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Colorado State Teachers College  
Bulletins  
1925 - 26  
Series 25  
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Catalog and Year Book. Colorado State Teachers College, 1925-26. April, 1925.

Annual Contest in Commercial Subjects for High Schools, Greeley, CO published by the College. No date or number.

Colorado State Teachers College Report of the School Survey and Educational Program for Ft. Lupton, CO. School Year, 1924-25. No date or number.

Colorado State Teachers College Bulletin for School Janitors and Engineers One Week Course of Intensive Training. June 7-12, 1926. Series 25, No.4.

Colorado State Teachers College The Social and Economic Background of State Teachers College Students. No date or number.

Colorado State Teachers College Bulletin. College Life. Series 25, No.7.



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Colorado State Teachers College Bulletin.  
How to study Nature, Botony and Nature  
Study. Series 25, No.8.

Colorado State Teachers College Bulletin.  
Summer Quarter, 1926. Preliminary  
Announcement. Series 25, No.9.

Colorado State Teachers College Bulletin.  
Hand Book of the Extension Department.  
January, 1926. Series 25, No.10.

Colorado State Teachers College Bulletin.  
Summer Quarter, 1926. Series 25,  
No.11.

Colorado State Teachers College Bulletin.  
School for Coaches Close to the  
Mountains. Series 25, No.12.

The Evening Lectures, Summer Quarter  
1926. No date or number.

The Book Review Hour. Summer Quarter,  
1926. 4 p.m. Monday, Wednesday, and  
Thursday Little Theater. No date or  
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of  
Colorado State Teachers  
College  
Greeley, Colorado

By *Opal M. King*  
*Fall* Quarter, 19 *26*



CATALOG  
AND  
YEAR BOOK

COLORADO STATE TEACHERS COLLEGE

1925—1926

*Opal King  
Basket Locker*

GREELEY, COLORADO  
PUBLISHED BY THE COLLEGE  
APRIL, 1925

## THE COLLEGE CALENDAR

1925

Sept.	29	Wednesday	.....	Registration day for the Fall Quarter
Sept.	30	Thursday	.....	Classes begin
Nov.	26-27	Thursday-Friday	.....	Thanksgiving recess
Dec.	17	Thursday	.....	Fall Quarter closes
Dec.	29	Tuesday	.....	Winter Quarter begins

1926

Jan.	1	Friday	.....	New Year's Day
Mar.	12	Friday	.....	Winter Quarter closes
Mar.	16	Tuesday	.....	Spring Quarter begins
May	7	Friday	.....	Insignia Day
June	2	Wednesday	.....	Spring Quarter closes
June	15	Tuesday	.....	Registration for the Summer Quarter
June	16	Wednesday	.....	Classes begin
Aug.	26	Thursday	.....	Summer Quarter closes

## 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 secure a "College Matriculation Blank" from the Registrar. Beginning with the year 1924-25 entrance credits will be accepted only on this blank. 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. 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 regulations which went into effect September 1, 1923.

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 33 for a statement concerning other ways of gaining entrance, either as regular or unclassified students.



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PART I  
ORGANIZATION OF THE COLLEGE

## TRUSTEES OF THE COLLEGE

HON. C. N. JACKSON, Greeley .....	Term Expires 1929
HON. E. M. RUSSELL, Gunnison .....	Term Expires 1929
HON. H. V. KEPNER, Denver .....	Term Expires 1927
HON. GEORGE D. STATLER, Greeley .....	Term Expires 1927
HON. CLIFFORD P. REX, Alamosa .....	Term Expires 1931
HON. EARL M. HEDRICK, Wray .....	Term Expires 1931
HON. MARY C. C. BRADFORD, Denver .....	Term Expires 1927
<i>State Superintendent of Public Instruction</i>	

## OFFICERS OF THE BOARD OF TRUSTEES

MR. KEPNER .....	President
DR. RUSSELL .....	Vice-President
W. F. MCMURDO .....	Secretary
MR. KEPNER, MR. STATLER, MR. JACKSON .....	Executive Committee

## OFFICERS OF ADMINISTRATION

GEORGE WILLARD FRASIER, A.B., A.M., Ph.D, L.L.D.....	President of the College
ETHAN ALLEN CROSS, A.B., A.M., Ph.D. ....	Dean of the College
WINFIELD DOCKERY ARMENTROUT, A.B., A.M.,.....	Director of Instruction
A. EVELYN NEWMAN .....	Dean of Women
J. P. CULBERTSON .....	Secretary to the President
R. M. CARSON .....	Registrar
W. F. MCMURDO .....	Treasurer



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LUCY NEELY McLANE

*Associate Professor of Secondary English*

A.B., Colorado State Teachers College; Student, Columbia University; B.L.L., Emerson College of Oratory, Boston; Student, College of Speech Arts, Boston; Graduate Student, Boston University; Pi Kappa Delta.

VIVIEN MERRIMAN

*Associate Professor of Commercial Education*

A.B., A.M., Denver University; National Gregg Teachers Certificate; Zaner Penmanship Certificate.

SONORA TULENA METSKER

*Associate Professor of Secondary Social Science*

B.S., M.S., Kansas University; Graduate, Kansas State Normal School, Emporia; Student, Baker University; Instructor Social Sciences, Junior High School, Lawrence, Kansas; Teacher of English, High School, Lind, Washington.

ROBERT HUGH MORRISON

*Assistant Director Extension Service;**Associate Professor of Extramural Education*

A.B., Michigan State Normal College; Graduate Student, University of Colorado; Graduate Student, Colorado State Teachers College; Superintendent of Schools, Centreville, Michigan; Principal Durant School, Flint, Michigan; Director Physical Education, Flint, Michigan; Principal Junior High School, Saginaw, Michigan; Pi Kappa Delta; Kappa Delta Pi.

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 Ark 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.

† ELLEN C. OAKDEN

*Acting Professor of Literature and English*

A.M., Birmingham University; Research Scholar, Somerville College, Oxford; Author of "Stella Mundi, a Nativity Play"; Lecturer in English, Goldsmiths' College, University of London, England.

† Exchange Professor from Goldsmiths' College, University of London, England, 1925-26.

- 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.
- IVAREZ BEIL OPP *Instructor in Music*  
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*  
M.D., University of Michigan.
- \*ORA BROOKS PEAKE *Associate Professor of Secondary History*  
Pd.B., 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.
- RHODA BELLE PERMENTER *Assistant Professor of History*  
A.B., Colorado State Teachers College; Graduate Student, Colorado State Teachers College; Student, Oklahoma University, Trinity University, East Texas State Teachers College; Assistant Principal, Aikero High School, Paris, Texas; Superintendent, Palmer Public Schools, Palmer, Texas; Kappa Delta Pi.
- ETHEL BLANCHE PICKETT *Associate Professor of Household Science*  
B.S., A.M., Teachers College, Columbia University; Teachers College, Columbia University, Diploma in Education; Student, Pratt Institute; Teacher, Rural and City Schools, Carthage, Missouri; Head of Department of Home Economics, State Normal School, Silver City, New Mexico.
- HAROLD M. RANDALL *Acting Assistant Professor of English*  
A.B., Parsons College; Graduate Student Northwestern School of Speech. Professor of Social Sciences and Public Speaking, Westminster College, Salt Lake City, Utah. Phi Alpha Phi; Pi Kappa Delta.
- HEDWIG ELIZABETH ROESNER *Associate Professor of Public School Music*  
A.B., B. Mus., University of Illinois; Student, Northern Illinois State Teachers College, DeKalb, Illinois, Bodfors School of Music and Oratory, Moline, Illinois; Augustana Conservatory of Music, Rock Island, Illinois; University of Michigan, Ann Arbor, Michigan; American Institute of Normal Methods, Northwestern University; Principal, McKinley School, East Moline, Illinois; Supervisor of Music, Community High School, Gilman, Illinois; Grades and High School, East Moline, Illinois; Grade, and High School, Bensenville, Illinois; Argentine High School, Kansas City, Kansas; Supervisory Certificate, State of Illinois; Mu Kappa Alpha.
- LUCY LYNDE ROSENQUIST *Associate Professor of Primary Education*  
B.S., Fremont Normal College, Fremont, Nebraska; Kindergarten-Primary Supervisor's Certificate, University of Chicago; Kindergarten Director, Schuyler, Nebraska, Public Schools; Principal, McCormick Orthogenic School, Chicago, Illinois; Kindergarten-Primary Supervisor, Public Schools, Mobile, Alabama; Head of Kindergarten Department, Nebraska State Teachers College, Peru, Nebraska.
- MARGARET MOORE ROUEBUSH *Professor of Household Arts; Head of Division*  
A.B., State Woman's College of Mississippi; Graduate Student, 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; Ph.B., University of Chicago.

\* On leave.

EARLE UNDERWOOD RUGG

*Professor of Education;  
Head of Division*

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"; Phi Delta Kappa, Kappa Delta Pi.

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; Kappa Delta Pi.

JOHN HENRY SHAW

*Editor of Official Publications;  
Director of 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; 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.

EDITH STEPHENS

*Library Assistant*

A.B., Colorado State Teachers College.

CORA MAY THOMAS

*Library Assistant;  
Classifier and Cataloger*

Graduate, 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; Theory 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.

FRANCES TOBEY

*Professor of English  
Acting Head of Division*

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

*Assistant Professor of Primary Education*

Ph.B., University of Chicago; Diploma State Teachers College, Warrensburg, Missouri; 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, 1921.

CHARLES FRANKLIN VALENTINE

*Assistant Professor of Physics*

A.B., Kalamazoo College; M.A., Teachers College, New York; Head of Science Department, Dowagiac High School, Dowagiac, Michigan; Principal High School, Hartford, Michigan; Head of Physics Department, Flint High School and Junior College, Flint, Michigan.

SUSAN HART VAN METER

*Assistant Professor of Elementary Education*

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

EDWARD IRL VARVEL

*Dental Examiner*

Pd.B., Colorado State Teachers College; D.D.S., Colorado College Dental Surgery.

FREDERICK LAMSON WHITNEY

*Director of Educational Research;  
Acting Director of Training Schools;  
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

*Assistant Professor of Education;  
Director of Religious Activities*

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

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\* On leave, 1925-26.

## SPECIAL FACULTY AND GENERAL LECTURERS

Summer Quarter, 1925

DOCTOR EDWIN E. SLOSSON, Scientist; Director of Science Service, Washington, D. C.; Author, Editor, and Lecturer of note; Former literary editor of "The Independent."

DOCTOR WILLIAM STARR MYERS, Professor of Politics, Princeton University. Author of "Socialism and American Ideals" and other works and articles on History and Political Science.

DOCTOR HARRY LAIDLER, Social Economist; Director of the League for Industrial Democracy; Chairman of the Labor Research Department of the Federal Council of Churches; Author and Lecturer on Social and Labor subjects.

MR. RAYMOND ROBINS, Social Economist; Lawyer and noted Civic worker; Industrial expert and strike arbiter.

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

DOCTOR WILLIAM MATHER LEWIS, President George Washington University; Author and Lecturer on Economic questions.

PROFESSOR ELLA VICTORIA DOBBS, Associate Professor of Industrial Arts, University of Missouri and President of The Missouri State Teachers Association.

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

PROFESSOR SARAH M. STURTEVANT, Assistant Professor of Education, Teachers College, Columbia University; Expert on Extra Curricular Activities in high schools and courses for deans of women and advisers of girls in high schools; Author of several books on the subject.

DOCTOR HENRY HARAP, Member of the faculty of Cleveland School of Education; Expert in Practical Arts.

DOCTOR N. L. ENGELHARDT, Professor of Education, Teachers College, Columbia University; Specialist in Educational Administration.

DOCTOR HAROLD RUGG, Professor of Education, Teachers College, Columbia University; Educational Psychologist; Curriculum Expert in the Social Sciences.

DOCTOR JOHN R. CLARK, Lincoln School, Teachers College, Columbia University; Expert in Mathematics.

MRS. I. ODENWALD UNGER, Sociologist, Author and Teacher. Former student of Lester F. Ward, and translator of his works.

- DOCTOR EDWARD RYNEARSON, Principal Fifth Avenue High School, Pittsburgh, Pennsylvania; Author, Lecturer and Teacher on Biology and specialist in Vocational and Educational Guidance.
- DOCTOR CARLETON W. WASHBURNE, Superintendent of Schools, Winnetka, Illinois; Expert in the field of Individual Instruction.
- DOCTOR HENRY C. PEARSON, Professor of Education, Teachers College, Columbia University, Principal of the Horace Mann School; Author of textbooks in the field of English and Latin.
- PROFESSOR LUCIA WILLIAMS DEMENT, Department of Fine Arts, Teachers College, Columbia University.
- MR. A. L. THRELKELD, Deputy Superintendent of Schools, Denver, Colorado; Specialist in Public School Curriculum Work.
- MR. H. GRAHAM DUBOIS, Professor of English, Newark, New Jersey; Poet and Short Story Writer.
- DOCTOR SAMUEL B. HARDING, Head of Department of History, University of Minnesota; Author, Lecturer and Teacher in Historical Subjects.
- DOCTOR JESSE H. NEWLON, President National Education Association, Superintendent of Schools, Denver, Colorado.
- MR. JAMES H. RISLEY, Superintendent of Schools, Pueblo, Colorado.
- MR. PERCY RECTOR STEPHENS, Celebrated Soloist, New York City.
- MR. J. R. BARTON, Superintendent of Schools, Okmulgee, Oklahoma; Specialist in School Organization.
- MR. O. D. WYATT, Principal E. M. Daggett School, Fort Worth, Texas.
- MR. HOWARD H. JONES, Celebrated Athletic Coach, University of Southern California.
- MR. G. O. CLOUGH, Superintendent of Schools, Tyler, Texas.
- DR. KIMBALL YOUNG, University of Oregon.



## COMMITTEES OF THE FACULTY

## FACULTY COUNCIL

The President of the College, Ex-officio; the Dean of the College, Ex-officio; the Dean of Women, Ex-officio; Howerth, Kendel, Fitzpatrick, Tobey, Baker.

## COMMITTEE ON COMMITTEES

The President of the College, Ex-officio; the Dean of the College, Ex-officio; Dickerson, Heilman, Baker, Finley, Colvin, secretary

NOTE: The President of the College is Ex-officio a member of all committees.

*Admission and Credits:* Cross, Dickerson, Principal of High School, Registrar.

*Alumni:* Wiebking, Carter, Hill, Kendel, Morrison, Mahan.

*Arts-Crafts:* Baker, Wiebking, Hill, Schaefer, Foulk.

*Assembly:* Fitzpatrick, Bishop, Chadwick, Roudebush, Hackman.

*Calendar:* Newman, Cooper, Tobey, McLane.

*Curriculum:* Cross, Jean, Rugg, Whitney, Colvin.

*Estes Park Outings:* Bell, Bishop, Hargrove.

*Faculty Club:* Howerth, Newman, Lyford, Merriman, Thomas, Lowe, Clasbey, Bedinger, Herman, Cave, Rosenquist.

*Loan Funds:* McMurdo, Principal of High School, Newman, Cross.

*Museum:* Carter, Hadden, Barker, Hill, Binnewies.

*Official Publications:* Cross, Shaw, Bishop, Head of English Department, Head of Education department.

*Religious Organizations:* Finley, Campbell, Bishop, Bryson, Dilling, Van Meter.

*Research:* Whitney, Boardman, Jean, Rugg, Ganders.

*Scholarships:* Cross, Director of Extension Service, Director of Training Schools, Registrar, Secretary.

*Extension:* Bell, Bowers, Dickerson, Morrison, Armentrout, Jean, Whitney.

*Radio:* Shaw, Cline, Bowers, Herman, Valentine, Barker.

*Visual Education:* Bowers, Barker, Long, Fitzpatrick, Herman, Morrison, Knies.

*Women's Buildings:* Newman, Davis, Pickett.



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 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 a 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. 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 at 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.

## PLANT

The buildings which are completed at the present time consist of those described as follows:

**THE ADMINISTRATION BUILDING**—The main, or Administration Building, is 240 feet long and 80 feet wide. It has, in it executive offices, class rooms, and class museums. Its halls are wide and commodious and are occupied by statuary and other works of art, which makes them very pleasing.

**THE LIBRARY BUILDING**—This gray stone structure is centrally located and faces the vista of Ninth Avenue. The stained glass windows, class mementoes, make it one of the most beautiful on the campus. It contains 58,200 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 periodicals 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 SCHOOL**—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. The auditorium, the art gallery, and the spacious corridors lend a fine attractiveness to the building. An expenditure approaching \$300,000.00 has been made to provide a training school center comparable in every way with any similar structure in the country.

**INDUSTRIAL ARTS BUILDING**—The Simon Guggenheim Hall of Industrial Arts is a beautiful structure, in the classic style of architecture. It is constructed of gray pressed brick. It accommodates the departments of Manual Training and Art, including every branch of hand work 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 when the president of the College entertained, 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 musical departments. A large recital room is located on the top floor.

**THE MODEL COTTAGE AND CLUB HOUSE**—The first of these is a model cottage of five rooms for demonstrations in house furnishings and house-keeping for the department of Home Economics. The second is the Club House for women students. This beautiful building is used for student social gatherings.

**THE GYMNASIUM-AUDITORIUM**—A temporary wooden structure was completed to take care during the war period of the needs for a modern gymnasium and auditorium. The money was available and plans drawn for the permanent gymnasium and auditorium, but for patriotic reasons, the conservation of labor, materials, and money, these plans were put aside for the time and a large, airy, light wooden building was constructed at small cost to provide a suitable floor for athletic games and an auditorium for the Summer Quarter lectures.

**THE HOUSEHOLD ARTS BUILDING**—After the signing of the armistice and the consequent release of building materials, work was actively pursued on the new Home Economics building, the foundation for which had been already completed. 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 class rooms, 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.

**THE DORMITORIES**—Three new cottage dormitories were opened in the Fall Quarter, 1921. Each houses from thirty to fifty students. The small houses make it possible to maintain the atmosphere and customs of a well-ordered home. 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 class room studies, departmental clubs, and extra curricula 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 club house or picnic suppers in the ravine.

Belford Hall is the largest of the three. It has accommodations for fifty-two girls. Each building is in charge of a director. 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 on the east side 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, southwest 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 \$21.00, \$25.00, \$27.00 and \$28.00 per quarter for each student, with two students in each room.

Students who make application 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 an ample heating plant, stables, garages, automobile repair shops, etc., are maintained.

### THE BUILDING PROGRAM

The Legislature of 1916-17 provided a millage tax for building purposes for all the state educational institutions. This taxation extends over a period of ten years and gives to Colorado State Teachers College approximately \$83,000 a year for that period—a total of \$830,000 dollars for building.

### THE CAMPUS

Surrounding the buildings is a beautiful campus of forty acres. It is covered with trees and grass, and dotted here and there with shrubs and flowers.

In the rear of the buildings is a large playground, which covers several acres. In the southwestern portion of this playground is a general athletic field, a complete view of which can be secured from a grandstand which will accommodate more than a thousand spectators. On the portion of the ground adjacent to the buildings there is a complete outdoor gymnasium. To the south of the buildings are located the tennis courts.

### 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. From the formal garden we pass to the school garden proper. Here in the garden and nursery the student may dig and plant, sow and reap, the while gathering that knowledge, the handicraft, that is essential in the teaching of a most fascinating subject of the up-to-date school—gardening.

#### 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 56,000 volumes. There is ample opportunity to work out subjects requiring library research. There is a handicraft department connected with the library wherein a student may learn how to conduct a library. The gymnasium is well equipped with modern apparatus. Games of all sorts suitable for schools are taught.

#### 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 \$4.25 for which the activity ticket is issued. This ticket admits the holder to all campus activities with the exception of benefit affairs.

The program provided by the Associated Students throughout the three quarters of the regular school year is rich and varied. The objective in bringing to the students programs involving campus talent such as the Dramatic Club, Glee Club, etc., and artists from the professional entertainment field is three fold: (1) selected entertainment for everyone, (2) development through participation, and (3) development through observation. The fee also provides for athletic events to which the student activity ticket admits, and for the student publications, of which the "Mirror", the weekly paper, is distributed without additional charge.

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. The organization, which is one of the most progressive, has gone through a period of continuous growth and development since its inauguration six years ago.



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 by payment of twenty-five cents due at registration.

#### 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 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 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, critic 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 the 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 to be 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.

#### 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.

**DORMITORIES**—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 the Dormitories cost from \$21.00 to \$28.00 for a quarter. Students in the Dormitories are required to furnish their own bedding and towels. The College has found it much more satisfactory for students to see the rooms before renting them. It is urged, therefore, that students come several 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 Miss Grace Wilson.

**BOARD AND ROOM**—Table board costs an average of \$5.50 per week in the College cafeteria, where meals are supplied at cost to the student. In private boarding houses the cost is usually a little more. Rooms rent by the month for from \$12.00 to \$16.00, for one in a room; \$14.00 to \$18.00

for two in a room. Rooms equipped for light housekeeping cost from \$16.00 to \$24.00 a month.

Board .....	\$65.00
Room .....	30.00
Incidental Fee .....	8.00
Student Association Fee .....	4.25
Total for a quarter (12 weeks) .....	\$107.25

Add to this your own estimate for travel, clothes, laundry, books, amusements, etc.

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, library, gymnasium, and physical education fees. This fee is paid by all and is 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 secure the regular textbooks at the College Book Room at a reduction from the publishers' list prices.

## THE SUMMER QUARTER

The Summer Quarter of 1926 will in general follow the plans begun in 1918. 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 the same as in other quarters.

The policy of bringing in from other institutions, not only lecturers, but class-room teachers as well will be continued and extended. Forty or more 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 1905 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. More than two 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 may 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.



PART III

ADMISSION, CERTIFICATION, GRADUATION, CREDITS



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 (4) units must be presented.

- 1. English ..... 3
- 2. Social Science (History, Civics, Sociology, Economics) ..... 1

GROUP II (Required) Minimum of five (5) units must be presented.

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

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

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

- 6. Music and Fine Arts.
  - 7. Commercial Arts.
  - 8. Home Economics.
  - 9. Manual Arts.
  - 10. Normal Training (Maximum of two (2) units).
- } 6

Note: If more than four (4) 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.

Graduates of non-accredited high schools are required to meet the same conditions, except that a standard college entrance test is required in addition to the transcript.

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 the student's 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 college entrance 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.

School for Adults—Mature students (twenty years of age or over) who have less than 14 high school units of credit, and who are not admitted through the entrance test, will be assigned to the School for Adults—a division between the high school and the College. As soon as they have completed the equivalent of 15 high school units, or shown the learning power which such completion usually gives, they may be admitted to the College.

## 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 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 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 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 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. 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.

**COLLEGE ENTRANCE TEST**—One of the standardized college entrance tests is required once of every student working for credit in this College or for credit to be transferred elsewhere. A fee of \$1.00 is charged to cover the cost of the test and scoring. The student is required to take this test before he completes his final enrollment for his first quarter in residence. The student's score is used as a supplement to high school graduation to determine fitness for admission to the College and ability to carry college work creditably.

**UNIT OF COLLEGE CREDIT**—All credits 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.



**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. In no case shall more than eighteen hours be allowed.

**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 50.

**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 extended. By special arrangement in advance with the Dean 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 Dean 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 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.

## THE TRAINING SCHOOLS

The training schools have a two-fold function. First, to train college students in the art of teaching. Second, to 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 be the leader 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 all 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 being built 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 sometime 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 the first and fourth Tuesdays of each month.

### ELEMENTARY

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

In the Elementary School the training teacher spends approximately one-half of his time teaching and the other half observing the student teacher. In this way inexperienced students are not allowed to disturb the advancement of children. During the first week or ten days of each quarter the training teacher does all of the classroom teaching in order to put the school in a good working attitude. The class organization is perfected and the technic of classroom management well established. During this time of adjustment the student teachers are observing the training teacher while he is getting the school well started and organized. During this period of observation, the student teacher writes up lesson plans from the lessons observed and determines from observation how the training teacher puts into actual practice the principles of teaching. Student teachers will form standards for classroom work and definite ideas for applying these standards to classroom instructions. This period gives the student teacher an opportunity to learn the names of the pupils so he or she can easily identify each; the individual differences among the pupils, facts about attendance records and reports. Gradually the teaching will be placed in the hands of student teachers as their success seems to warrant. However, no student will continue teaching any considerable period of time when the class is not making progress under that individual's instruction. Under close supervision during the first part of his teaching the student teacher will not be permitted to go far astray or form bad habits in teaching, and children will not suffer under the instructions.

### 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 over 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 Director of the Training Schools. 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.

The Teachers College High School (The Secondary Training School of Colorado State Teachers College) is built upon the theory that the highest interests of the student teachers and the highest interests of the high school pupils can be made to harmonize.

In addition to its excellent teaching force, the school has the use of the splendid equipment of the College. The library, the museums, the collections of fine arts, and the laboratories are all available to high school students. The courses are vital and practical and are intended to meet the needs of boys and girls of the present age.

### THE UNGRADED SCHOOL FOR ADULTS

It often happens that for economic reasons boys and girls are compelled to leave school in the grades or in the early years of high school. Upon reaching maturity they realize the value of an education and are anxious to obtain it, but are unwilling to enter classes with children. The purpose of the Ungraded School for Adults is to open the door of opportunity to such students. It appreciates the value, in terms of char-

acter and intelligence, of the services rendered by the individual to the community, and gives a reasonable amount of credit for the same. No one can enter the Ungraded School of Adults who has not reached the age of 21 years.

### 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.

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. 5, and the method courses required for the majors listed on page 69. The prerequisite for student teaching in the high school is Ed. 101.

9. A full quarter of student teaching carries five hours credit. This course meets five days a week and in addition two one-hour group conferences the first and fourth Tuesday in each month.

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.

### EXTENSION SERVICE

An ever increasing number of teachers avail themselves of the opportunity for professional advancement which the Extension Service of the College affords.

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

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

### GROWTH OF EXTENSION SERVICE

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

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

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

The year 1924-25 is proving to be unprecedented in the development of the Extension Service. More than 3400 paid enrollments have now been entered upon the College records. This includes students working in both group classes and correspondence courses.

The standard colleges of America now offer practically all of their courses in the Summer when the public schools are not in session, and most of them can be pursued by extension during the Winter months. Faculty members go directly from all the leading institutions of higher learning to the larger centers of population and thus make available to teachers the most valuable and important courses offered in said institutions.

Courses in Education, Educational Psychology, Educational Sociology, Educational Biology—are the four subjects that develop the modern point of view in education—are listed in profusion in the pages which follow. These are supplemented by content courses in Literature, History, Science, Mathematics, Music and Art, that bestow culture and go far toward the development of true personality. To this imposing list are added method courses that are intended to give mastery in the technic of teaching, and vocational courses that correlate the school and the home with the responsibilities which life is to impose.

The teacher who appreciates the dignity and importance of teaching finds in extension courses the means of gaining professional prestige—the child has a right to trained teachers and superintendents and boards of education are constantly looking for them; increased power of service—to serve one must be himself endowed with the things which humanity needs, and these are acquired only through study; and the happiness that comes through growth.

Mr. John Dewey in his little volume on "Interest and Effort in Education" has rendered an inestimable service to the cause of education in making a sharp distinction between that false pleasure that comes through placid receptivity—seeing, hearing, tasting, and touching things, which all too often mean deterioration—and that noble happiness that comes through "Mastery, achievement, and getting ahead." If this philosophy could only be read and understood by all teachers, then, the realization of the joy of growth would impel all and there would be no need for any other incentive for self improvement.

### TWO DISTINCT TYPES

With growth in numbers, there has come improvement in procedure. Experience has taught the better way. The Extension Division has earnestly endeavored to profit by early mistakes and to work out the most practical and helpful way of conducting its courses.

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 the organization of a class and the selection of an instructor. Twenty is the minimum number in all cases where a college faculty member does the teaching.

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

### DETAILS RELATIVE TO THE GROUP PLAN

The University of Colorado, the University of Denver, and 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 1500 minutes spent in class recitation.
4. FEES—The fees shall be \$8.00 per student per class yielding three quarter hours' credit.

### THE NATURE OF INDIVIDUAL EXTENSION COURSES

Each extension course consists of 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.

The Extension Department sends the student the first four study units of the course he has chosen, together with a list of the books required for the course and names of publishers where the books may be purchased. The student studies the books as directed and works out his first recitation paper—covering the work outlined in the first study unit. The first paper is then mailed to the Extension Division and the student starts the preparation of his second recitation paper. The date on which the paper is received in the extension office is recorded on the student's enrollment card and stamped on the back of the study unit. The latter is then passed without delay to the instructor in charge. When the instructor has graded the paper, he returns it to the extension office, where the date of its return and the grade are recorded on the student's enrollment

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card. It is then returned to the student with additional study units. Other papers, when submitted to the Extension Department, pass through the same process until the course is completed.

## AID TO RURAL TEACHERS

The new Certification Law places definite professional responsibility upon teachers. Conscious of this fact and anxious to make it possible for rural teachers to meet the professional requirements of the law without undue hardship, Colorado State Teachers College has prepared a number of special courses intended to meet the needs of rural teachers, by means of which they can do the work which is required without overstrain and with both pleasure and profit.

Two group extension courses successfully pursued each year (by beginning promptly in September, two group courses can be completed during the year) would enable a teacher to earn enough quarter hours' credit so that one Summer in a standard college, or two half Summers in such college, would meet the requirements of the law in full.

The College is endeavoring to establish these courses in every part of the state. Wherever a group is found who desire to study for credit under the direction of Colorado State Teachers College, a most earnest and thorough effort is made to organize a class.

## THE QUESTION OF COST

A course for which four quarter hours' credit is granted costs eight (8) dollars; i. e., two dollars per quarter hour. Since a course of this type consists of twelve study units, it follows that the College receives fifty cents for the preparation (original) and grading of each study unit. This is, in the judgment of the department, fair both to the instructor and the individual taking the work. A recent survey shows that this is less than the average cost of the service as shown by the bulletins of the standard educational institutions in the country. The instructor receives 75 per cent of the money paid for any given course.

In the past, forty (40) cents additional has been charged for postage. This has proved to be inadequate for the purpose. The rate now in effect is eighty (80) cents. The entire cost of a four hours' course is, therefore, eight (8) dollars and eighty (80) cents.

## 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. During the calendar year of 1924, 357 teachers were placed through the Placement Bureau. The grand total in salaries paid to these teachers was \$465,924.00. A careful survey of the success of these teachers reveals that 94 percent of the placements have proved satisfactory to the communities concerned.

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 as well acquainted with the school conditions in Colorado as the personnel of the Extension Division. 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 Teach-

ers 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 co-operation of all concerned.

#### GUIDING PRINCIPLES IN MAKING NOMINATIONS

1. The rights of the child are paramount.
2. Testimonials are to be truthful and discriminating.
3. As far as is humanly possible, the Bureau will endeavor to place the right individual in the right position.
4. Only one candidate will be nominated for any particular vacancy. This does not mean, however, that we are not pushing the nominee for other positions at the same time.
5. When, however, superintendents and boards of education come to Colorado State Teachers College in quest of teachers, they will be permitted to examine the records of any or all available individuals and interview any person in whom they may be interested to the intent that questions of scholarship, teaching power, and character may be decided at 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 Colorado State 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.
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 classroom and Training Schools. 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.

Colorado State 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 friends of Teachers College. We now receive calls for teachers from every state in the union. Our graduates are scattered from coast to coast.

#### POSITIONS FOR WHICH WE NOMINATE

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

Colorado State 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 educational psychology and current educational thought. The spirit of co-operation and scientific investigation is instilled from the beginning courses until graduation. School officials seeking teachers need have no fear concerning the educational training of our graduates.

#### STATE SERVICE—NO COMMISSION

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

#### 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 \$12,000, 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 compel 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 purposes of meeting just such emergencies that these loan funds have been established.

Applications for loans are made to the Student Loan Committee, which is comprised of members of the faculty of the College. This committee carefully investigates the record of the applicant; and grants his petition only in case it is satisfied that he 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 secretary to the Board of Trustees of the College is custodian of the funds. The student furnishes a note acceptable to the committee and makes arrangement for its payment when due.

The following are some of the loan funds:

**NORMAL STUDENTS LOAN FUND**—The money constituting this fund consists of contributions from persons, classes and organizations disposed to help in the work, and of the interest derived from loans. The freshman and sophomore classes of the College quite often contribute money left after meeting class expenditures to this fund. The freshmen class of 1921-22 contributed more than \$200 to this fund. 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 comprised 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 under-graduate 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 within five years after graduation or quitting College, without interest; but it is the desire of said donor that no student shall be pressed for the payment of said note or notes when the same shall become due and payable, so long as the Board of Trustees shall be satisfied that the recipient is making every reasonable effort, according to his abilities, to repay the same and is not endeavoring to repudiate the obligation.

**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."

## 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 this standard.

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

### KAPPA DELTA PI

Kappa Delta Pi is the international honor fraternity in education. It was founded at the University of Illinois in June, 1911, by Dr. William Chandler Bagley, now of Teachers College, Columbia University. Theta Chapter was established at Colorado State Teachers on February 28, 1920, as the eighth chapter of the fraternity and the first chapter in a teachers college.

The requirements demand that students shall have credit for ten hours scholarship, and achievement in educational work—membership in Kappa Delta Pi is open by invitation to students who fulfill certain conditions. The requirements demand that students shall have credit for ten hours in Education, shall belong to one of the upper classes, shall have been

in residence for three quarters, shall have an average of 90 per cent in all subjects, and shall possess qualities of co-operation, leadership and character.

#### PI KAPPA DELTA

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

#### GIFTS TO THE COLLEGE

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

PART IV  
THE GRADUATE SCHOOL



## 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 institutes 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.

### GRADUATE FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS FOR 1925-26

Ten graduate teaching fellowships will be available for the school year 1925-26. Each fellowship carries a stipend of \$450 paid in nine equal installments. These fellowships are open to any man or woman who has an A.B. 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.

Three graduate scholarships are offered for 1925-26. The usual College fees are waived for holders of these scholarships.

#### 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 1925-26. 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 1925-26. 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 1925-26. 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 Dean of the College.

## ADMISSION TO GRADUATE WORK

Persons holding 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, may be admitted as graduate students by Colorado State Teachers College upon the presentation of official credentials, including a transcript of records of 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.

Excess Bachelor of Arts work taken in Colorado State Teachers College may be applied toward the Master of Arts degree only when arrangement is made in advance with the Dean of the College so that he may see that the work is of graduate standard and that it is in line with the specialization necessary for this degree. Such credit will be granted only to students in their fourth year who do not need all their time for the completion of the undergraduate work.

Students should offer among their undergraduate courses at least three which acquaint them with current practices in the organization and administration of public education, and one or two courses which introduce them to the literature of educational science and to the methods of investigation in the educational field. These courses must include Ed. 210, Ed. 211, and Ed. Psych. 212 or 214, or their equivalents to be determined by the Dean of the College.

Before beginning the work of the fifth year, each student must arrange with the head of his major department a three quarter program of courses which must be approved by the Dean of the College.

## FEES FOR GRADUATE COURSES

Fees in connection with the fifth, or graduate, year of work will be the same as for undergraduate work.

## THE DEGREE OF MASTER OF ARTS

1. ADMISSION TO CANDIDACY FOR THE DEGREE—Admission to graduate work does not guarantee admission to candidacy for the degree of Master of Arts. Not later than the tenth week of the first quarter's work application must be made in writing to the Dean of the College. Such admission shall be determined by a committee consisting of the President of the College, the Director of Educational Research, the head of the department in which the student is majoring, and one member of the faculty with whom the student has had work, to be chosen by the



Dean of the College. The following are the requirements in the case of each student: personal fitness, intelligence above average as determined by a standard test, the ability to use good English, both oral and written, the ability to do superior work in the field of specialization, and ability to do independent research. Also each student will be required to take a written examination upon certain books prescribed by the head of the department in which the candidate is majoring and by the heads of the departments of Education and of Educational Psychology. Such students must be given a grade above average on such examination or examinations before being admitted to candidacy for the degree.

## 2. REQUIREMENTS FOR THE DEGREE:

(1) Residence—Three quarters of work in residence are required beyond a four-year undergraduate course.

(2) Course Credits Required—A year's graduate work shall be interpreted as forty-eight quarter-hours. Thirty-eight hours credit will be given for graduate courses pursued and ten hours for research in education leading to the completion of the master's thesis. To this end, every graduate student shall enroll in Ed. Res. 223, Research in Education.

No graduate student may enroll for more than sixteen hours of work in any quarter. This regulation is essential to the maintenance of the standard of intensive work for the master's degree. In determining the maximum amount of work permitted, research upon the thesis must be included within the limit stated.

Before the degree of Master of Arts may be conferred, a student must have had at least sixty-four quarter hours of undergraduate and graduate work in his major, and not less than thirty-two hours of professional work in education and related fields such as Psychology, Educational Sociology, and Educational Biology. Where the candidate majors in Education, sixty-four quarter hours will be required, but only work in Education or Educational Psychology will be accepted for such undergraduate and graduate work.

(3) LEVEL OF WORK—In order that the standard of intensive and specialized work for the master's degree may be maintained, no graduate credit will be given for courses numbered under 100 or for scattered and unrelated courses. No credit will be given for any course taken by a graduate student in which students with less than senior college status (96 quarter hours credit) are registered.

Sixteen hours credit toward the degree of Master of Arts shall be the maximum amount allowed to be earned in a regular school year (three quarters) by any person employed on full time, except upon the recommendation of the Dean of the College.

All work for the degree of Master of Arts shall be done with distinction. Work barely passed (mark of "D" under the present grading system) shall not be considered creditable for an advanced degree in the College, and the average should be distinctly above "C".

(4) THE THESIS—Research culminating in the writing of a thesis upon some vital problem in the field of education shall be an integral part of the work for the degree of Master of Arts.

In order that progress in the research problem which the candidate has undertaken may be continuous and systematic throughout the graduate year, he shall register for Ed. Res. 223, Research in Education, each quarter of his graduate work. In the first quarter, the candidate must submit to his thesis committee for approval the topic and detailed agenda of procedure and technic for his investigation. Not later than the fourth week of the third quarter of work, the candidate must submit to his committee evidence that the research upon his thesis has been completed.

At least four weeks before the date upon which the degree is to be conferred, three copies of the thesis must be sent to the thesis committee for final judgment, and at least three weeks before the date upon which the degree is to be conferred, the completed thesis in *final* form must be approved by his committee and by the Dean of the College; and two copies must be filed in the Dean's office.

The thesis is to conform to definite standards. It must be typewritten on paper of good quality, size 8½x11 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 Division)

(Date)

PART IV  
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 that of other technical schools and also from that 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' work. The following departments shall prepare teachers to receive the Bachelor's degree:

Biology	Fine and Applied Arts
Commercial Arts	Geology, Physiography, and Geog-
Education	raphy
Superintendents,	History and Political Science
Principals for	Home Economics
Grades	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
Rural Schools	Physics
Educational Psychology	Romance Languages and Latin
	Social Sciences

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:

Kindergarten-Primary	Music
Intermediate Grades	Fine and Applied Arts
Upper Grades or	Manual Training
Junior High School	Commercial Education or
Rural Schools	Home Economics

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 cannot 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, the 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 com-

plete 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. Students who come to the College with advanced standing, and those who gain time by doing work of exceptional quality, may shorten the course somewhat.

**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 7, Sociology 3, Education 1, Education 5, 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, 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), and 111, Hygiene 108, Psychology 105 and 108b, Sociology 105, and Ed. 116.

## ATHLETICS AND MEN'S PHYSICAL EDUCATION

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

In addition to the core subjects listed on page 56, this department requires:

FIRST YEAR: P. E. 5, P. E. 13, P. E. 52, P. E. 66, and Hyg. 1.

SECOND YEAR: P. E. 2, P. E. 2a, P. E. 55, P. E. 66, P. E. 66a, and P. E. 67.

THIRD YEAR: P. E. 113, P. E. 162, P. E. 165, and P. E. 167, Ed. Psych. 105 and 106, and Soc. 105 and 130.

FOURTH YEAR: P. E. 101, P. E. 102, P. E. 103, P. E. 108, P. E. 166, and P. E. 168, Biotics 101, Ed. 111, and Eng. 100.

13. ATHLETIC TRAINING—Winter and Summer Quarter. Two periods. Two hours.

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—Each Quarter. Three periods. One hour.

An assortment of activities are included in this course, such as, handball; tennis; heavy apparatus; tumbling; volley-ball; depending on the season.

55. PERSONAL COMBAT GAMES—Winter Quarter. Two periods. One hour. Boxing, fencing, wrestling, and other activities.

66. COLLEGE SPORTS—Each Quarter. 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 and Winter Quarters. Three periods. One hour.

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

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 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.

## 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 laboratory and field work with class room study wherever this is possible and desirable. For it is only through this procedure that students gain both a scientific knowledge and a large appreciation of life forms.

## COURSE OF STUDY

Courses marked \* are given also by Extension.

In addition to the core subjects listed on page 56, this department requires:

## BOTANY THE MAJOR INTEREST

FIRST YEAR: Botany 1, 2, and 3.

SECOND YEAR: Zoology 4 and 5; Chemistry 1 and 2.

THIRD YEAR: Physics 1 and 2; Botany 103; Zoology 1 and 2.

FOURTH YEAR: Biotics 101; Biology 102; Botany 101, and 102; Bacteriology 1; Geology 100.

## ZOOLOGY THE MAJOR INTEREST

FIRST YEAR: Zoology 1, 2, and 3.

SECOND YEAR: Botany 2; Chemistry 1 and 2; Zoology 5.

THIRD YEAR: Physics 1 and 2; Zoology 4; Botany 1 and 3.

FOURTH YEAR: Biotics 101; Biology 102; Geology 100; Zoology 106 and 107; Botany 103.

## BIOLOGY

\*1. EDUCATIONAL BIOLOGY—Every quarter. Three hours. Required of all Junior College students. Fee, 75 cents.

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.

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

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

## BOTANY

1. GENERAL BOTANY—Fall Quarter. Four hours. Prerequisite, Biology 1. Fee, \$1.00.

This course includes a study of algae; such fungal forms as bread mold, yeast, rusts, smuts and mushrooms; liverworts; mosses and ferns. Throughout the course constant emphasis is placed upon their relation to man. Numerous field trips are taken to acquaint the student with plants in their native habitats as well as in the laboratory.

2. GENERAL BOTANY—Winter Quarter. Four hours. Prerequisite, Biology 1. 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, as the color of woods and grainings of 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.

3. **SYSTEMATIC BOTANY**—Spring Quarter. Four hours. Prerequisite, Biology 1. 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. **TAXONOMY**—Spring or Summer Quarters. Four hours. Prerequisite, Biology 1. 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**—Fall Quarter. Two hours. Prerequisites, Biology 1 and Botany 2. Fee, \$1.50.

A course in which the science of collecting and preserving of botanical materials is treated. Elementary instruction in killing material, staining it, and making it up into permanent slides is given.

103. **PLANT PHYSIOLOGY**—Winter Quarter. Four hours. Prerequisites, Biology 1 and Botany 2. Fee, \$1.50.

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 or Summer Quarters. Four hours. Prerequisites, Biology 1, Botany 2 and 101. Fee, \$1.00.

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.

## ZOOLOGY

1. **INVERTEBRATE ZOOLOGY**—Fall Quarter. Four hours. Prerequisite, Biology 1, or an equivalent course. Fee, \$1.00.

The various invertebrate groups are studied in regular order. A general study of each group is supplemented by the specific study of a type form. This course is designed to give the student a knowledge of the lower animals; a necessary background for the teaching of biology.

2. **VERTEBRATE ZOOLOGY**—Winter Quarter. Four hours. Prerequisite, Biology 1, or an equivalent course. Fee, \$1.00.

This course includes a study of the chordates, and together with Zoology 1, completes the survey of the animal kingdom. Like Zoology 1, it is necessary to any student who contemplates the teaching of biology.

3. **BIRDS AND MAMMALS**—Spring Quarter. Four hours. Prerequisite, Biology 1, or an equivalent course. Fee, \$1.00.

A study of birds and mammals designed to familiarize the prospective teacher with the species found in Colorado and neighboring states. The distribution, life history, and economic status of each species will be given. Class work will be constantly illustrated by the use of museum material.

\*4. **PRACTICAL ZOOLOGY**—Spring and Summer Quarters. Four hours. Fee, 75 cents.

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.

5. BIRD STUDY—Spring and Summer Quarters. Four hours. Fee, 75 cents.

A non-technical study of Colorado birds. The purpose of this course is to enable the prospective science teacher to recognize the commoner species. Life histories, ecology, and economic importance of birds will also be stressed. Field trips will supplement the identification of material in the laboratory.

106. PREPARATION OF MUSEUM MATERIALS—Winter Quarter. Two or four hours. Fee, \$1.00.

A study of the preparation of museum and class room specimens. Most of the work will be done individually in the laboratory. Instruction in preparing bird and mammal skins, and later on, in the mounting of birds, mammals, and fish will be given. If the student so elects, some of the work may be done in the preparation of microscopic materials.

107. ENTOMOLOGY—Fall Quarter. Four hours. Prerequisite, Biology 1, or an equivalent course. Fee, \$1.50.

A study of the insects with special reference to the commoner species. Structure, classification, and economic importance will be developed. A course for students who desire more specialized biological knowledge.

201. ADVANCED INVERTEBRATE ZOOLOGY—Fall Quarter. Two or four hours. Prerequisite, Biology 1, or an equivalent course. Fee, \$1.00.

An advanced consideration of invertebrate zoology, given particularly for graduate students. If the student has already taken Zoology 1, the course may be taken for two hours credit. In this case the work will be chiefly along the line of individual research. Students who have not taken Zoology 1 previously, may take this course for four hours credit. In the latter case they will attend the regularly scheduled lectures of Zoology 1, and carry on individual work in addition.

202. ADVANCED VERTEBRATE ZOOLOGY—Winter Quarter. Two or four hours. Prerequisite, Biology 1, or an equivalent course. Fee, \$1.00.

An advanced study of vertebrates, given primarily for the benefit of graduate students. The nature of the work is similar to that of Zoology 201. In this case the course may be taken for two hours credit if the student has previously taken Zoology 2, or for four hours credit in case the student has not previously taken Zoology 2.

204. ADVANCED PRACTICAL ZOOLOGY—Spring Quarter. Four hours. Fee, 75 cents.

This course is provided for the accommodation of graduate students who have not previously taken Zoology 4 or an equivalent course. Students registering for this course will attend the regularly scheduled lectures of Zoology 4, and will be required to do individual research in addition.

#### 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

1. ELEMENTARY BACTERIOLOGY—Summer Quarter. Four hours. Prerequisite, Biology 1. Fee, \$1.50.

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, 50 cents.

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.

## 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 chemical industries or the teaching profession. They will follow the program outlined below.

C. Students taking the new Science Course 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 listed on page 56, this department requires:

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

SECOND YEAR: Botany 2 and Chemistry 7, 110, and 111.

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

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

## CHEMISTRY

1. GENERAL CHEMISTRY—Fall and Summer Quarters. Three hours. Fee, \$3.00.

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

2. GENERAL CHEMISTRY—Winter Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period. A continuation of Course 1.

\*3. GENERAL CHEMISTRY—Spring Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period on the chemistry of metals. A continuation of Course 2.

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

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

4. GENERAL CHEMISTRY—Fall and Summer Quarters. Four hours. Fee, \$4.00.

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

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, and Home Economics students).

7. QUALITATIVE ANALYSIS—Any quarter. Two to eight hours. Fee, \$4.00.

A laboratory and consultation course on the separation and identification of the common elements. Prerequisites, Course 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 or eight hours. Fee, \$4.00.

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—Any 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—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.

117. 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.

#### 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. Fee, \$4.00. Four to eight hours.

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—Any 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—Any 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 113, 114, 114b.

225. RESEARCH WORK IN THE TEACHING OF CHEMISTRY. Hours credit to be determined.

A library reference and field survey course. Prerequisites, Chemistry 117 or 217.

## COMMERCIAL EDUCATION

The direct and controlling aim of the Department of Commercial Education is to prepare supervisors, department heads, and teachers of commercial education in the public schools. The course of study offered below and all subjects included in the course of study are offered with this basic 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 may select a two or a four year course that will give the highest degree of specialization that it is possible to acquire in the given length of time. On the other hand specialization in the field of accounting or economics is just as possible.

Small high schools require teachers with a more general commercial training. This may be had by selecting one of the two courses of study outlined below and electing from the other at the same time. A definite selection should be made, however, and carefully followed in order that requirements for graduation may be met without loss of time.

Supervisors and department heads likewise should be equipped with a general training in commercial subjects. The head of a department, however, may prefer to specialize in some particular subject or group of subjects, and aim to have only a good working knowledge of the others. In the larger high schools specialization is desirable and many teachers of commercial subjects are specialists in certain subjects and teach only those.

The Life Certificate will be issued to those who complete the requirements of either of the two courses outlined below for the first two years and the core subjects outlined on page 56 and who have earned 96 hours of college credit. The Bachelor of Arts degree will be granted to those who have completed either of the following four-year courses and the core subjects on page 56 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 on page 51.

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

#### COURSE OF STUDY

Courses marked \* are offered by extension.

In addition to the core subjects as listed on page 56, this department requires:

For teachers of Bookkeeping, Accounting, or Economics,

FIRST YEAR: C. E. 36, 37, 38, Geog. 7.

SECOND YEAR: C. E. 50, 51, 52, Economics 10.

THIRD YEAR: C. E. 155, 157, History 101, Economics 110.

FOURTH YEAR: C. E. 144, 154, 158, Economics 112.

For teachers of Secretarial Training Courses,

FIRST YEAR: C. E. 12, 13, 14, and 15.

SECOND YEAR: C. E. 3, and 4.

THIRD YEAR: C. E. 105, 106, 110.

FOURTH YEAR: Twelve hours of commercial education to be selected by the student.

No credit will be granted to majors in commercial education or to non-majors for C. E. 1 or 11. Credit will be granted to majors in commercial education and to non-majors for C. E. 2 and 12 only upon the completion of C. E. 3 and 13. Only methods in handwriting shall receive credit and this to the maximum of two hours altogether.

**\*1. PRINCIPLES OF SHORTHAND I.—Fall and Summer Quarters. No credit.**

This class meets four times a week and will be counted in the student's program as four hours in determining the student load. The purpose of this course is to give the student who has not had shorthand in high school the necessary foundation in Gregg shorthand for the secretarial course. The first ten lessons in the Gregg Shorthand Manual will be covered in this course.

**\*2. PRINCIPLES OF GREGG SHORTHAND II.—Winter Quarter. Four hours.**

Prerequisite C. E. 1 or the equivalent. This course is a continuation of C. E. 1. The Gregg Manual will be completed with this course.

**3. SECRETARIAL PRACTICE I.—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 is the first required course in the training of teachers of secretarial science. It will include the taking of dictation with transcriptions and some attention to arrangement and special forms. Special methods of presenting shorthand and conducting beginning dictation classes will be considered.

**\*4. METHODS IN COMMERCIAL EDUCATION—SHORTHAND—Spring and Summer Quarters. One hour.**

Prerequisites, C. E. 2 or the equivalent. The purpose of this course is to give the student special methods for the presentation of the subject of Gregg shorthand.

**\*11. PRINCIPLES OF TYPEWRITING I. Fall and Summer Quarters. No credit. Fee \$1.00.**

This class meets four times a week, and it is a preparatory course for the first course in the principles of typewriting which is required of all secretarial majors. It will be counted as four hours in determining the student's load.

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

Prerequisite, S. E. 11 or the equivalent. A study of special business forms and tabulating.

13. PRINCIPLES OF TYPEWRITING III.—Spring and Summer Quarters. Three hours. Fee, \$1.00.

Prerequisite, C. E. 12 or the equivalent. This course includes the preparation of legal documents, complicated tabulation, and gives considerable attention to methods of acquiring speed.

14. METHODS IN COMMERCIAL EDUCATION—TYPEWRITING.—Spring and Summer Quarters. One hour.

Prerequisite, C. E. 12 or the equivalent. The purpose of this course is to give the student special methods in the teaching of typewriting.

\*15. BUSINESS REPORTS AND COMPOSITION—Spring and Summer Quarters. Four hours.

The aim of this course is to give the commercial teacher a better background for the subject of business English in high school. Emphasis is put upon the use of words in such a way that people will be induced to act. The principles of literary composition will be applied to commercial correspondence. 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 sales letter will be analyzed, and principles derived from this analysis will be applied in actual practice. Special consideration will be given to letters of application, letters of complaint, sales letters, follow-up letters, and collection letters.

\*36. HANDWRITING METHODS—Every Quarter. Two Hours.

This course combines practice and special methods 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 80 as measured by the Zaner Handwriting Scale No. 5 before credit will be given.

\*37. BUSINESS MATHEMATICS—Fall and Summer Quarters. 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.—Fall and Summer Quarters. 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.

50. PRINCIPLES OF ACCOUNTING I.—Fall and Summer Quarters. Four hours.

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

51. PRINCIPLES OF ACCOUNTING II.—Winter Quarter. Four hours. Prerequisite, C. E. 50 or the equivalent.

Various types of business papers arising out of transactions are considered in their relation to the records and to the routine of the business. Summary statements of various kinds are discussed and illustrated. Types of accounting records and their development, especially as regards a partnership business, are taken up in detail. The principles considered are developed by means of class discussion and illustrative laboratory exercises. A complete set of partnership books with a minimum of bookkeeping detail are written up in this course. Three class periods a week will be given to discussion, and the remaining credit-hour will be a laboratory period of two hours.

\*52. PRINCIPLES OF ACCOUNTING III.—Spring and Summer Quarters. Four hours. Prerequisite, C. E. 51 or the equivalent.

This course is designed to cover the more advanced principles of accounting, emphasizing especially, the problems of corporation accounting. The proper evaluation of balance sheet items, as regards depreciation and the maintenance of fixed assets, is especially stressed. Principles considered are developed by means of class discussion and illustrative laboratory exercises. A complete set of corporation books with a minimum of bookkeeping detail are written up in this course. Three class periods a week will be given to discussion, and the remaining credit-hour will be a laboratory period of two hours.

\*53. SALESMANSHIP—Winter and Summer Quarters. Three hours.

Special attention is given in this course to methods of teaching, textbooks suitable for high school classes in salesmanship, and special references and aids. Selling and the prime essentials of selling are considered in this course. Attention is given to the problem of selling personal services. Sales talks are given to the class by experienced salespeople while students prepare written analyses of the processes. Students are required to prepare and give special sales talks, apply for positions, etc.

105. SECRETARIAL PRACTICE II.—Fall and Summer Quarters. Four hours.

Prerequisites, Commercial Arts 3 and 13 or their equivalents. This course is a continuation of Commercial Arts 3. Special emphasis will be put upon speed both in taking dictation and in transcribing. The handling of correspondence and filing will receive special attention.

106. SECRETARIAL SCIENCE I.—Winter and Summer Quarters. 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 in so far 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 general course in the principles of filing, business graphs of all sorts, editing, proof-reading, briefing, charting, detailed activity studies, and allied subjects. The material handled deals directly with the presentation of such work to pupils. Prerequisites for the course are Commercial Education 105 and 13.

107. SECRETARIAL SCIENCE II.—Spring and Summer Quarters. Three hours. Prerequisite, C. E. 106 or the equivalent.

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

108. SECRETARIAL STANDARDS AND MEASUREMENTS—Three hours. Prerequisite, C. E. 105 or the equivalent.

This course is made 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 other similar material are to form the basis for this study. Evaluation of 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 setting 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. Prerequisites are C. E. 105 and 13.

109. ANALYTICAL STUDIES IN GREGG SHORTHAND—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 can not 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. Six hours. Prerequisite, C. E. 3 and 12 or the equivalent.

The aim of this course is to acquaint the student with the handling of modern office appliances under actual office conditions. Students are required to do two consecutive hours of office work daily for five days a week, plus two additional hours to be arranged by the student. Hours for this work are to be arranged to suit the convenience of the student.



141. **ADVANCED CORPORATION ACCOUNTING**—Three hours. Prerequisite. C. E. 52 or the equivalent.

This is a thorough study of the corporation and the special accounts involved in the keeping of corporation records. A complete set of corporation books are kept introducing the voucher system of handling accounts payable. Some of the topics treated are: records and accounts peculiar to a corporation; elements of manufacturing accounts; perpetual inventory; payroll records; theories of the balance sheet; depreciation; showing of liabilities; valuation of capital stock; profits; dividends; reserves and surplus; sinking and other funds; liquidation of corporations; consolidations and mergers.

142. **ADVERTISING**—Three hours.

The origin and development of the art of advertising and its relation to our present system of distribution is emphasized in this course. It includes a study of the psychology of advertising and the characteristic features of some of the good and bad advertising to be found in magazines, newspapers, and other media. The general field of advertising is studied with some attention to scientific tests and records of results.

143. **THE INCOME TAX LAW AND REGULATIONS**—Three hours.

This course is planned with the idea that all commercial teachers should have a working knowledge of the Income Tax Law and ordinary problems growing out of its application. The latest revised law will be studied with the decisions and reports of the Treasury Department, etc., and these will be applied to practical problems for solution. It is not the purpose of this course to train income tax experts, but it should give the teacher a working knowledge of the income tax regulations that would enable him or her to help an individual make a satisfactory report.

\*144. **COMMERCIAL LAW II**.—Spring and Summer Quarters. Four hours.

The law of corporations, partnerships, real property, bailments, and bankruptcy will be treated in this course. Considerable time will be devoted to the study of the necessary legal forms and procedure in connection with these topics.

150. **BANK ACCOUNTING**—Fall Quarter. Three hours.

This includes a study of state and national banking laws, loans, discounts, commercial paper, methods and principles of banking, and savings accounts. A set of books illustrating several days of business will be written. Burroughs bookkeeping machines are used in connection with this course.

\*151. **COST ACCOUNTING**—Spring and Summer Quarters. Four hours.

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

154 **BUSINESS ORGANIZATIONS**—Winter Quarter. Three hours.

A substitute for Commercial Arts 150 or 151. This course treats of the basic types of business organization with special emphasis on the partnership and corporate form of conducting a business.

155. **THE ECONOMICS OF RETAILING**—Fall Quarter. Four hours.

A course in the fundamentals of the retail business. A brief history of the development of the different kinds of retail stores, salesmen, and methods of distribution. Also a treatment of some of the most important problems of retailing.

157. **METHODS IN COMMERCIAL EDUCATION**—Fall and Summer Quarters. Two hours.

The purpose of this course is to give the student a better conception of the function of commercial education together with a better appreciation of its merits and value. Special attention will be given to methods of teaching the subjects of bookkeeping and allied subjects.

158. **PROBLEMS IN BUSINESS EDUCATION**—Spring and Summer Quarters. Four hours.

This course provides for the treatment by research and study of some of the most important problems of 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 demanded by the business man; the relation of the department of commercial training in the high school to the school of commerce or to the business college; present tendencies in commercial education; what should be the content of some of the commercial subjects, etc.

## 159. AUDITING—Four hours.

A study of the qualifications, duties, and responsibilities of the Certified Public Accountant, a Chartered Accountant, a Public Accountant, an Auditor or an Accountant. This course will be of interest to the student who is especially interested in accounting. It gives a better understanding of the purpose of accounts and their analysis. The methods of conducting different kinds of audits and special investigations will be studied and discussed. The course provides for a limited amount of laboratory work in the preparation of analyses and reports.

## \*211. BUSINESS ADMINISTRATION.

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

## 220. SEMINAR—Any Quarter.

An opportunity will be given for research work on problems in the field of Commerical Education. Problems to be selected in conference with the head of the department. This is planned as a conference course.

## 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 56, this department requires:

## FOR KINDERGARTEN AND PRIMARY TEACHERS

## TWO YEARS

FIRST YEAR: Ed. 3, Ed. 51, Ed. 52, Lib. Sci. 1, Art 2.

SECOND YEAR: Elem. Science 1, Art 13, Eng. 15, Ind. Arts 1 (2 hrs.), Music 10.

## FOR INTERMEDIATE TEACHERS

## TWO YEARS

FIRST YEAR: Ed. 4, Elem. Science 1, Lib. Sci. 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 11.

## FOR JUNIOR HIGH SCHOOL TEACHERS

## TWO YEARS

FIRST YEAR: Lib. Sci. 1, Eng. 15, Eng. 2, Hist. 1 or 2 or 4 or 10 (one of these courses), Elem. Science 1, Ed. 15.

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

## FOR TEACHERS AND SUPERVISORS IN RURAL SCHOOLS

## TWO YEARS

FIRST YEAR: Ed. 21, Ed. 3, Geog. 12, Ed. 23, Math. 8, Eng. 1.

SECOND YEAR: Ed. 4, 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. 104, Ed. 106, Ed. 129, Ed. 134, Ed. 152, Ed. 210, Psych. 107, Biotics 101.

FOR SUPERINTENDENTS, SUPERVISORS AND PRINCIPALS: Ed. 104, Ed. 113 or 115, Ed. 108, Ed. 120, (take either Ed. 147 or 120), Ed. 129, Ed. 134, Ed. 142, Ed. 144, Ed. 147, Ed. 210, Psych. 107, Biotics 101.

## I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

\*1. AN INTRODUCTION TO EDUCATION—Required of all first-year students. Every Quarter. Three hours.

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

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

This course consists of two regularly scheduled observation hours each week and one conference hour the first and fourth Tuesday of each month. The student observes the class he is to teach for a quarter preceding his actual teaching. This quarter of pre-teaching observation gives the student an opportunity to gain an insight into the technic of teaching and the mechanics of class room 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 Tuesday. Each student making a grade of less than "C" shall be required to repeat the 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, 5, and a method course. (See page 38.)

\*3. PRIMARY GRADE METHODS—Every Quarter. Four hours.

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

4. INTERMEDIATE GRADE METHODS—Fall, Spring and Summer Quarters. Four hours.

The course is based on the needs of the child between the ages of ten and twelve. It will consist of (1) a review of the most significant things in child study common to children of this period; (2) a comparison of courses of study for these grades; (3) the building of a course of study; (4) methods of presenting the material of the curriculum of the intermediate grades.

5. PRINCIPLES OF TEACHING—Every Quarter. Three hours. Prerequisite Ed. 1.

This course will consist of readings, discussions and observations of class room work in the elementary training school. It will deal with such topics as types of class room procedure; standards for judging both the subject matter and class room instruction; development and use of lesson plans; socialized recitations and the project method; the ideas of enrichment, development and control of experiences and the methods appropriate to a realization of these. An extra hour is scheduled for demonstration lessons in the training school.

\*10. THE ELEMENTARY SCHOOL CURRICULUM—Every Quarter. Three hours. Prerequisites, Ed. 1 and Ed. 5. Sophomore standing.

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

15. EDUCATIONAL GUIDANCE—Winter and Summer Quarters. Three hours.

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

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

This course is intended for those who wish to become Camp Fire Guardians. Groups will be organized into regular camp fires and 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 field 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.

\*Ed. 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.

Ed. 22. STUDENT TEACHING IN RURAL DEMONSTRATION SCHOOL—Fall, Winter and Spring Quarters. Four hours. Prerequisites, Ed. 2a and Ed. 2b.

Students who plan teaching in rural schools should take one month of teaching in a rural school which is being used for the special training of teachers. Student teachers live at the teachers' cottage while teaching and can arrange to carry on their studies in absentia while so teaching.

Ed. 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.

## ED. 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—Every Quarter. Four hours.

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

## \*52. THE KINDERGARTEN CURRICULUM AND USE OF MATERIAL—Fall, Winter and Summer Quarters. Four hours.

A study of the educational possibilities of the natural activities of childhood.

## 100a. PROBLEMS OF EDUCATION—Summer Quarter. Four hours.

This course attempts, therefore, 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 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 text-book 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 class room management; types of instruction; lesson planning and supervised study.

## 102. ADVANCED STUDENT TEACHING IN ELEMENTARY TRAINING SCHOOL—Every Quarter. Four hours.

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

## 102b. STUDENT SUPERVISION OF EXTRA CURRICULA ACTIVITIES IN TRAINING SCHOOL—Every Quarter. Four hours.

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

This course will include conference, observations, supervision and teaching under the direction of the training teacher. (See page 38.)

## 104. THE PROJECT METHOD OF TEACHING—Spring 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.

## \*106. ELEMENTARY TYPES OF TEACHING AND LEARNING—Spring and Summer Quarters. Four hours.

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

107. METHODS OF IMPROVING READING AND STUDY HABITS OF ELEMENTARY SCHOOL CHILDREN—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 especial 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—Given on request. Three 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-CURRICULA ACTIVITIES—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, music 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 a necessary and valuable part of the school curriculum.

111. PHILOSOPHY OF EDUCATION—Winter and Summer Quarters. Required fourth year. Four hours.

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. The 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. SCHOOL HOUSE CONSTRUCTION—Fall and Summer Quarters. Two hours.

This course will deal with the practical problems in the planning and building of school houses.

\*113. ORGANIZATION AND ADMINISTRATION OF THE JUNIOR HIGH SCHOOL—Fall and Summer Quarters. Four hours. Primarily for Junior High School Majors. Senior College and Graduate Students Take Ed. 213.

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

114. PRIMARY SUPERVISION—Summer Quarter. Either half or full quarter. Two or four hours.

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

115. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL—  
Winter and Summer Quarters. Four hours.

In this course the work of the elementary school will be analyzed from the standpoint of organization and administration. The following are some of the topics considered: The problem in the large: the first day of school, yard and building organization, programs and schedules, the school janitor, health and sanitary control, discipline, use of the assembly period, classifying and promoting pupils, the curriculum, planning the supervision, teachers meetings, measuring instruction, parent-teachers associations, and extra-curricular activities.

\*116. THE ORGANIZATION AND ADMINISTRATION OF A SENIOR HIGH SCHOOL—  
Spring and Summer Quarters. Four hours.

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

120. (formerly 220) EDUCATIONAL FINANCE—Spring and Summer  
Quarters. Two hours.

This course deals with budget making, taxation, financial reports, and other subjects that relate to financing the public schools. A study will also be made of cost units and financial comparisons of schools.

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. Only one quarter's work may be taken.

125. (formerly Ed. 25.) RURAL EDUCATION—Winter and Summer Quar-  
ters. Three hours.

A study of the general purpose and problem 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 elementary 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 also be studied.

126. (formerly Ed. 26) THE PROJECT CURRICULUM FOR RURAL SCHOOLS  
—Fall Quarter. Three hours.

This course is designed to study and interpret the basic ideas implied in the concept of *project methods* as formulated by leading educators of the present time and to show their use in rural education. Comparisons are made of concrete examples of the application of the project curriculum with the traditional rural school curriculum. It includes a study of the underlying principles which control the procedure of the project curriculum and an attempt to evaluate the principles.

129. (formerly 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—Fall Quarter. 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—Winter and Summer Quarters. Three hours.

Beginning with the old world background this course will trace the development of free public education in America up to the present time. Special emphasis will be given to a consideration of how the school subjects came to be what they are, the development of methods of teaching in terms of children's 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. CITY SCHOOL ADMINISTRATION—Winter and Summer Quarters. Two hours.

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

144. SCHOOL PUBLICITY—Fall 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—Fall and Summer Quarters. Two hours.

In this course an opportunity will be given to study the technique of conducting surveys, the surveys which have been made, and the application of these surveys to educational thought and practice.

152. THE CHILD AND HIS SCHOOL—Spring 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.

165. BIBLE STUDY—GREAT PERSONALITIES OF THE OLD TESTAMENT—Fall Quarter. One hour.

The purpose of the course is to show the growth, through experience, of the Hebrew mind and religion.

166. BIBLE STUDY—THE PERSONALITY AND TEACHINGS OF JESUS—Winter Quarter. One hour.

A study of the personality of Jesus and the practical application of His teachings to the life of today.

167. BIBLE STUDY—PAUL AND THE GROWTH OF THE CHURCH—Spring Quarter. One hour.

A study of the letters of Paul, of the situations which called them forth, and of the beginnings of Christianity.

### III. COURSES FOR GRADUATE STUDENTS AND 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—Winter and Summer Quarters. Four 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 MIND IN EDUCATIONAL THEORY—Winter and Summer Quarters. Four hours. Prerequisite Ed. 111. This course will not be given, Winter, 1926.

A study of the doctrines of mind that have exercised a determining influence upon educational theory, method, and practice.

213. PROBLEMS OF THE JUNIOR HIGH SCHOOL WITH SPECIAL REFERENCE TO THE CURRICULUM—Spring and Summer Quarters. Four hours.

This course will attempt to offer practical suggestions for the reorganization of the junior high school grades. The following problems, with 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-Schwepe 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. Opportunity will be given to observe the teaching of The Social Science Pamphlets in the Training 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 other related to secondary education. Intensive study and investigation will be organized along the lines of individual interest.

220. EDUCATIONAL FINANCE—This course is now numbered Ed. 120.

\*223. RESEARCH IN EDUCATION—Every Quarter. Three or four hours.

This is a 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. EXPERIMENTAL EDUCATION—Either half or full Quarter. 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; findings in experimental schools and classes; planning and 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.

229. CURRENT EDUCATIONAL THOUGHT—This course is now numbered Ed. 129.

240. WOMEN IN ADMINISTRATION.—Spring and Summer quarters. 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—Fall and Winter Quarters. Two and 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 schoolhouse construction; selection, purchase, and distribution of textbooks, equipment, and supplies; the development and utilization of a budget; needed changes in financial accounting; needed changes in taxation; needed changes in education laws for a particular state, a plan for a self-survey of a school system; the superintendent or principal as a supervisor—what he can do to improve instruction; an adequate set of educational and financial records and reports for cities of various sizes; how to make and utilize the results of age-grade-progress studies; analysis of the janitor's job; the selection, preparation, tenure, and promotion of teachers, and the legal rights of boards of education. For students desiring it the course will afford guidance in the discovery and statement of problems suitable for work toward the advanced degrees.

## 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 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

#### FOUR YEARS FOR MAJORS IN PSYCHOLOGY

Courses marked \* are given also by extension.

In addition to the core subjects listed on page 56, this department requires:

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

SECOND YEAR: Psychology 3.

THIRD YEAR: Psychology 104, 105, 106, 107, and 109, Biotics 101 or 201.

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

Students who wish to major in the curriculum for teachers of special schools and classes will take 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 numerated 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 the classroom.

\*2a. EDUCATIONAL PSYCHOLOGY—Second year. Every Quarter. Three hours credit, four hours recitation. Required of all students.

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

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.

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 curves 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 aesthetic 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.

105. PSYCHOLOGY OF THE HIGH SCHOOL SUBJECTS—Third year. Four hours. Required of Senior High School teachers and High School Principals. Winter and Summer Quarters.

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 co-operation on the part of the teachers of all of 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; psychology of classroom management; experimental work on the transfer of training in high school subjects; psychological analysis of subjects taught in high school; psychology of the methods employed in teaching the high school subjects; psychology of selecting subject matter in each one; the psychology of motivation and appreciation in the high school; individual differences in aptitudes and interests.

106. CLINICAL PSYCHOLOGY—Spring Quarter, 1926. 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 feeble-minded 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 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 kinds 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, 1926. 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.

113. VOCATIONAL PSYCHOLOGY—Winter and Summer Quarters, 1927. Four hours.

Purposes: (a) to acquaint the student with the nature of individual variations in the capacity for and efficiency in various kinds of vocational work; and to point out the causes and effects of these variations and the methods of detecting them; (b) to familiarize the student with the fundamental problems of a psychological nature which confront both the employment manager and the vocational counsellor.

Topics: the field and history of vocational psychology; the difficulties and limitations of applied psychology; the aims and requirements of the course; individual differences as applied to the vocational field, their causes and effects; some treatment of statistical procedures; popular systems of vocational guidance and their fallacies; the value of the personal interview with the applicant and its psychological aspects; how to supplement the interview with tests; trade tests as developed during the recent war; tests of endurance, speed, motor control, dexterity, sensory, and perceptual capacity; uses and limitations of intelligence tests in vocational work; assisting children in self-appraisal and the choice of a suitable vocation.

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—Any 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.

## FINE ARTS

The Department of Fine Arts aims to prepare teachers to meet all the demands made upon regular grade teachers in public and private schools from the kindergarten up through the high school in all branches of art, and to train special students to act as departmental teachers and supervisors. There are several courses for special students of Fine Arts and Commercial Art. The courses are open as electives to all students of the College.

The department occupies the entire second floor of Guggenheim Hall and is well equipped. In addition to the regular equipment there is a museum of ceramics, original paintings, and reproductions of masterpieces.

### COURSE OF STUDY

Two or four-year course in Fine and Applied Arts.

In addition to the core subjects as listed on page 56, this department requires:

FIRST YEAR: Fine Arts 1, 2, 3, 3a, 4a, 14, 16, and Industrial Arts 10.

SECOND YEAR: Fine Arts 4b, 5, 6, 7, 9, 11, 12, 13, 17.

THIRD YEAR: Fine Arts 100, 101, 102, 104, 108, and six hours of art to be selected by the student.

FOURTH YEAR: Fine Arts 103, 104a, 105, and six hours of art to be selected by the student.

1. METHODS OF TEACHING FINE ARTS IN INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—Winter Quarter. Four hours. Fee, 50 cents.

Freehand drawing, perspective, color, composition and design adapted to the needs of intermediate grades and junior high school. Mediums: pencil, charcoal, water color, chalk. Principles of teaching in connection with each unit of work.

2. METHODS OF TEACHING FINE ARTS IN PRIMARY GRADES—Fall and Spring Quarters. Four hours. Fee, 50 cents.

Freehand drawing, perspective, color, composition, and design adapted to the needs of the first four grades. Principles of teaching in connection with each unit of work.

3. FREEHAND DRAWING I.—Winter Quarter. Four hours.

Drawing in line, dark-and-light, and color. Study of the principles of composition and perspective. Reference texts: Dow's Composition, Norton's Perspective.

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

An introductory course devoted to the study of basic principles in art structure. Problems in spacing, value relation, and color harmony to produce fine quality in line and pattern.

4a. ART STRUCTURE II.—Winter Quarter. Three hours.

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

4b. DESIGN—Each Quarter. 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. Fall and Spring Quarters. Four hours.

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

6. ART APPRECIATION—Fall and Winter Quarters. One hour.

The essential structural elements of fine arts are taken up in illustrated lectures. The purpose of the course is to increase the students' power to interpret, select, and enjoy fine art.

7. CONSTRUCTIVE DESIGN—Winter 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—Fall 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 a large collection of photographs and lantern slides. Lectures with related reading.

11. HISTORY OF ARCHITECTURE—Spring Quarter. One hour.

Illustrated lectures on the development of architecture; interpretations of famous buildings.

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. APPLIED ART FOR PRIMARY GRADES—Fall and Winter Quarters. Four hours. Fee, \$1.50.

This course includes paper construction, cutting, stick-printing, weaving, clay modeling, toy making, stitchery, table problems, design, and color. Methods of teaching in connection with each unit of work. The relation of art to the industries. This course is intended for teachers of the first four grades.



14. APPLIED ART FOR INTERMEDIATE AND GRAMMAR GRADES—Fall and Spring Quarters. Four hours. Fee, \$1.50.

A study of art in the industries. Application of design and color to paper construction, basketry, bookbinding; block-print, toys, clay modeling. Relation of art to other subjects of the curriculum.

16. FREEHAND DRAWING II.—Spring Quarter. Four hours.

An intensive course requiring accurate drawing and close values. Charcoal drawing from casts.

17. LETTERING AND POSTER COMPOSITION—Fall and Spring Quarters. Two hours.

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

18. DRAWING AND DESIGN—Winter and Spring Quarters. Two hours.

The study of structural design and surface enrichment of furniture and crafts problems. This course is planned to meet the needs of manual training teachers.

100. SUPERVISION OF FINE ARTS EDUCATION—Spring Quarter. Two hours.

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

101. DRAWING FROM THE FIGURE—Spring Quarter. Four hours.

Figure construction, composition. Study from the costumed model. Mediums: pencil, charcoal, color.

102. DESIGN AND LETTERING—Winter and Spring Quarters. Two or 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.

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.

104. DESIGN AND COMPOSITION—Fall and Spring Quarters. Four hours.

Advanced design and color. Principles of design and ways of creating harmony in design and color.

105. 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.

108. POTTERY I.—Two or four hours. Fall and Winter Quarters. 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.

115. POTTERY II.—Two hours. Winter and Spring Quarters. Fee, \$2.00.

A course which stresses the decoration and glazing of pottery.

200. OIL PAINTING II.—Winter and Spring Quarters. Four hours.

An advanced course in composition and color. The work may be done outside of regular classes, to suit the convenience of the student. Regular criticisms will be given by the instructor in charge. The student must submit satisfactory evidence of having had sufficient preparation for this course.

202. RESEARCH IN FINE ARTS EDUCATION—Four hours.

This course is for students who wish to do research in connection with art subjects and problems of interest to art teachers.

## 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.

Two years or four years for majors in Geology, Physiography, and Geography.

In addition to the core subjects as listed on page 56, 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 Quarter. 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—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 1925.

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.

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.

\*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 in so far 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. Geographies often omit a study of outlying islands because they are chiefly concerned with the continents. This course is designed to fill this gap in the student's geographic knowledge—a gap that needs to be filled because of the strategic and historic importance of many island groups.

150. GEOGRAPHY OF COLORADO—Winter and Summer Quarters. Four hours.

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

## 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.

In nearly every phase of school work the teacher utilizes the subject matter of history, either directly in teaching or as supplementary material. History furnishes the background for an appreciation of the varied interests of the school; it is the basis of much of our thinking; and more and more it is assuming a prominent place in our daily experiences.

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 of practical value to teachers.

#### COURSE OF STUDY

Courses marked \* are given also by Extension.

In addition to the core subjects listed on page 56, this department requires:

**FIRST YEAR:** Political Science 1, History 27, 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, and 13; Political Science 2.

**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 at least twelve hours of Sociology, Economics, and Geography 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 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. **AMERICAN HISTORY, 1700-1800**—Fall and Spring 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. **AMERICAN HISTORY, NATIONAL DEVELOPMENT, 1820-1865**—Winter Quarter. Four hours.

Consolidation of the new West; the tariff controversy; financial readjustment; removal of the Indians beyond the Mississippi; westward expansion; Jacksonian democracy; the slavery controversy; secession and civil war; saving the Union; foreign relations; economics of the Civil War.

\*3. **RECONSTRUCTION AND THE NEW UNITED STATES**—Winter and Spring 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 Quarter. 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 Mediaeval period that vitally affected the development of the nations of western Europe. Development of important nations. The Reformation with its results upon both Catholic and Protestant churches. The new spirit of education and missionary zeal. Beginning of the expansion of European nations to other continents and the growth of colonial empires. National and religious rivalry in the seventeenth and eighteenth centuries. Growth of democratic ideas of government. Causes leading to the French Revolution. The revolutionary and Napoleonic eras in Europe with their resultant political, social, and economic changes.

**\*6. MODERN EUROPEAN HISTORY—Winter Quarter. Four hours.**

This is a continuation of Course 5. The Congress of Vienna and its attempt to restore Europe to what it was before the French Revolution. The new balance of powers. Continued growth of democracy. Social and political results of the spread of the industrial revolution. New spirit of radical socialism. Conflict between the new and the old ideas of science and religion. Continued growth of political democracy. Rise of Russia, Prussia, and Italy as important national states. Renewed colonial expansion, and the national rivalries that resulted from it. The Balkans and their problems. Break-up of the balance of power. New alliances. The World War. Versailles and since.

**\*10. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES—Fall and Spring Quarters. Four hours.**

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

**\*13. THE TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL—Spring Quarter. 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 Quarter. Two hours.**

This course deals with the world problems that have developed since the World War. Topics are selected that are of current interest and studied in the light of their historical development. These topics vary from year to year. Each year brings in some new problems that are pressing for solution and sees others eliminated that have temporarily been adjusted. Topics are selected from events in the United States, in South America, in Asia, and in Europe that touch the Americans in some important way. Much use will be made of current periodicals.

**101. COMMERCIAL AND FINANCIAL HISTORY OF THE UNITED STATES—Spring Quarter. Four hours.**

English commerce, its ideals, its regulation, and its effect upon colonial development on the continent of America. Chief characteristics of colonial commerce. Effect of the Revolution upon American trade. Encouragement of commerce by the new national government. Currency and banking reforms and their effect upon the trade of the United States. Effect of foreign relations upon the growth of shipping, foreign trade, and domestic commerce. The Civil War and its effect upon manufacturing, foreign commerce, currency and banking, and our carrying trade. Consolidation and government supervision. New adjustments that came with the World War and the commercial consequences that have followed. This course is especially designed to meet the needs of those who are expecting to teach commercial courses.

**\*102. ANCIENT SOCIAL HISTORY—Four hours. Not given 1925-1926.**

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—Summer Quarter, 1925, Spring Quarter, 1926. 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—Four hours. Not given 1925-1926.

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.

108. 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.

109. SECESSION, CIVIL WAR, AND RECONSTRUCTION. 1850-1870—Summer Quarter, 1925. Winter Quarter, 1926. 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.

\*116. SPANISH-AMERICAN HISTORY—Four hours. Not given 1925-1926.

A course designed to furnish a background for understanding the growing relations between the United States and the republics to the south. In tracing the experiences of the Latin-American people, attention is given to the work of Spain, to the securing of independence, to the social, political, and economic growth, to international relations and the Monroe Doctrine, to Panama, and the purchase of the Danish West Indies, and to the new Pan-Americanism.

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

\*124. HISTORY OF THE FAR EAST—Spring Quarter. Four hours.

This course is designed to enable teachers to understand the problems of the Far East. It includes a survey of the modern history of Japan and China; the growth of western ideas; the development of Japan as a first class power; the conflict of interests 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.

215. 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.

## POLITICAL SCIENCE

**\*1. GOVERNMENT OF THE UNITED STATES—Fall Quarter. Four hours.**

A detailed study of the origin of the federal government; the selection and powers of the president; congress and its relations to the other departments; the federal judiciary; conduct of elections; the actual work of the national government; foreign relations; the preservation of peace and the enforcement of law; the police power and social legislation; relations to the state and local governments.

**\*2. STATE GOVERNMENT—Winter 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.

**101. AMERICAN DIPLOMACY—Winter Quarter. Four hours.**

Foreign relations under the Federalists; establishment of an American foreign policy; Jefferson and the acquisition of Louisiana; arbitration of boundary disputes; the Monroe Doctrine; the open door policy; cooperation 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.

**103. POLITICAL SCIENCE—Four hours. Not offered, 1925-1926.**

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

## HOME ECONOMICS

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

It is now the policy of this department to recommend for elementary school positions those students who have had the work in high school and two years of creditable college work in the subject. This seems advisable because so many students are dependent on their own efforts to supplement scholarships or assistance given by parents.

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

## COURSE OF STUDY

Courses marked \* are given also by Extension.

In addition to the core subjects listed on page 56, this department requires:

FIRST YEAR: H. A. 1, H. A. 3, H. A. 4, and H. A. 4a; Home Ec. Ed. 1; Chem. 1, Chem. 2, Chem. 3; Bact. 1.

SECOND YEAR: H. A. 5, H. A. 6, H. Sc. 1, H. Sc. 2, H. Sc. 3 and H. Sc. 7; Eng. 15 or Eng. 16.

THIRD YEAR: Chem. 108, Chem. 109, Chem. 112; H. A. 102, H. A. 108, H. A. 109; H. Sc. 104.

FOURTH YEAR: H. A. 112; H. Sc. 103, H. Sc. 105, H. Sc. 106, H. Sc. 108; Home Ec. Ed. 111, Home Ec. 101.

## HOUSEHOLD SCIENCE

\*1a. FOODS AND COOKERY—Fall and Summer Quarters. Four hours. Fee, \$3.00.

Household Science 1, 2 and 3 are planned as consecutive courses. The courses include the study of foods from the standpoints of production, manufacture, composition, nutritive value, and cost. Food legislation is considered. Field trips are made to local food factories. A survey is made of the principles of cookery and their applications in the preparation of numerous typical dishes. Well balanced meals are planned and served at different costs per capita. Emphasis is placed upon the nutritive needs of the various members of the family group.

1b. A similar course adapted to students who have had no previous training in high school.

2. FOODS AND COOKERY—Winter Quarter. Four hours. Fee \$3.00. A continuation of 1a.

3. FOODS AND COOKERY—Spring and Summer Quarters. Four hours. Fee, \$3.50. A continuation of H. Sc. 2.

4. ELEMENTARY NUTRITION—Fall Quarter. Four hours.

A course designed for non-majors. No chemistry required. The fundamental principles of food selection in relation to body needs are considered in this course.

\*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.

102. HISTORY OF COOKERY—Winter Quarter. Two hours.

An historical study of the development of equipment, cooking processes and food habits from primitive to modern times. The causes of change in food habits and methods of cooking.

103. DIETETICS—Fall 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. Dieteries are planned and prepared to meet the needs of individuals from infancy to old age, also family dieteries which fulfill the requirements of each member with due consideration as to cost.



104a. DEMONSTRATION COOKERY—Spring and Summer Quarters. 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.

104b. CATERING—Spring and Summer Quarters. Three hours. Fee \$1.00.

105a. CHILD CARE—Winter and Summer Quarters. Two hours.

The subject matter of the course includes a study of prenatal care; the physical care of children from infancy through adolescence. The work of various agencies which are promoting child welfare and methods of organizing and conducting such work in schools and communities are included.

105b. DIETS IN DISEASE—Winter and Summer Quarters. Two hours. Fee \$1.50.

A study of nutrition as affected by disease. Diets for typical diseases are planned and prepared. Prerequisite: H. Sc. 103, Dietetics.

106. HOME NURSING—Fall and Summer Quarters. Four hours. Fee \$1.00.

Care of sick room and patient in the home. Study of contagious diseases, care of helpless patient, care of children and children's diseases. Making home-made articles for nursing. The diet of patient, preparing food for tray for different diseases. How to make the trays attractive to children as well as adults. Bandaging and First Aid.

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.

3a. GARMENT MAKING—Fall Quarter. Three hours.

The fundamentals of plain sewing taught as they should be presented in high school. This course is for students who have had no sewing in high school. Under-garments, middy and child's dress are completed in the course. The study of textiles should precede this course or should be taken during the same quarter.

3b. GARMENT MAKING—Fall Quarter. Three hours.

In methods much the same as H. A. 3a but adapted to the needs of students who have had previous training. In this the technic of sewing is stressed and in addition methods of teaching, the work as developed in the elementary school. Outlines of course suited to each grade. The study of the individual child and the adapting of courses to community.

4. MILLINERY—Fall, 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 of willow, wire, and buckram frames; the use of velvet, silk, and straw in hat making.

**\*5. DRAFTING AND PATTERN DESIGNING—Winter and Summer Quarters.** Four hours. Fee 50c.

This course is prerequisite to H. A. 6. The course includes drafting 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 Quarter.** 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. Made in linen or cotton fabric. Designing and making a sport outfit, wool skirt and appropriate blouse. This is for majors only. The patterns made in H. A. 5 are used in this class. A similar course is offered for majors who have had their preparatory work elsewhere.

**8. DRESSMAKING.**

A similar course to H. A. 6, offered to others than majors. This course is arranged to meet the increasing demands of residents in Greeley, and relatives of students who come to Greeley and wish to take special college classes. The garments made in this class are largely adapted to the needs of the individual.

**102. APPLIED DESIGN—Winter and Summer Quarters.** 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; proportion and balance in design. The application and design in 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, and in finishes and decoration. A dress of fine wool or silk material is made. The work is almost entirely hand work.

**110. ADVANCED TEXTILES—Winter Quarter.** Two hours.

In addition to the lectures given in this course two hours in Textile Chemistry is offered. A fee of \$1.50 is charged when the Chemistry is taken.

The lecture course includes a study of fine laces, tapestry, embroideries, and oriental rugs.

**112. HOME DECORATION—Spring and Summer Quarters.** Four hours.

The application of art principles to interior decoration. This course is studied from the standpoint of the artistic and practical side of the home. The study of the home as a unit; color harmony; line and proportion. Floor and wall finishing and covering. Window decoration, shades, curtains and draperies. The study of furniture and how to buy wisely. The room as a unit, placing of furniture to create balance. Selection of suitable pictures and how to hang them.

**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. 1—Winter and Spring Quarters.** Three hours.

The methods, subject matter and equipment used in teaching household science, and household arts in the elementary grades.

**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 secondary work.

HOME ECONOMICS 101. THE HOME—Fall and Summer Quarters. Two hours.

This course gives some of the problems that relate to every individual who expects to have a home or share in making better homes. "New Homes for Old" is its motto. Text: "Successful Family Life on a Moderate Income," Abel.

## HYGIENE AND PHYSICAL EDUCATION

One aim of education is vigorous aggressive health. This department's function is to assist in the realization of this aim through the following measures:

1. Health examinations of all students and specific hygienic instruction based on the findings in each case.
2. Personal health conferences with medical advisers for the purpose of assisting students to form wise health habits and correct faulty habits.
3. Promotion of health through directed physical activity, and through instruction in informational hygiene.

The department also provides a four year major course for those preparing for positions as teachers and supervisors of physical education or as athletic coaches. As more than one-half of all the states have recently passed compulsory physical education laws, requiring definite programs of physical education for all school children, the demand for trained teachers in this field exceeds the present supply.

The department is equipped with the necessary examination and class rooms, instructional apparatus, gymnasia, athletic fields, and playgrounds to accomplish the functions outlined above.

All first and second year students are required to take an active (exercise) course each quarter in residence. Where physical disability makes it inadvisable to participate in the regularly organized class activities, work in a corrective class, or other special regimen, depending on the needs of the student, is prescribed. *No one is excused from this requirement.*

A regulation gymnasium uniform is required for the activity courses. Satisfactory work cannot be done in regular street or school clothes. Students should not purchase suits before coming to Greeley, as they may not conform with the regulation uniform.

A four-year course is offered for which the Bachelor of Arts degree is granted. Students expecting to qualify for the life certificate to teach in the elementary schools of Colorado at the end of two years should major in primary and kindergarten or intermediate grade work and minor in Physical Education. If the life certificate is desired only upon the completion of the four year course, a major in physical education may be carried during the entire four years. The following tables outline the courses offered.

The courses listed below are divided into:

- I. Informational Courses and
- II. Practical or Activity Courses.

Of the courses in the informational group (Group I), Hyg. I is required of all students during the first year, and Hyg. 108 during the senior college years. Other courses in this group are intended primarily for physical education majors, but may be elected by students in other departments.

The activity courses (Group II) will satisfy the general college requirements for physical education.

## COURSE OF STUDY

In addition to the core subjects listed on page 56, the following courses are required of students expecting to graduate with physical education as a major.

## FOR WOMEN MAJORING IN PHYSICAL EDUCATION

FIRST YEAR: Hyg. and P. E. 5, P. E. 50a, 51, 53, 53a, 56, 57, 62, Hyg. 1, Lib. Sci. 1.

SECOND YEAR: Hyg. and P. E. 2, 2a, 12, P. E. 64a, 64b, 64c, Hyg. 108, Ed. Psych. 1, Mus. 14, H. E. 4.

THIRD YEAR: Hyg. and P. E. 111, 113, P. E. 150, 158, 162, Anthropol. 100.

FOURTH YEAR: Hyg. and P. E. 101, 102, 103, 106, P. E. 164, 167. Ed. Psych. 107, Biot. 101.

## FOR MEN MAJORING IN PHYSICAL EDUCATION

FIRST YEAR: Hyg. and P. E. 5, 13, P. E. 52, 66, (3 quarters); Hyg. 1, Lib. Sci. 1.

SECOND YEAR: Hyg. and P. E. 2, 2a, 66a, P. E. 55, 66 or 67, (3 quarters); Ed. Psych. 1.

THIRD YEAR: Hyg. and P. E. 108, 113, 165, 166, P. E. 162, Anthropol. 100 or Soc. 130. Ed. Psych. 107.

FOURTH YEAR: Hyg. and P. E. 101, 102, 103, 168, 169, P. E. 66 (3 quarters); Biot. 101, Eng. 100.

## GROUP I—INFORMATIONAL COURSE

1. INDIVIDUAL AND SOCIAL HYGIENE—Each Quarter. Three periods. Three hours

A first year course covering some of the essentials of personal and community hygiene. The course will aim 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.

✓ 2. ANATOMY—Fall Quarter. Four 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.

✓ 2a. APPLIED ANATOMY AND KINESIOLOGY—Winter Quarter. Three 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.

✓ 5. HISTORY OF PHYSICAL EDUCATION—Spring Quarter. Two periods. Two hours.

The place given to physical education in the life of different nations. The beginning of modern physical education; rise of the play and recreation movement; recent developments and status of physical education in public schools, colleges and universities.

9. CHILD AND SCHOOL HYGIENE—Winter Quarter. Four periods. Four hours.

A course in Child and Educational Hygiene. (See Educational Psychology 1.)

✓ 12. FIRST AID—Winter and Summer Quarters. Two periods. Two hours.

A course covering the usual subject matter on the right thing to do.

✓ 101. PHYSIOLOGY—Fall Quarter. Three periods. Three hours.

Lectures, demonstrations and recitations from text and general references on human physiology. A course for physical education students but open to others who expect to teach physiology.

✓102. **PHYSIOLOGY OF EXERCISE**—Winter Quarter. Three periods. Three hours.

A continuation of No. 101 with special emphasis on muscle-nerve physiology and the effects of muscular activity upon the various organs of the body.

✓103. **ANTHROPOMETRY AND PHYSICAL EXAMINATIONS**—Winter Quarter. Fourth year. Four periods. Four hours.

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 some biology.

105. **REMEDIAL GYMNASTICS**—Spring Quarter. Two periods. Two hours.

A course covering application of remedial, corrective, or individual gymnastics to different type cases. Theory and practice. Prerequisites P. E. 2 and 2a.

106. **RESEARCH IN PHYSICAL EDUCATION**—Fall Quarter. Five hours.

Before graduation, senior students select a problem for research, the outcome of which must be an acceptable essay or thesis. Required for graduation with physical education as a major subject.

108. **EDUCATIONAL HYGIENE**—Each Quarter. Three periods. Two hours.

A senior college course dealing with the problems of health instruction and health training of children. A general knowledge of hygiene is assumed. The course will deal primarily with the problems of effective instruction during the progress of the child through the school.

110. **OCCUPATIONAL HYGIENE**—Two periods. Two hours.

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.

✓111. **PUBLIC HEALTH**—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.

✓113. **ADMINISTRATION OF PHYSICAL EDUCATION**—Fall Quarter. Two periods. Two hours.

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

## GROUP II. EXERCISE COURSES

Students who are registering for the first time are required to enroll in some physical exercise course each quarter during the first two years. Courses numbered under 100 in general are the activity courses, fulfilling this requirement.

✓50a. **GYMNASTIC DANCING**—Spring Quarter. Three periods. One hour. No prerequisites.

A course for Physical Education students.

✓51. **LIGHT GYMNASTICS (WOMEN)**—Winter Quarter. Three periods. One hour.

✓53. **GYMNASTICS**—Fall Quarter. Five periods. Two hours.

A major activity and reference course for women during the first year.

54. **GYMNASTICS**—Winter Quarter. Five periods. Two hours.

A continuation of No. 53. For women major students in Physical Education.

✓ 56. SINGING GAMES AND ELEMENTARY FOLK DANCING—Either half or full quarter. Three periods. One-half or one hour.

A course for those desiring rhythmic material for the lower grades.

✓ 57. FOLK AND NATIONAL DANCES—Each Quarter. Three periods. One hour.

A selected list of folk and national dances suitable for school and playground use, especially for upper grade and high school groups.

58. ESTHETIC DANCING—Fall, Winter and Summer Quarters. Three periods.

Technic of the dance; the development of bodily co-ordination and rhythmic responsiveness are the aims of the course.

59. CLASSICAL AND NATURAL DANCING—Winter Quarter. Three periods. One hour. Advanced and technic and classical dances. Prerequisite course 58.

60. INTERPRETIVE AND NATURAL DANCING—Spring Quarter. Three periods. One hour. Prerequisite course 59.

61. SCHOOL GYMNASTICS—Each Quarter. Three periods. One hour.

Class organization and conduct, marching, free, dumb-bell, wand, and Indian club drills, principles of selection and arrangement of exercises, practice in organizing and leading drills, working out daily programs for different grades under school conditions.

✓ 62. PLAYS AND GAMES—Each Quarter. Three periods. One hour.

✓ 64. ATHLETICS FOR WOMEN—Each Quarter. Three periods. One hour.  
A course in group and team games. Play material suitable for upper grades and high schools will be presented.

65. RECREATION COURSE—Summer Quarter. Three periods, each half quarter. One-half or one hour.

Group games, tennis and swimming are emphasized. Special fees for tennis and swimming.

68. CORRECTIVE GYMNASTICS.

A course for those who are not able to take the regular class work. A special regimen, depending on the disability, is worked out for each individual case. Students are admitted to this course only upon recommendation of medical advisers or by the director of physical education.

69. SPECIAL COURSE—Each Quarter.

For students whose outside work earning a living make it impractical to take the regular work, an irregular work course is provided, no-credit. Special permission from Dean of College or the Director or Phys. Ed. department necessary for admission.

✓ 150. CHARACTERISTIC DANCING—Winter Quarter. Three periods. One hour. Prerequisites, Nos. 57 and 58.

A course for Majors in Physical Education.

✓ 158. DANCING METHODS—Spring Quarter. Five periods. Three hours.

A course for students majoring in Physical Education.

✓ 162. PLAYS AND GAMES—Fall Quarter. Five periods. Three hours.

Third year major course. A selected list of games and activities suitable for intermediate grades and the vacation playground. A lecture discussion and practice course. Two lectures and three practice periods each week. Theories and applications of play in modern education; play and athletics from an educational point of view are among the topics considered. A third year course for students majoring in Physical Education but open to others interested in this phase of school work.

164. ATHLETICS (WOMEN)—Fall Quarter. A fourth year course for majors in Physical Education. Five periods. Three hours.

This course will deal with the rules, development of skill, and the coaching of sports and games suitable for upper grade and high school girls.

167. ATHLETIC COACHING PRACTICE—Each Quarter. Third or fourth year. Five periods. Two hours.

A course for qualified students desiring additional practical experience in coaching various sports under supervision.

## 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 historic 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 by Extension.

Two, three or four years for major in Industrial Arts. In addition to the core subjects as listed on page 56, this department requires:

**FIRST YEAR:** Ind. Arts 11, 12 and at least 12 hours in addition in two of the following fields: Woodworking, printing, art metal, drafting, book-binding.

**SECOND YEAR:** Ind. Arts 5, Art 11, two hours in a selected course in Fine Arts and 12 hours in two of the fields listed in first year.

**THIRD YEAR:** Ind. Arts 104, 117 and at least 32 hours of work in two of the fields listed in the first year.

**FOURTH YEAR:** Ind. Arts 105, 118, and at least 48 hours in two of the fields named in the first year.

## INDUSTRIAL ARTS MAJORS

1. Students not prepared to do regular beginning collegiate courses will be required to do extra work in special sections.
2. Credit for extra work in special sections shall be withheld until work is completed in a second quarter of each subject.

## NON-MAJORS

Non-Majors in Industrial Arts are not subject to Section 2 above.

**INDUSTRIAL ARTS I.**—Technic and Theory of Woodworking. Every Quarter. Two or four hours. Fee \$1.00 or \$2.00.

This course is especially arranged for primary and kindergarten majors and deals with such types of work as will be found most useful in either the kindergarten or in the primary grades.

**INDUSTRIAL ARTS Ia.**—Technic and Theory of Woodworking I. Fall, Winter, 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.**—Every Quarter. Four hours. Fee \$2.00.

This course is a continuation of Course 1 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—Fall and Spring Quarters. 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. TOY CONSTRUCTION—On request. Four hours. Fee \$2.00.

The purpose of this course is to train the teacher in the construction of toys, bird houses, etc. The making of original designs will be emphasized. This course should appeal to those taking kindergarten and grade work.

\*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—On request. 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.

\*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 projections, simple working drawings 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.—Fall 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.—Winter 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—On request. Three hours.

This course is designed to train students to care for, repair and adjust hand and power tools of the woodworking department.



19. WOOD TURNING—Winter Quarter. Four hours. Fee \$1.00.

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—Every Quarter. Two 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—Every quarter. 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—Every Quarter. Four hours. Fee \$1.00.

Balance, proportion, simplicity, harmony, etc., as applied to the designing and producing of good printing.

32a. INTERMEDIATE PRINTING—Every Quarter. Two 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, letter heads, posters, etc.

32b. INTERMEDIATE PRINTING—Every Quarter. Four hours. Fee \$1.00.

Production of title pages, covers, menus, etc.

32c. INTERMEDIATE PRINTING—Every Quarter. Four hours. Fee \$1.00.

Continued practice in producing more pretentious pieces of work of the classes named in 2a and 2b.

41a. ELEMENTARY BOOKBINDING—Fall and Spring Quarters. 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—Fall and Winter Quarters. 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—Winter Quarter. Four hours. Fee \$1.00.

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers. Some of the type projects undertaken are the making of travelers' full leather writing cases, music cases and a variety of other art leather pieces.

42b. INTERMEDIATE BOOKBINDING—Spring 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.

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—Winter 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, motors and gas or steam engines.

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—On request. Four hours. Fee \$2.00.

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing and key joining. These technical processes will be worked out on individual projects.

124. MACHINE WORK—On request. Four hours.

This course is designed to give the student a general knowledge of the care and operation of woodworking machinery. The setting of cutters and their manipulation embraces the general basis of this course.

## 125. CLASS MANAGEMENT—On request. Three 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—Every quarter. 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—Every Quarter. Four hours. Fee \$1.00.

Special work in cutting and printing of linoleum blocks. Hand-lettering and its application to printing.

## 134a. PRACTICAL NEWSPAPER WORK IN PRINTING—Every Quarter. 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—Every Quarter. Two hours.

Estimating and work dealing with the cost of printing.

## 136. SHOP MANAGEMENT IN PRINTING—Every Quarter. 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 WORK—Fall Quarter. Four hours. Fee \$1.00.

## 143b. ADVANCED LEATHER CRAFT ART WORK—Winter Quarter. 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.

## LIBRARY SCIENCE

The main Library of the College contains about 58,200 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 which with the exception of the first are

intended for part of the third and fourth year's work leading toward the degree of Bachelor of Arts.

The following electives are suggestive unless already covered:

Typewriting 11 and 12.

Art 4b, 6, 9, and 17.

Languages; Twelve hours of French, German, or Latin.

Education 51.

Literature and English 6, 8, 9, and 10.

Bookbinding, Eight hours.

#### COURSE OF STUDY

In addition to the core subjects offered on page 56, the following, are required for library majors.

1. **ELEMENTARY LIBRARY COURSE**—Each Quarter. One hour. No credit given except to first year students.

An introductory course intended to familiarize the student with the arrangement of the books and general classification scheme of the library. A brief study is made of the catalogs and various indexes; also the standard books of reference, dictionaries, encyclopedias, etc., the purpose being to acquaint the student with the most ready means of using the library.

102. **RECEIPT AND PREPARATION OF BOOKS**—Fall Quarter Two hours.

This course includes checking bills, collating, mechanical preparation of books for the shelves, care of books, physical make-up of the book, paper, binding, illustrating, aids and methods in book selection, etc. A good form of library handwriting must be attained in this course.

103. **CLASSIFICATION AND CATALOGUING**—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. The dictionary 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**—By request. 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.

106. **SCHOOL LIBRARIES**—By request. Fall Quarter. Three hours.

Organization, relation between the public library and the school. The field of each. Story telling, evaluation of children's literature. Illustrators.

107. **ADMINISTRATION AND HISTORY OF LIBRARIES, TRAVELING LIBRARIES, COUNTY LIBRARIES**—By request. Two hours.

108. **PRACTICAL WORK IN THE LIBRARY**—By request. Five hours. Time required, two hours a day, plus optional work by the student.

This is allowed only to those who have taken courses 2, 3, and 4, 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 literature; 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. This is designated the English 4 Exemption Test. Those who secure a grade below 75 per cent are required to take one quarter of English 4 work. This class work gives opportunities for review of grammar, but also contains work in composition and in methods that is professionalized and collegiate. Experience has shown, however, that in mixed groups students who are extremely deficient in the use of English fail to improve sufficiently to pass the exemption test at the end of a quarter's study. It is evident, then, that such students should have opportunities to study specifically those matters of grammar in which their habits are incorrect.

On February 19, 1924, the faculty voted as follows: All College students shall be classified according to their standing in the English 4 Exemption Test. Those in the highest quartile shall be excused from taking the class work in English 4 and shall be eligible to take English 20 (Intermediate Composition). Those in the second and third quartile shall be required to take English 4 in class. Those in the lowest quartile shall be required to take work in English composition and grammar of secondary grade, without college credit.

#### COURSE OF STUDY

Courses marked \* are given also by Extension.

Two years or four years for majors in Literature and English.

In addition to the core subjects as listed on page 56, this department requires:

FIRST YEAR: Library Science 1, and English 3, 4, 8, 9, 10, and 11.

(Students may be excused from English 4 by passing the English 4 Exemption Test. This is given at 2 p. m. on the day after Registration Day in Room 214. Fee, 25 cents.)

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

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.

\*1. MATERIAL AND METHODS IN READING AND 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 somewhat flexible course, affording opportunity for intensive work within the scope of any grade or grades, according to the individual need or preference.

2. TEACHING OF WRITTEN ENGLISH—Fall, Winter and Summer Quarters. 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.

3. PUBLIC SPEAKING AND ORAL COMPOSITION—Every Quarter. Three hours.

The endeavor of this course is to establish the student in habits of accurate speech, and to encourage fluency, vigor, and the logical marshaling of his thought in discourse of varied types, including exposition, description, narrative, oratory, argumentation, free dramatization.

4. SPEAKING AND WRITING ENGLISH—Required of all students unless they pass the English 4 Exemption Test. 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.

\*8. THE HISTORY OF ENGLISH LITERATURE—Fall Quarter. Four hours.

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

\*9. THE HISTORY OF ENGLISH LITERATURE—Winter Quarter. Four hours.

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

\*10. THE HISTORY OF ENGLISH LITERATURE—Spring and Summer Quarters. Four Hours.

A reading course following the development of our literature from 1798 to 1900.

11. THE ENGLISH LANGUAGE—Winter, Spring and Summer Quarters. Four hours.

Historical development of the English language. Etymologies, word origins, connotations, etc.

12. VOICE CULTURE—Fall and Spring Quarters. Four hours.

Technical drill for freedom, flexibility, and expressiveness of voice. Exercises for clear-cut, accurate articulation. Interpretation of units of literature adapted, by their range of thought and feeling, to develop modulation, color, and variety of vocal response.

None of this drill is mechanical; even the technical exercise is controlled by a variety of concepts embodying the qualities sought.

13. THE ART OF STORY TELLING—Winter, Spring, and Summer Quarters. Three hours.

The study of the main types of narrative, with emphasis upon diction and manner suitable for each. Practice in the art of story telling. Open only to Intermediate and Rural School majors.

14. DRAMATIC ART—Fall Quarter. Four hours.

The technic of the drama. The analysis and group interpretation of plays. The content of the course varies from year to year. Open only to students who have taken or are taking English 3. (See also English 114.)

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, and Junior High School majors.

16. CONTEMPORARY LITERATURE—Every Quarter. 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. We want to help them to form a discriminating taste for reading and to acquire a liking for reading, so that they will be alive to what the world is thinking, feeling, doing, and saying after they leave college.

17. COMEDY: A LITERARY TYPE—Summer Quarter. Four hours.

The consideration of comedy as a type of drama, with intensive and comparative study of a Shakspearean comedy. The group interpretation of a Shakspearean comedy on the campus. Sometimes, when the class is large, other programs of standard plays are also given.

18. DEBATING—Fall Quarter. Two hours.

A practice course in debating open to any student interested in interclass and intercollegiate debating. The teams for the intercollegiate debates are chosen at the end of the quarter from the students enrolled in this group.

19. DEBATING—Winter Quarter. Three hours.

Those students who were selected for the intercollegiate debaté 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—Spring and Summer Quarters. Prerequisite, English 4, Four hours.

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

\*31. THE SHORT STORY—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. The course is based upon Mr. Cross' book, "The Short Story," supplemented by O'Brien's "The Best Short Stories" and other recent volumes. Current magazine stories are also used. Offered next in Summer, 1926.

100. JOURNALISTIC WRITING—Fall Quarter. Three hours. A first course in journalism.

A course in advanced English composition, based upon newspaper and magazine work. This course is designed primarily in the interest of those majoring in English who expect to teach journalism in the high schools or may be called on to act as sponsors or advisers for school papers. Every type of composition used in practical news and magazine writing is used in this course.

101. JOURNALISTIC WRITING—Winter Quarter. Prerequisite, English 100. Three hours.

A continuation of English 100. A course in advanced English composition based upon newspapers and magazine work. Every type of composition used in practical news and journalistic writing is used in the course.

102. JOURNALISTIC WRITING—Spring and Summer Quarters. Prerequisite, English 100, 101. Three hours.

A continuation of English 101.

103. ADVANCED PUBLIC SPEAKING—Winter Quarter. Three hours.

A senior college course for students who wish to get more practice under direction than is given in English 3. Open only to those students who have had elementary public speaking in this college or elsewhere.

105. ORAL ENGLISH IN THE HIGH SCHOOL—Fall and Summer Quarters. Three hours.

The discussion of practical problems concerning the direction of oral English in the secondary school, oral composition, literary society and debating activities, festivals, 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 1926.

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.

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108. COMPARATIVE LITERATURE—Italian, Spanish and French. Winter Quarter. Four hours. Offered next in 1927.

A study of literary elements and influences deriving from Mediæval and Renaissance cultures; a review of the trends of modern romance literatures; 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 1927.

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. ADVANCED DRAMATIC ART—Winter Quarter. Four hours. Prerequisite, English 14.

A lecture and laboratory course designed primarily for teachers and students who intend to engage in the work of play production, either in the schools or in Little Theatre or Children's Theatre work. It is planned to give the student a general knowledge of theatrical technic, including staging, lighting, and the art of make-up; and of play rehearsal including casting and directing. Consideration is also given to the choice of material for amateur theatricals.

116. THE FESTIVAL—Summer Quarter. Three hours.

The study of historical or racial festival, its origin, forms, and various elements. Research and original work in outlining unified festival plans for schools or communities, reflecting some significant event or idea, or some phase of civilization.

120. LYRIC POETRY—Winter and Summer Quarters. Four hours. Offered next in 1926.

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. NINETEENTH CENTURY POETRY—Fall Quarter. Four hours. Offered next in 1925.

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 1926.

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

\*125. NINETEENTH CENTURY PROSE—Fall and Summer Quarters. Four hours. Offered next in 1926.

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

126. THE INFORMAL ESSAY—Fall and Summer Quarters. Three hours. Offered next in 1925.

A study of the familiar essay for the purpose of determining the nature and form of this delightful phase of literary composition. The method in this course is similar to that pursued in the short story; namely, a reading of a number of typical essays as laboratory material for a study of technic and theme.

\*127. SHAKESPEARE'S COMEDIES—Fall and Summer Quarters. Four hours. Offered next in 1925.

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. SHAKESPEARE'S HISTORIES—Winter Quarter. Four hours. Offered next in 1926.

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

129. SHAKESPEARE'S TRAGEDIES—Spring and Summer Quarters. Four hours. Offered next in 1926.

The completion of the year's work in Shakspeare.



130. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPERE—Fall Quarter. Four hours. Offered next in 1926.

A knowledge of the dramatic literature of the early seventeenth century is incomplete without an acquaintance with the contemporaries and successors of Shakespeare from about 1585 to the closing of the theatres 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. Offered next in 1927.

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. LITERATURE OF THE BIBLE—Winter and Summer Quarters. Three hours.

This course gives a general view of the literature of the Bible from the Period of Exile. It continues with the study of the work of Jeremiah, the book of Ezekiel and the writings of the other great Prophets. The New Testament is studied from the point of view of the origin and purpose of each of its books. Special references will be given to the Pauline Epistles and the Book of Acts.

230. RESEARCH IN ENGLISH.

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.

## MATHEMATICS

All courses in the department are given with a keen appreciation of the modern demand for vitalization of school work. In consequence, the material is presented in such a way as to furnish as many points of contact with real life as possible, and to give the student a comprehensive grasp of the principles of the subject under consideration.

### COURSE OF STUDY

Courses marked \* are given also by Extension.

In addition to the core subjects listed on page 56, this department requires:

FIRST YEAR: Mathematics 2, 5, and 6.

SECOND YEAR: Mathematics 7, 8, 9, or 108.

THIRD YEAR: Geography 113, Mathematics 100, 100a, or 100b, 101, 102.

FOURTH YEAR: Sixteen hours of Mathematics selected by the student.

\*1. SOLID GEOMETRY—Spring and Summer Quarters. Four hours.

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

\*2. PLANE TRIGONOMETRY—Fall, Spring, and Summer Quarters. Four hours.

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

4. SURVEYING—Spring Quarter. 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.

\*5. COLLEGE ALGEBRA—Fall, Spring, 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 function and its graph.

\*6. COLLEGE ALGEBRA—Winter 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. ANALYTIC GEOMETRY—Fall and Summer Quarters. Four hours. Prerequisite, Math. 2.

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.

8. THE TEACHING OF ARITHMETIC—Fall, Winter, and Summer Quarters. Two 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.

\*9. THE TEACHING OF ARITHMETIC—Spring Quarter. Four hours.

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

\*100. THE TEACHING OF SECONDARY MATHEMATICS—Fall Quarter. Four hours.

This course is designed to place before the prospective teacher the best educational thought of the day relating to high school algebra, geometry, and trigonometry. Consideration is given to the educational value of these subjects, to the recent improvements in teaching them, and to all problems arising in the work of the modern teacher of secondary mathematics.

100a. THE TEACHING OF ALGEBRA—Winter and Summer Quarters. Two hours.

This course 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.

100b. GEOMETRY FOR TEACHERS—Winter and Summer Quarters. Two hours.

This course 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.

\*101. DIFFERENTIAL CALCULUS—Winter and Summer Quarters. Four hours.

Prerequisites: Math. 2, 5, 6, and 7. An introduction to the powerful subject of the calculus. While care is taken to see that the formal sides 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.

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

\*103. THEORY OF EQUATIONS—Fall Quarter. Four hours.

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

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.

108. JUNIOR HIGH SCHOOL MATHEMATICS—Spring and Summer Quarters. Two 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—Winter Quarter. Four hours.

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

\*201. DIFFERENTIAL EQUATIONS—Spring Quarter. Four hours.

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

202. ADVANCED INTEGRAL CALCULUS—Spring Quarter. Four hours.

Prerequisites: 2, 5, 6, 7, 101, 102. In this course the work of the preceding course in integral calculus is rounded out and extended.

## 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 recitals. 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 the 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, including voice, in which they apply for further work. Second grade work must be equal to the following standard: sonatines 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

Prerequisite examination must be taken in piano work.

The maximum credit 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 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 also by Extension.

In addition to the core subjects listed on page 56, this department requires for majors in public school music:

FIRST YEAR: 1, 2, 20, 22, 40, 101.

SECOND YEAR: 3, 4, 10, 11, 21, 23, 40, 101.

THIRD YEAR: 40, 100, 101, 103, 104, Ed. 2c.

FOURTH YEAR: 40, 101, 105, 106, 107, 108, 114, 120, 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. SIGHT SINGING—Every Quarter. Three hours.

This course is offered each quarter of the regular year and the first half of the summer quarter. It is a non-credit course prerequisite to Mus. 1b. Students who pass a proficiency test in sight singing at the beginning of the quarter will register at once for Mus. 1b. Rudiments of music such as staff, key signature, time signature, clef signature and major, minor and chromatic scales are explained, and the larger portion of time is given over to the actual drill in sight singing.

#### 1b. ADVANCED SIGHT SINGING—Fall Quarter. Two hours.

This course is offered in the fall quarter and is given for the benefit of music students who expect to become supervisors of music. Choral music of a high type will be read and studied with special reference to speed, accuracy and expression. Required of all music majors.

#### 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 study 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. Prerequisite Music 2.

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 the higher discords and modulations. Required of music majors.

10. KINDERGARTEN—PRIMARY METHODS—Fall, Spring and Summer Quarters. Three hours.

The sensory period. 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. Prerequisite Music 1.

11. INTERMEDIATE METHODS—Winter and Summer Quarters. Three hours.

The associative or drill period. 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. Prerequisite Music 1.

12. RUBAL SCHOOL MUSIC—Winter Quarter. Three hours.

Materials and methods of presentation. Classification of voices. School programs. Drill. Simple folk-dances and singing games. The teaching of music appreciation. Mimetic play. Christmas caroling. Conducting the community sing. The music contest. Its development and manner of judging. The music project. Survey of various state courses in rural school music.

\*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. This subject is made an interesting course. 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—Fall, Spring, and Summer Quarters. Three hours.

A course open to all who want 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—Winter 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 \$1.50.

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers.

31. INDIVIDUAL PIANO LESSONS—Every Quarter. One hour. Fee \$1.25 and \$1.50.

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 \$1.50.

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 is carefully supervised.

33. **INDIVIDUAL PIPE ORGAN LESSONS**—Every Quarter. One hour.  
Fee \$1.50.

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.

35. **INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS**—Every Quarter. One hour. Fee \$1.25.

Each instrument is carefully taught by a competent instructor and special attention is given to beginners.

36. **INDIVIDUAL 'CELLO LESSONS**—Every Quarter. One hour. Fee \$1.25.

Modern methods are used and a thorough course is given presenting the best music literature for the 'cello.

40. **BEGINNERS 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**—Winter Quarter. One hour.

Entrance upon examination. This club prepares a program and makes an extended tour of Colorado and of near-by states.

42. **SCHUMANN GLEE CLUB**—Every Quarter. 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.

101. **COLLEGE CHORUS**—Fall Quarter. 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. Two hours.

The rules of harmony are here applied to polyphonic writing. Required of majors in music. Prerequisite Music 4.

104. **ADVANCED COUNTERPOINT**—Winter Quarter. Two hours.

Continuation of Music 103. Required of majors in music.

105. **BEGINNING ORCHESTRATION**—Fall 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**—Winter Quarter. Three hours.

Continuation of Music 105. Required for a degree in music.

107. **FORM ANALYSIS**—Winter Quarter. Two hours.

Analysis will be made of the smaller forms in music, also of symphonies from Haydn down to the present. Prerequisites Music 104 and 106. Required of majors in music.

108. **ADVANCED FORM ANALYSIS**—Spring Quarter. Two 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 and music in all forms is studied with special reference to the directors' problems.

120. SCHOOL ENTERTAINMENT—Spring and Summer Quarters. Two hours.  
A materials class for programs on all occasions: Thanksgiving, Christmas, Commencement, etc.

122. APPRECIATION FOR THE CONCERT GOER—Winter and Summer Quarters. One hour.

Different phases of the subject of music will be discussed and illustrated including composers, style in music, construction of symphonies and opera and it will be shown how different composers effected the advance and development of music.

130. INDIVIDUAL VOCAL LESSONS AND METHODS—Every Quarter. One hour. Fee \$1.50.

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 \$1.25 and \$1.50.

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 \$1.50.

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. Fee \$1.50.

An advanced course in organ playing combined with instruction in teaching the instrument.

134. INDIVIDUAL 'CELLO LESSONS AND METHODS—Every Quarter. One hour. Fee \$1.25.

Discussions will be held with special regard to the methods pursued in teaching the 'cello.

200. RESEARCH IN PUBLIC SCHOOL MUSIC—Four hours.

## PHYSICS

The various courses to be given by the Physics Department have a double purpose in view: first, to give the student an adequate knowledge of theoretical and applied physics; second, to develop in close cooperation with the students more efficient methods of teaching this subject in secondary school and college. Although the former is essential, the latter constitutes the problem proper in a teachers college.

In our century of intense industrialism, the role of physical science has become of such importance that its place in the public school curriculum ought to be carefully reconsidered. The Physics Department of Colorado State Teachers College is, therefore, facing the two-sided problem:

1. What ought to be the purpose and organization of physics teaching in a progressive school?

2. What ought to be the best organization of physics teaching under existing conditions?

These two sides of the problem will constantly be kept in view in all courses given by the Physics Department.

#### COURSE OF STUDY

Two years or four years for majors in Physics.

In addition to the core subjects, as listed on page 56, this department of Physics requires:

FIRST YEAR: Physics 1, 2 and 3; Chemistry 1, 2 and 3.

SECOND YEAR: Physics 11, 14 and 15; Math. 2, 5 and 6.

THIRD YEAR: Physics 20, 107 and 108; Math. 7, 101 and 102.

FOURTH YEAR: Physics 111 and 121; Math. 103.

1. MECHANICS AND HEAT—Fall Quarter. Four hours. Fee \$3.00.

An elementary course. Lectures and discussion including one three hour laboratory period.

2. ELECTRICITY AND MAGNETISM—Winter Quarter. Four hours. Fee \$3.00.

A continuation of Physics 1.

3. SOUND AND LIGHT—Spring Quarter. Four hours. Fee \$3.00.

A continuation of Physics 1 and 2.

10. HOUSEHOLD PHYSICS—(For household Students)—Spring Quarter. Four hours. Fee \$3.00.

Physical laws applied to the needs of the household or to the life of the community at large will be emphasized in a series of topics and projects taken from the immediate environment.

11. HEAT—ADVANCED COURSE—Fall Quarter. Four hours. Fee \$3.00.

This course will include a simple exposition of different theories of the nature of heat, its effect upon matter, its physiological and climatic effects; its relation to other forms of energy, and, finally, the application of a few fundamental principles of thermodynamics to gas and steam engines.

14. SOUND—ADVANCED COURSE—Winter Quarter. Four hours. Fee \$3.00.

This course will deal with the nature of sound, the laws of its propagation, reflection, interference, and re-enforcement as well as their application to musical and technical instruments.

15. LIGHT—ADVANCED COURSE—Spring Quarter. Four hours. Fee \$3.00.

An elementary exposition of Huyghens' theory of light will make the light phenomena more intelligible. The study of mirrors, lenses, and prisms will lead toward experiments and projects on such instruments as the microscope, telescope, spectroscope, as well as to the study of photography and color photography.

20. ORGANIZATION OF PROJECTS IN ELEMENTARY PHYSICS—Four hours.

This course is of importance to prospective science teachers. The course is based upon projects including demonstration and laboratory experiments.

103. ELECTRICAL PHENOMENA AND RADIO COMMUNICATION—Fall Quarter. Four hours. Fee \$3.00.

A course for prospective physics teachers. Lectures and laboratory. Oscillatory circuits, vacuum tubes, radiation, telegraphy and telephony. (Prerequisite Physics 2).



107. THE HISTORY OF EPOCH-MAKING DISCOVERIES IN PHYSICS—Winter Quarter. Two hours.

The purpose of this course is to bring out the historical conditions under which the great discoveries were accomplished. The struggle that the natural philosophers have had to carry out in all ages against their contemporaries, imbued either with traditional superstition or with prejudice, their unyielding and often heroic determination to vanquish and subdue the forces of Nature for the benefit of mankind, ought to form one of the corner-stones in the teaching of history in the public schools.

108. METHOD OF TEACHING PHYSICS IN ELEMENTARY AND HIGH SCHOOLS—Fall Quarter. Four hours. Fee \$3.00.

This course is intended for teachers of both Physics and General Science. Its main purpose is the organization of projects, experiments, and "red-letter" lessons in elementary physics.

111. PROJECTS BASED UPON THE STUDY OF THE AUTOMOBILE—Winter Quarter. 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.

121. PROJECTS BASED UPON THE STUDY OF DIRECT AND ALTERNATING CURRENTS—(Prerequisite: Physics 2 and 103). Spring Quarter. 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 accompanied by problems, experiments and projects on D. C. and A. C. generators, motors, telephone, telegraph, wireless, etc.

## ROMANCE LANGUAGES AND LATIN

The Department of Romance Languages and Latin offers five years of instruction in French and Spanish and three years instruction in Latin.

Other languages, Italian and Portuguese, may be offered when ten or more students request such instruction.

All courses are taught according to the direct method and in all advanced classes but little English is used.

Courses numbered 131 in all languages are taught chiefly in English. It is expected that a student beginning a course in languages during the Fall Quarter will continue this course during the year.

Students in beginning French or Spanish are expected to complete 12 hours work before receiving any credit.

On February 19, 1924, the Faculty voted as follows:

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

### MAJORS IN FOREIGN LANGUAGES

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, Romance Language majors should have their programs for each quarter's work specially approved by the Registrar.

## ANY STUDENTS

1. Collegiate grade beginning language work shall materially exceed in amount the elementary language work that is offered in secondary schools.

## COURSE OF STUDY

Courses marked \* are given also by Extension.

In addition to the core subjects listed on page 56, this department requires:

## SPANISH

1. **ELEMENTARY SPANISH**—Fall and Summer Quarters. Four hours.  
Wagner's Spanish Grammar. Ray's Elementary Spanish Reader. Writing from dictation and practice in speaking.
2. **ELEMENTARY SPANISH**—Winter Quarter. Four hours.  
Wagner's Grammar complete. Hill's Spanish Tales for Beginners. Short themes on Spanish life. Considerable practice in speaking Spanish.
3. **ELEMENTARY SPANISH**—Spring Quarter. Four hours.  
Carrasco's La Mariposa Blanca and Broomhall's Spoken Spanish. Original short themes on Spanish-American life.
5. **INTERMEDIATE SPANISH**—Fall and Summer Quarters. Four hours.  
Prerequisite: Courses 1, 2, and 3 or two years of high school Spanish. Composition, conversation and extensive reading. Cool's Spanish Composition; Benavente's Tres Comedias; Escrich's Amparo. Conducted chiefly in Spanish.
7. **INTERMEDIATE SPANISH**—Winter Quarter. Four hours.  
Daily themes selected from every day facts. Valdes' La Hermana San Sulpicio; Caballero's Un Servilon y un Liberalito; Cuentos Mexicanos, by Johnson.
9. **INTERMEDIATE SPANISH**—Spring Quarter. Four hours.  
Alarcon's El Sombrero de Tres Picos, El Final de Norma, Novelas Cortas y El Niño de la Bola and one other selected work by Alarcon for outside reading. Conducted in Spanish.
105. **ADVANCED SPANISH**—Fall and Summer Quarters. Four hours.  
Spanish drama of the 17th, 18th and 19th centuries. Prerequisites: Two years of college Spanish, or three years of high school Spanish. Five of the following to be read in class, and five outside of class: Lope de Vega's La Moza de Cantaro and La Estrella de Sevilla; Tirso de Molina's La Prudencia en la Mujer and El Burlador de Sevilla; Alarcon's La Verdad Sospecha; Moreto's El Desden con el Desden; Calderon's La Vida es Sueño and El Magico Prodigioso; Hartzenschuch's Los Amantes de Teruel and Tamayo's Un Drama Nuevo.
107. **ADVANCED SPANISH**—Winter Quarter. Four hours.  
Galdos's Doña Perfecta and Marianela; Bardin's Leyendas Mexicanas; Bazan's El Tesoro de Gaston. Crawford's Spanish Composition.
109. **ADVANCED SPANISH**—Spring Quarter. Four hours.  
The History of Spanish Literature, by Fitz-Maurice-Kelley; Havelock Ellis' The Spul of Spain; Cervantes Novelas Ejemplares; Rueda's La Hija de Montezuma. History of Spanish-American Literature, by Gamboa.
225. **GRADUATE SPANISH**—Fall and Summer Quarters. Four hours.  
Selections from Mesonero Romanos; Romera-Navarro's La America Española; Ford's old Spanish Readings; Juan de Valdes' Dialogo de la Lengua. A knowledge of Latin, French, German, and Italian of great advantage in this course, but not required.
227. **GRADUATE SPANISH**—Winter Quarter. Four hours.  
A critical study of the life and works of Cervantes, Velez Guevara, Corrauas and Quevedo. Selections from Don Quijote, El Diablo Cojuelo, Amar sin Saber a Quien, and Quien es Ella? Original themes on the passing of Latin words into Spanish.

131. THE TEACHING OF SPANISH IN HIGH SCHOOLS—Summer and Spring Quarters. Four hours.

All the most recent methods available for this work will be reviewed. Some fifty of the best known texts now in use in both high schools and colleges will be examined, and "resumens" made by members of the class. A series of 20 lectures illustrated by lantern slides of all the countries of Spanish speech; Spain, Cuba, Porto Rico, Central America, Mexico, and all the countries of South America except Brazil.

FRENCH

1. ELEMENTARY FRENCH—Fall and Summer Quarters. Four hours.

McKenzie and Hamilton's French Grammar and Meras' *Le Premier Livre*.

2. ELEMENTARY FRENCH—Winter Quarter. Four hours.

Grammar completed and Meras *le Premier* and *le Second Livre* completed.

3. ELEMENTARY FRENCH—Spring Quarter. Four hours.

*La Perle Noir*, by Kurz; *Rosalie and Le Chauffeur*, by Maurey, *Contes de Daudet*. Practice in speaking and writing French.

5. INTERMEDIATE FRENCH—Fall and Summer Quarters. Four hours.

*La Vie Boheme*, by Van Horne; *Gautier's Jettatura*; *Greville's Dosia* and *Halevy's Una Mariage d'Amour*.

7. INTERMEDIATE FRENCH—Winter Quarter. Four hours.

Hugo's *Gavroche*, *La Chute* and *Cosette*. French Prose Composition, by Koren. Daily themes on French Life.

9. INTERMEDIATE FRENCH—Spring Quarter. Four hours.

Labiche and Martin's *La Poudre aux Yeux*, *Le Voyage de Monsieur Perrichon*, *Les Petits Oiseaux*, *Moi*. Themes on the French comedy of the 16th, 17th and 18th centuries.

105. ADVANCED FRENCH—Fall and Summer Quarters. Four hours.

Moliere's *Les Femmes Savantes*, *L'Avare*, *Le Tartuffe* and *Le Misanthrope*.

107. ADVANCED FRENCH—Winter Quarter. Four hours.

Rousseau's *L'Etat de Guerre*, Pages Choisis and *Extraits en Prose*. *Rostand's Cyrano de Bergerac* and *L'Aiglon*. Conducted in French.

109. ADVANCED FRENCH—Spring Quarter. Four hours.

Racine's *Andromaque*, *Athalie*, *Esther* and *Mithriades*. History of the French Classic drama of Corneille, Racine and other writers, Racine, Voltaire, Corneille, Moliere, Le Sage, La Fontaine and Boileau, being the ones considered.

225. GRADUATE FRENCH—Fall Quarter. Four hours.

History of the Romantic movement. Selected works from Hugo, Coppee, Merimee and De Musset. Discussions of literary forms and critical points in grammar. (Offered on request only.)

227. GRADUATE FRENCH—Winter Quarter. Four hours.

Selection for graduate students in French from old French readings: Aucassin et Nicolette, and *La Chanson de Roland*. (Offered on request only.)

131. TEACHING OF FRENCH IN HIGH SCHOOLS—Summer Quarter. Four hours.

A careful study of all the latest methods now in use in the study of French. Many standard texts to be reviewed.

LATIN

10. FRESHMAN COLLEGE LATIN—Fall and Summer Quarters. Four hours.

Cicero's *Essays on Old Age and Friendship*. Latin Prose and Mythology.

12. FRESHMAN COLLEGE LATIN—Winter Quarter. Four hours.

Livy, Books 21 and 22. Latin Prose.

14. FRESHMAN COLLEGE LATIN—Spring Quarter. Four hours.

Horace, Odes and Epodes, and Readings from Latin Lyric Poets.

10. ADVANCED COLLEGE LATIN—Fall and Summer Quarters. Four hours. Selected works from Seneca, and Pliny, the Younger.

112. ADVANCED COLLEGE LATIN—Winter Quarter. Four hours. The Germania and Agricola of Tacitus and Selected works from Pliny, the Elder.

131. THE TEACHING OF LATIN—Summer Quarter. Four hours.

A study and criticism of various textbooks. Lectures on the scope and aim of Latin study. Teacher's equipment and reference library, and methods of teaching. Discussions of the difficulties which may confront a teacher of Latin. A critical study of the subjunctive mood and the essentials of classical philology. (Offered on request Fall or Winter quarters.)

## 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.

Two years or four years for majors in Sociology. In addition to the core subjects as shown on page 56, this department requires:

FIRST YEAR: Sociology 1, Sociology 10, History 10.

SECOND YEAR: Biotics 101, Anthropology 100, Geology 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—Fall, Winter, and Spring Quarters. Four hours.

This course begins with a brief history of the natural sciences in order to provide a background for the study of the nature and scope of the social sciences. Each science is given such consideration as will enable the student to perceive what it is and the field it covers. On the completion of the course, the student should be in possession of the knowledge that will enable him to choose the particular line or lines of study he prefers to follow. It is an orientation course. It should be taken, if possible, the first year. A printed syllabus is used.

3. EDUCATIONAL SOCIOLOGY—Each Quarter. 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—Fall and Spring Quarters. 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.

\*105. THE PRINCIPLES OF SOCIOLOGY—Fall, Spring, and Summer Quarters. 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.

The objective of this course is to acquaint students with the technic of social surveys and to enable them 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 opinion, leadership, and like topics. Text and syllabus.

\*132. THE FAMILY—Winter, Spring, and Summer Quarters. Four hours.

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

\*134. 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 problems arising from social maladjustment.

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.

### 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 courses in the social sciences.

\*101. THE ORIGIN AND ANTIQUITY OF MAN—Fall, 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 inference as seems to be warranted by the facts thus far discovered.

102. EARLY CIVILIZATION—Spring and Summer Quarters. Four hours.

Types of early civilization are studied, including those of Europe, Mexico, Peru, and North America. In this course 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—Winter 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 Quarter.

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 IV

PROGRAM FOR THE THREE QUARTERS





## 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, Tuesday, September 29.

2. ORDER OF REGISTRATION.—Do *only two 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 PENCIL 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.

The Temporary Card must be exchanged for Permanent Cards at the Registrar's office. This exchange should be completed by 5:00 P.M. of the last day for permanent registration. Permanent Cards, AUDITED BY THE ACCOUNTANT and 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 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 matriculation may not average more than sixteen hours. Those wishing to take seventeen or eighteen hours regularly must take the Extra Hour Test, given at 1:30 P. M. on Registration Day—Room 214, Administration Building. 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. 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. **ALL COURSES FOR CREDIT.**—There are no non-credit courses except a special activity course designed for those unable to take the active courses. This is taken by students who have been examined by the college physicians and exempted from active exercise. Students who take this course must present a certificate of recommendation from one of the College physicians and register for the course as for any other subject.

6. **PHYSICAL EDUCATION.**—All freshmen and sophomores, including the unclassified students who expect later to become classified, are required to take an **ACTIVE EXERCISE** course in physical education each quarter in residence.

7. **PHYSICAL AND DENTAL EXAMINATIONS.**—An annual health examination is required for each student. Unclassified students are **NOT** exempt from this requirement.

8. Old Ed. 8 is now designated as Ed. 1. Old Ed. 1 is now designated Ed. 5. Note this carefully in registering.

9. **BIOLOGY AND SOCIOLOGY.**—Sociology 3 cannot be taken by any student who has not had Biology 2.

10. **EDUCATION 1** (Formerly Ed. 8, Introduction to Education) must be taken by all candidates for graduation who have not already had the course, unless properly exempted.

11. **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 to be announced.

12. 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.

NOTE:—Class rooms not designated in the Program will be assigned on Registration Day. Read carefully pages immediately preceding.

## PROGRAM OF THE THREE QUARTERS

### FALL QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>I. 8:00 to 8:50</b>					
Art 13	Primary Art Methods	MTWTF	4	Klee	G-200
Biol 1	Educational Biology	MTThF	3	Fitzpatrick	301
C. E. 11	Principles of Typewriting I.	MTThF	0	Knies	210
C. E. 50	Prin. of Accounting I.	MTWTh	4	Colvin	214
Ed. 1	Introduction to Education	MTTh	3	Ganders	
Ed. 4	Intermediate Methods	MTWTh	4	Van Meter	
Ed. 126	Project Curric. for Rural School	MWF	3	Hargrove	
Eng. 1	Mat. & Meth. in Reading and Literature	MTWTh	4	Tobey	
Eng. 4	Speaking and Writing English	MTWTh	3	Kavich	
Eng. 106	Teaching of English in High School	MWF	3	Hawes	
Hist. 103	The Reformation	MTWTh	4	Dickerson	
H. A. 1	Textiles	MTTh	3	Wiebking	HE-304
H. Sci. 4	Nutrition	MTWTh	4	Jean	HE-306
Hyg. & P. E. 2	Anatomy	MWF	3	Long	
Ind. Arts 1	Elementary Woodworking	MTWTh	2		
Ind. A. 1a	Tech. & Theo. of Woodkg. (2 pds.)	MTWTh	4	Foulk	G-1
Ind. A. 8a	Art Metal	MTWTh	4	Hadden	G-105
Ind. A. 31a	Elem. Printing (2 periods)	MTWTh	4	Bishop	G-104
Ind. A. 32a	Interm. Printing (2 periods)	MTWTh	4	Bishop	G-104
Math. 100	Teaching Secondary Math.	MTThF	4	Finley	304
Mus. 40	Beginning Orchestra	TTh	1	Thomas	Con. 12
Phys. 1	General Physics (Lab by Appt.)	MTTh	4	Valentine	HE-106
P. E. 58	Esthetic Dancing	MWF	1	Keyes	
P. E. 58	Esthetic Dancing	MTTh	1	Keyes	
Psych. 108a	Educational Tests. & Meas.	MTWTh	4	Heilman	
Soc. 1	Intro. to the Social Sciences	MTWTh	4	Binnewies	
Soc. 3	Educational Sociology	MTTh	3	Howerth	
Span. 1	First Year Spanish	MTWTh	4	Du Poncet	

FALL QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>II. 9:00 to 9:50</b>					
Art 4b	Design	MTThF	4	Hill	G-200
Art 6	Art Appreciation	W	1	Baker	G-200
Art 11	History of Architecture	Th	1	Hadden	G-105
Chem. 108	Organic Chemistry (Lab. by Appt)	MW	3	Bowers	300
Chem. 110	Organic Chemistry (Lab. by Appt)	MW	4	Bowers	300
C. E. 158	Prob. in Commercial Education	MTWTh	4	Colvin	214
Ed. 1	Introduction to Education	WThF	3	Mahan	
Ed. 21	Rural School Problems	TWF			
Ed. 242	Prob. of Educ. Adm. (2 periods)	Sat.	2	Ganders	
Eng. 6	American Literature	TWThF	4	Tobey	
Eng. 127	Shakspere's Comedies	MTThF	4	Oakden	
Hist. 5	Early Modern Europe	MTWTh	4	Permenter	
H. A. 1	Textiles	MTThF	3	Wiebking	HE-304
H. Sci. 7	Household Management (Theory)	ThF	2	Clasbey	HE-305
H. Sci. 7	Household Management (Practice)	Daily	3	Clasbey	Cottage
Hyg. 1	Indiv. & Social Hygiene	TWF	3	Long	
Ind. A. 1	Elementary Woodworking	MTWTh	2		
Lib. Sci. 102	Receipt and Prep. of Books	TTh	2	Carter	
Lib. Sci. 106	School Libraries	MWF	3	Carter	
Mus. 3	Introductory Harmony	MWF	3	Thomas	Con.
Mus. 22	Appreciation	TWF	3	Opp	Con.
P. E. 52	Physical Education (Men)	TWF	1	Cooper	Field
P. E. 56	Rhythmic & Singing Games	TWF	1	Keyes	6
P. E. 64	Sophomore Athletics	MWF	1	Cave	Field
P. E. 64	Sophomore Athletics	TThF	1	Cave	Field
P. E. 106	Research	T	2-5	Long	
Psych. 2b	Educational Psychology	MTWTh	3	Heilman	
Soc. 105	Principles of Sociology	MTWTh	4	Binnewies	
Span. 5	Intermediate Spanish	TWThF	4	Du Poncet	

### III. 10:00 to 10:50

Art 13	Primary Art Methods	MTThF	4	Klee	G-200
Art 14	Interm. & Jr. High Art Methods	MTThF	4	Lowie	G-204

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Art 104	Design and Composition	MTThF	4	Hill	G-203
Art 104a	Design and Composition	MTThF	4	Hill	G-203
Biol. 1	Educational Biology	MTThF	3	Fitzpatrick	301
C. E. 37	Commercial Mathematics	MTThF	4	Colvin	214
Ed. 1	Introduction to Education	MThF	3	Hargrove	
Ed. 3	Primary Methods	MTThF	4	Rosenquist	
Ed. 10	Elem. School Curriculum	MTTh	3	Rugg	
Ed. 133	Hist. of Modern Education	MThF	3	Mahan	
Ed. 242	Problems of Education Administration (2 periods)	Sat. 9-11		Ganders	
Eng. 3	Public Speaking and Oral Composition	MTTh	3	Randall	
Eng. 105	Oral English in High School	MTTh	3	Tobey	
Eng. 126	The Informal Essay	MTTh	3	Oakden	
Geog. 100	Geology	MTThF	4	Barker	
H. A. 3a	Garment Making (2 periods)	MTThF	3	Wiebking	HE-304
H. A. 108	Costume Design	MTThF	4	Roudebush	HE-301
H. Sci. 103	Dietetics (2 periods)	MTThF	4	Pickett	HE-207
Ind. A. 5	Prin. of Teaching Prac. Arts Sub.	MTWTh	4	Hadden	G-105
Ind. A. 6	Repair and Equipment Construction (2 periods)	MTWTh	4	Foulk	G-1
Ind. A. 11	Projections Shade and Shadow	MTThF	4	Hadden	
Ind. A. 41a	Elementary Bookbinding (2 periods)	MTWTh	4	Schaefer	G-100
Ind. A. 42a	Intermediate Bookbinding (2 periods)	MTWTh	4	Schaefer	G-100
Lib. Sci. 1	Elementary Library Course	T	1	Carter	
Lib. Sci. 1	Elementary Library Course	Th	1	Carter	
Math. 8	Teaching of Arithmetic	MF	2	Finley	
Math. 108	Junior High Mathematics	TTh	2	Finley	
Mus. 20	Ancient History	MThF	3	Opp	Con.
Mus. 103	Counterpoint	MTh	2	Thomas	Con.
Phys. 11	Heat	MTh	4	Valentine	HE-106
P. E. 62	Outdoor Games	MThF	1	Keyes	6
P. E. 64	Freshman Athletics	TThF	1	Cave	Field
P. E. 162	Plays and Games	MTThF	2	Long	Field
Pol. Sci. 1	Government of the United States	MTThF	4	Dickerson	
Psych. 2b	Educational Psychology	MTThF	3	Heilman	

FALL QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Psych. 109	Psycho-clinical Practice (2 periods)	MTF	1-2	Hamill	
Span. 105	Advanced Spanish	MTThF	4	Du Poncet	
<b>IV. 11:00 to 11:50</b>					
Art 2	Fine Arts Method for Primary	MTWTh	4	Baker	
Biol. 1	Educational Biology	MTWTh	3	Jean	301
Chem. 1	Inorganic Chemistry (Lab by appointment)	MW	3	Bowers	300
Chem. 1	Inorganic Chemistry (Lab by appointment)	TTh	3	Bowers	300
Chem. 4	Inorganic Chemistry (Lab by appointment)	MW	4	Bowers	300
Chem. 4	Inorganic Chemistry (Lab by appointment)	TTh	4	Bowers	300
C. E. 110	Office Appliances	Daily	6	Knies	210
C. E. 141	Advanced Corporation Accounting	MTWTh	4	Colvin	214
Ed. 1	Introduction to Education	TThF	3		
Ed. 5	Principles of Teaching	MWThF	3	Mahan	
Ed. 113	Organization & Administration of a Junior H. S.	MTWTh	4	Rugg	
Eng. 8	History of English Literature	MTThF	4	Oakden	
Eng. 121	Nineteenth Century Poetry	MTWTh	4	Tobey	
French 109	Advanced French	MTWTh	4	Du Poncet	
Geog. 4	Regional Geography of North America	MTThF	4	Barker	
Hist. 27	Contemporary History	WF	2	Dickerson	
Hist. 117	Teaching of History in High School	MTTh	3	Dickerson	
Hyg. 1	Individual and Social Hygiene	MWF	3	Long	
Ind. A. 12	Principles of Architectural Drawing I.	MTWTh	4	Hadden	G-105
Math. 7	Analytic Geometry	MTThF	4	Finley	
Mus. 1a	Sight Singing	MWF	3	Cline	Con.
Mus. 1b	Sight Singing	TTh	2	Cline	Con.
P. E. 50a	Gymnastic Dancing	TThF	1	Cave	Gym.
P. E. 52	Physical Education (Men)	MWF	1	Cooper	Field
P. E. 57	Folk and National Dancing	MWF	1	Keyes	6
P. E. 64	Upper Classmen Athletics	MWF	1	Cave	Field
Psych. 212	Statistical Methods	MTWTh	4	Heilman	
Soc. 100	General Anthropology	MTWTh	4	Howerth	
Soc. 130	Social Psychology	MTWTh	4	Binnewies	
Span. 225	Graduate Spanish	MTWTh	3	Du Poncet	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>V. 1:00 to 1:50</b>					
Art 3a	Art Structure I.	MTThF	4	Baker	G-203
Art 5	Water Color Painting	MTWTh	4	Hill	G-203
Biol. 1	Educational Biology	MTWTh	3	Jean	301
Chem. 7	Qualitative Chemistry	MTWTh	2-4	Bowers	302
C. E. 36	Penmanship Methods	MTThF	2	Bedinger	214
C. E. 110	Office Appliances	Daily	6		210
Ed. 1	Introduction to Education	TThF	3		
Ed. 10	Elementary School Curriculum	MTTh	3	Rugg	
Ed. 16	Elementary Training Course-Campfire	M	1	Lee	
Ed. 52	Kindergarten Curriculum and Use of Materials	MTWTh	4	Lyford	
Eng. 14	Dramatic Art	MTThF	4	Randall	
Eng. 16	Contemporary Literature	MTThF	4	Oakden	
French 1	First Year French	MTWTh	4		
Geog. 113	Mathematical Geography	MTTh	3	Barker	
Geog. 130	Islands of the Sea	W	1	Barker	
Hist. 1	American History 1700-1800	MWThF	4	Permenter	
H. E. 111	Teaching Home Economics	TWThF	4	Roudebush	HE-207
H. Sci. 1	Foods and Cookery (2 periods)	MTThF	4	Pickett	HE-207
H. Sci. 106	Home Nursing	MTThF	4	Wiebking	306
Ind. A. 14	Care and Management		3	Fouk	G-1
Ind. A. 31b	Elementary Printing (2 periods)	MTWTh	4	Bishop	G-104
Ind. A. 41b	Elementary Bookbinding (2 periods)	MTWTh	4	Schaefer	G-100
Ind. A. 42b	Inter. Bookbinding (2 periods)	MTWTh	4	Schaefer	G-100
Math. 2	Trigonometry	MTThF	4		
P. E. 166	Football Coaching	MWF	2	Cooper	
Soc. 101	Origin and Antiquity of Man	MTWTh	4	Howerth	
Zoology 1	Invertebrate Zoology	MTThF	4	Fitzpatrick	303

FALL QUARTER

**VI. 2:00 to 2:50**

Art 7	Constructive Design	MTWTh	4	Baker	
Art 103	Art Structure III.	MTThF	4	Hill	
Biol. 1	Educational Biology	MTWF	3		301
Bot. 1	General Botany	MTWTh	4	Jean	303

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Chem. 114	Quantitative Chemistry	MTWTh	4	Bowers	302
C. E. 38	Commercial Law I.	MTThF	4	Bedinger	214
C. E. 105	Secretarial Practice II.	MWThF	4	Merriman	213
C. E. 110	Office Appliances	Daily	6		210
Ed. 1	Introduction to Education	WThF	3	Mahan	
Ed. 20	Agricultural Education	TWThF	4	Hargrove	
Ed. 51	Story Telling, etc. for Kindergarten	MTWTh	4	Lyford	
Ed. 101	Principles of Teaching in the High School	MTThF	4	Blue	
Ed. 112	Schoolhouse Construction	MT	2	Ganders	
Ed. 123	Educational Research for Seniors	Arrange	4	Rugg	
Ed. 144	School Publicity	ThF	2	Shaw-Ganders	
Eng. 12	Voice Culture	MTThF	4	Randall	202
Eng. 15	Types of Literature	MTTh	3	Cross	L. T.
Eng. 100	Journalistic Writing	MWTh	3	Shaw	100
French 5	Second Year French	MTWTh	4		
Geog. 8	Human Geography	MTThF	4	Barker	
H. A. 3b	Garment Making (2 periods)	MTWTh	3	Jean	304
Hyg. 1	Individual and Social Hygiene	MWF	3	Long	
Hyg. & P. E. 108	Educational Hygiene	MWF	2	Bryson	
Math. 103	Theory of Equations	MTThF	4	Finley	
Mus. 10	Primary Methods	MWF	3	Roesner	
Phys. 103	Radio	MTWTh	4	Valentine	HE-106
P. E. 64	Sophomore Athletics	MWF	1	Cave	Field
Pol. Sci. 102	International Relations	MTWTh	4	Dickerson	
Psych. 110	General Psychology	MTWF	4	Hamill	
Soc. 3	Educational Sociology	MTTh	3	Howerth	

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COLORADO STATE TEACHERS COLLEGE

## VII. 3:00 to 3:50

Art 18	Drawing and Design	MT	2	Hill	G-203
Bot. 102	Botanical Technic	MW	2	Jean	303
C. E. 110	Office Appliances	MTWF	6		210
Ed. 1	Introduction to Education	MTF	3	Ganders	
Ed. 223	Research in Education	MTW	3	Whitney	
El. Sci. 1	Elementary Science	MTWF	4		301



Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Eng. 2	Teaching of Written English	MTWTF	4	Johnson	T-3
Eng. 4	Speaking and Writing English	MTWTF	3	Randall	202
Hist. 10	Social and Industrial History of the United States	MTWTF	4	Permenter	
H. A. 4	Millinery (2 periods)	MTWTF	4	Roudebush	301
H. Sci. 1	Foods and Cookery (2 periods)	MTThF	4	Pickett	207
Ind. A. 41c	Elementary Bookbinding (2 periods)	MTWTh	4	Schaefer	G-100
Ind. A. 42c	Intermediate Bookbinding (2 periods)	MTWTh	4	Schaefer	G-100
Latin 10	Freshman College Latin	MTWTF	4		
Math. 5	College Algebra	MTThF	4		
Mus. 11	Intermediate Methods	MWF	3	Roesner	
P. E. 50	Characteristic Dancing	MWF	1	Keyes	6
P. E. 64	Freshman Athletics	MWF	1	Cave	Field
P. E. 66	Football Practice	Daily	1-2	Cooper	Field
P. E. 68	Corrective Gymnastics	MWF	0	Cave	6
Psych. 2a	Educational Psychology	MTWTF	3	Hamill	
Soc. 3	Educational Sociology	MTW	3	Howerth	

### VIII. 4:00 to 4:50

Art. 108	Pottery I.	MWThF	4	Lowe	G-204
Art 115	Pottery II.	WTh	2	Lowe	G-204
Chem. 117	Teaching of Chemistry	MWTh	3	Bowers	300
C. E. 1	Principles of Shorthand I.	MWThF	0	Merriman	213
C. E. 110	Office Appliances	Daily	6		210
Ed. 1	Introduction to Education	WThF	3	Mahan	
Ed. 165	Bible Study	M	1	Church	
Eng. 4	Speaking and Writing English	MTWTh	3	Kavich	100
Eng. 18	Debating	MW	2	Randall	202
Ind. A. 1	Elementary Woodworking	MTWTh	2		
Latin 110	Advanced Latin	MWThF	4		
Mus. 42	Schumann Club	MW	1	Cline	Con.
Mus. 43	Advanced Orchestra	MTh	1	Thomas	Con.
Mus. 44	Advanced Band	WF	1	Thomas	Con.
P. E. 57	Folk and National Dancing	MWF	1	Keyes	6
P. E. 57	Folk and National Dancing (Freshmen only)	MTTh	1	Keyes	6

FALL QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
P. E. 64	Upper Classmen Athletics	MWF	1	Cave	Field
Phys. 108	Methods of General Science	MWThF	4	Valentine	HE-106
Psych. 2a	Educational Psychology	MTWF	3	Hamill	
Soc. 10	Elementary Economics	MWTh	3	Binnewies	
Soc. 134	Social Statistics	WF	2	Binnewies	

**IX. 7:00 P. M.**

Mus. 101	College Chorus	MTh	1	Cline	
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## WINTER QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>I. 8:00 to 8:50</b>					
Art 13	Primary Art Methods	MTWTF	4	Klee	
Biol. 1	Educational Biology	MTWTh	3	Jean	301
C. E. 12	Principles of Typewriting II.	MTThF	4	Knies	210
C. E. 51	Principles of Accounting II.	MTWTh	4	Colvin	214
Ed. 1	Introduction to Education	MTTh	3	Hargrove	
Ed. 15	Educational Guidance	TThF	3	Mahan	
Ed. 115	Organization & Administration of an Elem. School	MTWTF	4	Ganders	
Eng. 4	Speaking and Writing English	MTWTh	3		
Eng. 103	Advanced Public Speaking	MTTh	3	Randall	
Hist. 108	American Revolution	MTWTh	4	Dickerson	
Hyg. & P. E. 102	Kinesiology	MWF	3	Long	
Ind. Arts 1	Elementary Woodworking	MTWTh	2		
Ind. A. 2	Tech. and Theory of Woodworking (2 periods)	MTWTh	4	Foulk	G-1
Ind. A. 8b	Art Metal	MTWTh	4	Hadden	G-101
Ind. A. 31b	Elementary Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A. 32b	Intermediate Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A. 109a	Art Metal	MTWTh	4	Hadden	G-101
Math. 106	Astronomy	MTThF	4	Finley	
Mus. 40	Beginning Orchestra	TTh	1	Thomas	Con.
Mus. 105	Orchestration	MWF	3	Cline	Con.
Phys. 2	General Physics (Lab by Appointment)	MTTh	4	Valentine	H-106
P. E. 58	Esthetic Dancing	MWF	1	Keyes	6
P. E. 64	Freshman Athletics	MWF	1	Cave	Gym.
P. E. 64	Freshman Athletics	TThF	1	Cave	Gym.
Psych. 1	Child Hygiene	MTWTh	4	Heilman	
Soc. 3	Educational Sociology	MTTh	3	Howerth	
Span. 2	First Year Spanish	MTWTh	4	Du Poncet	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>II. 9:00 to 9:50</b>					
Art 2	Fine Arts Methods for Primary	TWThF	4	Klee	
Art 3	Freehand Drawing I.	TWThF	4	Hill	
Art 11	History of Architecture	Th	1	Hadden	G-101
Art 18	Drawing and Design	TTh	2	Hill	
Art 108	Pottery	MTThF	4	Lowe	
Art 115	Pottery and Glazing	TTh	2	Lowe	
Biot. 101	Heredity and Eugenics	MTWTh	4	Jean	301
Chem. 109	Organic Chemistry (Lab by Appointment)	MW	3	Bowers	300
Chem. 111	Organic Chemistry (Lab by Appointment)	MW	4	Bowers	300
C. E. 150	Bank Accounting	MTW	3	Colvin	214
Ed. 5	Principles of Teaching	MTWTh	3	Mahan	
Ed. 23	Rural School Management	MTTh	3	Hargrove	
Ed. 242	Problems of Education Administration (2 Periods)	Sat. 9-11	2	Ganders	
Eng. 16	Contemporary Literature	TWThF	4	Newman	
Eng. 114	Advanced Dramatic Art	MTThF	4	Randall	
Eng. 128	Shakspeare's Histories	MTThF	4	Oakden	
Hist. 6	Modern European History	TWThF	4	Permenter	
H. E. Ed. 1	Methods in Elementary H. E. Teaching	MTW	3	Clasbey	HE-305
H. Sci. 7	Household Management (Theory)	ThF	2	Clasbey	HE-305
H. Sci. 7	Household Management (Practice)	Daily	3	Clasbey	Cottage
H. Sci. 104a	Child Care (First Half Quarter)	MTThF	2	Pickett	HE-207
H. Sci. 104b	Diets in Disease (Second Half Quarter)	MTThF	2	Pickett	HE-207
Hyg. 1	Individual and Social Hygiene	WThF	3	Long	
Hyg. 110	Occupational Hygiene	TTh	2	Long	
Ind. A. 1	Elementary Woodworking	MTWTh	2		
Ind. A. 104	Pre-Vocational Education	MWF	3	Hadden	G-101
Lib. Sci. 103	Classification and Cataloging	MWF	3	Carter	
Lib. Sci. 105	Periodicals and Binding	TTh	2	Carter	
Mus. 1a	Sight Singing	TWF	2	Cline	Con.
Mus. 4	Intermediate Harmony	MWF	3	Thomas	Con.
Mus. 23	Musical Literature	MWF	3	Opp	Con.
P. E. 52	Physical Education (Men)	TWF	1	Cooper	Gym.
P. E. 57	Folk and National Dancing	TWF	1	Keyes	6

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
P. E. 64	Sophomore Athletics	MWF	1	Cave	Gym.
P. E. 64	Sophomore Athletics	TThF	1	Cave	Gym.
Psych. 107	Mental Tests and Measurements	MTWTh	4	Heilman	
Soc. 112	Labor and Society	MTWTh	4	Howerth	
Span. 7	Second Year Spanish	TWThF	4	Du Poncet	

### III. 10:00 to 10:50

Art 1	Fine Arts Methods for Intermediate and Junior High Schools	MTThF	4	Lowe	G-101
Art 101	Drawing from Life	MTThF	4	Hill	
Biol. 1	Educational Biology	MTThF	3	Fitzpatrick	301
C. E. 143	Income Tax Accounting	MTTh	3	Colvin	214
Ed. 3	Primary Methods	MTThF	4	Dulin	
Ed. 5	Principles of Teaching	MTThF	3	Mahan	
Ed. 125	Rural Education	MTTh	3	Hargrove	
Ed. 142	City School Administration	MTThF	4	Ganders	
Ed. 242	Problems of Ed. Administration (2 Periods)	Sat. 9-11	2	Ganders	
Eng. 11	The English Language	MTThF	4	Cross	100
Eng. 15	Types of Literature	MTTh	3	Oakden	L. Th.
Eng. 160	Literature of the Bible	MTTh	3	Church	202
Geog. 5	Geography of the New Europe	MTThF	4	Barker	
H. A. 5	Pattern Making (2 Periods)	TWThF	4	Roudebush	HE-301
H. Sci. 2	Foods and Cookery (2 Periods)	MTThF	4	Pickett	HE-207
Hyg. & P. E. 12	First Aid	MTF	2	Cooper	
Hyg. & P. E. 113	Administration of Physical Education	TTh	2	Long	
Ind. A. 13	Principles of Architectural Drawing II.	MTWTh	4	Hadden	G-105
Ind. A. 19	Wood Turning (2 Periods)	MTWTh	4	Foulk	G-1
Ind. A. 41a	Elementary Bookbinding	MTWTh	4	Schaefer	G-100
Ind. A. 143a	Advanced Leather Craft and Art Work	MTWTh	4	Schaefer	G-100
Lib. Sci. 1	Elementary Library Course	T	1	Carter	
Lib. Sci. 1	Elementary Library Course	Th	1	Carter	
Math. 8	Teaching of Arithmetic	MF	2	Finley	
Math. 100a	Teaching of Algebra	TTh	2	Finley	
Mus. 21	Modern Composers	MThF	3	Opp	Con.

WINTER QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Mus. 104	Counterpoint	MTh	2	Thomas	Con.
Mus. 122	Appreciation for Concert-Goer	T	1	Southard	Con.
Phys. 14	Sound	MTh	4	Valentine	HE-106
P. E. 51	Light Gymnastics	MTTh	1	Keyes	6
P. E. 64	Sophomore Athletics	TThF	1	Cave	Gym.
Pol. Sci. 2	State Government	MTThF	4	Dickerson	
Psych. 2b	Educational Psychology	MTThF	3	Heilman	
Soc. 3	Educational Sociology	MTTh	3	Howerth	
Span. 107	Advanced Spanish	MTThF	4	Du Poncet	

#### IV. 11:00 to 11:50

Art 13	Fine Arts Methods for Primary	MTThF	4	Baker	
Bot. 103	Plant Physiology	MTWTh	4	Jean	303
Chem. 2	Inorganic Chemistry (Lab by Appointment)	MW	3	Bowers	300
Chem. 2	Inorganic Chemistry (Lab by Appointment)	Th	2	Bowers	300
Chem. 5	Inorganic Chemistry (Lab by Appointment)	MW	4	Bowers	300
Chem. 5	Inorganic Chemistry (Lab by Appointment)	TTh	4	Bowers	300
C. E. 110	Office Appliances	Daily	6	Colvin	212
C. E. 157	Methods in Commerical Education	MW	2	Colvin	214
Ed. 5	Principles of Teaching	MTWTh	3	Mahan	
Ed. 24	The Rural Community	MTTh	3	Hargrove	
Ed. 107	Methods of Improving Reading	MWThF	4	Davis	
Ed. 111	Philosophy of Education	MTThF	4	Ganders	
Eng. 4	Speaking and Writing English	MTWTh	3	Kavich	202
Eng. 9	The History of English Literature	MTThF	4	Oakden	100
Geog. 12	Methods in Intermediate Geography	MTThF	4	Barker	
Hist. 2	American History—National Development	MTWTh	4	Permenter	
H. A. 102	Applied Design	MTThF	4	Wiebking	HE-304
Hyg. 1	Individual and Social Hygiene	MWF	3	Long	
Ind. A. 117	Elements of Machine Design	MTWTh	4	Hadden	G-105
Math. 101	Differential Calculus	MTThF	4	Finley	
Mus. 107	Form Analysis	MWF	3	Thomas	Con.
Mus. 120	School Entertainments	MW	2	Cline	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
P. E. 5	History of Physical Education	TTh	2	Keyes	
P. E. 52	Physical Education (Men)	MWF	1	Cooper	Gym.
P. E. 59	Natural Dancing	MWF	1	Keyes	6
P. E. 64	Upper Classmen Athletics	MWF	1	Cave	Gym.
P. E. 64	Upper Classmen Athletics	TThF	1	Cave	Gym.
Psych. 2b	Educational Psychology	MTWTh	3	Heilman	
Soc. 101		MTWTh	4	Howerth	
Span. 227	Graduate Spanish	MTWTh	3	Du Poncet	
Zool. 106	Preparation of Biological Materials (Lab by Appt.)	MTThF	2-3-4	Fitzpatrick	

### V. 1:00 to 1:50

Art 105	Oil Painting I.	MTWTh	4	Hill	
Art 200	Oil Painting II.	MTWTh	4	Hill	
Biol. 1	Educational Biology	MTThF	3	Fitzpatrick	301
Bot. 2	General Botany	MTWTh	4	Jean	303
Chem. 7	Qualitative Chemistry	MTWTh	2-4	Bowers	302
C. E. 36	Penmanship Methods	MTThF	2	Bedinger	214
C. E. 110	Office Appliances	Daily	6	Colvin	210
Ed. 5	Principles of Teaching	MTThF	3	Ganders	
Ed. 16	Elementary Camp Fire Course	M	1	Lee	
Ed. 16a	Advanced Camp Fire Course	T	1	Lee	
Ed. 52	Kindergarten Curriculum and Use of Materials	MTWTh	4	Lyford	
Ed. 210	Problems of the School Curriculum	MTTh	3	Rugg	
Eng. 1	Material and Method in Reading and Literature	MTWTh	4	Tobey	202
Eng. 120	Lyric Poetry	MTThF	4	Oakden	100
French 2	First Year French	MTWTh	4		
Geog. 7	Business Geography	MTThF	4	Barker	
Hist. 4	Western American History	MTWF	4	Dickerson	
H. A. 3	Garment Making (2 Periods)	MTThF	3	Wiebking	HE-304
H. Sci. 1b	Foods and Cookery (2 Periods)	MTThF	4	Pickett	HE-207
H. Sci. 108	The House and Sanitation	MTW	3	Roudebush	HE-207
Ind. A. 32c	Intermediate Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A. 42a	Intermediate Bookbinding	MTWTh	4	Schaefer	G-100

WINTER QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ind. A. 124	Machine Work ((2 Periods)	MTWTh	3	Foulk	G-7
Ind. A. 133b	Advanced Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A. 143b	Advanced Leather Craft	MTWTh	4	Schaefer	G-100
Math. 100b	Geometry for Teachers	TTh	2		
Mus. 12	Rural School Methods	MWF	3	Roesner	Con.
P. E. 167	Basketball Coaching	MWF	2	Cooper	
Psych. 113	Vocational Psychology	MTWF	4	Hamill	
Soc. 3	Educational Sociology	MTTh	3	Howerth	

### VI. 2:00 to 2:50

Art 4a	Art Structure II.	MTThF	4	Baker	
Biol. 1	Educational Biology	MTWF	3		301
Chem. 114b	Quantitative Chemistry	MTWTh	4	Bowers	302
C. E. 53	Salesmanship	MThF	3	Bedinger	214
C. E. 106	Secretarial Science I.	MWF	3	Merriman	213
C. E. 110	Office Appliances	Daily	6		210
Ed. 5	Principles of Teaching	MTWTh	3	Mahan	
Ed. 51	Story Telling, etc. for Kindergarten	MTWTh	4	Lyford	
Ed. 134	History of Education in the United States	MTTh	3	Rugg	
Ed. 216	Problems of Secondary Education	MTThF	4	Blue	
Eng. 3	Public Speaking and Oral Composition	MTTh	3	Tobey	202
Eng. 101	Journalistic Writing	MTTh	3	Shaw	100
French 7	Second Year French	MTWTh	4		
Geog. 150	Geography of Colorado	MTThF	4	Barker	
H. A. 5	Pattern Making (2 Periods)	MTWTh	4	Roudebush	HE-301
Hyg. 1	Individual and Social Hygiene	MWF	3	Long	
Hyg. & P. E. 108	Educational Hygiene	MWF	2	Bryson	
Math. 200	Advanced Calculus	MTThF	4	Finley	
Mus. 10	Primary Methods	MWF	3	Roesner	
Phys. 111	Automobile	MTWTh	4	Valentine	HE-106
Pol. Sci. 101	American Diplomacy	MTWTh	4	Dickerson	
Psych. 2a	Educational Psychology	MTWF	3	Hamill	
Soc. 110	Principles of Economics	MTWTh	4	Binnewies	
Zool. 2	Vertebrate Zoology	MTThF	4	Fitzpatrick	303



Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>VII. 3:00 to 3:50</b>					
Art 6	Art Appreciation	F	1	Baker	
Art 9	Art History	MTW	4	Baker	
Art 17	Lettering and Poster Composition	MT	2	Hill	G-203
Art 102	Design and Lettering	MTWF	2-4	Hill	
Biol. 1	Educational Biology	MTWF	3		301
C. E. 36	Penmanship Methods	MTWF	2	Bedinger	214
C. E. 110	Office Appliances	MTWF	6		210
Ed. 10	Elementary School Curriculum	MTW	3	Rugg	
Ed. 223	Research in Education for Graduate Students	MTW	3	Whitney	
Eng. 2	Teaching of Written English	MTThF	4	Johnson	T-3
Eng. 13	The Art of Story Telling	MTW	3	Tobey	202
Eng. 19	Debating (Women)	MTWF	4	Randall	100
Geog. 2	Physiography	MTThF	4	Barker	
H. A. 109	Advanced Dressmaking (Double Period)	MTWF	4	Wiebking	HE-304
Hist. 10	Social and Industrial History of the United States	MTWF	4	Permenter	
Hyg. & P. E. 101	Physiology	MWF	3	Long	
Ind. A. 42b	Intermediate Bookbinding	MTWTh	4	Schaefer	G-100
Ind. A. 143a	Advanced Leather Craft	MTWTh	4	Schaefer	G-100
Latin 12	Freshman College Latin	MTWF	4		
Math. 6	College Algebra	MTWF	4		
Mus. 11	Intermediate Methods	MWF	3	Roesner	
Phys. 120	Projects in Physics	MTWF	4	Valentine	HE-106
P. E. 50	Characteristic Dancing	MWF	1	Keyes	
P. E. 55	Wrestling	Daily	1	Cooper	
P. E. 66b	Basketball Practice	Daily	1-2	Cooper	Gym.
P. E. 68	Corrective Gymnastics	MWF	0	Cave	6
Psych. 105	Psychology of Senior High School Subjects	MTWF	4	Hamill	
Soc. 132	The Family	MTTh	3	Binnewies	

WINTER QUARTER

**VIII. 4:00 to 4:50**

Chem. 116	Agricultural Chemistry	MTTh	4	Bowers	300
C. E. 2	Principles of Shorthand II.	MWThF	4	Merriman	213
C. E. 110	Office Appliances	Daily	6	Colvin	210

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Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ed. 123	Educational Research for Senior College Students	Arrange	4	Rugg	
Ed. 166	Bible Study	M	1	Church	
Eng. 3	Public Speaking and Oral Compositions	MTW	3	Tobey	202
Eng. 19	Debating (Men)	MTWTh	3	Randall	100
French 107	Advanced French	MTWTh	4	Du Poncet	
Latin 112	Advanced Latin	MWThF	4		
Mus. 42	Schumann Club	MW	1	Cline	
Mus. 43	Advanced Band	MTh	1	Thomas	
Mus. 44	Advanced Band	WF	1	Thomas	
P. E. 56	Rhythmic and Singing Games	MWF	1	Keyes	6
P. E. 56	Rhythmic and Singing Games (Freshmen only)	MTh	1	Keyes	6
P. E. 64	Hiking	MWF	1	Cave	Gym.
Phys. 107	History of Physics	MTh	2	Valentine	HE-106
Psych. 2a	Educational Psychology	MTWF	3	Hamill	
Soc. 130	Social Psychology	MTWTh	4	Binnewies	
Soc. 134		WF	2	Binnewies	
<b>7:00 P. M.</b>					
Mus. 41	Men's Glee Club	MTh	1	Cline	

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COLORADO STATE TEACHERS COLLEGE

## SPRING QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>I. 8:00 to 8:50</b>					
Art 12	Household Art Design	MWThF	4		G-200
Biol. 1	Educational Biology	MTWTh	3	Jean	301
C. E. 13	Principles of Typewriting III.	MTF	3	Knies	210
C. E. 14	Methods of Teaching Typewriting	Th	1	Knies	210
C. E. 52	Principles of Accounting III.	MTWTh	4	Colvin	214
Ed. 3	Primary Methods	MTWTh	4		
Ed. 4	Intermediate Methods	MTWTh	4	McCowen	
Ed. 106	Types of Teaching and Learning	MTThF	4	Ganders	
Eng. 3	Public Speaking and Oral Composition	MTTh	3	Randall	100
Eng. 6	American Literature	MTWTh	4	Tobey	202
Hist. 109	Slavery, Secession, Reconstruction	MTWTh	4	Dickerson	
H. A. 6	Elementary Dressmaking (2 Periods)	MTThF	4	Wiebking	HE-304
H. Sci. 104	Demonstration Cookery (2 Periods)	MTThF	4	Pickett	HE-207
Hyg. & P. E. 101	Physiology of Exercise	MWF	3	Long	
Ind. A 1	Elementary Woodworking	MTWTh	2		
Ind. A 1a	Tech. and Theory of Woodworking (2 Periods)	MTWTh	4	Foulk	G-1
Ind. A 31c	Elementary Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A 32c	Intermediate Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A 109b	Art Metal	MTWTh	4	Hadden	G-101
Math. 9	Teaching of Arithmetic	MTThF	4	Finley	
Mus. 40	Beginning Orchestra	TTh	1	Thomas	Con.
Mus. 106	Orchestration	MWF	3	Cline	Con.
Phys. 3	General Physics (Lab by Appointment)	MTTh	4	Valentine	HE-106
P. E. 60	Interpretive Dancing	MWF	1	Keyes	6
P. E. 62	Plays and Games	MWF	1	Cave	Field
P. E. 102b	Remedial Gymnastics	TTh	2	Cave	6
Psych. 214	Advanced Educational Psychology	MTWTh	4	Heilman	
Soc. 132	The Family	MTTh	3	Binnewies	
Span. 3	First Year Spanish	MTWTh	4	Du Poncet	
Zool. 5	Bird Study	MTThF	4	Fitzpatrick	

SPRING QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>II. 9:00 to 9:50</b>					
Art 11	History of Architecture	Th	1	Hadden	G-105
Art 16	Freehand Drawing II.	TWThF	4	Hill	G-203
Art 100	Supervision of Fine Arts Education	TTh	2	Baker	G-203
Art 101	Drawing from Life	MTWTh	4	Hill	G-203
Art 108	Pottery	MTThF	4	Lowe	G-204
Art 115	Pottery and Glazing	TTh	2	Lowe	G-204
Biol. 102	Teaching of Biology	MTWTh	4	Jean	
Chem. 112	Food Chemistry (Lab by Appointment)	MW	3	Bowers	300
Chem. 113	Food Chemistry (Lab by Appointment)	MW	4	Bowers	300
C. E. 159	Auditing	MTWTh	4	Colvin	214
Ed. 5	Principles of Teaching	TWThF	3	Hargrove	
Ed. 120	Educational Finance	MT	2	Ganders	
Ed. 240	Women in Administration	MTWTh	4	Newman	
Eng. 4	Speaking and Writing English	TWThF	3	Randall	100
Eng. 20	Advanced Composition	MTWTh	4	Oaken	100A
Eng. 122	Victorian Poetry	MTWTh	4	Tobey	202
Hist. 101	Commercial and Financial History of United States	TWThF	4	Dickerson	
H. E. Ed. 1	Methods of Teaching Elementary H. Ecs.	MTW	3	Roudebush	HE-305
H. Sci. 7	Household Management (Practice)	Daily	3	Roudebush	HE-305
Hyg. 1	Individual and Social Hygiene	WThF	3	Long	
Hyg. & P. E. 106	Research	T	2-5	Long	
Ind. A. 1	Elementary Woodworking	MTWTh	2		
Ind. A. 5	Principles of Teaching Practical Arts Subjects	MTWTh	4	Hadden	G-105
Lib. Sci. 104	Reference Work	TWThF	4	Carter	
Math. 201	Differential Equations	MTThF	4	Finley	
Mus. 5	Advanced Harmony	MWF	3	Thomas	Con.
Mus. 22	Appreciation	TWF	3	Opp	Con.
P. E. 50	Characteristic Dancing	TWF	1	Keyes	6
P. E. 52	Physical Education (Men)	TWF	1	Cooper	Field
P. E. 64	Sophomore Athletics	MWF	1	Cave	Field
P. E. 64	Sophomore Athletics	TThF	1	Cave	Field
Psych. 104	Psychology of Elementary School Subjects	MTWTh	4	Heilman	
Soc. 3	Educational Sociology	TWTh	3	Howerth	
Span. 9	Second Year Spanish	TWThF	4	Du Poncet	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>III. 10:00 to 10:50</b>					
Art 14	Industrial Arts Methods for Intermediate and Junior High School	MTThF	4	Lowe	G-204
Art 17	Lettering and Poster Composition	MT	2	Hill	G-200
Art 102	Design and Lettering	MTThF	2-4	Hill	G-200
Art 104	Design and Composition	MTThF	4	Hill	G-200
Biol. 1	Educational Biology	MTThF	3	Fitzpatrick	301
C. E. 151	Cost Accounting	MTThF	4	Colvin	214
Ed. 5	Principles of Teaching	MTThF	3	Mahan	
Ed. 28	School and Home Gardens	TThF	3	Hargrove	
Ed. 108	Educational Supervision	MTThF	4	Ganders	
Ed. 110	Extra-Curricular Activities	MTTh	3	Rugg	
Eng. 13	Art of Story Telling	MTTh	3	Tobey	202
Eng. 129	Shakspere's Tragedies	MTThF	4	Oakden	100
Geog. 103	Climatology	MTThF	4	Barker	
Hist. 124	History of the Far East	MTThF	4	Permenter	
H. A. 6	Elementary Dressmaking (2 Periods)	MTThF	4	Wiebking	HE-304
H. Sci. 3	Cookery and Table Service (2 Periods)	MTThF	4	Picket	HE-207
Ind. A 3	Woodworking for Elementary & Secondary Schools	MTWTh	4	Fouk	
Ind. A 41c	Elementary Bookbinding (2 Periods)	MTWTh	4	Schaefer	G-100
Ind. A. 105	Advanced Architectural Design	MTWTh	4	Hadden	G-105
Ind. A. 143b	Advanced Leather Art Work (2 Periods)	MTWTh	4	Schaefer	G-100
Lib. Sci. 1	Elementary Library Course	T	1	Carter	
Lib. Sci. 1	Elementary Library Course	Th	1	Carter	
Math. 4	Surveying (2 Periods)	TTh	4	Finley	
Mus. 2	Tone Thinking and Melody Writing	MTThF	3	Opp	Con.
Mus. 114	Methods in Conducting	TTh	2	Cline	Con.
Phys. 15	Light	MTh	4	Valentine	HE-106
P. E. 56	Rhythmic and Singing Games	MTTh	1	Keyes	6
P. E. 64	Freshman Athletics	TThF	1	Cave	Field
Pol. Sci. 3	Municipal Government	MTTh	3	Dickerson	
Psych. 2b	Educational Psychology	MTThF	3	Heilman	
Soc. 120		MTTh	3	Binnewies	
Soc. 209	Seminar in Sociology	MTThF	4	Howerth	
Span. 109	Advanced Spanish	MTThF	4	Du Poncet	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>IV. 11:00 to 11:50</b>					
Art 13	Industrial Arts Methods for Primary	MTWTF	4	Klee	G-204
Art 18	Drawing and Design	TTh	2	Hill	G-203
Biol. 1	Educational Biology	MTWTh	3	Jean	301
Chem. 3	Inorganic Chemistry (Lab by Appointment)	TTh	3	Bowers	300
Chem. 3b	Household Chemistry (Lab by Appointment)	MW	3-4	Bowers	300
Chem. 6	Inorganic Chemistry (Lab by Appointment)	TTh	4	Bowers	300
C. E. 155	Economics of Retailing	MTWTh	4	Colvin	214
Ed. 5	Principles of Teaching	MTThF	3	Mahan	
Ed. 10	Elementary School Curriculum	MTTh	3	Rugg	
Ed. 129	Current Educational Thought	MTThF	4	Ganders	
Eng. 1	Material and Methods in Reading and Literature	MTWTh	4	Tobey	202
Eng. 10	History of English Literature	MTWTh	4	Oakden	100
French 109	Advanced French	MTWTh	4	Du Poncet	
Geog. 14	Junior High School Methods	MTThF	4	Barker	
Hist. 3	Reconstruction and the New United States	MTThF	4	Permenter	
H. E. 101	The Home	TTh	2	Roudebush	HE-301
Ind. A 118	Elements of Machine Design	MTWTh	4	Hadden	G-105
Mus. 1a	Sight Singing	MWF	3	Cline	
Mus. 108	Advanced Form Analysis	MWF	3	Thomas	Con.
P. E. 52	Physical Education (Men)	MWF	1	Cooper	Field
P. E. 62	Plays and Games	TThF	1	Cave	Field
P. E. 64	Upper Classmen Athletics	MWF	1	Cave	Field
P. E. 104	Athletics for Women	MTWTF	2	Long	Field
P. E. 158	Dancing Methods	Daily	2	Keyes	6
Psych. 2b	Educational Psychology	MTWTh	3	Heilman	
Soc. 3	Educational Sociology	MTTh	3	Howerth	
Span. 131	Teaching of Spanish	MTWTh	3	Du Poncet	
Zool. 4	Practical Zoology	MTThF	4	Fitzpatrick	
<b>V. 1:00 to 1:50</b>					
Art 2	Fine Arts Methods for Primary	MTThF	4	Baker	G-200
Art 5	Water Color Painting	MTWTh	4	Hill	G-203
Art 105	Oil Painting I.	MTWTh	4	Hill	G-203
Art 200	Oil Painting II.	MTWTh	4	Hill	G-203

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Biol. 1	Educational Biology	MTThF	3	Fitzpatrick	301
Bot. 3	Systematic Botany	MTWTh	4	Jean	303
Chem. 7	Qualitative Chemistry	MTWTh	2-4	Bowers	302
C. E. 36	Penmanship Methods	MTThF	2	Bedinger	214
C. E. 110	Office Appliances	Daily	6		210
Ed. 5	Principles of Teaching	MTThF	3	Ganders	
Ed. 16	Elementary Campfire Course	M	1	Lee	
Ed. 16a	Advanced Campfire Course	T	1	Lee	
Ed. 152	The Child and His School	MTWTh	4	Lyford	
Ed. 213	Problems of the Junior High School	MTTh	3	Rugg	
Eng. 12	Voice Culture	MTWTh	4	Randall	202
Eng. 133	The Recent Novel	MTWTh	4	Oakden	100
French 3	First Year French	MTWTh	4		
Geog. 52	Geography of South America	MTThF	4	Barker	
Hist. 13	Teaching of History in Elementary School	TWTh	3	Dickerson	
Hist. 104	Literature of American History	MF	2	Dickerson	
H. A. 4	Millinery (2 Periods)	MTWTh	4	Roudebush	HE-301
H. A. 112	Home Decoration	MTThF	4	Wiebking	HE-304
H. Sci. 3	Foods and Table Service (2 Periods)	MTThF	4	Pickett	HE-207
Hyg. 1	Individual and Social Hygiene	MWF	3	Long	
Ind. A 12	Advanced Cabinet Making (2 Periods)	MTWTh	4	Foulk	G-1
Ind. A 31a	Elementary Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A 42a	Intermediate Bookbinding (2 Periods)	MTWTh	4	Schaefer	G-100
Ind. A 33b	Advanced Printing (2 Periods)	MTWTh	4	Bishop	G-104
Ind. A 143a	Advanced Leather Crafts (2 Periods)	MTWTh	4	Schaefer	G-100
Mus. 110	Supervisors' Course	MWF	3	Roesner	
P. E. 168	Baseball Coaching	MWF	2	Cooper	
P. E. 169	Track Coaching	TTh	2	Cooper	
Psych. 3	Child Development	MTWF	4	Hamill	
Soc. 1	Introduction to the Social Sciences	MTWTh	4	Binnewies	
<b>VI. 2:00 to 2:50</b>					
Art 4b	Design	MTWTh	4	Hill	G-105
Art 7	Constructive Design	MTThF	4	Baker	G-204
Chem. 221	Advanced Inorganic Chemistry	TTh	3-4	Bowers	300
C. E. 107	Secretarial Science II.	MWF	3	Merriman	213

SPRING QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
C. E. 110	Office Appliances	Daily	6		210
C. E. 144	Commercial Law II.	MTThF	4	Bedinger	214
Ed. 5	Principles of Teaching	MTThF	3	Mahan	
Ed. 17	Boy Scout Work	M	1	Moore	
Ed. 21	Rural School Problems	TThF	3	Hargrove	
Ed. 51	Story Telling, etc. for Kindergarten	MTWTh	4	Lyford	
Ed. 116	Organization and Administration of a Senior High School	MTThF	4	Blue	
Ed. 123	Educational Research for Seniors	Arrange	4	Rugg	
El. Sci. 1	Elementary Science	MTWF	4		301
Eng. 4	Speaking and Writing English	MTWTh	3	Randall	202
Eng. 11	The English Language	MTWTh	4	Cross	100
Eng. 102	Journalistic Writing	MWTh	3	Shaw	100
French 9	Second Year French	MWTh	3		
Geog. 122	Biogeography	MTThF	4	Barker	
Hist. 10	Social and Industrial History of the United States	MWThF	4	Permenter	
Hyg. & P. E. 108	Educational Hygiene	MWF	2	Bryson	
Math. 102	Integral Calculus	MTThF	4	Finley	
Mus. 10	Primary Methods	MWF	3	Roesner	
Phys. 121	Electricity	MTWTh	4	Valentine	HE-106
P. E. 64	Sophomore Athletics	MWF	1	Cave	Field
Psych. 2a	Educational Psychology	MTWF	3	Hamill	
Soc. 102	Early Civilization	MTWTh	4	Howerth	
Soc. 105	Principles of Sociology	MTWTh	4	Binnewies	
<b>VII. 3:00 to 3:50</b>					
Biol. 1	Educational Biology	MTWF	3		301
C. E. 36	Penmanship Methods	MTWF	2	Bedinger	214
C. E. 110	Office Appliances	MTWF	6		210
Ed. 1	Introduction to Education	MTW	3	Mahan	
Ed. 5	Principles of Teaching	MTWF	3	Hargrove	
Ed. 223	Research in Education for Graduates	MTW	3	Whitney	T-16
Eng. 4	Speaking and Writing English	MTWF	3	Kavich	202
Eng. 15	Types of Literature	MTW	3	Cross	
Hist. 1	American History 1700-1800	MTWF	4	Permenter	



Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
H. Sci. 7	Household Management (Theory)	MT	2	Roudebush	HE-301
Hyg. 1	Individual and Social Hygiene	MWF	3	Long	
Ind. A 41a	Elementary Bookbinding (2 Periods)	MTWTh	4	Schaefer	G-100
Ind. A 143b	Advanced Leather Crafts (2 Periods)	MTWTh	4	Schaefer	G-100
Latin 14	Freshman College Latin	MTWF	4		
Math. 5	College Algebra	MTWF	4		
Mus. 11	Intermediate Methods	MWF	3	Roesner	
P. E. 61	School Gymnastics	MWF	1	Keyes	6
P. E. 64	Freshman Athletics	MWF	1	Cave	Field
P. E. 66	Baseball Practice	Daily	1-2	Cooper	Field
P. E. 68	Corrective Gymnastics	MWF	0	Cave	o
Psych. 2a	Educational Psychology	MTWF	3	Hamill	
Psych. 108b	Educational Tests and Measurements	MTWF	4	Hamill	
Soc. 3	Educational Sociology	MTW	3	Howerth	

### VIII. 4:00 to 4:50

Chem. 115b	Industrial Chemistry	MTWTh	4	Bowers	300
C. E. 3	Secretarial Practice I.	MWThF	4	Merriman	213
C. E. 110	Office Appliances	Daily	6	Colvin	210
Ed. 104	Project Method of Teaching	MWThF	4	Mahan	
Ed. 167	Bible Study	M	1	Church	
Eng. 4	Speaking and Writing English	MTWTh	3	Kavich	202
Eng. 16	Contemporary Literature	MTWTh	4	Newman	L. T.
Latin 114	Advanced Latin	MWThF	3		
Math. 1	Solid Geometry	MWThF	4		
Mus. 42	Schumann Club	MW	1	Cline	Con.
Mus. 43	Advanced Orchestra	MTh	1	Thomas	Con.
Mus. 44	Advanced Band	WF	1	Thomas	Con.
P. E. 57	Folk and National Dancing	MWF	1	Keyes	6
P. E. 57	Folk and National Dancing (Freshmen only)	MTh	1	Keyes	6
P. E. 64	Upper Classmen Athletics	MWF	1	Cave	6
Phys. 10	Household Physics	MTThF	4	Valentine	HE-106
Psych. 2a	Educational Psychology	MTWF	3	Hamill	

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ANNUAL CONTEST  
IN COMMERCIAL SUBJECTS  
FOR HIGH SCHOOLS

GREELEY, COLORADO  
PUBLISHED BY THE COLLEGE

## FOREWORD

This bulletin was prepared and printed for the purpose of giving information to the many persons who make inquiry annually concerning the contest in commercial subjects for high schools conducted by Colorado State Teachers College. It will probably be of interest to all school officials and teachers of Colorado who are interested in these contests.

It contains all of the rules and regulations concerning the contest except those set forth by the International Contest Committee for conducting typewriting contests. Samples of all of the material used for the contests for the year 1924-25, with instructions for giving and scoring, are included. A complete report of the finals is also included.

Instructors in the Department of Commercial Education of the college are indebted to many teachers and friends for suggestions and help, and especially to the Gregg Publishing Co., J. N. Kimball, and Roy B. Kester for material furnished by them. The kindly cooperation and spirit of fairness on the part of commercial teachers has greatly encouraged us in our attempt to make this contest worth while.

The Faculty of the Department of Commercial Education,

A. O. COLVIN

VIVIEN MERRIMAN

WINFIELD L. KNIES

S. C. BEDINGER

SOME GENERAL STATEMENTS CONCERNING THE  
CONTEST FOR 1924-25.

1. Seventy high schools participated
2. Twenty-five high schools were represented in the finals
3. One hundred fifteen contestants registered for and participated in the finals
4. Approximately 50,000 pages of material were prepared and sent out by the contest committee to students in the high schools of the state. Some of this material was sent to other states
5. Approximately 3,500 students used some of this material that was sent out



# ANNUAL STATE CONTEST IN COMMERCIAL SUBJECTS, 1925

## FOR THE HIGH SCHOOLS OF COLORADO

The state was divided into districts by towns according to the location of high schools and transportation facilities. The first town in each group is the central town where the district meet was held.

1. Lamar, Holly, Hartman.
2. Rocky Ford, Las Animas, LaJunta, Wiley, Fowler, Swink, Olney Springs, Haswell, Manzanola.
3. Hugo, Simla, Eads, Arapahoe, Cheyenne Wells.
4. Englewood, Wheatridge, Littleton, Aurora, Golden.
5. East Denver, South Denver, Manual, North Denver, West Denver.
6. Trinidad, Primero, LaJara.
7. Montrose, Delta, Ouray.
8. Glenwood Springs, Palisades, Meeker, Leadville, New Castle, Steamboat Springs.
9. Pueblo Centennial, Pueblo Central, Monument, Florence.
10. Keota, Buckingham, Grover, New Raymer.
11. Sterling, Haxtun, Holyoke, Peetz, Julesburg, Ovid, Ft. Morgan, Crook.
12. Ft. Collins, Windsor, Loveland, Wellington.
13. Longmont, Lafayette, Boulder, Brighton, Gilcrest.
14. Greeley High School, College High School, Ault, Eaton, Pierce.
15. Akron, Eckley, Wray, Brush.
16. Durango.

## A GENERAL STATEMENT OF THE PLAN

A series of three contests are held about two weeks apart. (1) The local contest conducted by the commercial teachers in each high school expecting to compete. This is for the purpose of choosing contestants for the District Contest and to familiarize students with the nature of the material to be used in each of the following contests. (2) The District Contest which is held in each of the central towns of the districts outlined above. This is held for the purpose of choosing contestants for the final contest in Greeley. It is a contest for the winners of first, second, and third places in each of the local contests held in the district. This should be the most interesting and keenly contested of the series. (3) The Final Contest is held in the College at Greeley and the eligibles are the winners of first, second, and third places in each event of the District Contests.

### GENERAL RULES AND REGULATIONS:

1. The contest is sanctioned by and will be conducted under the rules and regulations of the International Contest Committee so far as they apply.
2. Contestants are classified in two groups: (1) Beginners, those who began the study of the subject in which they wish to compete on or about Sept. 1 of the current school year, and who

have not taken more than two hours of work daily in the subject in which they wish to enter since that time. (2) Advanced, the best product of the school regardless of the time enrolled or the quantity of work done.

3. All material for the contests is furnished without charge by the College.

4. Expenses of contestants must be borne by the school sending them or by the individuals themselves.

5. An entrance fee of 25c will be charged each contestant whether he enters one or more of the events. This applies to both the district and final contests.

6. Any student who is a bona fide member of the school he represents is eligible; that is, regularly enrolled and taking a full regular course. Post graduate students are not eligible.

7. The school scoring the highest number of points will be considered the champion school of the district. The first place in each of the events will count 10 points, second place 7, and third place 4. Substitutions may be made by schools participating in the district contest.

8. Winners of first, second, and third places in each event in the local contests are eligible to enter the district contests. Winners of first, second, and third places in each event in the district contests are eligible to enter the final contest.

9. Contestants in typewriting may bring their own machines if they prefer.

10. A contestant may enter in as many of the events as he desires.

11. The material furnished by the College for the contests is intended to be parallel for the local, district, and final events in order that contestants may become familiar with the nature of the tests before coming to the Final Contest.

12. Fees collected by the manager of the district should be used to pay for the necessary material used in connection with the contest. Any remainder may be remitted to the Commercial Department at the College.

13. A complete list of the necessary supplies needed for the contest will be sent with the material.

14. District managers should follow very carefully the forms for reporting results of the contest.

15. The subjects included in the contest are, Typewriting (advanced and beginners), Shorthand (advanced and beginners), Bookkeeping (advanced and beginners), Spelling, Rapid Calculation, and Penmanship.

## AWARDS

1. The winners of first places in each event in the local contests are awarded appropriate certificates.

2. The winners of first places in each event in the district contests are awarded appropriate certificates.



3. The awards for the Final Contest are trophy cups for the winners of first place in each event. These cups will have the names of the winners engraved on them together with the date, record, etc., and will be put on exhibition in the schools from which the contestants came and will remain there for one year. They should be returned to the College in time for the next contest. When a school succeeds in winning one of these cups for two years in succession it becomes the permanent property of the school and need not be returned. Individual winners will receive attractively engraved certificates and the title of STATE CHAMPION. Contestants ranking second and third will receive appropriate certificates with HONORABLE MENTION.

4. A four-year scholarship will be awarded to the *champion bookkeeper*, i. e., to the contestant with the highest aggregate score in the Final Contest in the subjects of advanced bookkeeping, penmanship, and rapid calculation.

5. A four-year scholarship will be awarded to the *champion stenographer*, i. e., to the contestant with the highest aggregate score in advanced shorthand, typewriting, and spelling.

A student qualifying in any one of the subjects in either group in the district contest is eligible to enter the Final Contest and may compete in the other two subjects also; but only for the scholarship, i. e., if a student qualifies in spelling only in the district contest he may enter the finals and compete in all three subjects, spelling, shorthand, and typewriting, but he is eligible for but one cup—the one for spelling, and the scholarship for the CHAMPION STENOGRAPHER.

6. A trophy will be awarded to the school that turns in the highest average for a class of ten or more students who have had no training in typewriting prior to the beginning of the present school year. The following conditions are attached:

a. All students who enrolled for beginning typewriting within two weeks of the beginning of the school year must be included in the group.

b. Any student who has had training in typewriting previous to the beginning of the present school year is ineligible.

c. The material for the beginners in typewriting is not to be opened until students are assembled ready for the test.

d. The test must be conducted in the presence of the Superintendent, Principal, a member of the school board, or some responsible, disinterested person who shall keep time and who will certify that time was accurately kept and that the contest was fairly conducted.

e. All papers are to be carefully marked and graded by the students and teacher in charge, according to international rules.

f. A score sheet is to be completely filled out, showing the gross, errors, and net score of each student and sent in to the College together with all students' papers.

g. The certification blank must be sent along with the papers.

## THE MATERIAL

## TYPEWRITING.

All of the material for the typewriting contests will be furnished by the International Contest Committee through the College. The rules and regulations governing the International Contests will be used. All contestants will write for 15 minutes.

## SHORTHAND.

The material for beginners will consist of letters or an article supplied by the Gregg Company through the College. It is to be dictated at the rate of 68 words a minute for four minutes. Transcription may be typed or written in longhand.

Shorthand for the advanced students is to be material supplied by the Gregg Company through the College. It is to be dictated at the rate of 88 words for two minutes and one hundred eight words for two minutes. Transcripts must be typed.

Notes must be turned in with all transcripts, which must be in the hands of the judges within forty-five minutes from the time the dictation begins. The Gregg Writer rules printed in the September, 1924, number on pages 13-14, or in the January number on pages 260-261, shall be used in grading the work. In case of a tie the decision shall be based on arrangement.

Shorthand notes are to be graded according to the Hoke Penmanship Measuring Scale for Gregg Shorthand. Copies of these scales will be included with the material mailed for the local test. Use of the correct principles involved, will be taken into consideration.

## SPELLING.

A list of one hundred practical words of a little more than the average difficulty of spelling will be pronounced. Elimination will be made on the first fifty words, so that the contestant with the high score out of fifty words will be declared the winner. If two or more tie the next elimination will be made on the next twenty-five words and if there is still a tie, the next elimination will be on the last twenty-five words.

## BOOKKEEPING.

The bookkeeping material for beginners this year will consist of a "yes" and "no" or "true" and "false" theory test, an exercise in the theory of debit and credit by filling in blanks, an exercise to be posted to ledger accounts from the books of original entry (prepared), an exercise in classifying business transactions according to a given set of books of original entry (filling in blanks).

The material for advanced bookkeeping will consist of a "yes" and "no" theory test, a trial balance to be made up from a list of account titles promiscuously arranged, a Profit and Loss Statement and a Balance Sheet to be arranged according to a form previously prescribed, a series of journal entries to show the accounting for some transactions of more than usual difficulty.

## RAPID CALCULATION.

Speed and accuracy in the use of fundamentals is the basis of this test. It includes addition, subtraction, multiplication, and practical problems. Complete test papers are prepared so that each contestant is presented with a copy.

## PENMANSHIP.

The material for the penmanship contest consists of a type-written business letter to be copied in longhand. The time limit will be five minutes. This will be graded by the Zaner Penmanship Scale, which will be sent out with the material for the local contest.

## INSTRUCTIONS FOR SCORING

## Shorthand

## LOCAL

## GENERAL :

All materials, penmanship paper, pencils or pen and ink and type-writing paper should be passed to each student before the contest begins. Typewriting paper may be rolled in the machine ready to begin the transcription.

Before giving the actual contest material there should be a dictation of a minute at the required speed, using practice material, to accustom the student to the dictator's manner and to relieve nervous strain.

When the actual contest dictation begins there should be no break in the time except that made necessary in the advanced shorthand, by a change in speed. When this change is made a half-minute may be allowed and then a practice try-out given at the higher rate before the contest material is resumed for the last two minutes.

Forty-five minutes from the time the dictation begins, all papers should be in the hands of those in charge.

Penmanship charts accompanying these materials are to be used in securing the shorthand penmanship rating:

1. If the notes are rated at the score of 80 or less, no points shall be added.
2. If rated at 85 to 90 add 5 points.
3. If rated at 90 to 95 add 10 points.
4. If rated at 95 to 99 add 15 points.
5. If rated at 100 add 20 points.

Thus it is possible to secure a standing of 120 points as a total score.

## DETAILED INSTRUCTIONS :

1. All material will be properly counted out in quarter-minutes and will be furnished in duplicate, one for the dictator and one for the checker, who will follow the dictator and check all errors made in reading so that the contestants will not be charged for the dictator's errors.

2. In checking papers all penalties and errors will be rated as of the same value; that is, one error only should be marked for each incorrectly transcribed word, each omitted or added word, each transposition, or each deviation of any kind from copy as read.

3. Each deviation from copy, English or otherwise, is one error.

4. Each typographical mistake will constitute one error (the standard of perfection in this respect is the perfection required in a business office. As erasing is permissible in a business office, an erasure will not be considered an error if it is neatly done. If it is badly done, it will constitute one error).

5. Each misspelled word will be marked one error. (The Webster, Standard, and Century dictionaries will govern.)

6. Each deviation from copy in the matter of punctuation, where the sense of the context is affected, will be considered one error. This calls for discretion on the part of the checkers, but certain general rules may be enumerated here:

a. A period for an interrogation mark is obviously an error, except in some doubtful constructions. (All possibility of doubt in such constructions will be eliminated, as far as possible, in the selection of the material.)

b. The use of a comma for a semi-colon or vice versa is not an error. This is frequently a matter of taste.

c. The omission or insertion of a comma is not an error. This is frequently a matter of taste.

d. The omission of a period is obviously an error.

e. The use of a dash for a comma or semi-colon, or vice versa, is not an error. In all immaterial cases, such as this, it should be remembered that all authorities are not agreed on punctuation.

f. Faulty punctuation, where a clause is detached from the end of one sentence and placed at the beginning of the next, or vice versa, is one error if the sense of the context is affected. (In cases of immaterial clauses, this is frequently caused by faulty dictating, and the student should not be penalized when the sense is not affected.) Where the sense is changed, one error only should be marked.

7. Faults of capitalization should be marked one error each, except where deviation may be properly considered a matter of taste.

8. Hyphenated compound words will be considered as two words or more, as the case may be. A mistake on one word of the compound will constitute only one error.

9. Figures are counted as they would be read—"38" is counted as two words. A mistake on one of the figures, therefore, will constitute but one error. "1923" (nineteen hundred twenty-three) is counted as four words. The writing of "1922" for "1923" would be one error only. The writing of "1823" for "1923" would be, similarly, one error. The writing of "1819" for "1923" would be three errors; and if every figure were wrong in the date, four errors would be charged.

10. Errors are not charged both for the transcribing of wrong words and for the insertion of others on the same construction. For instance, the checker should count the number of words incorrectly transcribed and that will be the total of errors on that construction; but if the number of incorrect words the student transcribes on a particular construction exceeds the number of those he should have transcribed, *he is charged always with the greater number*. For instance, if he wrote "Secretary of State" for "the State," he would be charged two errors. It will be seen that he has properly transcribed "state," the only errors being the transcription of "secretary of" for "the," and he is charged with the greater number, which is two. Similarly, if in a wrong transcription the words he supplies are less than the copy, he is charged with the greater number. Care should be exercised in not charging him for words correctly transcribed, although words on either side of it may be subject to error.

11. Faulty arrangement or centering of the transcript will be marked an error. Only one error of this kind can be marked on the complete transcript.

12. Faulty paragraphing will be marked an error, but only one error of this kind can be marked on the complete transcript.

13. A maximum of one error only can be marked for each word of the copy. For instance, two errors cannot be charged against any one word of the copy. For example, any single word both misspelled and improperly capitalized, will be marked as but one error.

## BEGINNERS' SHORTHAND DICTATION

## LOCAL—68 WORDS A MINUTE

Often the line between a good and bad pull is so fine as to be almost imperceptible. There are pulls/which are like the one I have just mentioned, in a slight degree, and yet which are vastly different in/their results, pulls that are not at all bad and which can be worked without injury to the world at/large or to the man who uses them. A kindly word,

1  
spoken at the right time and place, may serve//as a very strong pull toward placing some deserving chap in a position which he could not have gotten in/any other way. There are thousands of young men who have taken advantage of that kind of pull with no/loss of respect, and a pull of the same sort has often been the means of putting a struggling firm/on a sound financial basis. Brown tells Jones that the goods which are made

2  
by Smith are sure to be//of the best quality and that the price will be found to be right. Smith profits thereby, really by a/pull, although behind it all will be found the fact that Smith really profits by his honesty in making and/selling his goods, but he needed the pull to let other people know it. The pull is there and no/one will be bold enough to say that

3  
it does not make for good. But it can be made to//work for evil just as easily. If Smith makes and sells goods which are not up to standard and if/he pays Brown a commission for the use of his pull in selling them, then the color of that pull/is changed. A pull which is used to benefit another, and with no thought of gain to one's self, is/always good, no matter what direction it may take, although there may be cases in which it

4  
is not wise//to use it.

## ADVANCED SHORTHAND DICTATION

## LOCAL—88 WORDS A MINUTE

## PART I

I do not understand, Mr. President, why the discussion on this bill has continued for so many days. There are so many important matters to/come before this body before the end of next week that we cannot afford to spend so much time with mere details. The bill has/passed the Senate and it is back here to be acted upon by the House. There is no chance to amend it and I do/not see why there would be any question about making it a law immediately. From all that has been said this morning, it is

1  
very//clear that an attempt has been made to bring the Federal Trade Commission into an unfavorable light. As a matter of fact this Commission has/given more time and attention to the essentials in this bill than anyone outside. By reason of the thorough manner in which the report was/drafted and because of the careful thought exercised in choosing the members of this body, it seems to me that it is for us to/accept the bill without any further debate on the subject. Every good provision in the

2  
bill represents the work of the Commission and certain agents.//

## LOCAL—108 WORDS A MINUTE

## PART II

I am very much impressed with the remarks made by the gentleman speaking before me and I am more firmly of the opinion that the points will require our most/careful study. It seems to me that the facts are very significant. Of course we all know, as Mr. Smith has said, that only

one phase of the subject relating to the railroad question has been considered and what we have heard, together with what we have seen, should result in further inquiry into the matters presented. I feel under obligations to Mr. Smith for bringing these facts to our attention.

In speaking further on this subject it is very difficult, in view of what  
 1  
 has already been developed, to know what phase to consider. If we could only return to our various offices now and immediately go to work on the course of action suggested, I am certain that the whole situation would be greatly improved. Such a course would not only enable us to improve but it would effect a change throughout the railroad system which would inspire every worker from the office boy, up or down, to the president of the road. At this point may I say that our great difficulty lies in the fact that we are not willing to get right down to such a task and think our way through the plans that are presented from time to  
 2  
 time in our general meetings. //

## Spelling

### DISTRICT

The highest possible score in spelling is 50. If contestants tie in the first list of 50 words, the elimination will be made in the grading on the next 25. If there is still a tie the elimination will be made in the last 25 words, but the final score will still remain the same as it was on the first 50 words. The whole list should be written by all contestants, however.

- |                   |   |
|-------------------|---|
| 1. mileage        | the total number of miles traversed   |
| 2. diphthong      | a union of vowels   |
| 3. blamable       | meriting blame; faulty  |
| 4. guidance       | the act or process of guiding   |
| 5. mistakable     | liable to be mistaken   |
| 6. ceiling        | overhead covering of a room   |
| 7. society        | the collective body of persons composing a community especially when considered as subjects of civil government |
| 8. lieutenant     | an officer in the army  |
| 9. Wednesday      | a day of the week   |
| 10. indict        | to charge with a crime  |
| 11. campaign      | an organized movement   |
| 12. candidate     | one who is to be voted upon for an office   |
| 13. caramel       | a confection; burnt sugar   |
| 14. lonely        | without companions  |
| 15. acquitted     | freed or cleared  |
| 16. parallel      | tending toward the same end or result   |
| 17. bicycle       | a two-wheeled vehicle   |
| 18. forbidden     | not allowed; prohibited   |
| 19. swimming      | a water sport   |
| 20. preferable    | more desirable than others  |
| 21. buffaloes     | animals of the western plains, almost extinct   |
| 22. pianos        | two or more of this type of musical instrument  |
| 23. amateur       | one who practices an art but is not a master of it  |
| 24. alphabet      | a series of letters that constitute the elements of a language  |
| 25. awkward       | ungraceful or ungainly  |
| 26. irrepressible | that which cannot be restrained or kept down  |
| 27. neutral       | belonging to neither side of two contestants<br>—indifferent  |

28. courteous	respectful
29. formidable	difficult to accomplish
30. government	administration of the affairs of a state
31. cancelling	removing or marking out or off
32. cancellation	the act of canceling or removing
33. naive	open and candid, frank
34. license	a grant or right to do an act
35. negligible	inconsiderable
36. tariff	a duty or tax by the government
37. pantomime	thought or story conveyed by motion without words
38. obstacle	that which hinders progress
39. dictionary	a book containing the words of any language
40. debtor	one who is in debt
41. cashier	a custodian of money
42. forfeit	something lost by default
43. inaugurate	to invest with an office in a formal manner
44. hygiene	the science of the preservation and improvement of health
45. led	past perfect of lead, to have conducted
46. intercede	to intervene or plead for
47. feasible	possible
48. exaggerate	making a thing appear larger or better than it is
49. grandeur	admirably great or sublime
50. embezzlement	appropriation for personal use of money or goods entrusted to one's care
51. guardian	a person who legally has charge or care of a minor's property
52. diphtheria	an infectious disease in the throat
53. contagious	transmissible by contact
54. justifiable	capable of being justified
55. weather	atmospheric condition
56. surmise	to guess or presume
57. promiscuous	things brought together without order
58. pecuniary	relating to money
59. simultaneous	at the same time
60. mortgage	to pledge or make liable for payment
61. prophesy	foretold
62. reimburse	paid back
63. schedule	a printed statement of details
64. visualize	to get a clear mental sight or picture
65. supersede	to place ahead
66. picnicking	outdoor pleasure
67. stratagem	a scheme
68. seine	net used in fishing
69. glycerine	a thick oily liquid with a sweet taste
70. degradation	the act of lowering or reducing in rank or character
71. quarantine	to keep from contact with disease
72. inoculate	to guard against disease
73. lily	a flower
74. restaurant	a place where meals are served
75. palatial	like a palace; very fine
76. vacuum	unoccupied space
77. transmissible	that can be passed to another
78. rheumatism	a disease or complaint
79. precede	to go before
80. proceed	to continue, go forward
81. cornea	a part of the eye
82. prerequisite	required ahead or before
83. significant	of importance

84. sympathize	to feel sorry for or take interest in
85. eustachian	tube leading to the ear
86. aisle	a passageway
87. equivalent	equal to
88. coincide	to correspond
89. aphasia	loss of power of speech
90. accompanist	one who plays an accompaniment
91. neurones	units of nervous system
92. vehicle	a conveyance
93. illustrate	to make clear by special method or device
94. lavender	an aromatic plant
95. prodigy	one of unusual power
96. calendar	a record of time
97. homogeneous	of the same time or nature
98. adolescence	completing of bodily growth
99. testament	a collection of books or records
100. hypermetropia	far sightedness

## BEGINNERS' BOOKKEEPING

### LOCAL

#### INSTRUCTIONS TO TEACHERS

- Each student should be supplied with a pen, ink, pencil, and blotter.
- Give out the questions one part at a time, face down. i. e. Part I, then Part II, etc.
- Give the signal "turn," and keep time accurately.
- When you say "turn" again students will turn the papers face down at once. Then give out Part II and continue in like manner.
- Allow ten minutes for Part I, fifteen minutes for Part II, and twenty minutes for Part III.
- When you have finished Part III, have students grade their own papers or exchange them if they prefer to do so.
- As you read from the key have the students place a circle around each error noted. Do not mark correct answers.
- The net score on Parts I and II will be the total correct answers minus the total number of circles.
- In grading Part III count each of the following as one error:
  - Each item posted to the wrong account.
  - Each item posted to the wrong side of an account.
  - Each omission of the year at the heading of the date column in an account.
  - Each error in the year used as in c.
  - Each omission of the date (month and day, month or day) where it should not be omitted.
  - Each omission of initial of book of original entry.
  - Each error in initial of book of original entry.
  - Each omission of folio numbers in the ledger.
  - Each error in the folio number.
  - Each error in amount posted.
  - Each omission of special terms on a purchase or sale entered in the ledger account. (This is not meant to include "on account.")
  - Each omission of the folio number in the books of original entry.
  - Each error in the folio number entered in the books of original entry.
- The net score for Part III will be the total number of items entered in the ledger minus the total number of errors as listed above.  
 Note to Teacher: It would be a good plan to put the items listed under nine above on the board and have students thoroughly understand them before giving the test. An "item" as the term is used in 10 includes the date, folio, explanation when used, and the amount.



PART I—THEORY

Name or No. ....	Score, Part I _____
	Part II _____
	Part III _____
	Total _____

INSTRUCTIONS:

Answer as many of the following questions as you can in 10 minutes with "yes" or "no."

1. Are notes receivable (customers) current assets? \_\_\_\_\_
2. Is delivery equipment a fixed liability? \_\_\_\_\_
3. Is interest on notes receivable an income? \_\_\_\_\_
4. Will items posted to wrong accounts cause a trial balance to be out of balance? \_\_\_\_\_
5. Is a sales journal a book of original entry? \_\_\_\_\_
6. Is the left hand side of an account the debit side? \_\_\_\_\_
7. When there is a balance in the notes payable account is it always a credit balance? \_\_\_\_\_
8. Would you debit an expense account for a new bookkeeper's stool bought for the office? \_\_\_\_\_
9. Should all accounts in the general ledger be closed and balanced at the end of a fiscal period? \_\_\_\_\_
10. Is a fiscal period always a year? \_\_\_\_\_
11. Would you debit cash for a note received from a customer on account? \_\_\_\_\_
12. Suppose you held a note for \$100 that you considered worthless and you burned it, would you credit notes receivable for \$100? \_\_\_\_\_
13. In a ledger account having entries on both sides is it necessary to write the year on both sides? \_\_\_\_\_
14. When a customer pays a note do you credit the customer's account? \_\_\_\_\_
15. If you paid your note in favor of John Smith would you debit Mr. Smith in his account? \_\_\_\_\_
16. If you were using a sales book, a general journal and a cash book and a cash sale was made, would you record it in the cash book? \_\_\_\_\_
17. If freight was prepaid on a shipment of goods to a customer with the understanding that it was to be added to the invoice when it was paid, would you debit the customer for the freight? \_\_\_\_\_
18. John Doe transferred Henry Brown's note to you on account. They are both customers of yours, would you credit Brown's account for the note? \_\_\_\_\_
19. If you paid a note for \$990, with interest \$10, would you debit Notes Payable for \$1000? \_\_\_\_\_
20. Does the cash account ordinarily show a credit balance? \_\_\_\_\_

PART II

Name or Number.....	Score.....
---------------------	------------

INSTRUCTIONS:

Fill as many of the following blanks as you can in 15 minutes. Show in which of the following books of original entry the transactions would be recorded: General Journal, Sales Journal, Purchase Journal, Cash Book. The letters "J" for Journal, "S. J." for Sales Journal, "P. J." for Purchase Journal, and "C. B." for Cash Book may be used.

1. Bought Merchandise on Account. \_\_\_\_\_
2. Sold Merchandise on Account. \_\_\_\_\_
3. Paid Cash for rent. \_\_\_\_\_
4. Received a note on account. \_\_\_\_\_

- 5. Returned unsatisfactory goods for credit. \_\_\_\_\_
- 6. Gave our 60 day note on account. \_\_\_\_\_
- 7. Accepted a 30 day draft drawn by one of our creditors. \_\_\_\_\_
- 8. Received Cash on account from a customer. \_\_\_\_\_
- 9. Part of the rent paid above was returned to us. \_\_\_\_\_
- 10. We returned merchandise as unsatisfactory. \_\_\_\_\_
- 11. We paid one of our notes with interest. \_\_\_\_\_
- 12. We bought merchandise on account. \_\_\_\_\_
- 13. We gave our note at 90 days on account. \_\_\_\_\_
- 14. We paid cash for insurance. \_\_\_\_\_
- 15. A creditor made an error in an invoice that we entered and paid before the error was discovered. \_\_\_\_\_
- 16. Cash was paid for some new office furniture. \_\_\_\_\_
- 17. Merchandise was sold on account. \_\_\_\_\_
- 18. A check was issued for delivery equipment. \_\_\_\_\_
- 19. A delivery truck was sold for cash. \_\_\_\_\_
- 20. A customer claimed an allowance for damaged goods which we allowed. \_\_\_\_\_
- 21. We returned some stationery that was unsatisfactory and got our money back. \_\_\_\_\_
- 22. By an oversight a customer overpaid us and we have agreed to allow him credit on his next bill for the amount. \_\_\_\_\_

Fill the following blanks with *numerals* to indicate the name of the accounts that would be debited or credited.

- |                                      |  |
|--------------------------------------|--|
| 1. Cash                              | 12. General and Administrative Expense |
| 2. J. Jones                          | 13. Interest Costs                     |
| 3. H. Smith                          | 14. Interest Income                    |
| 4. Notes Receivable                  | 15. Sales Discount                     |
| 5. Purchases                         | 16. Purchase Discount                  |
| 6. Sales                             | 17. Notes Payable                      |
| 7. Purchases, Returns and Allowances | 18. J. S. Byars                        |
| 8. Sales Returns and Allowances      | 19. C. D. Horn                         |
| 9. In-Freight                        | 20. U. R. Long, Capital                |
| 10. Out-Freight                      | 21. U. R. Long, Personal               |
| 11. Selling Expense                  |  |

	Debit	Credit
1. Bought Merchandise on account from J. S. Byars	_____	_____
2. Paid rent for 2 months	_____	_____
3. Sold merchandise on account to J. Jones	_____	_____
4. Cash sales for the day recorded	_____	_____
5. Bought books and stationery	_____	_____
6. Bought merchandise for cash	_____	_____
7. Paid C. D. Horn less discount for cash	_____	_____
8. We returned merchandise to C. D. Horn	_____	_____
9. Sold goods on account to J. Jones	_____	_____
10. Sold goods for cash	_____	_____
11. Sold goods to H. Smith on account	_____	_____
12. Paid freight on goods sold	_____	_____
13. Gave our 60 day note on account to J. S. Byars	_____	_____
14. Drew a 60 day draft on H. Smith in favor of C. D. Horn	_____	_____
15. Long took cash for personal use	_____	_____
16. H. Smith paid an invoice less cash discount	_____	_____
17. We paid incoming freight bills	_____	_____
18. H. Smith returned unsatisfactory goods	_____	_____
19. We paid a note and interest to C. D. Horn	_____	_____

20.	We paid clerks' salaries for the week	_____	_____
21.	J. Jones paid his note and interest	_____	_____
22.	Paid our Taxes	_____	_____
23.	Long took goods for his personal use at selling price	_____	_____
24.	Some of the freight paid in 12 was on incoming goods	_____	_____
25.	Paid the telephone bill	_____	_____
26.	Bought 10 tons of coal for cash	_____	_____
27.	We accepted a 30 day draft drawn by J. S. Byars in favor of J. Jones	_____	_____

PART III—POSTING

Name..... Score.....  
 INSTRUCTIONS:

Post as many of the items below as you can in 20 minutes. Post the amount, date and folio for each item. Omit explanations. Folio numbers must be used in the ledger and in the book of original entry. One point will be deducted for each error of any kind.

1925 GENERAL JOURNAL

1925		GENERAL JOURNAL	
Mar.	1	Cash	65.
		Notes Receivable	918.
		Merchandise Inventory	8761.
		Accounts Receivable	13645.54
		J. R. Runner	3645.54
		I. B. Buns	8000.
		A. Mann	2000.
		Furniture and Fixtures	200.
		Real Estate	1000.
		Notes Payable	345.27
		S. A. Amos	860.56
		M. I. Quinn	1161.16
		A. C. Rogers, Cap.	22222.55
		To record the assets, liabilities and net worth of A. C. Rogers, as of Mar. 1, 1925	
Mar.	1	Notes Receivable	1000.
		J. R. Runner	1000.
		Received his 60 day 6% note on account, due April 30.	
	2	M. I. Quinn	11.45
		Purchases, Returns and Allowances	11.45
		Goods returned as unsatisfactory	
	3	Furniture and Fixtures	87.60
		Purchases	87.60
		For hand trucks taken from stock to be used in the store.	
	4	Bad Debts	1400.
		A. Mann	1400.
		Mr. Mann has failed and is able to pay only 30c on the dollar.	

1925		SALES JOURNAL			16
Mar.	1	J. R. Runner	2/10 n/30		387.48
		I. B. Buns	on account		365.40
		A. Mann	1/10 n/30		413.10
Mar.	2	A. Mann	on account		126.40
		I. B. Buns	1/10 n/30		27.40
		I. B. Buns	2/10 n/30		186.06

1925		PURCHASE JOURNAL			92
Mar.	1	S. A. Amos	1/10 n/60		410.10
	2	M. I. Quinn	on account		1,365.15
		J. R. Dix	2/10 n/30		116.27
		N. C. Rankin	on account		841.30

1925		CASH RECEIVED JOURNAL			11
Mar.	1	A. C. Rogers,	Investment		1,265
		Notes Receivable			110
		Interest Income	on above note		8
		I. B. Buns	on account		116
	4	A. Mann	30c on \$1.00		600

1925		CASH PAYMENTS JOURNAL			12
Mar.	1	Rent	for store 2 mo.		600
		General Expense	Stationery		16.41
		Insurance	on Store, 1 yr.		120
		M. I. Quinn	on account		200
	2	General Expense	Stamps		5
	6	Sales Salaries	Clerks		116
		Delivery Expenses	Drivers Wages		40
		Delivery Equip't.	2 trucks		768.40
	7	Freight-In	on purchases		83.40















GENERAL LEDGER  
Inventory

Cash									

BEGINNERS' BOOKKEEPING  
TEACHER'S KEY  
LOCAL

PART I	PART II-a	Part II-b	Debit	Credit
1. yes	1. P.J.	1.	5	18
2. no	2. S.J.	2.	12	1
3. yes	3. C.B.	3.	2	6
4. no	4. J.	4.	1	6
5. yes	5. J.	5.	12	1
6. yes	6. J.	6.	5	1
7. yes	7. J.	7.	19	1-16
8. no	8. C.B.	8.	19	7
9. no	9. C.B.	9.	2	6
10. no	10. J	10.	1	6
11. no	11 C.B.	11.	3	6
12. yes	12. P.J.	12.	10	1
13. yes	13. J	13.	18	17
14. no	14. C.B.	14.	19	3
15. no	15. J.	15.	21	1
16. yes	16. C.B.	16.	1-15	3
17. yes	17. S.J.	17.	9	1
18. no	18. C.B.	18.	8	3
19. no	19. C.B.	19.	13-17	1
20. no	20. J.	20.	11	1
	21. C.B.	21.	1-14	4
	22. J.	22.	12	1
		23.	21	6
		24.	9	10
		25.	12	1
		26.	12	1
		27.	18	17

## ADVANCED BOOKKEEPING

## DISTRICT

## TEACHERS' INSTRUCTIONS

1. Have students grade or score their own papers.
2. As you read correct answers have them place a circle around each answer that is wrong. Correct answers should not be marked.
3. Have students count the number of correct answers then subtract the number of circles—wrong answers. The result will be the net score for Part I.

## PART II

1. Allow one point for a correct formal title (firm name, date, name of statement).
2. Allow one point for each complete item (account title and amount) properly listed in the trial balance.
3. Allow one point for each single column added if it corresponds with the key.
4. Deduct one point for each of the following:
  - a. An error in or omission of the whole or any part of the title.
  - b. An error in account titles used.
  - c. An error in copying an amount.
  - d. An amount placed in the wrong column.
  - e. A single column incorrectly added even though the figure may agree with the key.
  - f. The omission of an account title.
  - g. The omission of an amount opposite an account title.

## PART III

1. Allow one point for each complete title of statement.
2. Allow one point for each item (title and amount) in each statement if it is correct and properly placed according to the given classification.
3. Allow one point for each total or difference extended or inserted. But if the same total or difference found is placed in a column and then extended to another, which would be merely copying, it should be counted only once.
4. Deduct one point for each of the following:
  - a. For each error or omission of a part or the whole title of a statement.
  - b. Each item incorrectly classified.
  - c. Each error in description or amount of any item.
  - d. Each incorrect total or difference.
5. To the total net score for Parts I, II, and III as indicated above may be added.
  - 0 points if penmanship and appearance is poor
  - 10 points if penmanship and appearance is fair
  - 20 points if penmanship and appearance is good
  - 40 points if penmanship and appearance is excellent

ADVANCED BOOKKEEPING

DISTRICT

PART I, THEORY

Name or No. ....	Score.....	Part I .....
		Part II .....
		Part III.....
		Penmanship.....
		Total Net Score.....

INSTRUCTIONS:

Use the words "yes" and "no" in answering the following questions. Answer as many as you can in eight minutes.

1. Is the ledger a book of original entry? .....
2. Do expense accounts show credit balances usually?.....
3. Is the capital or proprietorship account a liability?.....
4. Should the Sales Account be debited for total sales for the period? .....
5. Is accrued interest on notes payable a liability? .....
6. Do sales discounts allowed customers increase proprietorship? .....
7. A customer fails in business and can pay nothing, would it be proper to credit his account on our books for the amount lost? .....
8. Money was borrowed at the bank by giving a note for \$1000 and the note was discounted \$10. \$990 was placed to our credit. Should we credit Notes Payable with \$1000? .....
9. As in No. 8, should we credit our interest account with \$10? .....
10. As in No. 8, the note has run for half its time when we come to the end of a fiscal period. Would it be correct to treat the unexpired discount as an expense? .....
11. Should the merchandise inventory at the beginning of a fiscal period be included in the assets of a balance sheet taken at the end of the period? .....
12. Should unpaid taxes at the end of a fiscal period be included with the statement of liabilities? .....
13. A burglar took \$75 from the safe. Would you credit cash account? .....
14. A hardware and implement dealer took a hand truck from stock for use in the store and warehouse. Would it be correct to debit an expense account? .....
15. Should the surplus account, when it contains a balance, be included in the trial balance? .....
16. Is it the principal function of a trial balance to show the financial status of a concern? .....
17. Should the trial balance include all open accounts in the ledger? .....
18. Should such accounts as "Reserve for Depreciation on Buildings" be closed at the end of a fiscal period?.....
19. Do accounts as in No. 18, show debit balances? .....
20. If a "Cash" account were kept in the general ledger would it be correct to post the total of the credit side of the cash book to the debit side of the account? .....
21. Would an entry for Notes Payable ever appear on the debit or cash receipts side of the cash book? .....
22. Do expense accounts ever receive credit entries other than "to close"? .....

- 23. When a controlling account for customers is kept in the general ledger would it usually show a credit balance? .....
- 24. As in No. 23, would it be correct to post the total of the purchase journal to the credit of the controlling account? .....
- 25. Is there any relation between the results of a Profit and Loss Statement and a Balance Sheet? .....
- 26. Would it be correct to charge an allowance for depreciation on delivery equipment to the selling expense account? .....

PART II—TRIAL BALANCE

Name or No..... Score.....  
 From the following particulars, take a trial balance of the ledger of the Builders' Supply Co. on June 30, 1925.  
 You will be allowed 12 minutes.

Warehouse .....	\$ 22,500.00
Land .....	7,800.00
Capital Stock .....	300,000.00
Surplus .....	50,193.00
Stock-in-Trade .....	245,680.00
Furniture and Fixtures .....	2,500.00
Good-Will .....	25,000.00
Trade Debtors .....	362,400.00
Cash .....	38,490.00
Trade Creditors .....	176,700.00
Notes Payable .....	15,700.00
Notes Receivable .....	18,900.00
Sales .....	589,760.00
Purchases .....	356,420.00
Salaries .....	38,900.00
Coal .....	4,200.00
Repairs .....	2,800.00
General Expenses .....	17,900.00
Depreciation Reserve Warehouse .....	5,000.00
Mortgage Payable .....	10,000.00
Interest Expense .....	475.00
Interest Income .....	662.00
Lighting .....	700.00
Telephone .....	600.00
Insurance .....	1,860.00
Taxes .....	890.00

PART III—STATEMENTS

Name or No..... Score.....  
 Instructions:

From the following trial balance taken from the books of A. D. Woolman Coal Co., as of Dec. 31, 1925, and the adjustment data given after the trial balance, you will prepare first a Balance Sheet then a Profit and Loss Statement. You will be allowed 20 minutes.

The Statements must be in good form and conform with the following outline as to order of arrangement:

Balance Sheet:

1. A complete, appropriate heading or title containing (1) kind of statement, (2) firm name, and (3) date.
2. Current Assets—in order of liquidity as a going concern.

3. Deferred Charges.
4. Fixed Assets—most permanent or fixed last.
5. Other assets.
6. Current Liabilities—most current first.
7. Deferred Incomes.
8. Fixed Liabilities.
9. Other Liabilities.
10. Original Capital.
11. Surplus (old) if a corporation.
12. Net Profit.
13. Present Net Worth (or Capital and Surplus, etc.).

## Profit and Loss Statement:

1. Appropriate title (see 1 above).
2. Net Sales Section.
3. Cost of Goods Sold Section.
4. Gross Profit from Operations.
5. Selling Expenses.
6. General and Administrative Expenses.
7. Financial Management Expenses.
8. Financial Management Incomes.
9. Net Operating Profits.
10. Other Incomes.
11. Other Expenses.
12. Net Profit.

## TRIAL BALANCE—DEC. 31, 1925

Cash .....	\$ 7,278.77	
Notes Receivable .....	15,800.00	
Accounts Receivable .....	34,672.10	
Coal Inventory .....	18,902.10	
Furniture and Fixtures .....	1,760.22	
Building ..	8,575.00	
Land ..	2,000.00	
Notes Payable .....		\$ 2,250.00
Accounts Payable .....		31,830.38
A. D. Woolman, Capital .....		52,498.17
A. D. Woolman, Personal .....	1,090.00	
Sales ..		57,375.90
Purchases ..	48,951.55	
Purchases Returns and Allowances .....		1,550.00
Freight and Delivery Inward .....	1,393.59	
Salesmen's Salaries .....	1,200.00	
Advertising ..	1,000.00	
Delivery Expense .....	900.00	
Expense Supplies .....	316.92	
Rent ..	675.00	
Insurance ..	360.00	
Office Salaries ..	380.00	
Sundry Expense .....	223.10	
Cash short and over .....	4.64	
Interest Expense .....	21.46	
	<u>\$145,504.45</u>	<u>\$145,504.45</u>

## Adjustments:

Interest prepaid on note at bank \$3.33; Interest accrued on notes receivable is \$57.33; Expense supplies inventory is \$14.50; Insurance unexpired \$330; Merchants' Association dues prepaid \$47.92; Delivery expense accrued \$75; Salesmen's salaries accrued \$100; Advertising ac-

crued \$50; Advertising prepaid \$100; Office salaries accrued \$31.67; Prepaid rent \$207.26; Furniture and fixtures are to be depreciated \$17.60; Uncollectable accounts are estimated as  $\frac{1}{2}\%$  on sales for the month; Coal inventory \$19,352.30.

## TEACHERS' KEY—PAGE 1.

## PART I—THEORY

1. no	6. no	11. no	16. no	21. yes
2. no	7. yes	12. yes	17. yes	22. yes
3. no	8. yes	13. yes	18. no	23. no
4. no	9. no	14. no	19. no	24. no
5. yes	10. no	15. yes	20. no	25. yes
				26. yes

## PART II—TRIAL BALANCE

Trial Balance Builders' Supply Company, June 30, 1925

Cash ..	\$ 38,490.00	
Notes Receivable ..	18,900.00	
Trade Debtors ..	362,400.00	
Stock-in-Trade ..	245,680.00	
Furniture and Fixtures ..	2,500.00	
Warehouse ..	22,500.00	
Depreciation Reserve Warehouse ..		\$ 5,000.00
Land ..	7,800.00	
Good-Will ..	25,000.00	
Notes Payable ..		15,700.00
Trade Creditors ..		176,700.00
Mortgage Payable ..		10,000.00
Capital Stock ..		300,000.00
Surplus ..		50,193.00
Sales ..		589,760.00
Purchases ..	356,420.00	
Salaries ..	38,900.00	
Coal ..	4,200.00	
Repairs ..	2,800.00	
General Expense ..	17,900.00	
Lighting ..	700.00	
Telephone ..	600.00	
Insurance ..	1,860.00	
Taxes ..	890.00	
Interest Expense ..	475.00	
Interest Income ..		662.00
	<u>\$1,148,015.00</u>	<u>\$1,148,015.00</u>

## A. D. WOOLMAN COAL CO., BALANCE SHEET, DEC. 31, 1925

## ASSETS

## Current Assets:

Cash ..		\$ 7,278.77
Notes Receivable ..	\$15,800.00	
Accounts Receivable:		
M. R. Hamilton ..	\$5,083.70	
F. S. Kent ..	5,232.92	
H. T. Avery ..	4,268.19	
G. C. Furnald ..	3,547.92	



C. P. Pell .. .. .	5,027.10		
S. T. Hartley .. .. .	8,052.80		
A. D. Livingston .. . . .	3,459.47	34,672.10	
		<u>50,472.10</u>	
Less — Reserve for D. A. .... .		286.88	\$50,185.22
		<u>          </u>	
Coal Inventory .. . . .			\$19,352.30
Accrued Income:			
Interest on Notes Re- ceivable .. . . .			57.33
			<u>\$76,873.62</u>
Deferred Charges to Operations:			
Advertising .. . . .		\$ 200.00	
Rent .. . . .		207.26	
Insurance .. . . .		330.00	
Sundry Expense .. . . .		47.92	
Interest Expense .. . . .		3.33	
Expense Supplies .. . . .		14.50	803.01
		<u>          </u>	
Fixed Assets:			
Furniture and Fixtures..	\$ 1,760.22		
Less—Depreciation Reserve	17.60	\$ 1,742.62	
		<u>          </u>	
Building .. . . .		8,575.00	
Land .. . . .		2,000.00	12,317.62
		<u>          </u>	
		Total Assets	<u>\$89,994.25</u>

## LIABILITIES

Current Liabilities:			
Notes Payable .. . . .		\$ 2,250.00	
Accounts Payable:			
M. H. Hanna & Co. ....	\$10,345.70		
American Coke & Chem- ical Co. .. . . .	11,763.98		
Peabody & Co. .. . . .	6,830.00		
Seaboard By - Product			
		<u>          </u>	
Accrued Expenses:			
Salesmen's Salaries .. . . .	\$ 100.00		
Advertising .. . . .	50.00		
Delivery Expense .. . . .	75.00		
Office Salaries .. . . .	31.67	256.67	
		<u>          </u>	
Total Liabilities ....			<u>\$34,337.05</u>

## NET WORTH

Represented by:			
W. D. Woolman, Capital..		\$52,498.17	
Profit for the month .. . .	\$ 4,249.03		
Drawings .. . . .	1,090.00	3,159.03	\$55,657.20
		<u>          </u>	<u>          </u>
			<u>          </u>

A. D. WOOLMAN COAL CO.,  
PROFIT AND LOSS STATEMENT, DEC. 31, 1925

Sales .. .. .		\$57,375.90
Cost of Goods Sold:		
Inventory, Dec. 1, 19.. .. .	\$18,902.10	
Purchases .. .. .	\$48,951.55	
Freight and Delivery-in .. .. .	1,393.59	50,345.14
		\$69,247.24
<i>Less:</i>		
Purchases Returns and Allowances..	\$ 1,550.00	
Inventory, Dec. 31, 1925 .. .. .	19,352.30	20,902.30
Cost of Goods Sold .. .. .		\$48,344.94
Gross Profit .. .. .		\$ 9,030.96
Selling Expenses:		
Salesmen's Salaries .. .. .	\$ 1,300.00	
Advertising .. .. .	850.00	
Delivery Expense .. .. .	975.00	\$ 3,125.00
General Administrative Expenses:		
Office Salaries .. .. .	\$ 411.67	
Expense Supplies .. .. .	302.42	
Rent .. .. .	467.74	
Insurance .. .. .	30.00	
Depreciation .. .. .	17.60	
Cash Short and Over .. .. .	4.64	
Sundry Expense .. .. .	175.18	1,409.25
Financial Management Expenses:		
Interest Expense .. .. .	\$ 18.13	
Bad Debts .. .. .	286.88	305.01
		\$ 4,839.26
Financial Management Income.		
Interest Income .. .. .		57.33
Net Operating Expense .. .. .		4,781.93
Net Operating Profit for the month ..		\$ 4,249.03

RULES FOR RAPID CALCULATION

Eligibility:

Any regularly enrolled high school student who is carrying or has had one or more commercial subjects.

Awards:

Local Contest—a certificate for the winner of first place.

District Contest—a certificate for the winner of first place.

Finals—A handsome trophy cup and a state championship certificate for the winner of first place. Certificate of honorable mention for winners of second and third places.

Giving and Scoring the Test:

Each student should be provided with a pencil and scratch paper. Test papers or question sheets should be handed out face down and one at a time. The addition page first, then when time is called the addition page should be turned face down instantly and the subtraction page should be handed out face down, etc., through the other two pages.

After the first page has been given out, face down and all are ready to begin, say "When I say turn you will first write your name (or a number may be used in the district or final meet) in the space provided, then add without copying as many of the problems as you can in the allotted time. Read the instructions at the top before you begin." Then say "turn" and keep the time very accurately.

Give similar instructions for each page. Before turning the page of content problems explain the figures that appear in parentheses. These problems are weighted so students may not take them in order if they prefer to skip any. The figures in parentheses indicate the number of points that will be allowed for each answer that is correct to a cent.

When the test has been completed have students exchange papers and carefully mark answers as they are read by the teacher.

Scoring Addition, Subtraction and Multiplication:

As answers are read the student will place a small cross under *each figure* that is wrong. The net score will be found by counting the number of figures in all answers *both right and wrong* and then deducting the number of crosses (wrong figures). To this net score should be added the total number of points made on the content problems.

The blank on the first page should then be filled in showing net score.

FINAL

RAPID CALCULATION

ADDITION:

Solve, without copying, as many of the following problems as you can in 2 minutes. Take them in order and skip none.

(a)	(b)	(c)	(d)	(e)
9864	247	648	2464	5432
2643	1886	967	1527	7312
4928	975	325	14251	3987
3175	1298	596	76826	5428
2841	865	434	83577	6729
4238	357	1298	6575	3526

(f)	(g)	(h)	(i)
27452462	72519218	57264592	78955473
87950241	67482153	87492165	24521624
20724065	72186349	48576901	31826473
86957447	39256258	66875465	37462831
72757786	78295416	52163441	37455987
77777777	87596357	10205211	42612542
88888888	21111016	93758617	68375274
76767676	20407030	58759218	47298654

Total..... Wrong..... Net.....

SUBTRACTION:

Solve, without copying, as many of the following problems as you can in 1 minute. Take them in order and skip none.

(a)	(b)	(c)	(d)	(e)
1.00	2.00	3.00	40.00	50.00
.39	1.15	1.17	28.86	9.78

(f) 30.00 28.61 <hr/>	(g) 94575 65298 <hr/>	(h) 98856 47938 <hr/>	(i) 99473 89536 <hr/>	(j) 79845 78798 <hr/>
(k) 86972 84996 <hr/>	(l) 356094 264377 <hr/>	(m) 25438 9879 <hr/>	(n) 46232 19424 <hr/>	(o) 26463 8524 <hr/>
(p) 120090 47308 <hr/>	(q) 657.48 563.89 <hr/>	(r) 905.06 754.78 <hr/>	(s) 753.02 457.69 <hr/>	
Total.....		Wrong.....		Net.....

## MULTIPLICATION :

Solve as many of the following as you can in 2 minutes. Take them in order and skip none.

(a) 48676 6 <hr/>	(b) 96587 8 <hr/>	(c) 53827 7 <hr/>	(d) 4982 9 <hr/>	(e) 44588 8 <hr/>
(f) 92376 5 <hr/>	(g) 78789 9 <hr/>	(h) 40006 7 <hr/>	(i) 88544 6 <hr/>	(j) 90908 90 <hr/>
(k) 65566 8 <hr/>	(l) 35728 5 <hr/>	(m) 3261 63 <hr/>	(n) 5938 87 <hr/>	(o) 9763 94 <hr/>
(p) 2875 65 <hr/>	(q) 7009 86 <hr/>	(r) 8299 72 <hr/>		
Total.....		Wrong.....		Net.....

## CONTENT PROBLEMS

Solve as many of the following as you can in 10 minutes:

- (1) A bankrupt owes A, \$600; B, \$800; C, \$1,000; D, \$1200; but his property is worth only \$1440. How much should each creditor receive? (13)
- (2) Having \$240,000 to invest, a gentleman bought United States bonds with  $33\frac{1}{3}\%$  of it, a home with 25% of the remainder, and invested what still remained equally in farming lands and manufacturing stock. How much did he invest in manufacturing stock? (6)
- (3) B sold a farm to C for \$12,000, thereby gaining 20%. What was A's cost if in selling the same farm to B he made a profit of 25%? (7)
- (4) What is gained by selling 25 doz. pairs of gloves at \$1.25 per pair if they cost \$7.50 per dozen less  $16\frac{2}{3}\%$  and 10%? (15)
- (5) A dry goods merchant's gain in business for four years aggregated 50% of his capital. If his gain was \$5000 and he withdrew it and his capital and invested the total in a farm, consisting of 375 A., what was the price paid per acre? (12)
- (6) A merchandise account shows that the cost of a stock of goods was \$15,000, that the sales to date aggregate \$12,000, and that the goods on hand, estimated at cost prices, amount to \$4500. Find the per cent of gain or loss on the sales. (10)

- (7) Having sent a New Orleans agent \$1835.46 to be invested in sugar, after allowing 3% on the investment for his commission, I received 32,400 pounds of sugar. What price per pound did the sugar cost the agent? (14)
- (8) A man invested \$16,000 in business, and at the end of 3 yr. 3 mo. withdrew \$22,240, which sum included investment and gains. What yearly per cent of interest did his investment pay? (8)
- (9) What monthly rent should be charged for a house costing \$10,240 in order that 6% interest on the investment may be realized? (3)
- (10) In a school district the valuation of the taxable property is \$752,400 and it is proposed to repair the schoolhouse and ornament the grounds at an expense of \$5000. If old materials sell for \$673.70, what will be A's tax, whose property was valued at \$9400? (12)

### KEY TO RAPID CALCULATION

#### FINAL

##### ADDITION :

- (a) 27,689 (b) 5,628 (c) 4,268 (d) 185,220 (e) 32,414  
 (f) 539,276,342 (g) 458,853,797 (h) 475,095,610 (i) 368,508,858

##### SUBTRACTION :

- (a) .61 (b) .85 (c) 1.83 (d) 14.14 (e) 40.22 (f) 1.39  
 (g) 29,277 (h) 50,918 (i) 9,937 (j) 1,047 (k) 1,976  
 (l) 91,717 (m) 15,559 (n) 26,808 (o) 17,939 (p) 72,782  
 (q) 93.59 (r) 150.28 (s) 295.33

##### MULTIPLICATION :

- (a) 292,056 (b) 772,696 (c) 376,789 (d) 44,838 (e) 356,804  
 (f) 461,880 (g) 709,101 (h) 280,042 (i) 531,264 (j) 8,181,720  
 (k) 524,528 (l) 178,640 (m) 205,443 (n) 516,606 (o) 917,722  
 (p) 186,875 (q) 602,774 (r) 597,528

##### PROBLEMS :

- (1) A, \$240; B, \$320; C, \$400; D, \$480 (2) 60,000 (3) \$8,000 (4) \$270  
 (5) \$40 (6) 14 2/7% gain (7) 5 1/2 c (8) 12% (9) \$51.20  
 (10) \$54.05

### PENMANSHIP

#### (STATE SERIES)

Contestants will be given 5 minutes from the time the signal start is given in which to write the following letter, or as much of it as can be written in that time.

Grading will be by the Zaner Handwriting Scale number 5.

A few minutes practice on intermediate drills is advisable.

Copy the following business letter on good quality of writing paper 8"x10 1/2" or 8 1/2"x11", using a medium fine steel pen.

Current date

Mr. J. R. Brown  
 Cheyenne, Wyoming  
 Dear Sir.

We are in receipt of a letter from Mr. Walter McAdoo with reference to the matter of signing a release, freeing the Saxon Motor Car Corporation from any and all obligations to pay any further commissions which may be earned under his last season's contract. We will ask you to send Mr. McAdoo your check settling with him for the full amount of rebate due him according to his agreement. Immediately after his release is received, we will send it to our home office and have them make a check payable to you, refunding the amount of rebate that they have been holding in reserve until such time as you should settle with this subagent.

Mr. McAdoo seems disposed to take a critical attitude in this matter, and your immediate attention to the instructions of this letter will therefore be appreciated.

Very truly yours,  
Name

List of Contestants who participated in the Finals of the State Contest in Commercial Subjects held at Colorado State Teachers College, Greeley, Colorado, on April 25, 1925.

## PENMANSHIP

NAME	SCHOOL	SCORE
Martha Jonson	Longmont	92
Edward Demuth	Fort Collins	89
Anna Pearson	Wheatridge	88
*Florence Allen	Montrose	87
Lillian Nordon	Brighton	87
Gladys Thompson	Fort Collins	87
John McNeer	Montrose	87
Violet Tregoning	Eaton	86
Helen Pino	Centennial (Pueblo)	86
Mildred Barnard	Greeley High	85
Elma Brandon	Eads	85
Ruth Craggs	Boulder	84
Gertrude Hicks	Fort Collins	82
Margaret Johnson	Eaton	83
*Cleda Hanan	Boulder	82
*Louise Ribar	Centennial (Pueblo)	81
*Mabel Andre	Boulder	80
Isabell Anderson	Eads	80

## SPELLING

NAME	SCHOOL	SCORE
Evelyn Peterson	Fort Collins	50
Alice Hafer	Centennial (Pueblo)	49
Gordon Johnson	Wheatridge	47
Marion Dooley	Akron	46
Robert Lang	Eads	46
*Ruby Frazier	Boulder	45
Vera Haynes	Eads	45
Mae Hedricks	Golden	45
Salvador Artese	Wheatridge	44
Georgine Pratt	Longmont	43
Jeanette Lockwood	Loveland	42
Joe Klein	Brighton	42
Faye Bloom	Longmont	42
*Margaret Ellis	Greeley High	42
Mary Romans	College High	41
*Ina Belle Giles	Durango	41
Erminie Knecht	Greeley High	40
*George Layton Brown	Montrose	40
Leo Reynolds	Hartman	39
*John McNeer	Montrose	39
*Bernice Rutherford	Brighton	37
*Vera Reid	Brighton	36
*Catherine Wood	Centennial (Pueblo)	35
*Lillian Nordon	Brighton	28
*Mable Shaw	Wray	22

\*Contestants who were not eligible for this event.

## RAPID CALCULATION

NAME	SCHOOL	SCORE
Stella McCulloch	Centennial	235
Verle Hays	Brush	208
Sarah Reingold	Fort Collins	206
George Fischer	Brighton	177
Florence Allen	Montrose	172
Walter Schwabenland	Windsor	171
Harold Deinleiss	Eads	167
Jack Miller	Golden	166
Bertha Thoma	Brush	159
*Cleda Hanan	Boulder	159
*Joe Klein	Brighton	158
Salvador Artese	Wheatridge	149
*Louise Ribar	Centennial (Pueblo)	144
Beulah Wilson	Longmont	137
*Mable Andre	Boulder	136
*George Layton Brown	Montrose	134
Louise Strohaur	Greeley High	111
Mary Kidd	Greeley High	90

## BEGINNING SHORTHAND

NAME	SCHOOL	SCORE
Rachel Briggs	Fort Collins	99.26
Laura Morgan	La Jara	98.16
Thelma Taylor	Wyley	97.70
Frances Weaver	Greeley	97.42
Elenore Searle	Haxtun	97
Joe Klein	Brighton	97
Verna Bell	Pueblo (Centennial)	95.59
Rachel Cessna	Longmont	95.59
Goldie Clark	Akron	94.11
Sarah Reingold	Fort Collins	93.41
Dorothy Anderson	Greeley (C. T. High)	90.81
Elsie Zitnick	Greeley (C. T. High)	86.7
Laurene Conner	Glenwood	84.92
Margaret Knapp	Wheatridge	84
Dorothy Stokes	Tartman	80.1
Eva Schmalbeck	Eads	77.9

## ADVANCED SHORTHAND

NAME	SCHOOL	SCORE
Rose Boechler	Fort Collins	96.26
Ina Belle Giles	Durango	94.66
Catherine Wood	Centennial	93.06
Ruby Frazier	Boulder	92.345
Mary Romans	Greeley (T. C. High)	90.50
Margaret Ellis	Greeley	83.88
Harold Fasnacht	Wiley	83.18
Eunice Ferguson	Fort Collins	82.25
Opal Webster	Fort Collins	80.11
Mabel Shaw	Wray	78.95
Kathryn Schlosser	Greeley (T. C. High)	76.08
Lillian Norden	Brighton	72.95
Vera Reid	Brighton	69.54
*Bernice Rutherford	Brighton	63.4

\*Contestants who were not eligible for this event.

## BEGINNING TYPEWRITING

		SCORE	ERRORS
Marion Hall	Teachers College High	62	15
Dorothy Vennettisch	Pueblo—Central	59	19
Bertha Nix	Eaton	51	12
Pauline Propp	Fort Collins	50	44
*Mary L. Morgan	La Jara	48	23
Evelyn Rooney	Greeley High	48	24
Mildred Reisinger	Pueblo—Centen.	46	22
Mary Cessna	Longmont	44	21
Georgene Pratt	Longmont	42	21
Charlotte Coffin	Brighton	42	26
Blanche Keicher	Akron	39	31
Laurene Conner	Glenwood Springs	38	23
Harold Anderson	Wheatridge	37	57
Goldie Jay	Akron	31	33
Eva F. Schmalbeck	Eads	29	24
Elenore Searle	Haxtun	26	35
Virginia Brock	Fort Collins	25	68
*Elizabeth Shay	Wiley	17	59
Frederick L. Hull	Loveland	16	63
Howard Glandon	Wheatridge	15	54

## ADVANCED TYPEWRITING

		SCORE	ERRORS
Ruth Fleming	Teachers College High	67	17
Arna J. Hendren	Pueblo—Central	61	25
Ermine Knecht	Greeley High	59	19
Grace Price	Pueblo—Central	56	17
*Thelma Taylor	Wiley	54	25
Albert Vitullo	Pueblo—Centen.	52	16
Ethel Hipps	Greeley High	49	20
Ida P. Moore	Longmont	48	27
Julia Timmermeyer	Longmont	47	25
Mabel Shaw	Wray	47	36
Robert Lang	Eads	46	21
*Catherine Wood	Pueblo—Centen.	44	20
*Margaret Ellis	Greeley High	44	17
*Ruby L. Frazier	Boulder	43	29
Orpha Reed	Fort Collins	41	43
Ruth Whitney	Fort Collins	41	49
Elaine Hawkins	Fort Collins	39	36
Herb A. Names	Wheatridge	39	21
Bernice Rutherford	Brighton	34	55
Jewell M. Kennedy	Cheyenne Wells	26	51
*Vera Reid	Brighton	25	36
*Ina Belle Giles	Durango	23	64
*Lillian Norden	Brighton	2	80

## BEGINNING BOOKKEEPING

NAME	SCHOOL	SCORE
Julia Price	Pueblo (Centennial)	157
Ethel Hipps	Greeley High	153
Mary Hunter	Greeley High	151
Frances Rise	Longmont	149
Narry Dreany	Windsor	141
Mabel Morger	Fort Collins	139

\*Contestants who were not eligible for this event.



NAME	SCHOOL	SCORE
Ruth Craig	Keota	136
Walter Schwabenland	Windsor	134
Helen Hubbard	Cheyenne Wells	134
Leontine Hedrick	Brighton	130
Nellie Mumford	Longmont	129
Mildred Barnard	Greeley High	123
*Paul Namen	Wheatridge	114
George Layton Brown	Montrose	114
Mabel Shaw	Wray	114
Pearl Boucher	Wheatridge	98
Elam Brandon	Eads	85
Verne Sallie	Eads	79
*Verle Hays	Brush	61

## ADVANCED BOOKKEEPING

NAME	SCHOOL	SCORE
Cleda Hanan	Boulder	91
Katherine Barnes	Fort Collins	90
Louise Ribar	Pueblo (Centennial)	82
Doris Thompson	Fort Collins	77
Chas. Dougherty	Fort Collins	68
Margaret Ellis	Greeley High School	67
Mabel Andre	Boulder	55
Evelyn Rheinhold	Greeley High School	54
Gladys Holmes	Greeley High School	42

## STATE CHAMPION STENOGRAPHER

	School	Score			
		Typing	Spelling	Shorthand	Total
Ruby Frazier	Boulder	43	45	92.35	180.35
Catherine Wood	Pueblo (Cent'l.)	44	35	93.06	172.06
Margaret Ellis	Greeley H. S.	44	42	83.88	169.88
Ina Bell Giles	Durango	23	41	94.66	158.66
Mabel Shaw	Wray	47	22	78.95	147.95
Bernice Rutherford	Brighton	34	37	63.40	134.40
Vera Reed	Brighton	25	36	69.54	150.54
Lillian Nordan	Brighton	2	28	72.95	102.95

## STATE CHAMPION BOOKKEEPER

NAME	School	Score			
		Bkpg.	Pen.	Cal.	Total
Cleda Hanan	Boulder	91	82	159	332
Louise Ribar	Pueblo (Cent'l.)	82	81	144	307
Mabel Andre	Boulder	55	80	136	271

## BEGINNERS TYPEWRITING

## GROUP CONTEST

SCHOOL	NUMBER OF STUDENTS	AVERAGE
1. Fort Collins	40	30.47
2. Sterling	26	30.27
3. Teachers College High	11	30.04
4. Glenwood Springs	14	30
5. Haxtun	13	29.61

\*Contestants who were not eligible for this event.

6.	LaJunta	12	29.01
7.	Greeley High	51	28.66
8.	Durango	26	27.15
9.	Yuma County High	14	27
10.	Washington Co. High	12	26.4
11.	Wheatridge	12	26.4
12.	Brighton	30	26
13.	Lamar	17	26
14.	Loveland	28	25.59
15.	Wiley	17	24.5
16.	Longmont	11	21.9
17.	Eads	10	21.1
18.	Arapahoe	10	20.7
19.	Brush Union High	22	19
20.	Holly	23	18.06



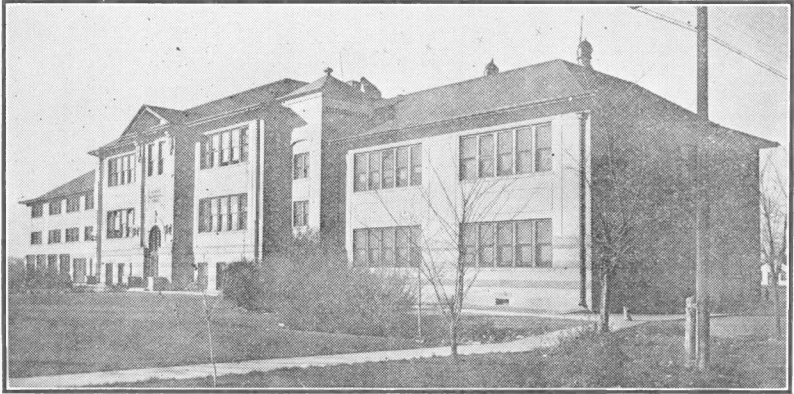


ILLUSTRATION 1

The exterior of the Fort Lupton Elementary-High School building presents a rather attractive appearance. The interior, including stairways, floors, walls, and ceilings, are of wood. The roof is entirely of wood. These exterior walls of brick offer practically no protection against fire, but rather form what, in case of a conflagration, would amount to sides and ends of a stove in which many of Fort Lupton's children would be consumed among burning wooden walls and stairs.

Note to the right one of only two fire escapes. The central entrance has no panic bolt on the doors.

Each day in the United States there is an uncontrolled fire in six such school buildings and daily one burns to the ground.

COLORADO STATE TEACHERS COLLEGE

REPORT OF THE  
SCHOOL SURVEY  
AND  
EDUCATIONAL PROGRAM

FOR FORT LUPTON, COLORADO

School Year 1924-25

GREELEY, COLORADO

Published by the College

PRICE, \$1.00



## FOREWORD

The Report of the Fort Lupton School Survey and Recommended Elements for an Educational Program represents but a minor part of what is accomplished for a community when our Bureau of Educational Surveys conducts a survey of a local school system. The printed report does not record the amount of energy expended by the surveyors with the board, superintendent and teachers in an effort to raise the community's educational standards.

Surveys of local school systems are conducted by our bureau in accordance with either of two plans:

First: The Bureau of Surveys carries on the entire enterprise without the direct assistance of local teachers.

Second: The bureau surveys the school system in co-operation with teachers of the local staff who enroll in an extension class for credit in educational surveys.

Modifications of these two plans are made when necessary to meet varying local conditions. Because it is desirable to bring teachers into intimate contact with the vital educational problems of their school the second plan should be preferred. Whichever plan is utilized College instructors with their most capable graduate students will, when feasible, participate in that part of the survey in which they are expert.

The aim of the survey is being realized when the community effects desirable changes in educational practices along lines proposed. For the tangible results of the survey one must go to the local school system.

It is upon a progressive superintendent, teachers, and board, who did much to bring the survey to Fort Lupton, and upon succeeding superintendents and teachers working with a co-operative community, that the responsibility for effective progress depends.

The published report in abstract form serves in a limited way to indicate to interested citizens, to boards of education and to superintendents of schools, the type of service the College through its Bureau of Surveys is prepared to render city and county school systems.

GEORGE WILLARD FRASIER

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### THE BOARD OF EDUCATION Fort Lupton, Colo.

DR. H. C. SMILEY, *Pres.*\*      MRS. H. B. ALSEBROOK, *Sec.*  
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---

\* Dr. H. C. Smiley resigned in June, 1925. The position has been filled by Mr. G. S. Landell, who was appointed in August, 1925, by the Superintendent of Schools of Weld County.



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# CHAPTER I

## THE FORT LUPTON DISTRICT

### SIZE AND LOCATION

The city of Fort Lupton, Colorado, is situated in Weld County, in the heart of one of Colorado's most prosperous sugar producing regions. It is the social and economic center of a district 10 miles long and 3 to 4 miles in width which lies midway between Denver and Greeley. The city is located on the trans-continental railway lines of the Union Pacific and is on the paved highway between Greeley and Denver, Colorado.

The 1924 population of the city was estimated at 1,550. The total population for the entire district is probably 2,000.

Figure 1 is a map of the Fort Lupton school district and bordering districts. The heavy lines represent the present boundaries of the Fort Lupton district. Roads, sizes and locations of schools in districts number 19, 23, 100, 102, 104, suggest excellent possibilities for further consolidation.

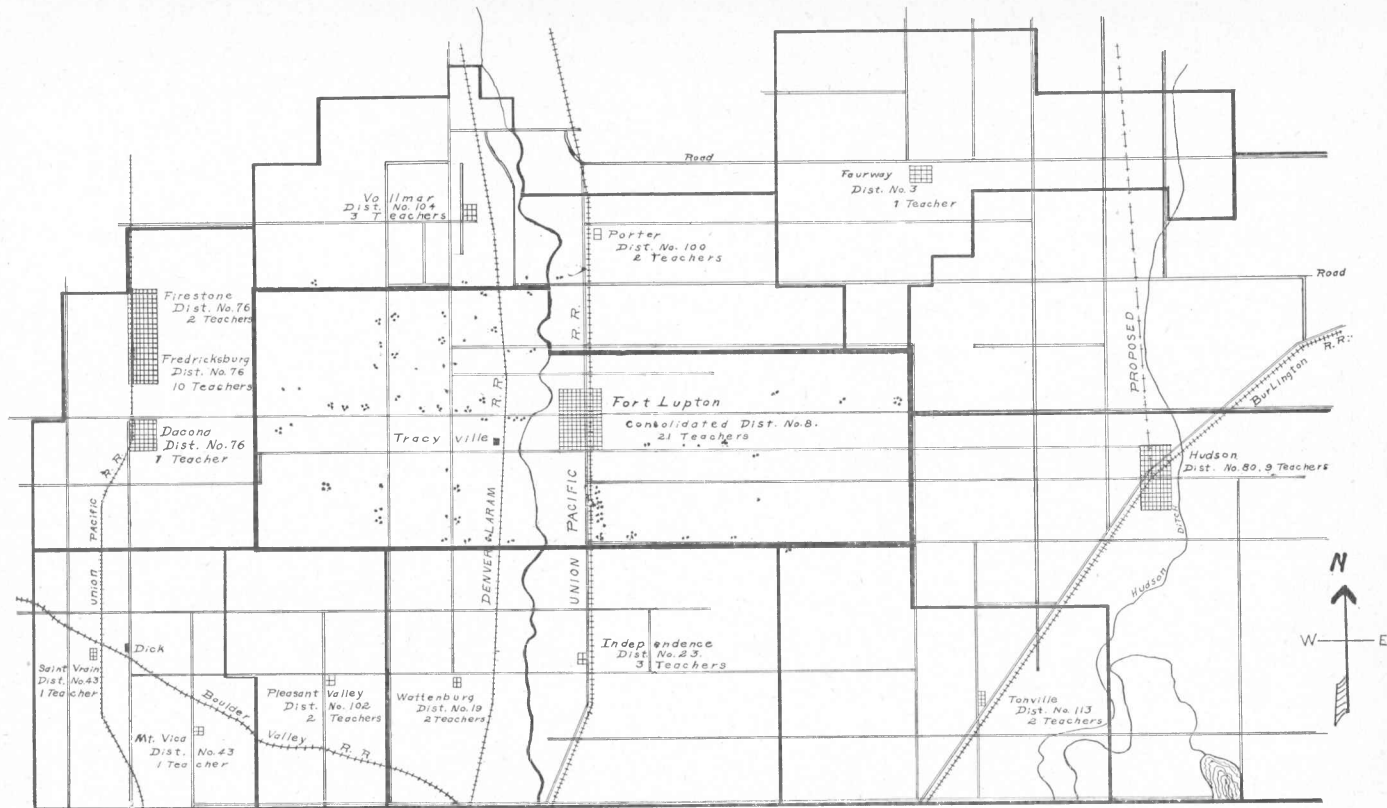
### INDUSTRIES

In this district of approximately 35 square miles all the varied crops that can be raised in the entire state of Colorado can be produced. Marketed crops consist largely of sugar beets, beans, peas, pickles, and cabbage. A beet sugar factory employing some 200 people is operated for from 90 to 120 days. About 300 men and women are employed in Fort Lupton's canning factories. As many as 20 cars of cabbage have been shipped from Fort Lupton in a single day. Cabbage shipping of course constitutes another seasonal industry. The largest non-seasonal industry other than farming is the condensing of milk.

### THE SCHOOL

Since 1913 when district Number 8 and district Number 9 were consolidated into district Number 8, all the schools have been housed in a single building. One superintendent, twenty teachers, one superintendent's clerk, one janitor, one attendance officer, and four bus drivers constitute the school personnel. The assessed valuation of the district in 1924 was \$3,521,590.00. The total investment in building, equipment, grounds, etc., represents a capital outlay of \$157,500.00. At present the school district is bonded for \$88,300.00. It costs roughly \$43,000.00 annually to operate the schools. Four bus routes serve to transport the children to and from school in the rural areas.

Fig. 1. FORT LUPTON AND CONTIGUOUS SCHOOL DISTRICTS, STATE OF COLORADO



(1 Dot Represents a School Child in the Rural Areas)

## CHAPTER II

### ORGANIZATION AND ADMINISTRATION

#### CONTROL OF THE SCHOOLS

The Fort Lupton schools are in a second class district. The control of the affairs of the Fort Lupton Consolidated School is vested by law in a three-member board of education. The state law empowers this board of education to employ and dismiss teachers, fix teachers' salaries, employ attendance officers, furnish free textbooks, provide transportation at district expense for all children living farther than one mile from school, make rules for the government of the school, select textbooks, establish high schools, hold in trust all school moneys, etc.

#### THE BOARD OF EDUCATION

Board members hold their office for three years. Annually one member is elected, at large, to a given position—president, secretary, or treasurer. Board members are elected at special school elections. There are no standing committees, thus making it possible for the board to act as a unit on all matters brought before it. The above organization is in conformity with Colorado law. In this respect the educational code embodies features of which Coloradans may be proud. Such a system makes possible the election to the board of a high type of representative citizens. The small number of members and no standing committees make for efficiency in the carrying on of the board's business.

#### HOW THE BOARD DOES ITS WORK

It is generally accepted as good policy in big commercial enterprises as well as in the management of schools that the function of boards of directors should be of a legislative nature.

The first duty of the board of education is to employ competent administrative service in the person of a superintendent of schools. The board functions then become the duty of passing upon policies submitted by the chief executive, and examination of reports with a view to determining to what extent policies decided upon and rules formulated are being carried out.

A common fault among board members in our smaller cities is that they misinterpret their function as board members. They construe their election to the board to mean that they are now to "run" the schools. The result is that such board members give a great deal of their time and energy in inefficiently doing what they have in reality hired a superintendent of schools to do. In all business affairs, including management of schools, it has been found through experience that executive functions exercised by legislative bodies is both unwarrantedly expensive and extremely inefficient.

The distinction in school work between formulation and approval of policy and participation in administrative detail is not always easy to make. Although the Fort Lupton board has dem-

onstrated that it recognizes such a distinction and seems to be desirous of giving the superintendent free reign in the performance of his duties, yet an analysis of the Minute Book, the authoritative record of the board's official acts, shows that the board has repeatedly erred on the side of the performance of too many minor administrative details.

The minutes of the board meetings from May 8, 1922, to December 10, 1924, were examined. There were nineteen meetings during which seventy-two separate items of business were handled. These items are classified below under eleven heads for purpose of showing the type of business done at the majority of board meetings. The sub-items included in quotation marks are to illustrate the scope of the headings.

Business Having to do with—	No. of Items
1. Examining bills for payment.....	17
2. Teacher selection and salary—salaries.....	12
3. General plans .....	6
"Plans for year presented by superintendent"	
"Various problems discussed"	
"Superintendent gave a report on Institute"	
"Appropriated \$200 for tests and measurements"	
4. Making definite rules .....	3
"No buying in any department until the order has had the sanction of the school board at a meeting in giving entertainments"	
"No dances in the school building except for the high school, and these shall not exceed four a year"	
5. Adopting budget .....	1
6. Tuition .....	4
"Rate of tuition discussed and determined"	
"Decided to accept a lump sum from the county for high school tuition"	
7. Busses and drivers.....	5
"Determined salaries"	
"Accepted bid on gasoline"	
"Decided on liability insurance for busses"	
8. Building repairs, supplies, and new equipment.....	11
"Gave bid for coal"	
"Instructed superintendent to have roof painted"	
"Accepted bid for bell system"	
"Matter of exits in auditorium discussed"	
9. Use of building by outsiders.....	4
10. Text books .....	3
"Gave sale of texts to....."	
11. Other detailed items.....	6
"Secretary instructed to see that girls' showers be fixed, and also exit light"	
"Secretary instructed to buy domestic science equipment"	
"Secretary to look up oil bids"	

The most striking facts in this connection are that during the period covered (May 8, 1922, to December 10, 1924,) the budget was considered but once, while seventeen, or one-fourth, of all items in the minutes for nineteen different meetings had to do with the examination of bills. The matter of examining bills for payment



is a clerical task that can well be performed by the superintendent's clerk who has proper office facilities for the efficient performance of the same. The control, by the board, of expenditures to be made should come at the time the budget is considered and approved. There, once, annually, the board should authorize expenditures that would make possible the carrying out of approved education programs. The auditing of bills then becomes a routine matter of checking against purchase orders, ledger and appropriation accounts. This indeed is a detailed matter the performance of which does not demand the time and energy of board members.

Twelve (12) items deal with selection of teachers and salaries. Again, the selection of teachers should be left to the superintendent, who knows how to perform this highly technical task in a much more satisfactory manner than do board members. Board members who have given up this work to their duly appointed school experts find that service on the board becomes a much less irksome task, and usually better teachers are selected.

The salary question should not be a matter for consideration every few months. Policies should be adopted upon which salary schedules can be established, the chief executive officer should then be obligated to pay salaries in accordance with accepted schedules.

Boards of education are entrusted by law with large powers none the least of which is the right to appoint a competent man as superintendent to administer the schools. Their other duties pertain to the making of legislation necessary to the proper functioning of the school, receiving reports and determining upon large comprehensive policies and programs.

#### THE INTERNAL SCHOOL ORGANIZATION

In theory the school is organized on the 6-2-4 basis. In practice, however, it is rather hard to distinguish between the type of work that is done in the seventh and eighth grades and that done in the seventh and eighth grades of any ordinary 8-4 school. All schools, elementary, junior high, and senior high, are housed in a single building. The strictly junior high school idea can usually be carried out more true to form when a separate building is provided therefor. Although the separate building is impracticable, for the present, for the junior high school there can be marked changes effected in the curriculum offerings for children of junior high school age. In the true 6-2-4 type of organization Fort Lupton would have what is a fairly satisfactory type of school organization.

The present organization is faulty in the following respects: The health work is at present more under the control of city than school officials. The attendance officer is a city marshal and bus drivers are only indirectly under the control of the school authorities, because Fort Lupton operates under the contract system of school transportation. Because of the use of the contract system in procuring janitor service, janitors are only indirectly responsible to the superintendent. The head janitor employs whatever help he desires.

**COLORADO STATE  
TEACHERS COLLEGE**

Greeley, Colo.

### THE SCHOOL PERSONNEL

The following employees of the school district constitute the staff which is charged with the duty of operating the above school organization :

- 1 Superintendent of schools
- 1 Supervisor of music and art (also a teacher in high school)
- 6 Teachers of high school subjects
- 13 Teachers of elementary school subjects
- 1 Janitor
- 1 Superintendent's clerk
- 4 Bus drivers

### THE SUPERINTENDENT

The entire administration of the schools is well headed up under the authority of a single individual, the superintendent of schools. This is as it should be. Many school boards throughout the country have made the mistake of setting up a dual control in the schools—one person in charge of educational affairs while a different individual is placed in a co-ordinate position in charge of financial affairs. The Fort Lupton board has in this respect wisely conceived the advantages that come from single unified control. Business affairs of the schools are recognized as being an integral part of the whole educational situation. The added efficiency that accrues to the Fort Lupton schools because of this approved administrative organization can hardly be overestimated.

At the present time the entire school staff is apparently working in harmony and under the present leadership it is furnishing abundant evidences of growth. When the number and variety of problems that press upon the superintendent for solution and the multitudinous duties he is forced to perform are taken into consideration, the question may well be asked as to whether under the present organization Fort Lupton is employing sufficient administrative and supervisory assistants.

A partial list of the duties performed by superintendents in the smaller cities of Colorado, which serves to give an idea of the overwhelming number and variety of tasks involved in the superintendency, has been submitted as supplemental material.

### THE PRINCIPALSHIPS AND SUPERVISION OF INSTRUCTION

At present Fort Lupton has neither a high school nor elementary principal.

The survey staff is not prepared to recommend that Fort Lupton employ a high school or elementary school principal. There is evidence, however, that it is an absolute impossibility for a single individual, the superintendent, to perform all the duties of administration for which he is responsible and at the same time do the supervision of class room work, which is as essential to a school organization as supervision is necessary in a large department store, factory, or laboratory. What other schools the size of Fort Lupton do in regard to the employment of principals is shown in Table I.

TABLE I

THE PRACTICE OF 16 SCHOOLS IN EMPLOYING SUPERINTENDENT, HIGH SCHOOL AND ELEMENTARY SCHOOL PRINCIPALS  
—1924-25

SCHOOLS	Supt.	H. S. Prin.	Elem. Prin.
1. Eaton, Colorado .....	x	x	x
2. Florence, Colorado .....	x	x	x
3. Primero, Colorado .....	x	x	x
4. Cripple Creek, Colorado .....	x	x	x
5. Glenwood Springs, Colorado .....	x	x	x
6. Del Norte, Colorado.....	x	x	x
7. Mancos, Colorado .....	x	x	x
8. Gallatin, Missouri .....	x	x	x
9. Center, Colorado .....	x	x	
10. Burlington, Colorado .....	x	x	
11. Bucklin, Kansas .....	x	x	
12. Shelton, Nebraska .....	x	x	
13. Ajo, Arizona .....	x		x
14. Wallace, Idaho .....	x		
15. Aguilar, Colorado .....	x		
16. FORT LUPTON, COLORADO.....	x		

Eight, or one half, of these schools employ both high school and elementary school principals, four others employ a high school principal besides the superintendent and one elementary principal. But two of these towns besides Fort Lupton employ only a superintendent.

The wisest policy for the present as far as Fort Lupton is concerned may be the employment of a single administrative officer. If this policy is continued, a competent teacher in the elementary grades should be relieved of part of her teaching load that she may act in the capacity of head teacher, whose duties shall be the co-ordination of the work of the grades, provide educational leadership to elementary teachers, and be responsible for many of the details of pupil management. It seems logical to suggest that Fort Lupton may well make up for the lack of educational supervision that now obtains in both elementary and high school by employing for a month or two of each semester the expert instructional supervisors obtainable at either Colorado State Teachers College or the University of Colorado. These institutions are located but a few miles from Fort Lupton.

This past year Fort Lupton employed but one special supervisor, a supervisor of music and art, who also taught these subjects in the high school. The arrangement seems satisfactory

enough so far as music and art are concerned if the right individual can be secured for this very important position.

Matters pertaining to teachers, janitors, and bus drivers are considered in succeeding chapters.

### THE SUPERINTENDENT'S CLERK

In the employ of District No. 8, during the past year, has been a young woman of rather exceptional native ability who has been acting as superintendent's clerk and director of the group editing the high school paper. Fort Lupton has evidently early realized what more and more schools of the country are coming to understand, namely, the fact that it is far more economical for the district to employ a girl at a comparatively low salary to do multitudinous tasks in connection with office routine that a comparatively high priced man can scarcely do as well. This clerk by keeping up routine records, passing out pencils, caring for small stocks of educational supplies, and other details frees the superintendent, enabling him through careful planning and organizing to save the school district thousands of dollars.

That Fort Lupton is not alone in realizing the wisdom of the adoption of such business methods is shown in Table II. Ten of the 16 cities used for comparison have either a full or part time clerk in the superintendent's office.

TABLE II.

PRACTICE OF 16 SCHOOLS IN EMPLOYING A FULL OR PART TIME CLERK FOR THE SUPERINTENDENT'S OFFICE—1924-25

SCHOOLS	F. Time Clerk	Pt. Time Clerk	No Clerk
1. FORT LUPTON, COLORADO.....	x		
2. Center, Colorado .....	x		
3. Eaton, Colorado .....	x		
4. Wallace, Idaho .....	x		
5. Burlington, Colorado .....	x		
6. Florence, Colorado .....	x		
7. Bucklin, Kansas .....		x	
8. Aguilar, Colorado .....		x	
9. Primero, Colorado .....		x	
10. Ajo, Arizona .....		x	
11. Gallatin, Missouri .....			x
12. Del Norte, Colorado.....			x
13. Glenwood Springs, Colorado.....			x
14. Cripple Creek, Colorado.....			x
15. Shelton, Nebraska .....			x
16. Mancos, Colorado .....			x

Table III shows that five of the six cities that do not employ a clerk for the superintendent's office do employ an elementary principal. The principals in these cases to some degree do the work of the clerk. When one realizes that the salary for elementary principals in cities in the United States the size of Fort Lupton is \$2,057.00 and the average salary for superintendent's clerks is \$850.00 it is not hard to decide whether the clerk or the principal should be employed for the performance of the details involved in clerical service.

TABLE III.

AMOUNT OF SUPERVISORY AND CLERICAL ASSISTANCE EMPLOYED BESIDES THE SUPERINTENDENT; IN 16 COMPARABLE SCHOOLS—1924-25

	H. S. Prin.	Elem. Prin.	Full Time Sec.	Part Time Sec.	P'nts*
1. Eaton, Colorado .....	x	x	x	x	11
2. Florence, Colorado .....	x	x	x		11
3. Primero, Colorado .....	x	x		x	10
4. Cripple Creek, Colo.....	x	x			9
5. Glenwood Springs, Colo..	x	x			9
6. Del Norte, Colorado.....	x	x			9
7. Mancos, Colorado .....	x	x			9
8. Gallatin, Missouri .....	x	x			9
9. Center, Colorado .....	x		x		7
10. Burlington, Colorado ....	x		x		7
11. Bucklin, Kansas .....	x			x	6
12. Ajo, Arizona .....		x		x	5
13. Shelton, Nebraska .....	x				5
14. Wallace, Idaho .....			x		2
15. FORT LUPTON, COLO..			x		2
16. Aguilar, Colorado. ....				x	1

\* In this comparison it was considered that a high school principal is of at least 5 times the value to the superintendent as a clerk; an elementary principal 4 times, and a full time clerk twice as valuable. It is seen that Fort Lupton's position in respect to amount of supervisor and clerical assistance furnished the superintendent is at the foot of the list of 16 comparative school systems.

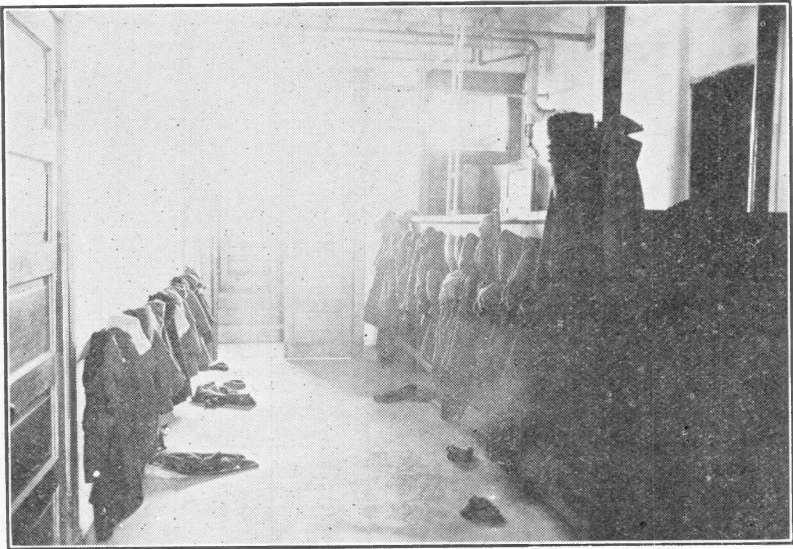


ILLUSTRATION 2

This shows the provisions made for the care of the children's and teachers' wraps. In many instances two or three coats and caps are hanging on a single hook. The wooden pole to the right substitutes for the teachers' closets. In modern buildings well heated and ventilated closet space, under control of the teacher, in the rear of classrooms replaces this inadequate, unsatisfactory situation. The door to the left is the entrance to one of the two extremely undesirable basement rooms for the first and second grades.

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY  
CONSTITUTING ELEMENTS FOR INCLUSION IN AN  
EDUCATIONAL PROGRAM

II.—ORGANIZATION AND ADMINISTRATION

**Findings No. 1.**

The board is a three-member board. Each member is elected at large at a special election and serves for three years. There are no standing committees.

**Recommended Program No. 1.**

Continue the present practice, which is almost ideal so far as selection and organization of the board is concerned.

**Findings No. 2.**

The board is apparently willing to clothe the superintendent with full authority, yet minutes of board meetings show that a large percentage of items considered in board meeting are of a detailed non-legislative type.

**Recommended Program No. 2.**

The board should confine itself to receiving reports, approving or rejecting important policies, etc., and leave all details and technical matters to the chief executive officer—the superintendent of schools.

**Findings No. 3.**

The 6-2-4 type of school organization exists at Fort Lupton in name only. Work done in seventh, eighth and ninth grades is very similar to old line curricula.

**Recommended Program No. 3.**

The 6-3-3 is a good type of school organization. A curriculum study should be undertaken from the highest to lowest grades in co-operation with other cities and towns that are revising their curricula. Experts from the state institutions should help in this work. The Fort Lupton High School courses of study should be modified to meet needs of children who drop out at the end of the ninth grade as well as those who go on to college. Children who drop out become citizens of the commonwealth as well as those who go to college.

**Findings No. 4.**

The organization is faulty in that health education is under control of a city department over which the school has no control. Bus drivers (because of contract system) are only indirectly under control of the superintendent.

**Recommended Program No. 4.**

Figure 2 shows the more desirable relationship which should constitute the school organization. This plan brings under control of superintendent health, transportation and all janitors.

**Findings No. 5.**

The entire school system is in theory headed up under the superintendent—the chief executive officer of the Board of Education.

**Recommended Program No. 5.**

In so far as the superintendent is actual head of the system, Fort Lupton has the most acceptable school organization. It is the most economical and efficient type of organization and should be continued.

Findings No. 6.

The multiplicity of tasks that the superintendent has to be responsible for makes it impossible to pay as much attention to classroom supervision as is essential. Most cities the size of Fort Lupton employ one or more principals besides full or part time clerks to assist the superintendent. Fort Lupton has neither high school nor elementary principal and but one clerk.

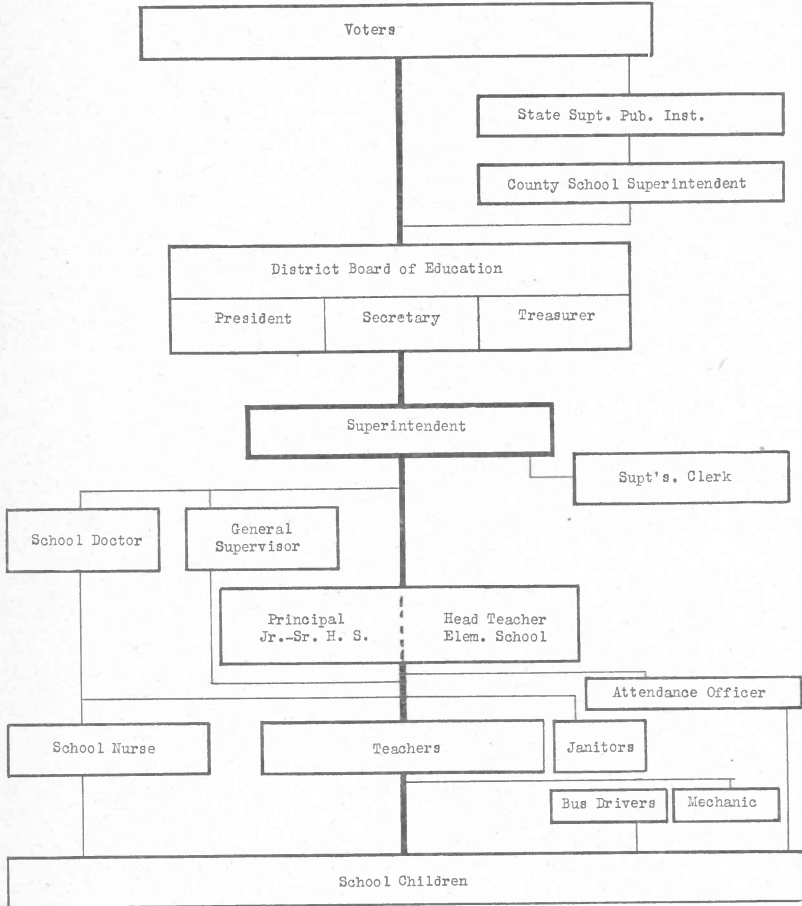


Fig. 2. PROPOSED ORGANIZATION FOR THE FORT LUPTON SCHOOL SYSTEM.

Recommended Program No. 6.

There must be supervisory assistance for the superintendent. The Fort Lupton board should consider the advisability of engaging the services of a high school principal. The following plan might well be tried: Employ an especially competent elementary teacher and appoint her head teacher in the elementary school and organize the home room system in the high school. Eighty-one per cent of the high schools of the country



utilize the home room organization.\* In addition capitalize for the best interest of the children by realizing on the benefits that can come to Fort Lupton because of her immediate proximity to a state institution employing scores of supervisory experts. The services of expert supervisors can be obtained at not too great an expense for at least a month or two each semester. It would be better to employ a supervisor for certain days of each week throughout the school year. To regularly employ instructional supervisors would constitute a better arrangement, but it would be more expensive than the plan here proposed as an immediate measure.

**Findings No. 7.**

Fort Lupton employs a clerk in the superintendent's office, which relieves the superintendent, enabling him to attend to more important administrative duties. This clerk is employed for ten months.

**Recommended Program No. 7.**

The clerk should be employed for the full year.

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\* Mr. C. F. Poole found in an investigation of 126 high schools that 92% of school authorities think that the "Home Room" organization contributes materially to the development in each pupil of a spirit of responsibility for the successful operation of student participation in the management of the affairs of the school. A. M. Thesis, Colorado State Teachers College—incomplete.

## CHAPTER III

## CENSUS, ENROLLMENT AND ATTENDANCE

## THE CENSUS

The data taken in the census is not complete and is not entered upon individual record cards. The census is not continuing, and no account is taken of children under six years of age. The fact that children less than six years old are disregarded in the enumeration seriously handicaps educational planning.

## COMPARISON OF CENSUS, ENROLLMENT AND ATTENDANCE

A table which presents available figures dating back from 1925 to the school year 1908-1909 has been prepared. During this sixteen-year period the census figures have increased for children of school age from 218 to 739 or 279%; enrollment from 200 to 690 or 290% and average daily attendance has lagged farther and farther behind the enrollment.

Figure 3, which presents in graphic form the increases in census, enrollment and average daily attendance, shows that over the sixteen-year period, although enrollment has kept well up to the census, the average daily attendance, which is the real measure of the school's efficiency, has continually lagged from one hundred to two hundred behind the census. In other words from 1909 to 1923 there has been an increasingly larger number of children out of school. There has been a marked improvement during the last year.

## ATTENDANCE AND THE LAW

Unfortunately in Colorado the state department does not materially encourage local communities in enforcing school attendance. Although the law (Article XI Section 253, Colorado School Law 1923) specifically states that all children between the ages of eight and fourteen must attend school during the entire school year during which public schools are in session, parents are openly violating this section of the law. The law is in many instances made ineffective by the local interpretation of the "Five day notice" provision. The superintendent is authorized to excuse children over fourteen years of age to work for their parents' support. The issuance of the great number of permits in district number eight is in violation of the intent of the law. The compulsory attendance law is not taken seriously in Fort Lupton, as it should be.

Under these conditions the matter of exerting effort to secure good attendance is a test of the seriousness with which responsibilities of educational leadership rest upon school authorities. The per cent that enrollment is to the census and that average daily attendance is to the enrollment is a good measure of the efficiency of the school system and at the same time indicates the breadth of vision of the communities' educational leaders. In most of the

cases of absence the law does not give school authorities sufficient power to enforce attendance nor are parents who are keeping their children out of school to work in the beet fields ready to surrender their prerogative.

No. Children

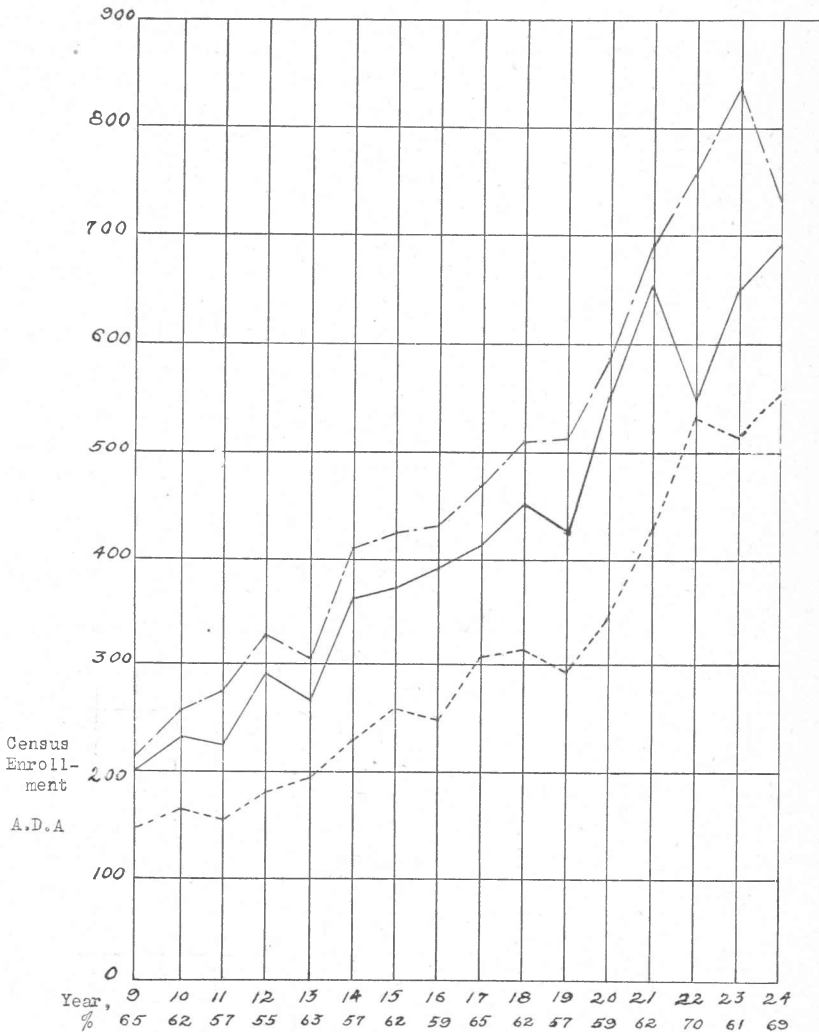


Fig. 3. THE RELATIONSHIP BETWEEN CENSUS, ENROLLMENT AND AVERAGE DAILY ATTENDANCE FROM 1909 TO 1924, FORT LUPTON, COLORADO.

THE ATTENDANCE OFFICER

Without a firm public sentiment supporting the compulsory educational laws the position of attendance officer becomes an ex-

tremely difficult one. His task is one of persuasion and attempts to impress the value and importance of education upon parents whose full responsibilities toward their children have not yet been completely comprehended. With these as the major duties of the attendance officer the town marshal is hardly the man for the job. A town marshal is a political appointee whose qualifications for the position of town marshal are hardly the same that would qualify him as an educational ambassador. The fact that at the opening of the present term there were but 499 pupils enrolled, and that it took six weeks to increase the enrollment to 558 and several more months to raise the enrollment to 589, should convince Fort Lupton beyond a doubt that something needs to be done. This gradual dribbling in of the school's enrollment is a tremendous educational and economic waste.

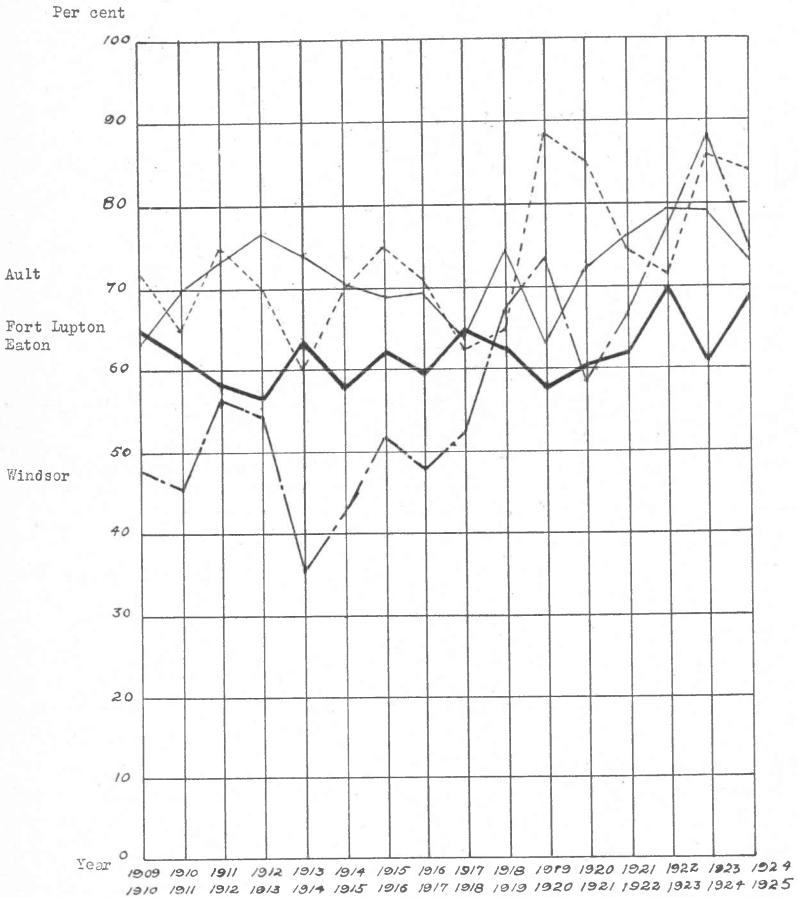


Fig. 4. THE PER CENT AVERAGE DAILY ATTENDANCE HAS BEEN OF THE CENSUS FOR A PERIOD OF 16 YEARS IN 4 CITIES INCLUDING FORT LUPTON.

### COMPARISON WITH SIMILAR CITIES

The unsatisfactory situation regarding attendance as found in the Fort Lupton district lead the survey investigators to secure comparable data from other neighboring cities in order to ascertain Fort Lupton's relative status. Census enrollment and average daily attendance figures were obtained from county superintendents' offices for three of Fort Lupton's closest neighbors.

Figure 4 reveals the fact that although Fort Lupton in 1909 was well on a par with the other cities, in the per cent average daily attendance was of the census, in every case by 1921 the other cities have secured a better average than has Fort Lupton. Without exception they have all been able to maintain the more advantageous position.

### RECOMMENDATIONS BASED UPON FINDINGS OF THE SURVEY FOR INCLUSION AS ELEMENTS IN AN EDUCATIONAL PROGRAM

#### III. CENSUS, ENROLLMENT AND ATTENDANCE

##### Findings No. 1.

Information secured at the time of the census enumeration is incomplete. The census disregards children under six. The census records are not continuing.

##### Recommended Program No. 1.

For success in educational planning children from one day to twenty-one years old should be counted. Data secured by the enumeration should be transferred to census record cards and the records should be continuing.

##### Findings No. 2.

Since 1909 increase in enrollment has kept pace fairly well with increase in the census, but the increase in daily attendance has lagged farther and farther behind the increase in enrollment. The fact that an appreciable percentage of all children of school age were out of school last year is a serious matter since a relatively small percentage of these have completed the eight lower grades. In regard to attendance, Fort Lupton is not doing as well as her neighboring cities.

##### Recommended Program No. 2.

More emphasis must be placed on problems of attendance. Fort Lupton may do at least as well as her neighboring cities.

##### Findings No. 3.

Standards pertaining to school attendance are so low in the Fort Lupton district that the compulsory education law is of little effect. The full responsibility rests upon local authorities who are lax in enforcing the law.

##### Recommended Program No. 3.

The attendance officer lacks a strong public sentiment upon which he can rely for enforcing attendance. He succeeds or fails largely on the basis of his ability to impress parents with the value of education and the desirability of regular attendance. An attendance officer must be employed who can by his enthusiasm and broad social outlook induce parents to send their children to school. Under existing conditions this position requires the services of an exceptionally well qualified man. The whole matter of encouraging attendance must be pressed with more vigor by the entire school personnel.

## CHAPTER IV

## THE CURRICULUM AND SUPERVISION OF INSTRUCTION

## A. CURRICULUM\*

## B. SUPERVISION OF INSTRUCTION

## WHY SUPERVISION IS NECESSARY

Although big businesses employ presidents, vice-presidents, general managers, assistant managers, directors of sections, the layman is repeatedly asking why do the schools need supervisors of instruction. They say teachers are supposed to know how to teach. A few of the reasons why supervisors are a necessary part of the school personnel are here set forth:

- a. Half of the younger teachers employed in the elementary schools by boards of education in Colorado have received their training in preparation for teaching different grades than for which they have been employed.\*\*
- b. Without supervisors to unify and co-ordinate the work, there is endless repetition in upper grades of what has already been accomplished in the lower grades.
- c. Supervisors assist in selection and organization of subject matter in accordance with the needs and abilities of children.
- d. Many ineffective methods of instruction are utilized by even superior teachers. The supervisor measures the effectiveness of the various methods and substitutes the effective for the ineffective.
- e. The instructional results of the entire school are measured by supervisors.
- f. Capable as well as mediocre teachers are encouraged to improve themselves in their work.
- g. Supervision helps eliminate poor teachers.
- h. New devices and methods are introduced to members of the teaching staff.
- i. Supervisors insure the establishment of proper aims and checks up to see that different subjects that are supposed to yield different results in the lives of the children do not all yield the same narrow results.
- j. Beginning teachers are assisted in order to prevent absolute failures.
- k. Supervisors do much to equalize the amount of effort necessary to earn a given grade in the various subjects. This does much toward establishing justice in the grading and promotion system and tends to prevent the formation of habits of laziness.
- l. Supervisors render important service in the classification of children which does much to prevent failures.
- m. The tremendous turnover in the Fort Lupton teaching personnel, which means that half of the teachers are new to Fort Lupton each year, makes supervisors doubly necessary.

The above results are accomplished through class visitations, requiring reports on work accomplished, giving demonstration les-

\*Discussion omitted in printed report.

\*\* Patterson, Dale—"The Relation between the Training Received and Positions Held by the 2-Year Graduates of Colorado State Teachers College, 1923-4." A. M. Thesis, CTC, 1925.

sons, administering and interpreting ability and achievement tests, directing observations of teachers, holding individual and group conferences, rating of teachers, obtaining a maximum of use from available supplementary material, assisting in formulating courses of study, assisting teachers in keeping in touch with new methods and materials developed in their subjects and through assistance in the revision of the curriculum.

Thus it is seen that supervision is not inspection. It is a most effective means in the improvement of the teaching process. The good supervisor studies teaching problems as the lawyer studies a case, or a doctor his patient. Her work is meritorious to the extent that she succeeds in helping teachers to succeed in their all important work of developing boys and girls.

#### SUBJECTIVE EVALUATION OF THE TEACHING PROCESS

In another chapter in this report the achievements of the children in various grades is discussed. Although the achievements of the pupils is in many ways a satisfactory means of evaluating the efficiency of the teachers, such method does not, however, take into consideration many significant teaching qualities. Each teacher was observed by competent members of the survey staff at least twice. By the application of the following subjective standards, the quality of instruction was evaluated:

Standard No. 1.

The curriculum as adopted to the school room will be good to the degree in which it contains problems, mental, aesthetic, economic, etc., that are socially vital and yet within the appreciation of the pupils.

Standard No. 2.

In the classroom child activity should predominate.

Standard No. 3.

The relation of parts of the subject matter under consideration should be brought out by the teachers' questions.

Standard No. 4.

Classroom management should be economical of the teachers' and pupils' time.

Standard No. 5.

The teacher should be neat and becomingly dressed and his entire personality should be such that it will tend toward positive moral development of his pupils.

Standard No. 6.

A happy contented and busy atmosphere should characterize the schoolroom.

Each teacher, after two or more observations, was given a positive or negative mark on each of the six standards set forth above.

As might have been expected it was found that the rating varied all the way from "all positive" marks for some teachers, to "all negative" marks for others. These ratings have been given to the superintendent of schools. Too much importance should not be attached to these ratings. The observations were too few and of too brief duration. The standards are defensible but not absolute. A competent supervisor after a few weeks in the system might be justified in reversing many of the evaluations made.

A significant fact to be noted in the ratings is that in many instances negative marks were given where under more adequate supervision the marks might very well have been positive.

The solution to the supervisory problem probably lies in the employment of a high school principal or an elementary principal, or it may be solved by employing a head teacher for the elementary school and securing the services of critic teachers from either the University of Colorado or Colorado State Teachers College at Greeley.

#### GRADING AND PROMOTION SYSTEMS

The grading system has been somewhat reorganized and improvements have been made. The three point system now in use should be replaced by a five point system. An analysis of the grades given during the last two years reveals the fact that, although much improvement has been made during the last two years over the previous years, one teacher still consistently gives 25% of her grades "A", while another teacher consistently gives 4% of her grades "A". The teachers uniformly give too many "B"s. Due to the system in vogue, the median per cent of "B"s given by all the teachers is 71.

Regular promotions occur only once a year. This is an old system that has been abandoned by a very large majority of all school systems in the United States. Semi-annual promotions are much better, making it possible for one-half entering first graders to enter one-half year earlier.

The greatest disadvantage of the annual promotions scheme is that it materially increases the cost of failures. This is extremely expensive from the standpoint of both time and money. Annual promotions make it impracticable to admit mid-year classes.

All the supervision that is done is accomplished by the superintendent and a single special teaching supervisor who confines his efforts to music and art. High school and elementary school principals who are largely supervisory officers are not included in the Fort Lupton personnel. About all that the superintendent has been able to do in an instructional supervisory capacity has been to indicate the scope of the work to be covered. There can scarcely be given any time to checking up to insure that the work has been covered. A good notion of the amount of time that can be given by the superintendent was obtained through a set of questions submitted to the teachers. It was found that although visits to teachers' classrooms were made by the superintendent, they were of such brief duration (variously estimated from two to twenty minutes) that most effective classroom supervision was impossible.

Each teacher is supplied with a manual of directions, general teachers' meetings are held and some suggestive bulletins are issued. Thus it can be seen that all possible, under the present organization, is being done. However, supervision as it should be practiced in the Fort Lupton schools is impossible with the present insufficient amount of supervisory assistance.



RECOMMENDATIONS BASED UPON THE FINDINGS OF THE SURVEY  
WHICH CONSTITUTE ELEMENTS FOR INCLUSION IN AN  
EDUCATIONAL PROGRAM

**Findings No. 1.** IV.-A.—CURRICULUM\*

A thorough study of the curriculum was not undertaken as a part of the survey. A preliminary and incomplete examination of the occupations of Fort Lupton high school graduates, needs of present high school students, shows that different emphases might well be given to the curricula. The distribution of time in the school day might be better balanced.

**Recommended Program No. 1.**

Subjects should be included in the curriculum that give a preliminary preparation for commercial pursuits. Agriculture might well be introduced. A greater percentage of the school day should be devoted to training in physical well-being.

**Findings No. 2.**

Preliminary investigations of curricular problems show that in Fort Lupton as in the majority of schools, courses of study have not been revised to keep pace with the revolutionary, economic and social changes of the last two or three decades.

**Recommended Program No. 2.**

Perhaps within the next school year Fort Lupton should lighten the teaching load of certain competent teachers, employ expert advice from neighboring institutions of higher learning and should then plan and execute a real curriculum revision. Early in this endeavor Fort Lupton should arrange through existing agencies full co-operation with other school systems now attempting to solve similar problems.

IV.-B.—SUPERVISION OF INSTRUCTION

**Findings No. 1.**

Supervision of instruction is considered indispensable by superintendents and board members in fifteen cities the size of Fort Lupton. Fort Lupton has practically no classroom supervision except in music and art.

**Recommended Program No. 1.**

The superintendent should not be expected to perform all the duties for which he is at present held responsible. The supervision of instruction constitutes sufficient additional duties that more help should be secured as is the case in most school systems.

**Findings No. 2.**

There are irregularities in the grading system. A three-point system is used.

**Recommended Program No. 2.**

Who ever is employed to do the supervision of instruction should make it one of his duties to more nearly standardize practices having to do with grading. In Fort Lupton a five-point system should be adopted.

**Findings No. 3.**

Promotions occur but once a year. This is wasteful both of children's time, and of money. It over-penalizes the failures and there are no mid-year beginning classes.

**Recommended Program No. 3.**

Promotions should be made at least semi-annually and more special promotions should be made whenever justified. A beginning first grade class should be started at the beginning of the second semester.

**Findings No. 4.**

Subjective evaluations of the quality of the teaching process reveals the necessity for more classroom supervision.

**Recommended Program No. 4.**

Fort Lupton should employ a principal or else elect a specially competent elementary teacher to the position of head teacher of the elementary grades and in addition secure the full or part time services of a supervisor from one of the near by state schools of education.

\* The discussion and tables presenting the findings are omitted in the printed form.

## CHAPTER V

CLASSIFICATION, ABILITIES AND ACHIEVEMENTS OF  
FORT LUPTON CHILDREN

## CLASSIFICATION

There are two widely used methods of determining the efficiency and degree of standardized classification of children in school systems. One is the construction of an "age-grade" table which shows to what extent children are at the commonly accepted ages for the school grades in which they are found. The other means of ascertaining the efficiency of the school's classification and administration is the construction for the entire school of a "grade-progress" table, which shows to what extent pupils are making regular progress through the grades.

## AGE AND GRADE

The birthdays of the children in all the grades were ascertained then by using the Baltimore Age Calculator; the ages of the children were determined as of September first, 1924. A table which gives the distribution of the children in each grade by ages as of September first was constructed and turned over to the superintendent of schools. From this table Figure 5 was constructed.

Figure 5 clearly shows that there is in most grades a minimum of underageness and that in grades 3 through 10 there is altogether too much overageness. A careful study of the table from which this figure was made will reveal to the school authorities in Fort Lupton where immediate reclassifications affecting individual pupils should be undertaken. A too rapid change toward a more desirable classification should not be attempted. Much of the improvement in this respect will come only as a result of a thorough curriculum revision recommended in Chapter IV of this Report.

## GRADE AND PROGRESS

The complete promotion history of as many of the children as possible in each grade was secured from school records and inquiries in pupils' homes. For each pupil the survey staff learned how many times he had been regularly promoted, how many times he had failed and how often the child in question had received a double promotion. Tables giving the distribution of children according to their progress through the grades have been turned over to the school authorities. Figure 6 gives a broad view of the situation for the entire school system.

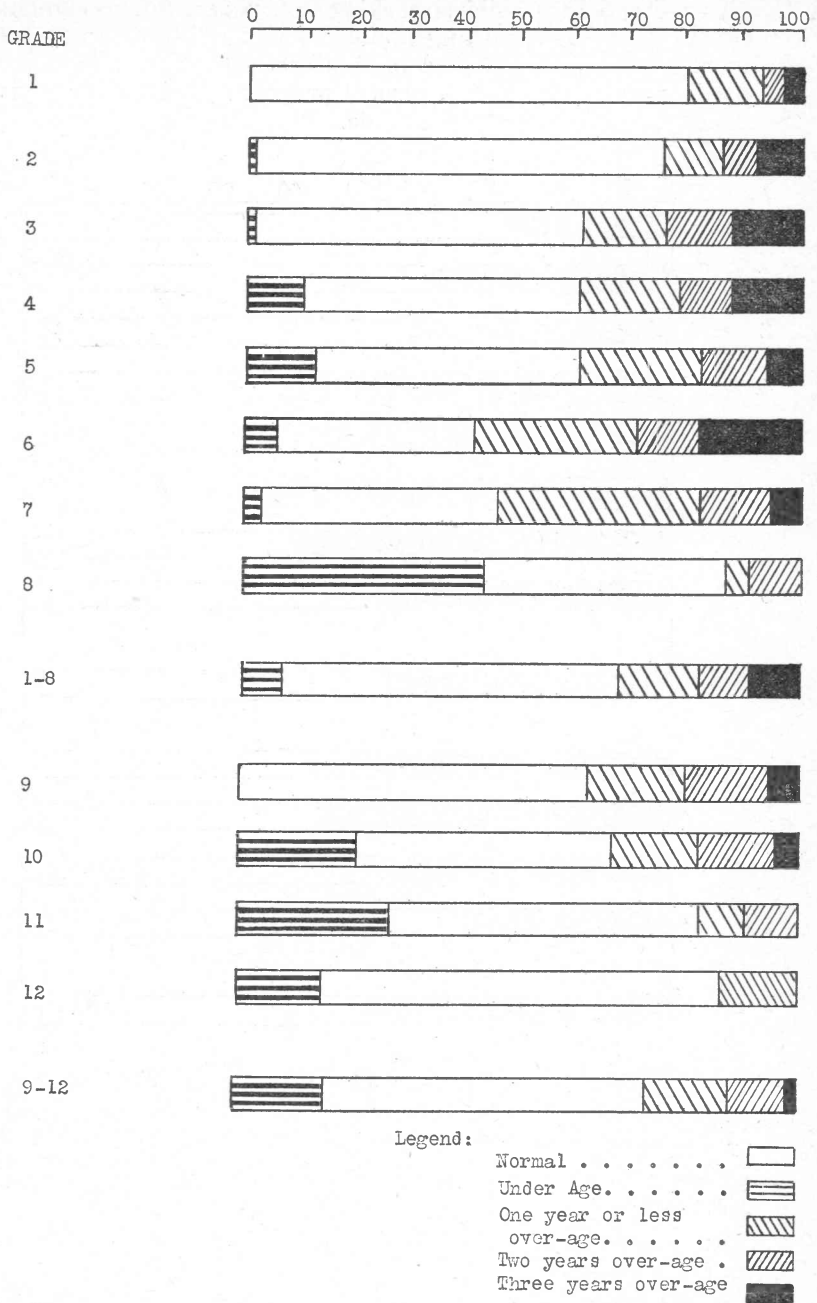


Fig. 5. THE PER CENT UNDER-AGE, NORMAL AND 1, 2, OR 3 OR MORE YEARS OVER-AGE FOR 589 CHILDREN IN THE FORT LUPTON SCHOOLS—AGES AS OF SEPTEMBER 1, 1924.

The percentage of children making slow progress is in marked contrast to the per cent making rapid progress. These percentages should more nearly balance and in no school should there be three times as many making slow as normal progress. This, however, is the case in the Fort Lupton 6th grade.

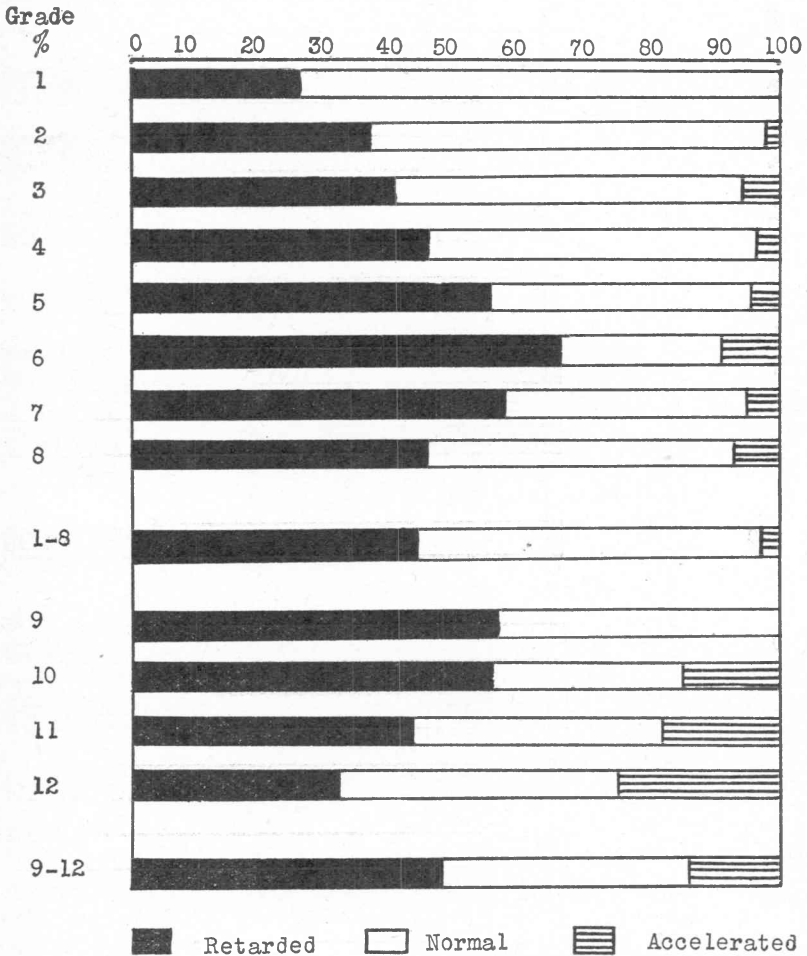


Fig. 6. GRADE PROGRESS. THE PER CENT OF SLOW, NORMAL AND RAPID PROGRESS IN THE VARIOUS GRADES OF ELEMENTARY AND HIGH SCHOOLS, AND FOR THE ENTIRE ELEMENTARY AND HIGH SCHOOL, FORT LUPTON, COLORADO, 1924-1925.

Usually causes of irregular progress are: differences in mentality, early or late entrances into school, irregular attendance, ill health, and maladjustment of the school to the children's needs. Teachers say in regard to 165 pupils who have made slow progress that 112 or 68% are unable to do the work assigned, 8 or 4.6% have too great language difficulties, 30 or 18.1% have made

slow progress because of absence due to illness, 9 or 5.5% due to moving in and out of different school districts, and 16 or 9.7% due to absence because of being kept out of school to work.

It was found that of approximately 500 children now in the first eight grades 227 repeated a grade once, 16 repeated the same grade twice and one repeated grades 4 times. From the financial standpoint this is the same as saying that these repeaters have cost the district the equivalent of the expenses incurred in sending 263 additional children to school for an entire year. This constitutes an argument in favor of semi-annual instead of annual promotions. Curriculum revision is the most fundamentally important "next step" looking toward the elimination of unwarranted retardation.

### ABILITIES AND ACHIEVEMENT

#### THE MEASUREMENT PROGRAM IN FORT LUPTON

Educational science has within the last few years developed instruments by which the ability possessed by pupils to do school work can be fairly well ascertained. In addition there have been developed means of measuring the actual achievement of individual children in reading, writing, arithmetic, geography and other subjects of the school curriculum.

A table reproducing Form F-5 shows what instruments were used in making the measurements involved in "Step One" of the measurement program in Fort Lupton.\*

The results of these tests show how much Fort Lupton children are able to achieve and how much they are actually achieving in the various school subjects. In addition, the results of these measurements give school authorities a means of comparing the efficiency of the instruction in the Fort Lupton schools with the efficiency of instruction in other school systems.

In so far as these school tests are diagnostic, they give the classroom teachers a knowledge of the specific difficulties that are being met by individual children in their classes.

In order that the greatest good might accrue to Fort Lupton as a result of these tests an expert in tests and measurements met with Fort Lupton teachers and gave them specific directions in the utilization of the results of the tests given.

A record on a 5 x 8 card was made by all the teachers for each of the pupils in their classes.

This record shows the individual child's ability to do school work, his percentile rank, i. e., how his achievements compare with that of other pupils in his class, and finally the relation between what he is able to do in each subject and what he is actually doing in that subject. The cards are in the possession of classroom teachers who can make daily references thereto.

\* Omitted in this printed report.

TABLE IV  
 CHRONOLOGICAL AND MENTAL AGES AND I. Q.'S OF FORT LUPTON PUPILS—1924-25

1	2	3	4	5	6	7	8	9	10	11
Grade	No. Pupils	Average C. A.	Median M. A.	Norm M. A.	Md.-Norm M. A.	Extreme Range M. A.	Interquartile Range M. A.	Median I. Q.	Extreme Range I. Q.	Interquartile Range I. Q.
12	27	17 yr. 7 mo.	16 yr. 10.5 mo.	16 yr. 6 mo.	4.5 mo.	13 yr. 3 mo.-18 yr. 6 mo.	1 yr. 4.7 mo.	100	78-103	96.7- 99.5
11	30	16 yr. 10 mo.	15 yr. 3 mo.	16 yr. 1 mo.	-10 mo.	11 yr. 11 mo.-18 yr. 4 mo.	2 yr. 1 mo.	93.5	70-122	89.2-100.2
10	26	16 yr. 2 mo.	15 yr.	15 yr. 4 mo.	- 4 mo.	12 yr. 10 mo.-16 yr. 11 mo.	2 yr.	95.3	76-114	86.3-101
9	30	15 yr. 6 mo.	14 yr. 1 mo.	14 yr. 6 mo.	- 5 mo.	10 yr. 10 mo.-18 yr. 9 mo.	2 yr. 2.3 mo.	93.3	64-117	83 - 99.7
8	37	14 yr. 4 mo.	13 yr. 7 mo.	13 yr. 10 mo.	- 3 mo.	12 yr. 5 mo.-16 yr. 6 mo.	1 yr. 8.3 mo.	96.7	73-122	87.5-102.7
7	33	13 yr. 2 mo.	12 yr. 11 mo.	12 yr. 10 mo.	1 mo.	12 yr. 2 mo.-16 yr. 3 mo.	1 yr.	100.3	75-122	96.2-106.7
6	42	12 yr. 1 mo.	12 yr. 2 mo.	12 yr. 2 mo.	0	9 yr. 11 mo.-15 yr.	1 yr. 1.6 mo.	101.3	73-129	89 -111.5
5	42	11 yr. 3 mo.	11 yr. 2 mo.	11 yr. 1 mo.	1 mo.	8 yr. 11 mo.-14 yr. 6 mo.	1 yr. 5.8 mo.	101.3	69-139	89.2-113.1
4	52	10 yr. 4 mo.	9 yr. 9 mo.	9 yr. 10 mo.	- 1 mo.	7 yr. 8 mo.-12 yr. 7 mo.	2 yr. 1 mo.	92.8	66-123	82.4-104
3	60	8 yr. 10 mo.	8 yr. 8 mo.	8 yr. 3 mo.	5 mo.	5 yr.-14 yr.	2 yr. 7.3 mo.	100	49-171	80.6-112.5
2	43	7 yr. 10 mo.	6 yr. 9 mo.	6 yr. 8 mo.	1 mo.	5 yr. 1 mo.- 9 yr. 4 mo.	1 yr. 5 mo.	104.2	62-135	88.3-110
1	55	6 yr. 8 mo.	5 yr. 9.5 mo.	5 yr. 9 mo.	0.5 mo.	4 yr. 9 mo.- 6 yr. 9 mo.	1 yr. 2 mo.	82.8	45-110	75.7- 92.1

To realize the greatest possible good from "Step One" of the measurement program a careful study of data presented in the following sections of this report should be made by all Fort Lupton teachers. In addition "Steps Two, and Three, and Four" should eventually be taken to complete the measurement program. "Step Two" should involve the giving of diagnostic tests in those subjects where Fort Lupton children are farthest behind the normal achievement. "Step Three" should involve the utilization of many practice tests, standard and otherwise. "Step Four" should be in the form of a re-survey similar to "Step One." This final "Step" determines the degree of improvement.

ABILITY TO DO SCHOOL WORK\*

Since the first essential for the satisfactory accomplishment of school work is native capacity, mental tests were given to determine what should be expected of Fort Lupton children. The Haggerty Intelligence Examination, Delta I, was used for grades one to three; the National Intelligence Tests, Scale A-Form 1, for grades 4 to 6; and the Terman Group Tests of Mental Ability, Form A, for grades 7 to 12.

The results of these tests are expressed in terms of mental age and intelligence quotients. A child's mental age equals the chronological age of the average child who has equal ability to do school work. For example, a child with a mental age of 12 years has the mental capacity of the average 12-year-old child; a child 10 years

TABLE V  
NUMBER OF MONTHS CHILDREN FALL BELOW THE MENTAL AGE NORM

Grades	4	5	6	7	8	9	10	11	12	Av.
Average number months, *Weld County . . . . .	6.11	7.96	9.27	22	15.78	9.49	12.43	12.22	7.81	11.45
Average number months, Fort Lupton . . . . .	1	1**	0	1**	3	5	4	10	4.5	2.8

\* Schools included in testing program reported in Research Bulletin No. 7.  
\*\* Above normal.

old whose capacity to do school work is equal to the average 8-year-old child has a mental age of 8 years.

The median mental ages of grades 3 and 12 are considerably above standard. This should mean that these grades have ability to do better than average work. Grades 8 and 11 are below the norm, grade 11 being almost a year below. Columns 4, 5, and 6 of Table IX show the Fort Lupton medians, the norms and the number of months the grade medians are above or below the norms for mental age.

In Colorado State Teachers College Bulletin, Series XXIII No. 7, the statement is made that in December, 1922, in the first

\* This section of the report was prepared by Miss Jean Robinson under the direction of Dr. J. D. Heilman of the Department of Psychology, Colorado State Teachers College, Greeley, Colo.

three grades of the high schools of Weld county included in that testing program, only one individual grade out of a total of thirty had reached the norm for mental age. Table V shows the number of months the children in each grade from 4-12 fall below the mental age norm for their respective grades.

The Fort Lupton school shows much higher mental age medians than were found in the schools of Weld County, but column 7 of Table IV reveals that the average difference between the highest and the lowest mental age in one grade averages for all the grades approximately five years, which is the average for the Weld County schools. This means that the classification of the school children is so poor as to make it possible to find in almost any grade from the fourth to the twelfth, children who differ in learning ability as much as the average third grade child differs from the average eighth grade child.

If one fourth of the children having the mental age and one fourth of the children having the highest are excluded, column eight of Table IV shows the difference between the highest and the lowest mental age of the remaining middle fifty per cent of the children. The corresponding average inter-quartile range for the Weld County schools was 19.37 months, which is less than that of eleventh, tenth, ninth, eighth, fourth, and third grades in Fort Lupton.

The intelligence quotient (I. Q.) is the result obtained by dividing the mental age by the chronological age. It is expressed as a per cent without the symbol (%) or the decimal point. The normal child has an I. Q. of 100. An I. Q. above 100 means rapid mental development, or more than average mental capacity.

The average chronological ages of the Fort Lupton pupils vary little from the grade standards. The median I. Q.'s of grades 8-11 are low. The extreme range of I. Q.'s (Column 10, Table IV) show too great a variation of ability. It is rather a widely accepted opinion that children with I. Q.'s below 100 profit but little from the study of such subjects as Latin and Algebra. It has been found that in the first year of high school 70 per cent of those with I. Q.'s of 95 or less fail in more than half their studies. In only two grades, 7 and 12, is the I. Q. of the lower fourth of the class above 90. It is questionable whether the lower fourth of the pupils in grades 9 to 11 should be allowed to follow the traditional high school course of study.

The upper quarter of grades 2, 3, 5, and 6 show superiority if the test results are reliable. Some of the lowest scores in grades one and two may be due to language difficulties. The scores on the Haggerty Test range from below to above the limits for which mental age equivalents are given. The table was therefore extended both upward and downward, giving approximate results probably less reliable than those given by the author of the test. The reliability of these extreme scores is doubtful. The records of some of the chronological ages show discrepancies which make it impossible to compute the I. Q.'s with accuracy.





ILLUSTRATION 3

The dark effect in the bowl is not a shadow, but the long accumulation of dirt and soot. Note the improper installation of the drinking fountain, necessitating the improvised platform. The fountain is at the entrance to the first and second grade rooms.

According to eminent psychologists, in the average case an I. Q. of 75 is considered about the minimum essential for appreciable achievement in school work. The average case (of 75 I. Q.) can scarcely succeed beyond the fifth grade. It would seem wise to use the Binet-Simon individual test for all children whose group I. Q.'s are below 75, and to provide for those whose low rating proved accurate a special room with a teacher especially fitted for work with children of less than average mentality.

#### SOME REASONS FOR MAKING SPECIAL PROVISION FOR RETARDED CHILDREN

##### I. Benefits to normal children.

Normal children will progress more rapidly if retarded children are removed from regular classes, for the following reasons:

1. Retarded children require more of the teacher's time and attention, making neglect of normal children necessary.
2. While waiting for retarded children to get a point, the normal children may lose interest and become irritated, bored, or disorderly.
3. Children are not stimulated to work at their full power unless the requirements call for their best efforts to keep pace with their equals.
4. The class morale is better if all have equal chances for success.

##### II. Benefits to retarded children.

1. They escape the inevitable failure that must result from competition with more fortunate children. The "habit" of failure is no longer taught.
2. They may be given the kind of work in which success is possible.
3. They may receive more individual help and encouragement from the teacher.
4. They are not neglected or treated as nuisances.
5. They are happier in school, unless prejudiced by others.
6. Their conduct improves.
7. They make more progress, many (who without special help would be permanently retarded) being restored to regular grades.

(In Los Angeles adjustment rooms 200 children averaged five times as much progress as regular children in regular grades. On the average, they stayed thirteen weeks in the adjustment rooms.)

##### III. Benefits to regular teachers.

1. Less time may be spent in discipline, more in real teaching.
2. The chief sources of discouragement and nervous tension are removed.
3. Teachers are stimulated by the more apparent results of their efforts.

##### IV. Benefits to taxpayers.

The cost of repeating a term's work is equal to the cost of schooling another child.

1. Normal children are less likely to be held back to repeat this work.
2. Retarded children may be given the work they can do instead of repeating again and again the regular work in which they fail.

3. Many retarded children can be restored to regular grades, able to go on with the class.

(Of 3111 St. Louis children in ungraded classes in 1916-17, 42% were restored to regular grades and 80% made greater progress than before. Of the remaining 20%, some were mentally deficient, others had been in these classes only a short time when the report was made.)

4. Classes of normal children may be somewhat larger.
5. The educational needs of all children may be better met, thus making them more useful citizens.

The large number of children with serious language difficulties of themselves make the establishment of a special class imperative.

#### THE ACHIEVEMENT OF THE CHILDREN

The general achievement of the pupils was measured by the Stanford Achievement Test, Primary examination, Form A, for grades two and three; and Advanced Examination, Form A, for grades 4-8. The results are given as educational ages and accomplishment ratios.

An educational age of twelve years means that the pupil's achievement in school work is equal to that of twelve-year-old children in general. The median education age of the Fort Lupton children is from two to seven months below standard, the average for grades two to eight being four months below (Columns 3 and 4, Table VI). In each grade from three to eight there may be found children whose achievement varies from three to six years (Column 5, Table VI), while the range of educational ages of the middle 50 per cent of the children is from nine months to one year nine months (Column 6). A pupil having an educational age ten or twelve months above the average for his grade should be promoted to the next grade.

Table VI gives the distribution of educational ages for grades 2-8 with medians, quartiles, and norms indicated. It may be seen that one eighth-grade pupil falls below the first quarter of the sixth grade, two seventh-grade pupils are above the third quartile of the eighth grade, two seventh-grade pupils are below the first quartile of the sixth grade, and so on.

Table VII shows that most of the Fort Lupton pupils have been achieving about as much as should be expected, though grade placements somewhat affect the accomplishment ratio. The medians in column 7, Table VI, are all above 100 except two (which are above 99), though column 8 shows that there are some children who are not working to capacity. According to column 9, fewer than the lower fourth in most grades are doing less than should be expected.

A comparison of intelligence quotients and accomplishment ratios shows that the duller children are accomplishing much more in proportion to their capacity than are the bright children. For the fourteen children (grades 2-6) whose I. Q.'s are below 75, and the three children (grades 7 and 8) with I. Q.'s below 78, the average A. R. is 114.7, with only two pupils whose A. R. is below 102.\*

\* Tables have been prepared which give all the important educational data available for each pupil with either exceptionally low or exceptionally high ability rankings. These have been turned over to the proper school authorities.

TABLE VI  
ACHIEVEMENT OF FT. LUPTON PUPILS AS SHOWN BY THE STANFORD ACHIEVEMENT TEST—1924-25

1 Grade	2 No. Pupils	3 Median E. A.*	4 Standard E. A.	5 Range E. A.	6 Quartiles E. A.	7 Median A. R.†	8 Range A. R.	9 Quartiles A. R.
8	31	14 yr. 3.5 mo.	14 yr. 9 mo.	11 yr. 11 mo. to 16 yr. 7 mo.	15 yr. 2 mo. 13 yr. 8 mo.	105.75	97-110	108.45 101.69
7	29	13 yr. 1 mo.	13 yr. 8 mo.	4 yr. 8 mo. 10 yr. 5 mo. to 16 yr. 6 mo.	1 yr. 4 mo. 13 yr. 11 mo. 12 yr. 4 mo.	101.83	91-113	106.25 97.12
6	29	12 yr. 2.5 mo.	12 yr. 7 mo.	6 yr. 1 mo. 11 yr. to 14 yr. 3 mo.	1 yr. 7 mo. 12 yr. 9 mo. 12 yr.	99.88	89-108	104.37 95.62
5	35	10 yr. 11.4 mo.	11 yr. 5 mo.	3 yr. 3 mo. 9 yr. 8 mo. to 13 yr. 2 mo.	9 mo. 11 yr. 6 mo. 10 yr. 1 mo.	99.17	87-122	104.5 94.75
4	45	9 yr. 11 mo.	10 yr. 4 mo.	3 yr. 6 mo. 7 yr. 11 mo. to 12 yr.	1 yr. 5 mo. 10 yr. 5 mo. 9 yr. 4 mo.	104.83	89-123	107.94 100.12
3	47	8 yr. 9 mo.	9 yr.	4 yr. 1 mo. 7 yr. to 13 yr. 3 mo.	1 yr. 1 mo. 9 yr. 9 mo. 8 yr.	107.71	57-162	114.46 93.96
2	32	7 yr. 7 mo.	7 yr. 9 mo.	5 yr. 3 mo. Below age- limit to 9 yr. 4 mo.	1 yr. 9 mo. 7 yr. 10 mo. 7 yr. 10 mo.	110.83	86-146	122.19 104.06

\* E. A.—Educational Age.

† A. R.—Accomplishment Rates.

In grades 2-8 there are 30 pupils with I. Q.'s above 115. Their average A. R. is 96.13. If those who were measured by the Haggerty Test (with results that seem improbable) are excluded, the remaining 21 pupils have an average A. R. of 97.9. In both groups

TABLE VII  
DISTRIBUTION OF ACCOMPLISHMENT RATIOS FORT LUPTON—  
1924-25

A. R.*	8th	7th	6th	5th	4th	3rd	2nd
153.....	..	..	..	..	..	1	..
146.....	..	..	..	..	..	1	1
144.....	..	..	..	..	..	1	..
136.....	..	..	..	..	..	1	..
130.....	..	..	..	..	..	1	4
125.....	..	..	..	..	..	2	2
124.....	..	..	..	..	..	1	..
122.....	..	..	..	..	3	..	2
120.....	..	..	..	1	3	..	2
118.....	..	..	..	..	..	1	2
116.....	..	..	..	..	..	1	2
114.....	..	..	..	..	..	3	2
112.....	..	1	..	1	1	2	1
110.....	3	2	..	..	3	3	†1
108.....	7	1	1	..	1	4	5
106.....	5	4	4	3	8	†5	2
104.....	†4	5	3	5	†6	3	2
102.....	3	1	..	2	5	1	1
100.....	5	†5	6	3	4	2	2
98.....	3	1	†4	†6	2	..	..
96.....	1	4	3	4	5	..	..
94.....	..	3	2	2	1	4	1
92.....	..	1	3	1	1	1	2
90.....	..	1	2	6	1	2	1
88.....	..	..	..	..	1	2	1
86.....	..	..	..	1	..	..	1
84.....	..	..	1	..	..	1	..
82.....	..	..	..	..	..	1	..
80.....	..	..	..	..	..	1	..
78.....	..	..	..	..	..	..	..
76.....	..	..	..	..	..	..	..
74.....	..	..	..	..	..	1	..
57.....	..	..	..	..	..	1	..
Number.....	31	29	29	35	45	47	37

\* A. R.—Accomplishment Ratios.

† Indicates the intervals within which the median falls.

two-thirds of the individual A. R.'s are below 100. (Accomplishment ratios could not be found for children who were not given the Stanford Achievement Test.)

Unless the removal of the dullest pupils for special room instruction will allow the regular classes to advance much more rapidly, the high I. Q. children with educational ages equal to the median of the next higher grade should be promoted and a coaching teacher provided to help them with subjects in which they need assistance. Both special room and coaching teacher should be provided if the most efficient work is to be done.

## ACHIEVEMENT IN READING

Following is a discussion of achievement in the various school subjects. The first subject considered is reading. If a pupil has a reading ability of the average 10-year-old, his reading age is ten years. The median reading age of the children in every grade from 2 to 8 is below the norm.\*

While the median reading ratios are satisfactory, the distribution table shows the classification might be improved. For example, five of the 33 children in grade seven are above the eighth grade median, while ten are below the median of the sixth grade. Of the 45 children in the fifth grade, three read better than the average of the seventh grade and nine are poorer readers than the average of the fourth grade child. This variation within a grade is a common problem. In the fifth grade of the Horace Mann School, which is made up of normal children, carefully graded, it was found at the end of the year that the reading ability ranged from fifth grade to ninth grade. The solution is probably frequent re-classification and much individual work in reading that each pupil may be kept working at his own level of ability.

## ACHIEVEMENT IN ARITHMETIC†

The median arithmetic ratios, as determined by the Stanford Achievement Test, are all above 100 except that of grade six, which is only one point below. Grade seven has attained the standard arithmetic age and grade three exceeds it by seven months, but all the other grades fall below. The distribution of scores indicates the desirability of re-classification. This test measures both computation and arithmetical reasoning.

The Woody Scales were used to measure ability in the fundamental arithmetical processes. The scores are compared with the average of scores attained in Wisconsin cities, Seattle, Paterson (N. J.), Pittsburgh (Pa.), and other cities from 1915-19. In general Fort Lupton compares favorably with the other cities. In addition, grades five and six, and in subtraction, grades four and eight, are slightly below the average. In multiplication, the seventh grade is the only one that reaches the average, while in division that distinction falls to grade three. Grades seven and three, as was observed, have reached the norm for arithmetic age, according to the Stanford test.

## ACHIEVEMENT IN HANDWRITING

The Ayres Scale, Gettysburg edition, was used to measure handwriting. The median of each grade is translated into a B score, in which the whole number indicates the grade and the decimal the month for which the score is the standard. For example, in quality, the B score for grade eight is 8.5, the standard for the fifth month of the eighth grade work. The seventh grade

\* Data omitted from printed form of report.

† Tables submitted to Fort Lupton school authorities but omitted from the printed report.

B score 5.5 indicates that the median score is equal to the norm for the fifth month of the fifth grade. The B score for the fourth grade is also 5.5, the only grade that is above standard in quality. With reference to quality, one pupil in eighth grade, five in seventh grade, thirteen in sixth grade, seventeen in fifth grade and six in fourth grade, all making a score lower than the standard for grade two. Grades four and six are very high in speed, while fifth grade is low. In grades four and five there are fifteen pupils who write more slowly than the third-grade standard.

ACHIEVEMENT IN SPELLING

Achievement in spelling was measured by means of the Ayres Scale. The results are listed in Table VIII. The sixth grade reaches the standard.

TABLE VIII  
SCORES IN SPELLING, AYRES SCALE  
Fort Lupton and Standards, 1924-25

Grades .....	2	3	4	5	6	7	8
Fort Lupton Medians.	58.75	76	73.5	82.92	91.88	86.5	85
Standards .....	79	79	84	84	84	*	*

\* Records appeared unreliable.

ACHIEVEMENT IN GEOGRAPHY

The results of the test in geography show that the seventh grade has exceeded the norm, but no quarter of any class in the other grades has reached the standard.

ACHIEVEMENT IN HISTORY

In history the test results are rather disappointing. The Gregory tests in American history, Test III, Form A, were used. The median for the 12th grades is 36.5, which is 16.5 below the norm. The median for the 11th grade is 32.25, and this is about 15 points lower than the norm for grade 11. Even the upper quarter of the class in both grades fails to reach the standard for average achievement.

ACHIEVEMENT IN MODERN AND ANCIENT LANGUAGES

Handchin's Modern Language Tests, Silent Reading Test A, Spanish, also yielded low scores. The norm for grade 11 is 17, while the median score for grade 12 is only 11, and that for grade 11 is 3.3.  $Q_3$  is 18 for the 12th grade, and 4.45 for the 11th grade.

In Latin vocabulary, Henmon Latin Tests, Test 1, the 10th grade median is 36.5, which is .5 above the norm. The median for the ninth grade is 19.5. This is more than half the June standard which is 33. No norm is given for a half year's work in the ninth grade.

## ACHIEVEMENT IN CHEMISTRY

In the Powers General Chemistry Test, Form A; the median score of the 12th grade is 25.1, while the norm for the half year in chemistry is about 26% as given by the author of the test. The upper quartile score for the Fort Lupton class is 29.3.

## ACHIEVEMENT IN ALGEBRA

The distribution of ninth grade scores in the Hotz First Year Algebra Scale, Series A, shows for the addition and subtraction test a rather distinct division of the class into two groups. On the test in equations and formulae, Fort Lupton did much better. However, the medians are below standards in both tests.

## ACHIEVEMENT IN ENGLISH COMPOSITION

Scores made by the Fort Lupton pupils, grades 7-12, on the Pressey Diagnostic Tests in English Composition have been compared with figures given in the 1925 Report of the Nation-wide Survey of Pupils' Achievements in English Composition, through the use of these same tests. This survey reports the scores of 131,858 pupils, representing every state except Nevada, Maryland, and Rhode Island. The comparison includes scores made by 570 Colorado pupils who participated in the survey. Figure 7 was constructed from these comparative tables.

Colorado failed to reach the standard of the nation in any test. The Fort Lupton medians are below those of the state except in three instances: in the punctuation test, the Fort Lupton seventh grade scores slightly higher than Colorado; and in sentence structure, the median of grades seven and nine surpass those of the nation. The median scores for the whole nation, for Colorado, and for Fort Lupton are shown graphically in Figure 7.



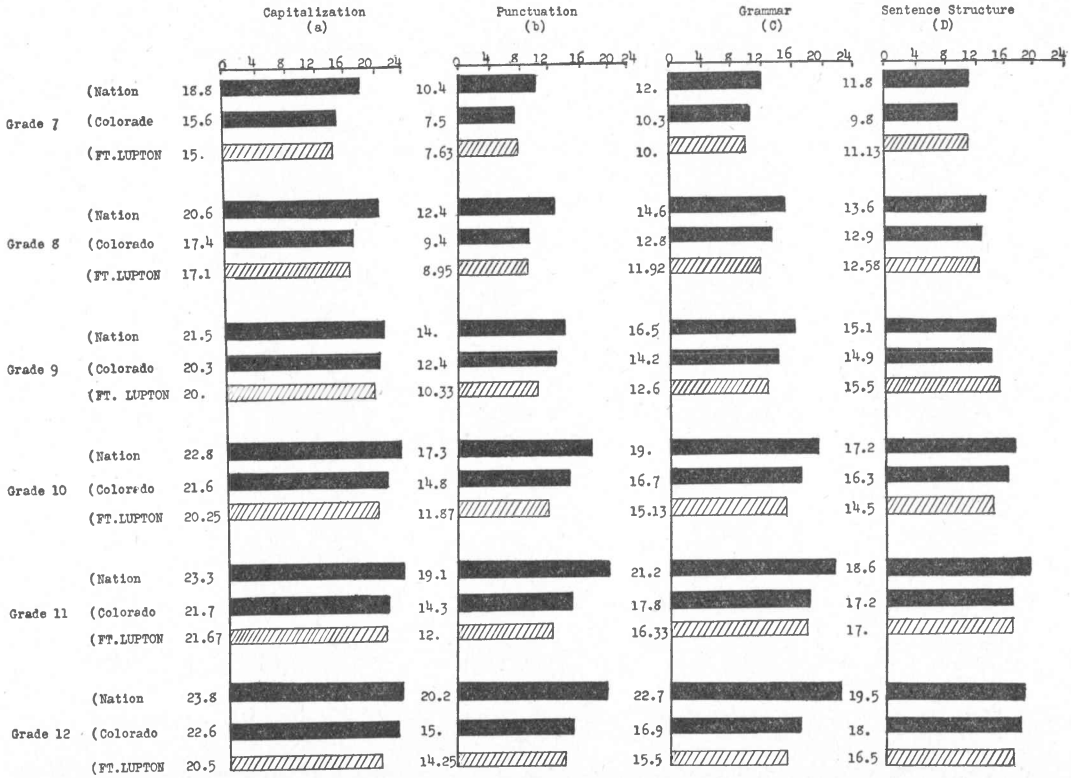


Fig. 7. MEDIAN SCORES ON PRESSEY DIAGNOSTIC TESTS IN ENGLISH COMPOSITION FOR FORT LUPTON, THE STATE OF COLORADO, AND THE UNITED STATES, 1924-25.

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY  
WHICH CONSTITUTE ELEMENTS FOR INCLUSION  
IN AN EDUCATIONAL PROGRAM

V. CLASSIFICATION, ABILITIES AND ACHIEVEMENT

Findings No. 1.

In grades 3 through 10 there is too much over-ageness. For example, in grade 6 there are 4 times as many overage children as normal.

Recommended Program No. 1.

A reclassification of some of the extreme cases should be immediately undertaken where test results justify.

Findings No. 2.

Of the 500 children in the Elementary school 227 failed once in making a grade a year, 16 failed twice, and 1 four times.

Recommended Program No. 2.

Semi-annual promotions should replace the annual promotion system now used. This will reduce by one-half the time lost in overcoming failures. Special promotions and placing of some children into a special class would eliminate much of the retardation in the future.

Findings No. 3.

In sheer ability expressed in mental ages Fort Lupton children are from 10 months below the normal in grade 11 to 5 months above normal in grade 3, i. e., Fort Lupton's children have about average ability to school work. Fort Lupton mental ages are considerably higher than mental ages of Weld County children.

Recommended Program No. 3.

Fort Lupton has a right to expect that her school children achieve as much as children in an average school, and that they do better work than all the children of Weld county taken together.

Findings No. 4.

Educational age, which is a measure of achievement in school work, was determined by the Stanford Achievement test. The average educational age of Fort Lupton children is from 2 to 7 months below standards for the country. There are wide differences in achievement among children in a given grade. The overlapping of educational ages from grade to grade is tremendous.

Recommended Program No. 4.

An educational age of two years above normal for grade probably justifies a special promotion.

Findings No. 5.

Comparison of intelligence and accomplishment among individual children shows that the duller children are doing more according to their ability than are the bright.

Recommended Program No. 5.

The dull should be removed from regular classes and the exceptionally bright should receive additional coaching. This will make possible better teaching for the large majority of children.

Findings No. 6.

In reading Fort Lupton children are from 2 to 8 months below standard. There is great variation of reading ability with any given grade.

Recommended Program No. 6.

Frequent Reclassification.

**Findings No. 7.**

In general Fort Lupton compares favorably with the norm and other cities so far as achievement in arithmetic is concerned. Fort Lupton is relatively better in addition and subtraction than multiplication and division.

**Recommended Program No. 7.**

Further use should be made of standardized practice materials.

**Findings No. 8.**

Writing—The fourth and eighth grades are strong in both quality and speed. The sixth and seventh grades are correspondingly weak.

**Recommended Program No. 8.**

More emphasis should be given to writing in grades six and seven.

**Findings No. 9.**

Spelling—In the lower grades, Fort Lupton is weak in spelling, but the upper grades are considerably above standard.

**Recommended Program No. 9.**

A little more stress should be placed on spelling in the lower grades.

**Findings No. 10.**

In Geography, American History, Spanish and Latin, Fort Lupton's levels of achievement are disappointingly low.

**Recommended Program No. 10.**

Diagnostic tests should be given in these subjects in order to determine specific difficulties.

**Findings No. 11.**

Algebra—Fort Lupton's ninth graders are much stronger in equations and formulas than in addition and subtraction.

**Recommended Program No. 11.**

This probably merely reveals emphasis in teaching.

## CHAPTER VI\*

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY WHICH  
CONSTITUTE ELEMENTS FOR INCLUSION IN AN  
EDUCATIONAL PROGRAM

## VI. STUDENT ACTIVITIES

## Findings No. 1.

Taking all schools together, elementary, junior high and senior high, there were twenty-one different student activities engaged in by pupils of the Fort Lupton schools during school year 1924-25. This is about the number maintained in small high schools in the State of Washington.

## Recommended Program No. 1.

A greater variety of activities should be encouraged in order to multiply the possibilities for participation on the part of a much higher percentage of the school enrollment. The program should take account of children in lower grades as well as those in high school. An honor society is recommended.

## Findings No. 2.

Available data show that approximately 50% of all students in Fort Lupton schools do not take a definite part in student activities.

## Recommended Program No. 2.

The program should be so planned that approximately 100% of the children participate in some activity.

## Findings No. 3.

No school credit is allowed students for participation in student activities.

## Recommended Program No. 3.

Credit should be allowed for orchestra and glee club, athletics, work on school paper, and debating.

## Findings No. 4.

All Student Activities Accounts are centralized and carefully kept.

## Recommended Program No. 4.

Continue the practice.

## Findings No. 5.

Problems of administration of student activities are about the same in Fort Lupton as in other schools.

## Recommended Program No. 5.

These problems having been discovered should be intelligently studied and solutions seriously attempted.

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\* Supporting data and discussion omitted in this printed report.

## CHAPTER VII

### HEALTH EDUCATION

#### AIMS OF HEALTH EDUCATION

The aims and purposes of health education have within the last five years suffered a complete reversal and drastic changes have been inaugurated. The old aims of physical education were to have the children engage in formal gymnastics and to get children to perspire. To some degree Fort Lupton's practices are in conformity to this old theory. These old purposes, however, have been shown to be inadequate. The new aims are as broad as education and life itself.

Today the whole aim of health education is simply that the program shall aim to provide an opportunity for all the children in school to have a chance to live in situations that are physically wholesome, mentally stimulating, and satisfying to the children, and at the same time socially sound. If Fort Lupton accepts the newer view much of the formal gymnastics now practiced even in the primary grades will be abandoned and games, singing and dancing will take their place.

#### GYMNASIUM AND PLAYGROUND ACTIVITIES

The outstanding need in the field of gymnasium and playground activities is a more modern point of view in regard to aims which are to be realized. The second great need is instruction and supervision sympathetic to the newer conceptions of what should be accomplished through these activities. The time is past when the majority of first and second grade children should be day after day forced through formal gymnastic exercises. This practice is, however, to some extent the rule in Fort Lupton.

Figure 8 gives in graphic form the program for the first six grades. Even in the high school games and athletics may well comprise practically the entire program for both girls and boys.

More than one half of the 1571 high schools of the North Central Association had, during the present school year, a paid physical director. Twelve per cent of these high schools employed two physical directors, one for boys and one for girls.

If Fort Lupton cannot secure the services of a physical director whose views are in accordance with the broad life aims of physical education, neighboring districts might co-operate with Fort Lupton in employing such an officer.

#### DEFECTS AND THEIR CORRECTION

According to written statements of parents who write excuses for their children's absences, illness was the cause for 3564 days of absence during the school year 1923-4. Since it costs Fort Lupton approximately 45 cents per day to provide schooling for one child, these absences cost the district 3564 times 45 cents or

	Rhythms	Dramatic games	Singing games	Dances	Games of low organization	Marching	Apparatus	Natural gymnastics
Grade I							as games only	
Grade II							as games only	
Grade III								Natural Exercises and story plays, or the teaching of technique and drill in movements that are the basis of activities which in themselves are satisfying to the children.
Grade IV								
Grade V				Girls	Girls		Girls	
				Boys	Boys		Boys	
Grade VI				Girls	Girls		Girls	
				Boys	Boys		Boys	

Fig. 8. THE ABOVE HORIZONTAL LINING INDICATES THE APPEARANCE AND DISAPPEARANCE OF, AND THE RELATIVE EMPHASIS UPON, THE DIFFERENT ACTIVITIES OF PHYSICAL EDUCATION IN THE FIRST SIX GRADES. (WILLIAMS, J. F., Phy. Ed. p. 47.)

\$1603.80. It is reasonable to believe that a competent school nurse working in co-operation with teachers and attendance officer could eliminate many of these causes for absence and thus save the district money that would go far toward paying the nurse's salary.

A school nurse is employed in 32 per cent of 1571 high schools, members of the North Central Association, and in 50 per cent of cities of the United States the size of Fort Lupton.

If Fort Lupton parents realized the educational loss sustained by many of their children through absences, and the degree to which absences impedes the progress in the classwork of those who do regularly attend, there is not a doubt that the services of a nurse would immediately be secured.

Of the city school systems in the United States the size of Fort Lupton, 50% employ a nurse for full or part time. Under the present system Fort Lupton is wasting through these absences both educational effort and an appreciable amount of money.

An inquiry into the Fort Lupton health situation resulted in the discovery of the records of physical examinations which had been given by Red Cross nurses during the school years 1920-21 and 1922-23. These results were tabulated and presented to the Fort Lupton school authorities.

From this data it was learned that no corrections were effected in 276 or 74 per cent of the 377 cases which were demanding attention. This is the situation in the face of the fact that medical authorities say that at least 90 per cent of such defects as found among Fort Lupton school children are of such a nature that they can be remedied.

This record leaves no question but that more of an effort should be put forth by school authorities to effect the correction of all possible defects. This must be accomplished in co-operation with the parents. It is in this co-operative effort that the services of a competent school nurse are indispensable.

The health program pertaining to corrections of physical defects demands drastic reorganization and financial support if the children of Fort Lupton are not to be denied their rightful heritage. Children in the up-to-date schools in rural as well as urban America are receiving such care. Why not Fort Lupton's children? The correction of defects in youth which avoid complications in adult life is by far the most economical policy to pursue.

Miss Lucille Dascomb, a nurse supported by the Red Cross organization in Weld County, was prevailed upon to give to Fort Lupton a few extra days of her service during the months of January and April, 1925, in order that conditions relative to defects prevalent among the elementary pupils might be determined. The findings are shown in Table IX, which embodies the essentials of her entire report.

It is an appalling fact that among 189 children among children of first three grades examined were found 164 with one or more defects pertaining to nose, throat, teeth, vision, and the like which are recognized as defects that seriously impair mental and

physical development. In grades four to eight slightly better conditions prevail—198 defects out of the 220 children examined. Of this group, among the 37 children who had previously been weighed by the Red Cross nurse, one third were found seven per cent or more under-weight. It must be remembered in this connection that examinations performed by nurses are necessarily limited to certain of the more obvious defects. There are no records of the more thorough physical examinations which doctors can perform ever having been given in Fort Lupton.

#### IMMUNIZATIONS AGAINST DIPHThERIA AND VACCINATIONS AGAINST SMALLPOX

The expenses for immunizing and vaccinating children in the schools against diphtheria, smallpox, and the like is supposedly born by the city. The reports secured of such immunizations during the last two school years would indicate that this phase of the health program has actually been carried out. This has been done in a commendable manner and should be continued. The health program in the Fort Lupton system should be recognized as strictly a part of the educational system. It is in connection with such immunizations and physical examinations, which should be given annually to all the younger children in the system, that the part time services of a medical doctor should be obtained.

#### HEALTH INSTRUCTION

Fort Lupton devotes approximately 75 minutes per week to health education or hygiene in grades one to six. This time allotment is exceedingly low when compared to time given to this subject in other cities. The average amount of time given to health instruction is on an average of 167 minutes per week for a group of 49 cities and 126 minutes for another per group of 60 cities. If the time given to physical training is added the two averages for the two groups of cities becomes 719 and 661 minutes per week compared with Fort Lupton's 125 minutes per week. The work in hygiene instruction could be further improved if more modern textbooks were used.

#### SCHOOL LUNCHEs

Problems of providing school lunches are involved in the health educational program as truly as are problems of defects, immunizations, etc. The school cafeteria was established in the spring of 1923 to furnish the pupils with at least one hot dish to supplement the lunches brought from home. Two dishes are prepared by the household arts girls. Each portion is sold at five cents. Soups, creamed dishes, or meats constitute the service. (Chocolate bars are sold as a side line.)

That the school is justified in maintaining this service was amply revealed through the inspection of lunches brought to school by the children of three different rooms. The lunches were found on the whole to be unsatisfactory for school children. Sandwiches



TABLE IX

RED CROSS NURSE'S REPORT OF NUMBER OF DEFECTS AND THE NUMBER AND PER CENT OF CORRECTIONS

Defects	Grades 1 to 3						Grades 4 to 8						Grades 1 to 8					
	Old Cases			New Cases			Old Cases			New Cases			Old Cases			New Cases		
	De- fects	Correc- tions		De- fects	Correc- tions		De- fects	Correc- tions		De- fects	Correc- tions		De- fects	Correc- tions		De- fects	Correc- tions	
		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%
Vision .....				17	1		37	3	8	23	2		37	3		40	3	7
Eyes .....				1			2			2			2			3		
Ears .....				4			3			2			3			6		
Nose .....	2	2	10	76	20		27	7		35	10		29	9		111	30	27
Throat .....	2	2	10	101	20		53	6		52	10		54	8		153	30	20
Teeth .....	1			108	5		82	19		69	6		83	19		177	11	6
Glands .....				6			1	1					1	1		6		
Skin .....				2												2		
Underweight (7% or more).....	1	1	100	74			36			27			37			101		
Total.....	6	5	84	389	46	12	241	36	15	210	28	13	246	40	16	599	74	12

Total Number Examined—Grades 1 to 3—189.  
 Total Number Examined—Grades 4 to 8—220.  
 Old—Children Examined Once Previous to 1924-25.  
 New—Children Examined Once 1924-25.

of unbuttered bread were found in most pails. There was an alarming over-supply of sweets, generally in the form of pie and cake.

More children should be urged to patronize the cafeteria. The extent to which the cafeteria was used by elementary and high school pupils is shown by the following tabulation which represents the number and per cent of elementary and high school pupils who utilized the school cafeteria over a period of a month:

Children's Lunches	Grades 1 to 6		Grades 7 to 12		Grades 1 to 12	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Number bringing lunches	140	77	38	58	178	72
Number eating in Cafeteria .....	42	23	27	42	69	53
Total .....	182	100	65	100	247	100

The per cent of the school enrollment that lives out of town was shown to be approximately 30 per cent. Since a large number of children using the cafeteria are city residents, the 23 and 27 per cents of children who use the cafeteria are low. The facilities of the cafeteria should be enlarged and that part of the school's service be undertaken on a bigger scale, that children traveling one or more miles to school may be induced to partake of a satisfactory lunch. If the lunches brought to school by some are an indication of what some of the children receive at home, the school can render no greater service than to provide complete lunches adequate for physical well being, proper growth, and adjustment to the mental demands of life at school.

Improvements in some directions can be made without any additional expenditures by providing adequate supervision over those children who bring home lunches as well as over those who eat at the cafeteria. A place for eating lunches should be provided all the children. They should not be allowed to eat cold lunches while at the same time running about over the playfield or standing shivering about the exterior corners of the building. Definite assistance and supervision should be given children in the proper selection of foods purchased in the cafeteria. Unrestricted sale of chocolate bars should not be permitted.

It is pointed out (page 45) that one third of the children reweighed this year were as much as seven per cent underweight or more. This conclusively proves the necessity for provision of milk and crackers in the mornings and afternoons to those children who are at present suffering from malnutrition.

#### EMERGENCY AND WOMEN TEACHERS' REST ROOM

Special rest rooms for women teachers are now recognized as essential and special work rooms for both men and women are generally being installed in all modern school buildings.

Some of the women teachers who have been longest in the system say they have felt the need for such a special room. Under existing conditions in regard to lack of available building space, a women teachers' rest room may also afford a place to which chil-

dren may be taken for proper care in case of accidents or sudden violent illness. The need for a room to serve this double purpose was felt so strongly by the four teacher members of the Fort Lupton survey staff, that during the year they took over an old girls' shower room, re-kalsomined it themselves and in other ways attempted to make useable an otherwise uninviting room. The need is apparent. There is no doubt that a room or suite of rooms meeting the above requirements should be made available. As long as the present building is used to house all three schools, the nurse's office may also be established in this room.

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY  
CONSTITUTING ELEMENTS FOR INCLUSION IN AN  
EDUCATIONAL PROGRAM

VII. HEALTH EDUCATION

**Findings No. 1.**

Fort Lupton's physical education program partly rests upon old theories now discarded in modern health education programs. There is a great deal of formal gymnastics even in the lower grades.

**Recommended Program No. 1.**

Abandon most of the gymnastics and substitute games and athletics. This will conform to the newer aims and purposes of physical education.

**Findings No. 2.**

The gymnasium and playground activities lack adequate supervision.

**Recommended Program No. 2.**

The services of a physical director who has been trained in accordance with the newer broad purposes of physical education should be obtained. If the full time services of such an officer are not secured, Fort Lupton should co-operate with neighboring towns in employing a physical director.

**Findings No. 3.**

Fort Lupton has many cases of absence due to illness. These absences represent a tremendous educational and economic loss. Many of these absences could be prevented by a competent nurse. The one or two days per year now given the school by the county Red Cross nurse is absolutely ineffective in securing improved conditions.

**Recommended Program No. 3.**

The school board should co-operate either with neighboring school boards or Fort Lupton municipal authorities in employing a competent school nurse. To secure a competent graduate nurse trained in public service would probably cost the district and city \$150.00 per month. This nurse would serve in hygiene instruction, examinations, and follow up work in the homes.

**Findings No. 4.**

Three-fourths of the defects of nose, throat, eyes, ears, etc., found by the Red Cross nurse during the school year 1923-24 have not been corrected. Authorities say that over 90 per cent of such defects can be corrected.

**Recommended Program No. 4.**

A nurse with time available for follow up work in the homes could with the co-operation of parents greatly improve this situation.

**Findings No. 5.**

There is a comparatively large per cent of under-weight children in the Fort Lupton schools.

**Recommended Program No. 5.**

There are enough children, seven per cent or more, under weight to justify the district in making milk and crackers available to these children two times a day. The nurse should advise with parents of these malnutrition children. In many communities mothers form classes in nutrition with the school nurse as instructor.

**Findings No. 6.**

The immunization and vaccination of the school children is now done by a local physician who is inadequately paid by the city.

**Recommended Program No. 6.**

This work is a legitimate part of the educational program and should be made such. The medical officer employed by the school should immunize, vaccinate, give physical examinations and perform sanitary inspections, for which services he should be adequately paid.

**Findings No. 7.**

Fort Lupton devotes seventy-five minutes per week to instruction in health and hygiene, and for physical education. This is one-half the time it should be.

**Recommended Program No. 7.**

One-third more time should be given to this phase of the educational offering.

**Findings No. 8.**

Seventy-two per cent of all the children do not eat in the school cafeteria. Lunches brought from home were found to be not the most desirable for young children.

**Recommended Program No. 8.**

A much larger per cent of children should be induced to benefit from the use of the school cafeteria. Lunch room facilities should be enlarged and more equipment secured. The educational value in working in the lunch room does not justify household arts girls working in the cafeteria for a long period of time. Help should be employed. School authorities should regulate how, when and where young children bringing their lunches should partake of their food. The sale of chocolate bars should be supervised.

**Findings No. 9.**

There is no nurses' quarters, no emergency sick room, no teachers' work room, and no women teachers' rest room.

**Recommended Program No. 9.**

For the present a room should be fitted up to serve all the above requirements. When a new building is constructed adequate room should be devoted to these purposes.

## CHAPTER VIII

### TRANSPORTATION

#### GENERAL DESCRIPTION OF THE SYSTEM UTILIZED IN FORT LUPTON

There are in the main two different types of transportation systems utilized in Colorado school districts for the purpose of conveying children to and from school. These are the contract system and the district ownership system. In the former, the district contracts with an individual who, for a fixed amount, either per mile or per month, agrees to convey the children to and from school. Under the district ownership form, the district owns the busses, pays all running expenses, and hires its own drivers.

Fort Lupton operates now under the contract system. Up until 1923, the school had owned its busses. The reason for change from "district" to "contract" seems to have been to avoid the expense incident to the purchase of new busses.

At the present time four busses are used to transport approximately 155 children. These are two Kissel cars valued at \$400 each, a Nash car valued at \$800, and a Ford worth \$200. Two are in fair condition, and two of them are in poor condition. Last winter a member of the survey staff accompanied the driver on his route and suffered from the cold. It was impossible to close all the windows, and window panes were broken out.

Sometimes little children wait an extra half hour at their appointed loading places because a bus in need of repair breaks down on the route or because the route is too long or the bus is overloaded. These young children who have had to wait an undue length of time for the arrival of the bus are sometimes excused from morning classes to sit in the furnace room where they may sufficiently warm and dry themselves.

#### ROUTE DISTANCES

Three of the route distances are fifteen miles each. The route served by the Ford bus is ten miles. These distances are considerably greater than the median route distances in other schools of the state where the contract system is utilized. In the irrigated districts of the state operating under the contract form the median is 9.7 miles compared with Fort Lupton's median distance of 14 miles. Because of these long routes the busses are overcrowded.

#### THE DRIVERS

Because Fort Lupton operates under the contract rather than the district ownership system, three of the drivers are men not otherwise connected with the school system. One bus is driven by a pupil, the son of one of the contractors. It has been found that it is much more economical to employ pupil, teacher, or janitor drivers than men not otherwise connected with the school. In 84 transportation systems in schools of Colorado the median monthly

salary paid the former is \$25, while the median monthly salary paid these men drivers is \$40.

Among 27 schools operating under contract, Fort Lupton ranks fourth in cost per pupil and eighth in cost per mile.

RELATIVE COSTS UNDER "CONTRACT" AND "OWNERSHIP"  
COMPARED\*

By making a comparison of the costs in these schools with 21 schools in the irrigated districts operating under district ownership, the advantages of district ownership become apparent.

TABLE X  
TRANSPORTATION COSTS PER CHILD PER DAY AND PER MILE IN  
IRRIGATED DISTRICTS WHICH OPERATE UNDER THE DIS-  
TRICT OWNERSHIP SYSTEM COMPARED WITH FORT LUP-  
TON'S COSTS UNDER THE CONTRACT SYSTEM—1924-25

Rank	School and County	Cost per Child per Day	Cost per Mile
1	Olney Springs (Crowley)...	.30	.36
2	Del Norte (Rio Grande)....	.26	.18
3½	Center (Saguache) .....	.25	.15
3½	Holly (Prowers) .....	.25	.19
5	Pierce (Weld) .....	.24	.19
6	Wiley (Bent and Prowers)..	.235	.221
7	Loma (Mesa) .....	.23	.37
8	Platteville (Weld) .....	.21	.24
9	Prospect Valley (Weld) ...	.18	.24
10	Crowley (Crowley) .....	.176	.101
11	Cheraw (Otero) .....	.17	.23
12	East Lake (Adams).....	.16	..
13	Sargent (Rio Grande).....	.159	.174
14	Gill (Weld) .....	.156	.213
15	Snyder (Morgan) .....	.15	.20
16	Ault (Weld) .....	.13	.25
17½	Rocky Ford (Otero).....	.12	.247
17½	Hillrose (Morgan) .....	.12	.14
19	Rye (Pueblo) .....	.11	.08
20	Mead (Weld) .....	.107	.208
21	Erie (Weld) .....	.10	.14
District Ownership System: Average for 21 Districts.....		.17	.204
Contract System: (FORT LUPTON) .....		.25	.26

\* Much of the data here presented is based on H. E. Green's Master's Thesis, "Transportation Costs in Colorado," C. T. C. 1925.

The facts presented below are based upon cost data for 47 district-owned systems and 37 contract systems in 84 school districts in the state of Colorado for the school year 1924-25:

Median cost per child per day in schools:		Cost per child
A. In irrigated districts		per day
1. Under district ownership.....		\$.017
2. Under contract system.....		.189
B. In dry land districts		
1. Under district ownership .....		.226
2. Under contract system .....		.470
Median cost per mile in schools:		Cost per child
A. In irrigated districts		per day
1. Under district ownership .....		\$.017
2. Under contract system.....		.25
B. In dry land districts		
1. Under district ownership .....		.150
2. Under contract system.....		.175

Figures 9 and 10 present these findings in graphic form.

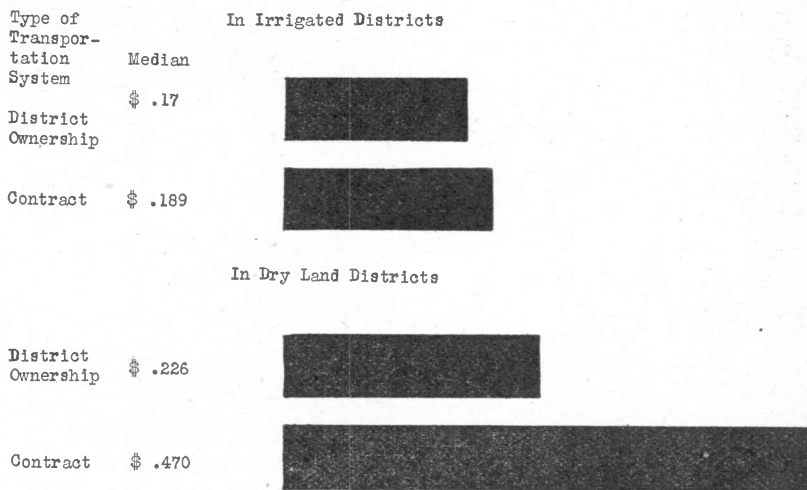


Fig. 9. A COMPARISON OF THE MEDIAN COSTS PER CHILD PER DAY OF TRANSPORTATION IN 84 SCHOOLS OPERATING UNDER THE CONTRACT AND THE DISTRICT OWNERSHIP SYSTEMS, STATE OF COLORADO, 1923-24.

According to bus reports sent to the superintendent of schools in Weld County, Fort Lupton in 1921-22, operating under the district ownership plan, spent \$0.205 per child per day for transportation. Under the contract system the cost per child per day this last year was \$0.25.

Fort Lupton is now paying five cents per child per day more for its transportation under the contract system than it paid in 1921-22 under the district-owned system.

CHANGE FROM ONE SYSTEM OF TRANSPORTATION TO ANOTHER

The history of school transportation in Colorado shows that the tendency has been to change from contract to district owner-

ship. Two-fifths more schools have changed from contract to district ownership than have changed from ownership to contract. In every case where the change was away from district ownership the reason given for the change was that the district would thus be saved the immediate expense of buying busses. Since it can be shown that even after figuring depreciation on the trucks district ownership is less expensive, the change to the contract system in order to avoid immediate outlay has been proven to have been a shortsighted policy.





Type of Transportation System used:		In Irrigated Districts
District Ownership Systems	Median \$ .17	
Contract Systems	.25	
In Dry Land Districts		
District Ownership Systems	.15	
Contract Systems	.175	

Fig. 10. A COMPARISON OF THE MEDIAN COSTS PER MILE OF TRANSPORTATION IN THE 84 SCHOOLS OPERATING UNDER THE CONTRACT AND OWNERSHIP SYSTEMS, STATE OF COLORADO, 1923-24.

The more numerous school systems that have changed from contract to district ownership point out the facts that district ownership is less expensive, the school authorities can exercise a more satisfactory control over the busses, better busses are used, and more definite future policies can be worked out. It was found in 84 school transportation systems in Colorado that busses under the district ownership system were in better repair, less overcrowded, better ventilated, presented a better appearance, and were better heated. Under district ownership extra trips to county fairs, school competitions, etc., can be made with great convenience at the discretion of school authorities. Under the contract system special arrangements at added costs must be made every time the busses are needed off the routes.



RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY CONSTITUTING ELEMENTS FOR INCLUSION IN AN EDUCATIONAL PROGRAM

**Findings No. 1.**

VIII. TRANSPORTATION

Fort Lupton is the oldest consolidated school in Weld County and therefore claims the distinction of having transported children to and from school for ten years. Up until 1923, the district owned its own busses. The district now contracts for four busses which carry on an average of 155 children. Two of these busses are in very poor condition. The other two are only fair. The service is impaired by the use of unsatisfactory trucks and a lack of sufficient transportation facilities.

**Recommended Program No. 1.**

Whether the contract system is retained or a change is made to district ownership, better and more busses are needed.

**Findings No. 2.**

The average route distance in sections of Colorado similar to Fort Lupton is 9.7 miles. The average route distance for Fort Lupton is about 14 miles. Overcrowding results.

**Recommended Program No. 2.**

Adequate facilities should be provided.

**Findings No. 3.**

Fort Lupton pays \$24.50 per month more for transportation than the average of 27 districts operating under the contract system. In both number of routes and number of busses operated Fort Lupton is typical of the school systems used for comparison. The average number routes is 2.3, and average number of busses is 3.

**Recommended Program No. 3.**

Although too little is being spent for transportation, costs are relatively high for service rendered. This is partly due to the use of the contract system, which should be changed.

**Findings No. 4.**

Among 18 schools in irrigated districts operating under the contract system Fort Lupton's costs per child per day and costs per mile are relatively high.

**Recommended Program No. 4.**

Unless there are serious and peculiar local conditions which dictate a different policy, Fort Lupton should return to the district ownership system, which is less expensive.

**Findings No. 5.**

Costs per child per day and costs per mile are lower under the district ownership than contract system, whether it be in dry land or irrigated sections of Colorado.

**Recommended Program No. 5.**

Because it is less expensive the Fort Lupton district should return to the district ownership system.

**Findings No. 6.**

In district ownership transportation systems service is superior to service under the contract system. Busses under this system are available for many school purposes.

**Recommended Program No. 6.**

Because the district ownership system is more satisfactory, Fort Lupton should return to its former system.

**Findings No. 7.**

More schools in Colorado have changed from contract to district ownership than have made the opposite change.

**Recommended Program No. 7.**

The change to district ownership will make for economy and more efficient service.

## CHAPTER IX

## THE TEACHING PERSONNEL

## THE SOURCE OF TEACHER SUPPLY

Fort Lupton is fortunate in having a corps of twenty teachers whose homes are in a number of different states, and whose training has been received in as many as thirteen different teacher training institutions. These characteristics, possessed by a teaching personnel, make for balance and breadth of educational viewpoint. Although a majority, 85%, of the teachers of Fort Lupton are Colorado residents, middle western states, Kansas and Illinois are represented.

A large percentage, 23%, of the elementary teachers are local women. Teachers of permanent residence in a school district are in a position to be of great value to the local school system. However, there are many grave disadvantages that frequently develop in connection with employing a large per cent of "home talent" teachers. Many boards of education throughout the country have passed rules to the effect that local teachers shall not be recommended by the superintendent for election. It is in the elementary school that these home talent teachers are employed. There are no local resident teachers employed on the high school staff.

The various institutions of higher learning that have trained in part or in whole the Fort Lupton 1924-25 teaching personnel and the number each has trained are: Colorado State Teachers College, 11; University of Colorado, 5; Denver University, 2; Colorado Agricultural College, 1; Pittsburg State Teachers College, 1; University of Wisconsin, 1; Southwestern College, 1; University of California, 1; Beloit College, 1; Iowa State College, 1; Bethany College, 1; and Kansas State Teachers College, 1.

## TRAINING OF FORT LUPTON TEACHERS

The generally accepted minimum standard amount of training for elementary teachers is 2 years above high school. Four years or more is desirable. The following is the amount of training received by Fort Lupton's twelve elementary school teachers:

1 has had 3 years training above high school.

3 have had more than 2 but less than 3 years training above high school.

7 have had exactly 2 years above high school.

1 has had no training above high school except one year in a business college.

The standard minimum amount of training for high school teachers has been fixed at 4 years of training above high school. Following is the amount of training received by Fort Lupton High School teachers:

5 have had 4 years training above high school (the minimum).

1 has had less than 4 years training above high school.

Fort Lupton cannot afford to employ teachers with less than the amount of training required by accrediting authorities and that is universally considered essential. The employment of a high proportion of men teachers in the high school (3 out of 6 teachers are men) is a commendable practice and compares favorably with other schools of the State of Colorado. For the state the proportion of men to women teachers, in the high schools, is one man to two women.

An investigation was made into the amount of training that had been received by the teachers at work during the school year 1924-25 in 16 neighboring cities the size of Fort Lupton. Although there is not a very wide margin among the cities, Fort Lupton holds twelfth place from the top among the 16 schools.\*

#### EXPERIENCE OF FORT LUPTON TEACHERS

Successful experience is one of the qualifying agencies for teachers as well as for other professional workers. The average experience of elementary teachers is, in Fort Lupton, slightly over two years. Of the two years of experience an average of more than one of these years has been obtained in some school system other than Fort Lupton. If we consider regular high school teachers (this excludes the superintendent and the art and music supervisor) the experience in the high school is: 2 years experience outside the Fort Lupton System and 1 year in the Fort Lupton System.

In the 13 schools furnishing data, Fort Lupton ranks eleventh, showing that a majority of the schools the size of Fort Lupton succeed better in employing and re-employing more experienced teachers.\*

#### EVIDENCES OF PROFESSIONAL GROWTH IN THE TEACHING STAFF

The teaching profession is today in many respects an extremely unstable profession. Methods that are considered pedagogical today, and subject-matter that is evaluated as very worth while, are discarded tomorrow for improved methods and more carefully selected subject-matter. Improvements that are annually being made in the methods of teaching subjects, as reading, spelling, and arithmetic, are so numerous and important that a teacher who fails to constantly keep up to date is within a single year eliminated from the group of professionally-minded and competent teachers. Teachers who do not keep abreast of their profession soon lose their enthusiasm so necessary to successful teaching.

For the above reasons evidences of growth among teachers such as attendance at summer schools, professional reading, active participation in professional teachers' meetings, membership in educational organizations and the like are of great significance when estimating the efficiency of a school system.

A survey of the professional reading done by Fort Lupton teachers was made. A table giving a ranking of teachers in respect

\* Tables and explanatory notes have been turned over to Fort Lupton school authorities.

to the total number of professional and general books and magazines read during the school year 1924-25 was prepared.

Seven of the teachers read two, one or no periodicals and books of a professional nature, while at the same time ten of the teachers read four each of professional magazines and books.\*

Since many of the teachers are just out of teacher training institutions, a large per cent of teachers would not be expected to have attended summer school. Five of the 21 teachers have attended one or more summer sessions. This is an indication that a proportion of the teachers employed in the Fort Lupton schools are desirous of securing training that will place them out of the class of teachers possessing only the mere minimum of professional training.

All the teachers attend the Colorado Education Association meetings held annually in Denver. One hundred per cent are members of this professional organization. It is a severe criticism against the Fort Lupton staff that none (excepting the superintendent) are members of the National Education Association.

The fact that for 4 months 17 of the 21 teachers (all the teachers except those engaged in directing student activities) not only paid a fee for enrollment in an extension survey course, but gave unstintingly of their time and efforts to the investigation of problems pertaining to the general administration of the system, is ample evidence of the desire on the part of Fort Lupton's teachers to make professional advancement.

#### STABILITY OF THE TEACHING CORPS

Fort Lupton has to date been unable to maintain necessary stability of her teaching corps. With this condition of affairs the school faces one of its most serious problems. The efficiency of the teaching corps is largely dependent upon the individual teacher's adjustment to his teaching environment. In Fort Lupton, as soon as a teacher has become partially familiar with her position she leaves the system. Eleven of the twenty-one teachers in the system are either teaching their first or second year in their present positions. This means that there has been an annual turnover of 42%, between three and four times the estimated turnover for the entire state of Colorado.

With practically one half of the teachers new to the system each year, it is impossible for Fort Lupton to successfully carry forward definite worthwhile programs of educational improvement. Under no circumstance can the children of Fort Lupton schools realize a maximum service from teachers who are always beginners in the system. Such teachers are definitely handicapped in not being familiar with the social conditions, learning abilities, and individual differences affecting the learning of children. A comparison with other school systems, similar to Fort Lupton, reveals the fact that the local system suffers more from the effects

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\* A list of the titles of the general and professional magazines read by the teachers as well as the table showing rankings has been submitted to the school authorities.

of teacher turnover than does eight of thirteen similar systems used for comparison. Fort Lupton cannot hope to build up an efficient educational system until the causes for this tremendous turnover is discovered and steps taken to eliminate them.

#### SALARIES

The school education of children is accomplished directly through the personal services of teachers. Buildings, equipment and supplies exist almost solely to facilitate the teacher's work. Hence citizens of Fort Lupton need not be surprised when they learn that \$51.26 of the \$78.46 it costs in current expenses to keep each child in school for one year is expended for "instructional services." By far the most important item falling under this

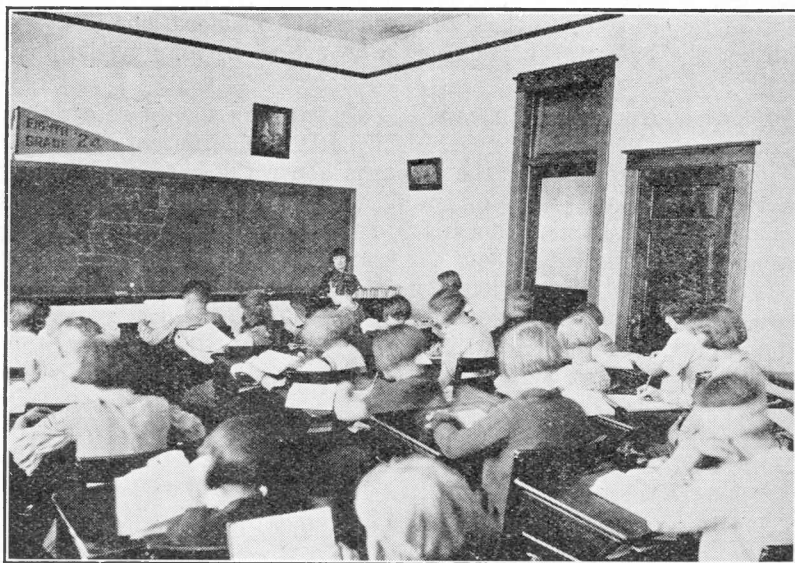


ILLUSTRATION 4

This represents one of the best rooms in the Fort Lupton school building. It has a southern exposure and children receive adequate daylight from the left. Desks are modern, blackboards, color scheme and general appearances are satisfactory. It lacks closet facilities and lighting fixtures.

classification, "instructional services," is teachers' salaries. It is significant to bear in mind when considering the questions involved in teachers' salaries, that Fort Lupton is ranked down the scale to eleventh place among sixteen comparable cities, in regard to the amount spent for instructional service.\*

#### HOW TEACHERS' SALARIES SHOULD BE DETERMINED

The basic pay of teachers in any system of schools should not be determined upon the basis of for what will this or that young

\* See discussion of Finance, Chapter XIII.

girl (perhaps a transient in the teaching profession) work, but basic pay should be determined in accordance with intelligently determined considerations such as:

- a. What does it cost to feed, clothe, shelter and provide recreation for a teacher and her dependents?
- b. What in addition to this does it cost a teacher to keep up to date in her work?
- c. What in additional salary will be required to enable this teacher to save something for the "rainy day"?
- d. What are competing school district boards paying the type of teacher we want to hire?
- e. Do the social conditions in our district make it necessary to pay bonuses in the form of additional salary in order to induce good teachers to live in the district?

These are some of the most important considerations in determining the base pay of teachers who are to be employed in the district.

The above does not mean that all teachers should receive the same pay. Perhaps a near ideal basis for differentiating the amounts paid in salary (the amounts above the base pay) would be to pay relatively more or less on the basis of more or less meritorious service. This scheme has been repeatedly tried in scores of school systems throughout the country without producing very many instances where such a method was considered sufficiently satisfactory. Scientific workers in the field of education are still unable to measure either all the essential qualities of teaching ability or the quantitative results of teaching. The obvious advantages that would accrue from such a method, however, justify every competent superintendent in experimenting in the field.

#### THE RELATIONSHIP BETWEEN TRAINING AND SALARY AND EXPERIENCE AND SALARY

The best bases yet derived for differentiating amounts of pay among teachers of the same system are these:

First, the amount of training the teacher has received above the minimum required; and second, the amount of successful experience the teacher has had.

Accepting these bases there should, therefore, be a direct positive relationship between the number of years training teachers have received and their salary, and also between the number of years successful experience and salary. In short, the teachers with the most training and experience should receive the highest pay.

The proper relationship between salary and training is maintained in so far as the elementary grades are concerned with but a few exceptions. The one outstanding exception is in the case of Teacher "F," whose pay is wholly disproportionate to her training. This is strikingly shown in Figure 11. Teacher "F" re-

ceives among the highest salaries, although she is the least well trained of all the teachers. This teacher, as is clearly seen in the figure, has received no professional training of a teacher training type.

An inspection of Figure 12 will convince the reader that in so far as the high school teachers are concerned there is practically no such desirable relationship existing between amounts of training and amounts of salary. It may be possible to justify one or more of these deviations from otherwise desirable practice as "exceptional" cases but probably not all these can be thus explained.

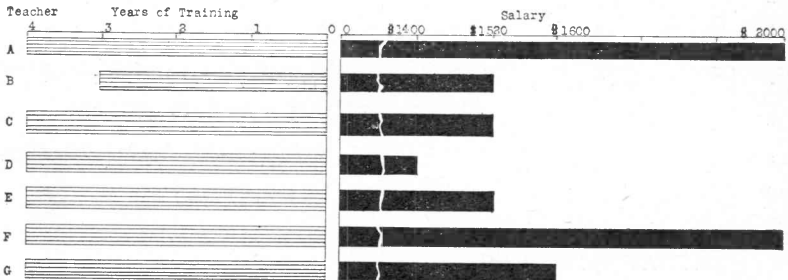


Fig. 11. RELATION BETWEEN TRAINING AND SALARY, ELEMENTARY TEACHERS, FORT LUPTON, COLORADO, 1924-25.

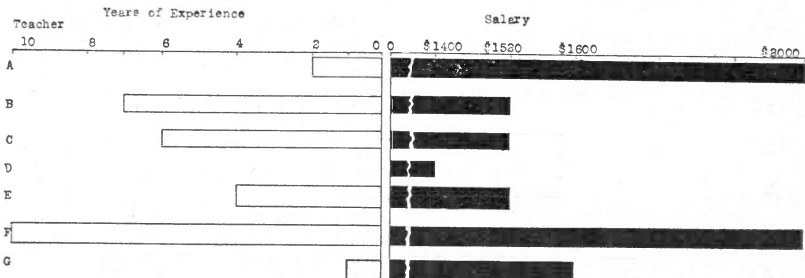


Fig. 12. RELATION BETWEEN TRAINING AND SALARY, HIGH SCHOOL TEACHERS, FORT LUPTON, COLORADO, 1924-25.

Figures 13 and 14 show that for both elementary and high school teachers the more years of experience teachers have had, the lower their salaries. This is an unusual situation. Generally speaking, school officials have been far more ready to recognize the worth of additional experience than they have of training. Although the relationship is negative for total experience, it is the reverse for experience in the Fort Lupton system.

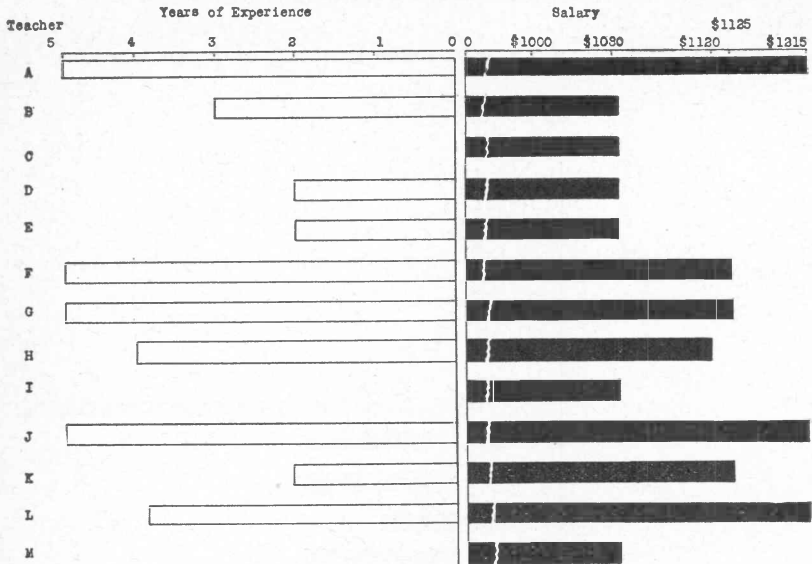


Fig. 13. RELATION BETWEEN EXPERIENCE AND SALARY, ELEMENTARY TEACHERS, FORT LUPTON, COLORADO, 1924-25.

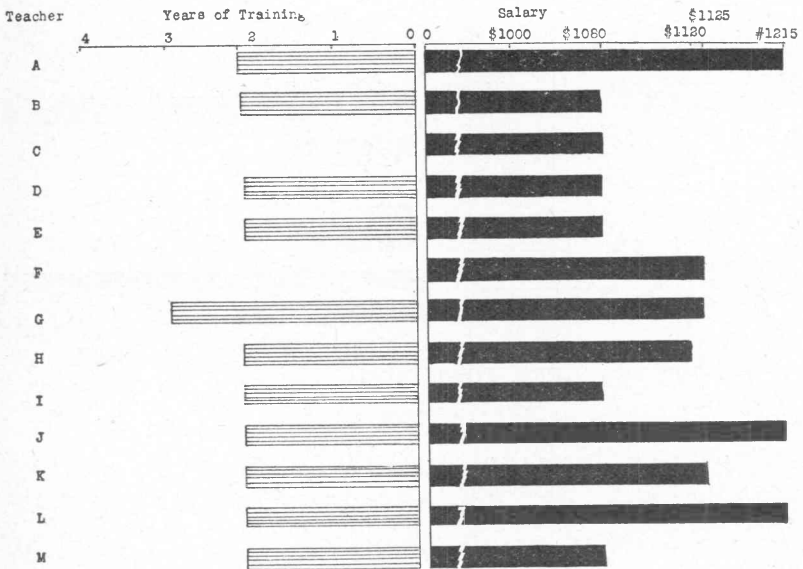


Fig. 14. RELATION BETWEEN EXPERIENCE AND SALARY, HIGH SCHOOL TEACHERS, FORT LUPTON, COLORADO, 1924-25.



THE SALARY SCHEDULE

The salaries paid Fort Lupton school teachers for their services during the school year 1924-25 are as follows:

6 elementary teachers	received between	\$1,080	and	\$1,099
4 elementary teachers	received between	1,100	and	1,199
3 elementary teachers	received between	1,200	and	1,299
1 high school teacher	received between	1,400	and	1,499
3 high school teachers	received between	1,500	and	1,599
1 high school teacher	received between	1,600	and	1,699
2 high school teachers	received between	2,000	and	2,099

Fort Lupton has only a semblance of a salary schedule. Only certain minimums have been set up for teachers of the elementary and secondary schools. No written record that such a salary schedule had ever been officially adapted was available to the investigators on the survey staff.

The lowest salary paid an elementary school teacher in Fort Lupton is \$1080. The highest salary paid an elementary teacher is \$1215. The lowest salary paid a high school teacher is \$1400, and the highest is \$2000. Annual increments in the elementary school have been \$45. Five such increments have been paid to one teacher.

ELEMENTARY TEACHERS' SALARIES

The minimum of \$1080, which is paid elementary teachers, is lower than that paid by thirty per cent of all the cities in the United States of the size of Fort Lupton.\* Five of the 13 cities used for comparisons with Fort Lupton pay higher minimums in the elementary grades. Fort Lupton's maximum for elementary teachers is \$85 below the average for all cities in the United States the size of Fort Lupton. Eight of the 13 cities pay higher maximums.

Cities of the United States the size of Fort Lupton grant their elementary teachers all the way from three to thirteen annual increments with the average at 6. As noted above, Fort Lupton has granted five increments to a single teacher. The average amount of such increases for the 13 cities compared with Fort Lupton is \$90 to Fort Lupton's \$45. It is concluded from these facts that in all probability the minimum salary paid Fort Lupton elementary teachers is high enough to attract good teachers, but that in other respects the salary schedule figures are extremely low; especially in regard to maximums and the number and amount of increments. This explains in a large degree why Fort Lupton can hire beginning teachers but fails to hold them for the greater service they are able to render after a few years experience in the system.

\* Where references are made in the following sections to salaries paid in the cities of the United States the size of Fort Lupton, reference is made to Research Bulletin Nos. 1 and 2, National Education Association, 1924-5.

## HIGH SCHOOL TEACHERS' SALARIES

The average minimum salary for high school teachers for cities of the United States the size of Fort Lupton is \$1350, which is \$50 lower than the minimum in Fort Lupton. Only five of the 13 cities used for comparison pay higher minimums. Thirty-five per cent of all small cities pay higher maximums. In the salaries paid high school teachers Fort Lupton compares favorably with the 13 cities used for comparison. The amounts and number of increments for high school teachers do not seem to have been definitely established. Salaries in the high school are slightly better than in the elementary school. However, the supervisor's salary is included among the six high school teachers' salaries, thereby raising the average higher than it should be.

## THE SALARY OF THE SUPERINTENDENT

The position of superintendent in Fort Lupton combines three positions, namely: Elementary School Principal, High School Principal and Superintendent of Schools. Were the average salary paid these three school officers in similar school systems combined, a comparison between the amounts paid in those cities would put Fort Lupton in an unenviable light. As it is, 5% of the cities of the United States with school populations the same as Fort Lupton paid from \$100 to \$2400 more to their superintendents during the school year 1924-25 than Fort Lupton will pay during the school year 1925-26.

## HOW TO PAY FOR JANITORIAL SERVICE

The method of contracting for janitorial service with one individual who is paid in a lump sum is an old and extremely undesirable way of hiring janitor service. Only twenty cities out of 555 comparable with Fort Lupton retain this antiquated method of employing janitors. It is assumed that the janitor will employ a second man to help him perform his duties. For this the janitor is paid \$175 per month for 9 months and \$125 for 3 months. About one tenth of the cities the size of Fort Lupton pay a single janitor more than this amount. \$175 per month divided between two men would give each about \$218 per year less than the average received by 1432 janitors of schools the size of Fort Lupton's.

## THE SALARY OF THE SUPERINTENDENT'S CLERK

The superintendent's clerk receives \$75 for 10 months or \$750 per year. This is \$100 per year less than the average paid superintendents' clerks in all cities of the United States of from 2,500 to 5,000 population, during the school year 1924-25.

Salaries paid bus drivers are not considered here, since under the contract system these employees' salaries are not determined by school authorities. It was pointed out in chapter VIII that the salaries paid men not otherwise connected with the school are about two times as high as salaries of bus drivers when the district ownership system is in use.

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY CONSTITUTING ELEMENTS FOR INCLUSION IN AN EDUCATIONAL PROGRAM

IX. THE TEACHING PERSONNEL

**Findings No. 1.**

Twenty-three per cent of elementary teachers are Fort Lupton residents.

**Recommended Program No. 1.**

Fort Lupton needs the influence of a large percentage of outside teachers.

**Findings No. 2.**

In both elementary and high school, teachers with less than minimum training are employed.

**Recommended Program No. 2.**

Only thoroughly trained teachers should be employed. Two years above high school for elementary teachers and four years above high school for high school teachers are only the minimum requirements.

**Findings No. 3.**

High school teachers are of less than average experience.

**Recommended Program No. 3.**

Teachers should be induced to remain in the system in order that Fort Lupton may benefit from the first years of experience obtained in the system.

**Findings No. 4.**

About one-half the teachers read twice as many professional and general periodicals as do the other half. All are members of State Teachers Association, but none are members of the National Education Association. Practically all have participated during the year in an extension class of Colorado State Teachers College.

**Recommended Program No. 4.**

More professional literature should be made available to the teachers by the school district. All Fort Lupton teachers should become members of the National Education Association.

**Findings No. 5.**

Forty-two per cent of the teachers were new to the local system this year.

**Recommended Program No. 5.**

Fort Lupton can probably never develop a first class school so long as this annual turnover occurs. Fort Lupton teaching positions must be made more attractive to the teaching personnel. General social conditions should be improved and important changes made in the salary schedule.

**Findings No. 6.**

The direct positive relationship that should exist between salary and training is fairly well maintained in the elementary school but not in the high school. The relationship between salary and experience is indirect and negative.

**Recommended Program No. 6.**

Salaries should be more definitely determined with training and experience as bases.

The following schedule is recommended:

**CLASS ROOM TEACHERS, ELEMENTARY AND HIGH SCHOOL**

	Minimum	Number Increases	Size of Increases	Maximum
I. Normal School (2 years) ..	\$1,100.00	6	\$50.00	\$1,400.00
II. Normal School (3 years) ..	1,250.00	6	75.00	1,700.00
III. A.B. Degree (4 years) ....	1,400.00	7	100.00	2,100.00
IV. A.M. Degree (5 years) ....	1,500.00	8	100.00	2,350.00
Head Teacher Elementary				
School .....	1,600.00	6	125.00	2,350.00
Principal High School .....	1,800.00	6	150.00	2,700.00
Superintendent .....	3,200.00	6	250.00	4,700.00

**GENERAL AND SPECIAL SALARY SCHEDULE RECOMMENDATIONS**

1. Where professional training and experience is the same, no distinction should be made between Elementary, Junior High School and Senior High School teachers' salaries.
2. Provisions should be made in the salary schedule for additional pay to teachers of exceptional merit whether these teachers have reached maximum or not.
3. There should be a probationary period of three years after which teachers who can be induced to remain in the system should have permanent tenure.
4. If men are to receive more than women the difference should be above the schedule proposed.
5. A transitional period of 2 or 3 years is necessary for the proper introduction of the new schedule. Administrative adjustments have to be made.
6. Summer school work should earn a proportionate amount of the difference allowed for years of additional training.
7. Flat increases of from \$50.00 to \$200.00 may be given at any time in the schedule for special work or added responsibilities.

## CHAPTER X TEXTBOOKS AND LIBRARIES

### TEXTBOOKS

The survey group did not find general satisfaction in regard to the textbook situation in Fort Lupton. Inquiry into this phase of the administration of schools revealed some serious objectionable features.

The Colorado law permits each second class district to adopt its own set of texts different from the texts used in any other school district. The unofficial practice in Weld County is for the county superintendent to recommend for adoption a list to the district boards.

Although Fort Lupton has in the main adopted the books recommended by the county authorities, there have been several exceptions.

The chief difficulties in following the independent adoption of texts lies chiefly in the fact that there is a relatively large per cent of children who move in or out of the district within any given school year. Most of these "transfers" occur among families that move from relatively short distances; very often from locations within the county. Parents of these children should not be compelled to buy a different set of books each time they move. An example of the injustice directly caused from this practice is the instance which came to the attention of authorities in Weld County where the book bill for a single year for parents with a family of five children amounted to nearly one hundred dollars.

A table has been constructed from data giving evidences of lack of uniformity within Weld County. The raw data has been assembled by F. A. Ogle, County Superintendent, in co-operation with H. D. Smith and other members of the Weld County Schoolmasters Club. It shows that within the county as many as 14 different texts for a given subject in a given grade are being used with about as many districts using any one of the 14 texts.

Many districts, however, recognizing the advantages of uniformity are more completely adopting the county-recommended texts. The following advantages of the recommended program over present practice would attend this changed method of adoption:

#### Advantages of County Uniformity:

1. Possibility of securing lower prices from publishers.
2. Books are, if properly selected, uniformly good.
3. Great saving to families moving from one school district to another district in the same county.

\*Five states have county adoptions and 26 more states have gone farther, having uniform adoption for the entire state.\*\*

\* The matter of uniformity is not essentially important to Fort Lupton proper if the wiser policy of having the district furnish the texts is adopted.

\*\* U. S. Bur. Bul. of Ed. No. 36, 1924, page 49.

Involved in the adoption of texts is a problem which, from an educational point of view, is even more important than uniformity, namely, the selection of texts. It was thought that since Fort Lupton elected to disregard county recommendations a better system of selection had been adopted by her own educational authorities. However, the survey staff was unable to discover any such system or procedure that would be acceptable to any progressive school system. So far as could be determined texts are often selected for adoption after investigation by a single teacher and upon her recommendation. This recommendation is made without a semblance of a means of measurement of the relative merits of that text over any other text in the same field.

One reason why the Fort Lupton schools have in the past been to some extent rather slow to adopt texts recommended by county authorities lies in the fact that the county officials employed methods of selection scarcely better than Fort Lupton's. However, Fort Lupton will do well in the future to participate in the county selections and then adopt the books recommended. The Weld County school officials together with representatives of the Weld County Schoolmasters Club are at present undertaking the important task of textbook selection according to methods that are educationally sound and more scientific than has ever before been attempted in the county. Definite objective standards have been set up and are being used.\*

#### SUPPLYING TEXTBOOKS TO THE PUPILS

Another series of very serious problems is involved in the method of furnishing books. District number eight does not provide the necessary tools of learning to the children in the school. This constitutes a problem that will continue to be a perennial cause for dissatisfaction among all concerned—the school administrative officers, parents, pupils, and teachers. There will be dissatisfaction as long as Fort Lupton continues the policy of individual family purchase of textbooks; a policy antiquated and long ago discarded among progressive school systems of the country.

The plan now followed is for the superintendent to place the order for texts needed for the ensuing year at the local drug store. This order is placed some time during the summer, that the books may be available in September.

The large part of a full day of education is lost to all the children of the district at the opening of school in order that children may provide themselves with the necessary tools for study. If the actual cost of a Fort Lupton school day,  $1/180$  of the annual budget is added to the loss in education sustained by the six hundred children who should be in actual school attendance, the tremendous waste of the system is partially realized. Furthermore, this system does not actually work even after the school is under way. As late in the school year as December, up to five minutes out of the thirty minutes of recitation time was being

\* A copy of these standards has been submitted to the Fort Lupton school personnel by the survey staff.

wasted in arranging pupils to sit together because there were not enough of even the basic text to "go around." Through this practice bad habits of study are instilled.

Such a system is not only extremely wasteful of the teacher's and pupil's time but, as has been pointed out, is very expensive.

Some of the special disadvantages of the private purchase and ownership of textbooks as it works out in Fort Lupton are:

The price of books is high.

Teachers and pupils waste hours and days of schooling because all children do not promptly buy the necessary textbooks.

Children moving in from neighboring districts are forced to buy a new set of books.

Books bought for older members of family are out of date and, therefore, unusable at the time the younger children need them.

#### THE DISTRICT PURCHASE AND OWNERSHIP OF TEXTBOOKS

The more acceptable method of district purchase and ownership is in use in 54 per cent of all city school systems of the United States of from 2,500 to 10,000 population and 80 per cent of all the cities of this size in the more progressive West.\* At present 19 states and the District of Columbia furnish elementary books without a direct charge. In 15 of these states the law also applies to secondary school texts. In 22 other states local school districts may supply free textbooks.

Following are the reasons why district purchase and ownership of school textbooks is recommended for Fort Lupton:

1. Books will cost less.
2. All children will be supplied with necessary texts. In a democracy educational opportunity should be denied no child because of his parents' economic status. Children without books should not retard the progress of whole classes.
3. Books will be found by pupils upon entering classrooms the morning of the first day, having been previously placed there by janitors and checked by teachers before the opening of school.
4. It is in line with the American theory of free education. Books are of no lesser importance in the educative process than blackboards.
5. School authorities can enforce better care of the books if they are public and not private property. This result is being attained in the large majority of cities where books are owned by the district.

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\* Ganders, Harry S., "Personnel and organization in the smaller schools." In press, United States Bureau of Education.

## LIBRARIES

Progressive citizens of Fort Lupton have already put forward considerable effort in building up a city library. At present, however, this library does not function as an important factor in the education of Fort Lupton's children. This is due largely to the type of books the library contains and the extremely limited number of volumes in it. Although city libraries sometimes can be made to supplement the school libraries in a very real way, these should never be looked upon as substitutes for adequate school libraries. When citizens recognize that the main task of teachers is to open the doors for her children leading to the rich experience of the race as it is recorded in libraries of books, they will understand in a way why a library in a school is second in importance only to the teacher herself.

All pupils in both elementary and secondary schools should have ready access to books, to the end that they may be trained—

- a. To love to read that which is worthwhile.
- b. To supplement their school studies by the use of books other than textbooks.
- c. To use reference books easily and effectively.
- d. To use intelligently both school and public libraries.

## LOCATION AND EQUIPMENT OF THE FORT LUPTON SCHOOL LIBRARY

The school library is located on the second floor on the north side of the older section of the building. Windows, with the exception of one, face to the north, thus providing the worst kind of lighting for library purposes. A much better location for the library would be on the opposite side of the hall just west of the superintendent's office.

In a library walls should be fully utilized for shelving. This has not been done. Instead an old metal stack is used, which cuts off much of the daylight that would otherwise come into the room. Furthermore, books on the upper shelves of this old stack are out of reach of the smaller children.

Replacing this large clumsy stack with neater and more efficient steel shelving would free the floor space for library tables and chairs, which should completely replace the old-fashioned desks that are now in use.

Detachable pasteboard covers for the protection of current magazines and suitable newspaper racks have been procured since the inauguration of the survey. There is no librarian's desk, or bulletin boards.

Upon the suggestion of members of the survey staff an effort was made to better organize the books in the library in order that the materials needed by teachers and pupils might be more readily found. The effort resulted in but temporary gain. Order and system cannot be realized until some teacher who has received library training is placed in charge for at least one period in the day and an adequate system of accounting for the books is installed. Such a system should include order cards, accession record, shelf lists, card catalog, and charging system.



NUMBER OF BOOKS AND MAGAZINES

School boards, superintendents, and principals are just beginning to realize that teachers' persistent demands for more books are not only justified, but they reveal one of the weakest links in our public educational system. That the per cent of school budgets devoted to the purchase of books is appallingly low in practically all school systems is undeniable. If the Fort Lupton Library contained more books than any small city of its size in Colorado and neighboring states, it would not indicate that Fort Lupton's library was adequate. That Fort Lupton's position is sixteenth rather than first among eighteen cities of its size in Colorado and neighboring states is strikingly shown in Table XI. Fort Lupton holds

TABLE XI

NUMBER OF VOLUMES IN ELEMENTARY, JUNIOR HIGH, AND SENIOR HIGH SCHOOL LIBRARIES IN 18 CITIES HAVING APPROXIMATELY THE POPULATION OF FORT LUPTON, 1924-1925

School	Element.	Jr. High	Sr. High	Total
Gallatin, Missouri .....	10,000	3,000	4,000	17,000
Glenwood Springs, Colo....	2,200	....	800	3,000
Hugo, Colorado.....	800	....	2,000	2,800
Holly, Colorado.....	400	400	1,000	1,800
Wallace, Idaho .....	500	550	1,500	2,550
Del Norte, Colorado.....	500	....	1,200	1,700
Central City, Nebraska....	200	400	1,000	1,600
Bucklin, Kansas .....	150	200	1,100	1,450
Clarksdale, Arizona .....	500	....	700	1,200
Golden, Colorado .....	....	200	1,000	1,200
La Jara, Colorado.....	200	....	1,000	1,200
Primero, Colorado .....	200	....	700	900
Fruita, Colorado .....	....	....	850	850
Florence, Colorado .....	200	....	600	800
Center, Colorado .....	175	75	550	800
Aguilar, Colorado .....	....	300	500*	800
FORT LUPTON, COLO....	....	....	700	700
Limon, Colorado .....	50	....	500	550
Burlington, Colorado .....	....	....	450	450

\* Division of books between Junior and Senior high school libraries is estimated. All Fort Lupton's library books are in one room.

third place from the bottom. About three fourths (72.6%) of the cities whose high schools are accredited in the North Central Association have over 1000 volumes in the high school library alone. Fort Lupton only has 700 volumes in the entire school library. Fort Lupton spent \$95.37 last year for library purposes, while 74 per cent of these North Central Association high schools spent from \$100.00 to over \$500.00.

Table XII gives the Fort Lupton classification of the books now included in the school library. It is seen that the list of books is almost entirely composed of history and literature books that fall in but four of the ten major classifications of human knowl-

edge. Books dealing with the fine and applied arts are wholly lacking. References are given elsewhere in this report which will prove helpful in determining what books should be purchased for the library.

TABLE XII

NUMBER OF VOLUMES UNDER EACH CLASSIFICATION IN THE FORT LUPTON SCHOOL LIBRARY, 1924-25

	No. Volumes
(Classification Is Fort Lupton's)	
Biography and General Reference.....	143
History .....	138
Sciences .....	79
Literature—	
Classics .....	169
Drama .....	3
Poems .....	15
Essays .....	6
Narrative Prose .....	52
Mythology .....	5
General .....	21
Unclassified .....	169
Total .....	800

Good judgment has been exercised in the selection of the magazines for use by the high school pupils. When additions are made more thought should be given to the children of the junior high school and elementary grades. It is in those grades that most reading habits are formed. Fort Lupton is third from the top among eighteen comparable school systems, in number of magazines provided in her school library.

#### TRAINING IN THE USE OF THE LIBRARY

At present no systematic training in the use of the library is provided. Second in importance to having the library is provision for training in the use thereof. (See page 71, "Educational Program," for recommended developments.)

#### RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY WHICH CONSTITUTE ELEMENTS FOR INCLUSION IN AN EDUCATIONAL PROGRAM

##### X. TEXTBOOKS AND LIBRARIES

###### A. Textbooks

###### Findings No. 1.

General dissatisfaction with the present system of handling textbooks is everywhere apparent.

###### Recommended Program No. 1.

Recommendations submitted below should be immediately put into operation.

###### Findings No. 2.

A large per cent of parents who move into and out of the district are forced to sustain material financial losses because there is an unpardonable lack of uniformity among school districts in basic texts adopted in the various Weld County districts, including Fort Lupton.

**Recommended Program No. 2.**

If Fort Lupton retains the system of individuals furnishing books, school authorities should enter unreservedly into the co-operative program being fostered by county authorities in an effort to more scientifically select texts that may be adopted throughout the county.

**Findings No. 3.**

Textbooks are not furnished equally to all children as are buildings, equipment, and teaching services. Each family still buys its own books.

**Recommended Program No. 3.**

The district should furnish all textbooks necessary to proper instruction of all the children of all the people. If the plan is adopted necessary textbook management procedures will have to be set up in relation to selection, time and manner of adoption, ordering, storing and distributing, care, inventories, accurate records, etc.

**Findings No. 4.**

The supply of supplementary books is meager indeed. There is not a single teacher who has even a small per cent of supplementary books her pupils need.

**Recommended Program No. 4.**

The problem of obtaining sufficient supplementary books will in time be partly solved when the district accepts the practice of furnishing textbooks. Supplementary books in reading, history, and geography should be purchased at once.

**B. Libraries**

**Findings No. 1.**

Although the city library will, some day in a real sense, supplement the school library, it can not do so at present.

**Recommended Program No. 1.**

Efforts put forward by cities with a view to building the city library should not minimize the support necessary to build up an adequate school library.

**Findings No. 2.**

At present north light is provided for the library. There is a question about the adequacy of north light even in Colorado.

**Recommended Program No. 2.**

The library should be changed to south side of building, wall shelving installed and reading tables take the place of school desks.

**Findings No. 3.**

The organization for care and circulation of books is practically nihil.

**Recommended Program No. 3.**

A teacher trained in library service should be placed in charge, the books classified, accessioned, and a card catalog prepared, etc. A good charging system should be installed. Over one-half (55%) of North Central High Schools had services of a part time librarian during the school year 1924-5.

**Findings No. 4.**

Magazines are well chosen for senior high school pupils. There are practically no magazines for the younger children of elementary grades.

**Recommended Program No. 4.**

When additional magazines are purchased needs of the younger children should be borne in mind.

**Findings No. 5.**

No training is given in use of library.

**Recommended Program No. 5.**

Specific provisions should be made whereby all children in school at sometime early in their educational career receive training in the use of the library. (This can be done in connection with reading or English lessons.)

## CHAPTER XI

### THE SCHOOL PLANT

#### THE EVALUATIONS OF SCHOOL BUILDINGS BY THE SCORE CARD METHOD

The school plant is a workshop where not only information is imparted, but where ideals and attitudes are instilled which will accompany individuals throughout adult life. Whether or not a school plant meets the educational building needs of a community should not be left for mere guesses and suppositions, but should be determined by complete and scientific measurement. Within limits, the Strayer-Engelhardt score card for school buildings is an instrument by means of which such measurement can be made. This score card lists and assigns a rating value to all of the features necessary to a modern school building. It consists of five major sections with many subdivisions. The five major sections pertain to Site, Building, Service System, Class Rooms and Special Rooms.

The highest rating value or "score" that any building may be given is 1000 points. A building that scores between 900 and 1000 points is satisfactory. Buildings that score between 700 and 900 are fairly satisfactory. Buildings that score between 500 and 700 need important alterations and installations if they are to be retained for use as school buildings. Buildings that score below 500 probably should be abandoned or radical alterations made.

A very careful analysis of the major and minor features of a building which are listed on the score card forms the basis upon which higher or lower scores are assigned. Scores are distributed on the 1000 point scale as follows:

I.	<i>Site</i> .....	125 points
	Pertains to location, drainage, size and form.	
II.	<i>Building</i> .....	165 points
	Pertains to placement, gross and internal structure.	
III.	<i>Service System</i> .....	280 points
	Pertains to heating, ventilation, fire protection, cleaning systems, lighting, water supply, toilets, etc.	
IV.	<i>Class Rooms</i> .....	290 points
	Pertains to location, construction, finish, illumination, cloakrooms, and equipment.	
V.	<i>Special Rooms</i> .....	140 points
	Pertains to rooms for school officials, large rooms for general use, etc.	

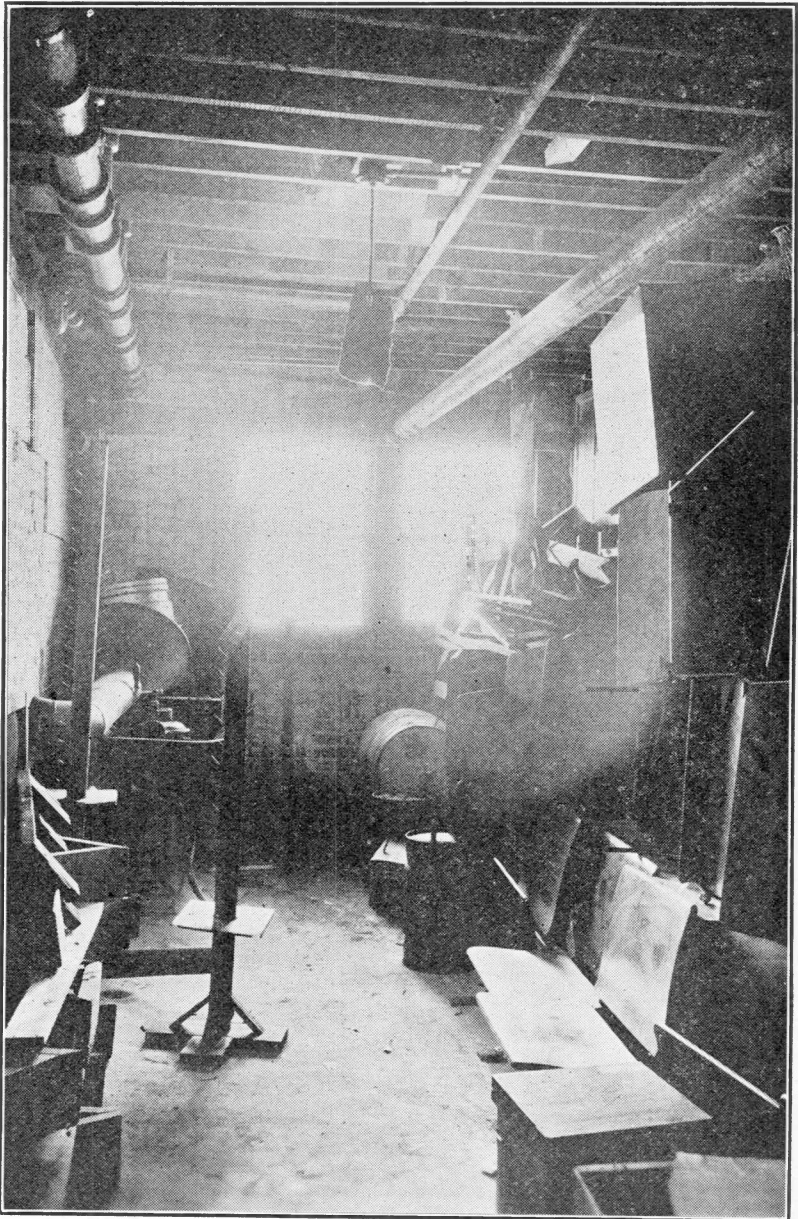


ILLUSTRATION 5

This is the storeroom, which represents unsatisfactory housekeeping, and the accumulation of broken boards immediately on top of combustible oils constitutes an almost criminal negligence.

## SCORE OF THE FORT LUPTON SCHOOL BUILDING

The total median score assigned the Fort Lupton school building by five competent examiners is 415 points.\* The total number of scores allotted to the Fort Lupton building on each of the major items of the Strayer-Engelhardt score card is shown in Figure 15.

	2		3	
	Standard	Ft. Lupton	Standard	Ft. Lupton
I. Site .....			125	57
A. Location .....	55	35	....	....
B. Drainage .....	30	2	....	....
C. Size and Form.....	40	20	....	....
II. Building .....			165	58
A. Placement .....	25	13	....	....
B. Gross Structure .....	60	25	....	....
C. Internal Structure .....	80	20	....	....
III. Service System .....			280	95
A. Heating and Ventilation.....	80	27	....	....
B. Fire Protection System.....	65	14	....	....
C. Cleaning System .....	20	10	....	....
D. Artificial Lighting System.....	20	7	....	....
E. Electric Service System.....	15	7	....	....
F. Water Supply System.....	30	14	....	....
G. Toilet System .....	50	16	....	....
IV. Class Rooms .....			290	160
A. Location and Connection.....	35	25	....	....
B. Construction and Finish.....	95	62	....	....
C. Illumination .....	85	53	....	....
D. Cloakrooms and Wardrobes.....	25	0	....	....
E. Equipment .....	50	20	....	....
V. Special Rooms .....			....	....
A. Large Rooms for General Use.....	65	19	....	....
B. Rooms for School Officials.....	35	11	....	....
C. Other Special Service Rooms.....	40	15	140	45
Totals.....	1000	415	1000	415

Fig. 15. SCORE OF FORT LUPTON SCHOOL BUILDING ON STRAYER-ENGELHARDT SCORE CARD FOR ELEMENTARY SCHOOL BUILDINGS, 1924-25

Instructions for Using Card—(1) Basis for scoring, 1000 points. (2) For scoring three columns are allowed. While actually at work on a building only the first need be filled out, the second and third to be filled out at leisure. (3) Where credit is allowed for any single item not present and not needed in a building, draw a circle around such credit. All scores should be recorded on the basis of the Standard outlines in the bulletin: "The Strayer-Engelhardt Standard for Elementary School Buildings." Bureau of Publications, Teachers College, Columbia University, N. Y.

\* The detailed score cards have been turned over to the school staff.

THE FORT LUPTON SCORES COMPARED

How the score for the Fort Lupton building compares with scores for sixty-seven other school buildings, many of which have already been replaced with more modern buildings, is shown in Table XIII.

TABLE XIII

THE SCORES FOR THE FORT LUPTON SCHOOL BUILDING COMPARED WITH SCORES ASSIGNED THE MEDIAN SCHOOL BUILDINGS IN OMAHA, NEBRASKA; STAMFORD, CONNECTICUT; NAPA, EUREKA, AND SAN RAFAEL, CALIFORNIA; AND PROVIDENCE, RHODE ISLAND

(Scores of 67 different school buildings in the comparison)

CITIES	Total or Maximum	Item I Site	Item II Building	Item III Service System	Item IV Class-rooms	Item V Special Rooms
Maximum Stand. Score..	1000	125	165	280	290	140
Omaha, Nebraska..... (11 Buildings)	556	93	105	106	216	47
Stamford, Conn. .... (17 Buildings)	527	66	94	112	179	47
Napa, Calif. .... (5 Buildings)	481	83	84	93	153	40
Eureka, Calif. .... (7 Buildings)	474	74	87	89	177	47
FT. LUPTON, COLO.... (1 Building)	415	57	58	95	160	45
San Rafael, Calif..... (5 Buildings)	373	68	67	88	125	42
Providence, R. I..... (21 Buildings)	351	50	59	94	128	29

The important facts from this table are more clearly shown in Figure 16.

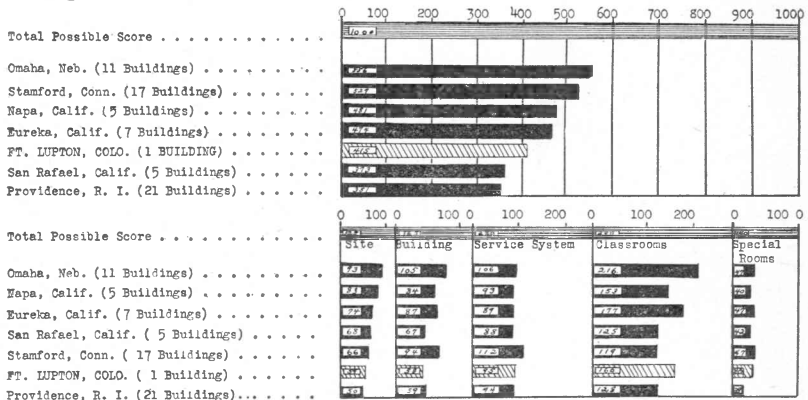


Fig. 16. A COMPARISON OF THE TOTAL POSSIBLE SCORE AND SCORES ACTUALLY ALLOTTED 67 SCHOOL BUILDINGS INCLUDING FORT LUPTON'S BUILDING. COMPARISONS ARE ALSO MADE OF SCORES ALLOTTED ON EACH OF 5 MAJOR DIVISIONS OF THE STRAYER-ENGELHARDT SCORE CARD.\*

\* The scores of the median buildings were taken for each city. Scores were obtained in each instance from educational surveys of the various cities.

Note that Fort Lupton holds third place from the bottom as far as total score is concerned. The local building ranks low in regard to all of the five major sections of the score card.

The actual rank order is easily seen from an examination of Table XIV.

TABLE XIV

THE RANK ORDER OF THE SCORE OF THE FORT LUPTON SCHOOL BUILDING IN RESPECT TO FIVE MAJOR DIVISIONS ON THE STRAYER AND ENGELHARDT SCORE CARD SHOWN WITH REFERENCE TO THE MEDIAN BUILDING IN SIX OTHER CITIES

Rank	Total Score	Item I Site	Item II Building	Item III Service System	Item IV Class-rooms	Item V Special Rooms
First..	Omaha	Omaha	Omaha	Stamford	Omaha	Eureka
Second.	Stamford	Napa	Stamford	Omaha	Stamford	Stamford
Third..	Napa	Eureka	Eureka	<u>FT. LUPTON</u>	Eureka	Omaha
Fourth.	Eureka	San Rafael	Napa	Providence	<u>FT. LUPTON</u>	<u>FT. LUPTON</u>
Fifth..	<u>FT. LUPTON</u>	Stamford	San Rafael	Napa	Napa	San Rafael
Sixth..	San Rafael	<u>FT. LUPTON</u>	Providence	Eureka	Providence	Napa
Seventh	Providence	Providence	<u>FT. LUPTON</u>	San Rafael	San Rafael	Providence

Among the buildings of seven different large and small cities Fort Lupton holds fifth place in total score, sixth place in regard to site, seventh or last, in regard to building; third with reference to service systems, fourth in regard to both classrooms and special rooms.

#### WHY FORT LUPTON'S SCHOOL BUILDING SCORES LOW

I. Site—Accessibility and environs of the building are good; however, the demands of modern health educational programs make necessary adequate playgrounds and athletic fields. Hence, just a little more than sufficient grounds on which a building can be placed is wholly inadequate. The commonly accepted standards for schools the size of this is from five to ten acres. Many cities are providing twenty and thirty acres as sites for single school buildings—this where land is worth many times the value of Fort Lupton real estate. Even without taking in consideration the fact that a new building will soon need to be erected, the present site is inadequate.

Another reason why the site has been rated low is due to the lack of drainage. During and after rains and at times of melting snow as much as 4 inches of water covers a large part of the play space. Steps should be taken at once to remedy this condition. Either the grounds should be filled in or drainage ditches dug. The nature of the soil is satisfactory. The difficulty lies entirely in the matter of elevation.



II. Building—Orientation of the building and its placement on the site are fairly satisfactory. It is in the matter of gross structure and internal construction that the building is most to be condemned. The material used in the exterior walls is brick, while all internal walls, studding, floors, ceilings, stairways and roof are entirely of wood. This represents one of the poorest types of modern school buildings. The building is of the correct height, but excavations for basement classrooms should never have been permitted. Cost of such rooms is too great and they are improper locations for purposes of education. Stairways that are of wood and dangerously wide besides being improperly placed with reference to possible economy of space is the chief cause of the extremely low rating of this building in regard to internal structure. Corridors are in the main much too narrow. The inadequate passageways are made still more inefficient by providing hooks upon which children's clothing is hung. The color scheme in rooms and corridors is, on the whole, satisfactory.

III. Service System—Heating and Ventilation—There are two separate heating plants which seem to provide adequate heat except during periods of extreme cold. Both boilers are of the low pressure type, which is a much better system for school buildings than the high pressure type. Without question the two plants within a single building is inefficient from the standpoint of fuel consumption and time required for operation and upkeep.

In the old section of the building there is no ventilation system as such. Toilet rooms are forbidding because of the lack of ventilation. There probably is no necessity in a locality such as Fort Lupton for the installation of expensive ventilation systems in either this or future buildings. However, if the window gravity system is to be used, proper deflecting boards and exhaust flues should be provided. There is absolutely no automatic temperature control. In several classrooms a thermometer could not be found. In two of the rooms the following temperature readings were made, 75° F. and 77° F. Since the maintenance of the proper temperature of the air is one of the most important elements in satisfactory ventilation, the omission of the thermometers is a gross error.

#### FIRE PROTECTION

The situation with reference to the inadequacy of fire protection constitutes a positive and serious danger. There is insufficient fire-fighting apparatus such as fire extinguishers. At the time the building was scored, there were but four fire extinguishers and most of the teachers did not know where they were or how to use them.

The whole building represents the direct opposite of fireproofness. As a matter of fact, the Fort Lupton school building, which houses for nine months out of the year Fort Lupton's future population, is constructed almost exactly like an old-fashioned box stove. Outer walls are of brick while inner walls, floors, ceilings, stud-

dings and even stairways, which are supposed to offer means of escape, are entirely made of wood.

Fire doors and partitions which are installed in all modern school buildings are absolutely non-existent in this structure. Exit lights and signs cannot be found in the main part of the building. A panic bolt, required by law in many states to be installed on all exit doors, was found on but one exit and this exit was found

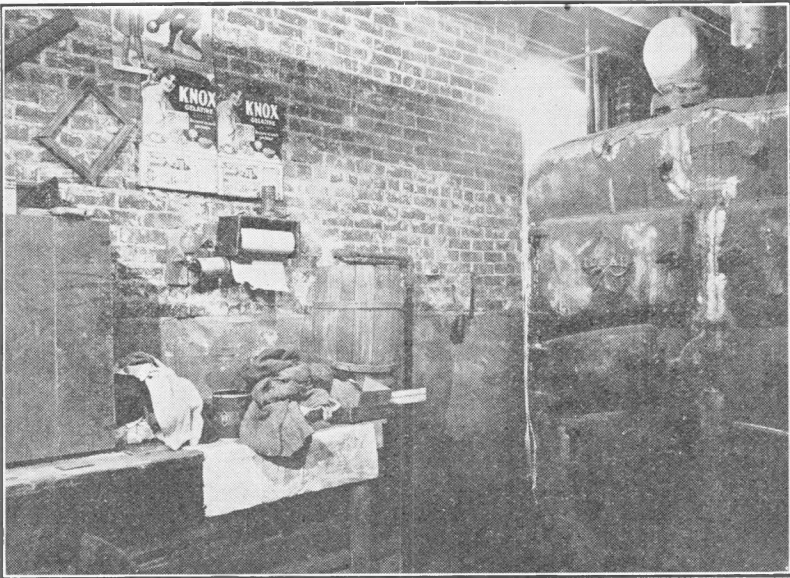


ILLUSTRATION 6

One of the two furnaces used to heat a single building of twenty rooms. The wooden ceilings, only a few feet above the top of the furnaces, are not protected in any way from ignition.

This also furnishes another illustration of the inadequacy of janitorial service provided in this school.

locked. There were no panic bolts on the doors at the main entrance. The door lock of this main entrance is almost impossible of operation from the inside due to needed repairs. A building such as this should fairly bristle with fire escapes. There are but two for the entire building.

In addition to these deplorable conditions unprotected wooden ceilings are found immediately over the two furnaces. Furthermore the inexcusable storing of inflammable janitorial supplies underneath wooden stairs constitutes additional and unnecessary hazards. Immediate steps should be taken to remedy these conditions, for they constitute daily positive dangers to the lives of Fort Lupton's children. As the building now stands it should unquestionably be condemned as a building to be used for school purposes.

### THE CLEANING SYSTEM

There is no central vacuum cleaning system. All floors are swept with the floor brush. There was little evidence of scrubbing. Floors in general need oiling and the janitor should be provided with necessary sweeping compounds in order to "hold down" the dust. The cleaning of classroom and vestibule floors, glass, drinking fountains, washbowls, seats, urinals, and furnace rooms must be pronounced as very inefficient. This judgment was expressed by every observer on the survey staff. (See page 80 for discussion of causes of inefficiency in janitorial service.)

There is neither a complete clock nor telephone system within the building. The bells and gong systems have only partially been installed.

### WATER SUPPLY SYSTEM

Bathing facilities for the rank and file of pupils is lacking. The odor that one senses upon entering the building attests to the necessity for sufficient showers. Drinking fountains were on the whole well placed but some were out of order, in need of repairs, and dirty.

### TOILET SYSTEM

The toilet facilities are not adequate to meet the needs of the school. There should be approximately 1 seat for every 15 girls and 1 seat for every 25 boys. The toilet rooms are inadequately lighted and ventilated. They are not properly placed to afford proper seclusion. The girls' toilet is immediately opposite a narrow corridor from the boys' toilet. There is no screen at the door of the boys' toilet room.

## CLASSROOMS

### SIZE AND LOCATION OF WINDOWS

In every room with one exception windows are located on the long axis of the room to the left of the pupils. This is a standard practice in all modern school buildings. Fifty per cent of the windows have south exposure, and fifty per cent north exposure. Standards recommend that exposures be to the south, southeast, east, southwest or west. These exposures are recommended because it is better lighting, and direct sunlight is beneficial to health of children.

### AMOUNT OF NATURAL LIGHTING

The ratio of the glass area in classrooms should be one-fifth to one-fourth of the floor space. The ratio of the glass area of the Fort Lupton building varies from one-fourth to one-eighth.

### ARTIFICIAL LIGHTING

Artificial lighting for classrooms should be provided from six to nine electrical outlets, and the lights should be of the indirect or semi-direct type. The rooms having the least amount of glass area have but a single electrical outlet. The primary rooms are

provided with four outlets. All lights are of the direct type. The main corridors are provided with one electrical outlet; some of the side corridors are provided with outlets, others are not. The corridors not provided with electrical outlets are very dark and get no direct light.

#### COLOR SCHEME

Correct standards are adhered to so far as color scheme for classrooms is concerned.

#### FLOORS

The floors are of wood and, according to the report of the janitor, they are oiled but once a year. They should be oiled at least three times per year, at each vacation period.

Blackboards should be placed at the front and to the left of the pupils. The standard material for blackboards is slate. Those that are not slate are almost unusable and should be replaced. The dimensions of blackboards and height of chalk rail should be adjusted to the size of children who use them.

#### CORRIDORS AND HALLWAYS

The corridors and hallways are used for cloakrooms, which is a very undesirable arrangement, as it obstructs passage way and detracts from the aesthetic appearance of the building. Special cloakrooms should be provided.

#### SPECIAL ROOMS

The Fort Lupton school building is provided with the following special rooms: gymnasium and auditorium combined, music and art room combined, manual training room, home economics room, cafeteria, a small office for the superintendent and his secretary, and store rooms. A combined gymnasium and auditorium is not desirable in that it is not possible to carry on both gymnasium and auditorium work at the same time. Although it is undesirable to use basement rooms for class activities, household arts, music and art, first and second grades are there located. The cafeteria is also in the basement.

#### THE CARE OF THE SCHOOL PLANT

The care of the school plant is unsatisfactory from almost every point of view. Everywhere are evidences of janitorial work left undone or of work too hurriedly passed over. Many of the little finishing touches that change the whole atmosphere of a building are unknown here. Even the basic work such as sweeping floors, dusting, cleaning toilets, furnace rooms, drinking fountains, and making minor repairs are not accomplished with sufficient completeness and at frequent enough intervals.

The cause does not lie wholly in the type of individual employed. He undoubtedly is doing the best he can. The trouble lies in the system adopted by the board in contracting to a single individual all the janitorial work and paying him in a lump sum.

Under this system the janitor is himself supposed to hire sufficient help to insure proper service. The practice has worked out in Fort Lupton much as it has in other places: The salary, if divided between two men, is too low. The head janitor fails to hire sufficient competent help. The result is totally unsatisfactory service.

The contract system has long ago gone by the board in more than 96% of the cities of the United States. There is not a single reason why this archaic system should not be abandoned. Let the board through its chief executive, the superintendent, hire all the help necessary to do the janitorial work. Pay reasonable wage to each man and then expect nothing but first-class service.

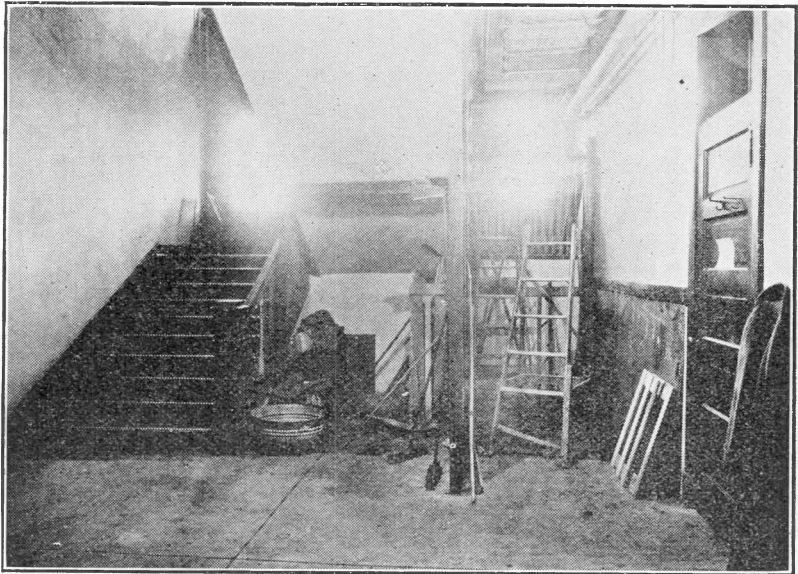


ILLUSTRATION 7

The situation portrayed here is positively the worst imaginable. Combustible janitorial supplies with broomhandles, ladders, and dry boards to insure adequate kindling for a possible fire immediately underneath and to the side of wooden stairs which are supposed to furnish the only exit in case of fire for scores of Fort Lupton's children.

Within twenty-six miles of Fort Lupton, at the Colorado State Teachers College, has been established perhaps the first school for janitors conducted in a college or university. Here janitors are trained at the expense of the state and local communities that they may render a more efficient service to the public schools of the land. Attendance at this school should be made a requirement of all men employed to do janitor work in the Fort Lupton schools. Economies that trained janitors are able to effect will many times repay the board for sending their janitors to such a school.

## THE ADEQUACY OF THE PRESENT PLANT

### PRESENT AND POSSIBLE EFFICIENCY

A study was made to determine to what extent existing building facilities were being utilized.\* The section of the building used for high school purposes is about 80% efficient. No school building housing a large or medium sized high school program can be planned so that 100% efficiency can be realized. However, more careful programing together with a change to six periods per day of one hour each will make available much more classroom space.

This change can easily be brought about and it should be done. However, this will not eliminate the greatest difficulties of congestion which are due to exceptionally narrow corridors and vestibules. Present congestion in the corridors is accentuated by using the already too narrow space in caring for children's wraps. Temporarily, accommodations for children's wraps should be provided in classrooms and lockers placed in the spacious central hallway. By means of reorganizations here suggested the building, from the single standpoint of housing, can be made to accommodate children who will enter during the next school year. It must be remembered that with the present internal structure of the building and the existing inadequacies of protection against fire, the building should be condemned for school use.

### PREDICTED INCREASE IN POPULATION

Since about 70% of the school enrollment comes from the city proper and but 30% from rural areas, conclusion based on population trends for the city itself should have a high degree of reliability for the situation as a whole. It can be seen from Table XV that the city of Fort Lupton has since 1900 doubled its population more than seven times. Fort Lupton's average increase per year has been third from the highest of the twelve cities used for comparison. Fort Lupton's per cent average yearly increase has been the highest of the group with the exception of Brighton.

If the more conservative figure of 12.7%, which is the average of the yearly percentage increases between the decades 1900 and 1910 and 1910 to 1920, and between 1920 and 1924, is taken instead of the 26% average increase, 1900 to 1924, as the probable percentage increase for succeeding years, the total population for the city will be approximately 2535 by 1930, and by 1935 it will be approximately 3520. If the total rural population increases at only one fifth the rate of the city population the total population for the entire district will probably be about 2980 by 1930 and 4020 by 1935. The school census in Fort Lupton is at present about 38% of the total population. If only 33 1/3% is taken as the figure to represent the proportion of school population to total population, in 1930 District No. 8 will have a school population of 993 in 1930, and in 1935 a school population of 1340. If only 80% of this school population is in school it means that Fort Lupton will need to provide school housing for 794 children by 1930 and 1072 children by 1935.

\* Data was turned over to the Board.

According to the conservative estimates above, Fort Lupton will need within five years to house 200 more children. In another ten years she will need to house 500 more children. Expressed in terms of building space, there will need to be an addition of from 8 to 10 classrooms by 1930 or 18 to 20 classrooms by 1935. This is assuming that with the construction of a new building the policy of using basements as classrooms would be abandoned, and that school authorities could make all building space from 85 to 90% efficient.

TABLE XV

THE INCREASE IN THE POPULATION OF FORT LUPTON AND 11 OTHER COLORADO CITIES, 1900 TO 1924

CITY	1900	1910	1920	1924	Total Increase 24 Years	Average Increase per Year	% Average Increase has been of 1900 population
Loveland, Colo.....	1091	3651	5065	5850	4769	199	18
Brighton, Colo.....	366	850	2715	3350	2984	124	34
Lafayette, Colo.....	970	1892	1815	1835	865	36	4
Littleton, Colo. ....	970	1872	1636	1820	850	35	4
Eaton, Colo.....	384	1157	1289	1560	1176	49	13
FT. LUPTON, COLO..	214	614	1014	1550	1336	55	26
Windsor, Colo.....	305	935	1290	1350	1045	44	14
Holly, Colo.....	364	724	940	1100	736	31	9
Berthoud, Colo.....	305	758	852	900	595	25	8
Ault, Colo. ....	....	569	769	820	251	11	2
Erie, Colo. ....	697	596	697	780	83	3	.4
Platteville, Colo. ....	263	430	479	500	237	10	4

In the above consideration no thought is given to needs which would grow out of further consolidations. As pointed out in Chapter I, certain outlying districts will find it profitable to consolidate with Fort Lupton. If the territory to be considered for consolidation (Figure 1, page 2) were incorporated into District No. 8 within the next two or three years, it would mean 20 or more rooms in addition to the above estimates.

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY  
WHICH CONSTITUTE ELEMENTS FOR INCLUSION IN  
AN EDUCATIONAL PROGRAM

XI. THE SCHOOL PLANT

**Findings No. 1.**

On a 1,000 point scale the Fort Lupton school building is assigned 415 points.

**Recommended Program No. 1.**

A building which scores less than 500 points is usually abandoned or radical alterations are made.

**Findings No. 2.**

If the average scores assigned buildings in seven different large and small cities including Fort Lupton are taken together, Fort Lupton's position is third from the bottom.

**Recommended Program No. 2.**

Fort Lupton needs and can afford as good school buildings as do other cities.

**Findings No. 3.**

The school site is poorly drained, although the soil is satisfactory.

**Recommended Program No. 3.**

Either the grounds should be filled in or else drainage ditches should be dug. (A competent engineer should be consulted.)

**Findings No. 4.**

Basements are being used as classrooms.

**Recommended Program No. 4.**

Because basement rooms are dark, poorly ventilated and gloomy, their use for classroom purposes should be discontinued.

**Findings No. 5.**

There is no ventilation system as such in the older part of the building.

**Recommended Program No. 5.**

Exhaust flues should be installed and deflecting boards placed at the base of windows.

**Findings No. 6.**

There is no automatic temperature control and no thermometers in the classrooms.

**Recommended Program No. 6.**

An automatic temperature control should be installed and desk thermometers provided each teacher.

**Findings No. 7.**

Fire hazards constitute a positive danger that demands immediate attention.

**Recommended Program No. 7.**

Panic bolts should be installed at each main exit. Stair rails should be installed. Two or more fire escapes should be added. Fire extinguishers in sufficient numbers should be provided and teachers should learn their location and how to operate them. The practice of storing inflammable materials under wooded stairways should be immediately discontinued. The ceiling above the furnaces should be protected against fire.



**Findings No. 8.**

Floors need oiling. No sweeping compounds are used.

**Recommended Program No. 8.**

Floors should be oiled three times per year at vacations. Sweeping compounds should be used.

**Findings No. 9.**

There is evidence of inefficient and incomplete janitor service. The contract system of employing janitors is used.

**Recommended Program No. 9.**

More janitor service should be secured. The janitors should be trained for their job. The contract system should be discontinued.

**Findings No. 10.**

Toilet facilities are inadequate.

**Recommended Program No. 10.**

More of the necessary facilities should be installed.

**Findings No. 11.**

Classrooms with the lowest per cent glass area have but one electrical outlet. Two corridors are without light.

**Recommended Program No. 11.**

From two to four additional outlets should be installed in the darker rooms. All corridors should be lighted.

**Findings No. 12.**

A few of the blackboards are unusable.

**Recommended Program No. 12.**

These should be replaced with first grade slate.

**Findings No. 13.**

Corridors which are already too narrow are being used as cloak rooms.

**Recommended Program No. 13.**

Until more building space is available, clothing should be kept in classrooms and lockers in the main vestibule.

**Findings No. 14.**

The building, so far as the high school section is concerned, is, under present management, 80 per cent efficient.

**Recommended Program No. 14.**

Under present conditions, the efficiency could probably be increased about 5 per cent. By organizing the school on a six period basis of one hour each the efficiency of the building could be further increased. (Other conditions may make this impracticable.)

**Findings No. 15.**

By 1930 the Fort Lupton District as now organized will need from 8 to 10 additional classrooms. By 1935 it will need from 18 to 20 additional rooms. If further consolidations are effected approximately 20 more rooms must be added to the above estimates, depending of course upon the area included in the consolidation.

**Recommended Program No. 15.**

Within two or three years Fort Lupton should commence the construction of a new Junior-Senior High School to accommodate increased enrollments due to the natural growth of the district and possible additional consolidations.

## CHAPTER XII

### SCHOOL ACCOUNTING

#### NECESSITY FOR COMPLETE AND ACCURATE ACCOUNTS

Directors and stockholders in every large business corporation demand that their executive officers keep detailed records and make full reports to them of the affairs of the business. These records and reports are considered absolutely essential in that they show for what purposes money has been expended, what use has been made of goods and equipment and the amount of money made or lost as a result of goods produced and sold. From the standpoint of money invested and amounts annually expended, the school is one of the biggest businesses in any community. It is the business which has by far the greatest import. Why accounting for children, accounting for materials used for their instruction and money expended in their interests should be done in a haphazard way while all insist upon absolutely accurate accounting in businesses is hard to understand.

Taking the schools of the country by and large the accounting there found is from the standpoint of business efficiency a disgrace. Inefficient school accounting is responsible for the fact that untold sums of money are wasted, goods are misused and lost, and children are deprived of educational opportunities through non-attendance or mal-classification within the system.

The chief functions of school accounting are :

1. The facilitation of administrative control.
2. The mechanizing of routines.
3. Making possible the measurement of the schools.
4. Making possible the prediction of future needs.
5. Providing the means for comparison with other school systems.
6. Making possible the development of economies in the plant, in goods utilized and in services rendered.\*

In short, school accounting should make it possible for school authorities and the people to know what the schools are doing.

How best to accomplish the above results is still an unsolved problem. However, much has been done that is in advance of the system now used in Fort Lupton and a majority of schools of its type.

A set of standards have been prepared for a complete system of school records and reports. Score cards have been devised for judging the same.\*\*

\* The Superintendent at Fort Lupton has procured Strayer and Engelhardt's standards that give in detail just what the necessary school accounting system should be.

\*\* Strayer and Engelhardt, *School Records and Reports*, Bureau of Publications, Teachers College, New York City, 1924.

EVALUATION OF FORT LUPTON'S RECORDS AND REPORTS

Figure 17 is a partial reproduction of the Strayer-Engelhardt score card which was used in evaluating the Fort Lupton system. It gives the score (first column on the left) that should be assigned to various large groups of accounts and (second column) the highest score that could be allowed on the Fort Lupton system. The third column shows the per cent of efficiency.

The application of the score card method in evaluating the Fort Lupton accounts revealed the following serious deficiencies:

RECORDS AND REPORTS INVOLVED IN GENERAL CONTROL

The board maintains an acceptable minute book. This book should be filed in the school office and back numbers should not be found in individual board members' summer homes fifty miles from the school. The most serious omission here is the total absence of anything even simulating a set of written rules and regulations. Such rules should define powers and duties of all school officers and provide teachers and other employees with regulations under which to work. A set of rules and regulations are to a school system what charts and maps are to navigators.

The most outstanding lack in so far as general control records of the superintendent's office is concerned is the lack of continuity in the records kept. Records do not go back far enough and the records of the achievements of one year do not dovetail into the next succeeding report. This condition is frequently found among the school systems in the smaller cities. In the case of Fort Lupton there is absence of continuity because prior to the present administration there was no record system as such.

The board does not keep a record of accounts payable, accounts receivable, nor does it regularly make monthly reports of appropriations and balances.

The survey staff experienced great difficulty in ascertaining procedures and accomplishments of the attendance service largely because there have been no reports made by the attendance officer. Where an efficient attendance department is functioning a system of reporting between teachers, principals and attendance officer is indispensable.

Standard divisions are not used for headings of the distribution ledger. This makes general comparisons of cost almost impossible. Fort Lupton should adopt the system advocated for the last twelve years by the department of superintendence of the N. E. A., which is now adopted in thousands of school systems.

RECORDS AND REPORTS INVOLVED IN INSTRUCTIONAL SERVICE

It is seen in column four in the partial reproduction of the score card (Figure 17) that the records and reports involved in instructional service are only 52% efficient. There is no registration card as such for the high school. The greatest difficulty here again is lack of continuity which could be made possible by means of a continuing survey record book. There are but few written courses of study other than outlines prescribed by the state. The

	1	2	Totals	% Effi- ciency	
<b>Records and Reports Involved in the General Control of a School System.....</b>			390	161	41
I. Records of the Board of Education.....	40	12			30
II. Records of the Superintendent's Office..	125	53			43
III. Financial Record of the Board of Education .....	150	71			47
IV. Census Enumeration and the Enforcement of Compulsory Attendance.....	75	25			33
<b>Records and Reports Involved in Instructional Service .....</b>			335	175	52
I. Elementary Principals' Records and Reports .....	90	45			50
II. Secondary Principals' Records and Reports .....	60	36			60
III. Supervisors' Records and Reports.....	35	7			20
IV. Elementary Teachers' Records and Reports .....	65	34			52
V. Secondary Teachers' Records and Reports .....	35	21			60
VI. Textbook Records .....	25	25†			100
VII. Records for Instructional Supplies.....	25	7			28
<b>Records of Operation of Plant.....</b>			50	0	0
A. Rules and Regulations for the Operation of School Plants.....	50	0			0
<b>Records and Reports Involved in Maintenance of Plant .....</b>			45	10	22
A. Record of Repair of Buildings and Upkeep of Grounds .....	45	10			22
<b>Records of Fixed Charges.....</b>			10	10	100
A. Insurance Records .....	10	10			100
<b>Records and Reports Involved in Debt Service..</b>			20	20	100
A. Bond Records* .....	20	2			100
<b>Records of Capital Outlay.....</b>			50	14	28
A. Land Records .....	50		14		28
<b>Records of Auxiliary Agencies.....</b>			100	31	31
I. Library Records and Forms.....	10	1			10
II. Health Records and Reports.....	75	20			27
III. Records and Reports of Other Auxiliary Agencies .....	15	10			67
<b>TOTAL POINT SCORE.....</b>	<b>1000</b>	<b>421</b>	<b>1000</b>	<b>421</b>	<b>42</b>

Fig. 17. THE STRAYER-ENGELHARDT SCORE CARD AND CHECKING LIST FOR THE RECORDS AND REPORTS OF A SCHOOL SYSTEM IN A CITY OF 100,000 PEOPLE OR LESS

Published by  
Bureau of Publications, Teachers College, Columbia University,  
New York City

† No textbook records needed at present. District does not furnish books.  
\* Included in the Strayer-Engelhardt School Record Series. Published by C. F. Williams and Son, Inc., Albany, N. Y.

Fort Lupton system is given full credit for her textbook records. This is done in spite of the fact that there are no such records. There will have to be installed an adequate set of records if the district adopts the policy recommended in another section of this report, namely, that the district furnish textbooks.

#### OTHER RECORDS AND REPORTS

There are absolutely no records or reports pertaining to the operation of plant and only a single incomplete record of repairs and upkeep of building. Records of debt service, fixed charges and capital outlay are more complete.

A book report is the only record having to do with the Fort Lupton school library. As far as health records and reports are concerned, there are two records: a pupil's physical record card assigned ten points out of a possible twenty-five and a rather satisfactory nurse's report. Records pertaining to transportation are fairly satisfactory. Fort Lupton should co-operate with the county in sending in more regularly their reports on transportation costs.

On the whole it can be said that Fort Lupton's school accounting system is about one half as complete as it should be. It can be said, however, that work involved in keeping the records of the superintendent's office is satisfactorily and efficiently done. The superintendent's office presents an appearance that is business-like and commands respect.

#### RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY WHICH CONSTITUTE ELEMENTS FOR INCLUSION IN AN EDUCATIONAL PROGRAM

##### XII. SCHOOL ACCOUNTING

###### Findings No. 1.

An evaluation of the school accounts revealed the absence of any complete and interlocking system. Fort Lupton has less than 50% of the records needed. The system was awarded 421 out of a possible 1000 points.

###### Recommended Program No. 1.

A complete system should be established. A system described by Strayer and Engelhardt in their "School Records and Reports" is probably the best system yet devised. Deficiencies made apparent through the score card check should be installed. This will cost relatively little and it will add tremendously to the efficiency of the system.

## CHAPTER XIII

## FINANCE

## FINANCIAL ACCOUNTING

The following shows the main headings of the classifications of expenditures now used by the Fort Lupton schools:

## EXPENDITURES

1. Salaries.
2. Supplies.
3. Repair and Up-keep.
4. Other Operation Costs.
5. Permanent Improvements.

## RECEIPTS

Although this system is far superior to the method of accounting previously used, this system is awkward and totally unsatisfactory from many points of view. The most serious difficulty with the system is that it is different from any other system in use in other schools in the county or the state. This makes it extremely difficult to make comparisons with other systems. Such comparisons often lead to investigations of local situations, that result in better allocation of funds, and frequently reveals possibilities for wise economies. To conform to modern practice the five ledger headings now used should be substituted at least by eight different headings as follows: 1 General Control, 2 Instructional Service, 3 Maintenance of Plant, 4 Operation of Plant, 5 Auxiliary Agencies, 6 Fixed Charges, 7 Debt Service, and 8 Capital Outlay.

Such detailed revisions in the recording and reporting system as proposed in Chapter XII are seriously needed in the field of financial accounting.

## COST OF EDUCATION IN FORT LUPTON

Fifteen schools of approximately the same size as Fort Lupton furnished data which was used to determine Fort Lupton's relative standing in respect to school costs.

Table XVI shows the total current expenses and current expenses per pupil in average daily attendance for the elementary and high schools combined for 15 school systems, including schools in Colorado, Idaho, Arizona, Kansas and Missouri, for the school year 1923-24.

TABLE XVI

TOTAL CURRENT EXPENSES AND CURRENT EXPENSES PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE ELEMENTARY AND HIGH SCHOOLS OF 15 SCHOOL SYSTEMS FOR THE SCHOOL YEAR 1923-24

SCHOOLS	Total Current Expense	Cost Per Pupil in Average Daily Attendance
1. Burlington, Colorado .....	\$37,589.00	\$127.85
2. Wallace, Idaho .....	62,407.97	118.64
3. Del Norte, Colorado.....	55,020.00	94.37
4. Florence, Colorado .....	69,156.06	93.95
5. Glenwood Springs, Colorado.....	54,750.00	93.57
6. Ajo, Arizona .....	41,495.13	92.38
7. Bucklin, Kansas .....	27,247.00	88.46
8. Primero, Colorado .....	57,850.00	83.47
9. FT. LUPTON, COLORADO.....	40,250.00	78.46
10. Cripple Creek, Colorado.....	68,646.83	77.48
11. Center, Colorado .....	34,625.00	76.77
12. Eaton, Colorado .....	43,110.00	66.73
13. Gallatin, Missouri .....	32,690.00	63.11
14. Aguilar, Colorado .....	17,820.00	40.04
15. Mancos, Colorado.....	15,490.00	38.55

Current expense includes six of the eight major headings: General Control, Instructional Service, Operation of Plant, Maintenance of Plant, Fixed Charges and Auxiliary Agencies. A very great range of costs per pupil in average daily attendance is represented by these fifteen schools. Fort Lupton ranks ninth in cost per pupil in average daily attendance, which is a little below the average for the fifteen schools. Last year eight of the fourteen other cities spent from \$5.01 to \$49.39 more for each pupil in average daily attendance than did Fort Lupton.

ITEMIZED COSTS

The current expenses of 16 schools for the year 1923-24 have been analyzed into six major items, i. e., General Control, Instructional Service, Operation of Plant, Maintenance of Plant, Auxiliary Agencies, and Fixed Charges. Table XVII shows the total expense and cost per pupil in average daily attendance for each of these items for the 16 schools.

For each of these items Fort Lupton ranks from the top of the list as follows: General Control, fourth; Auxiliary Agencies, fourth; Maintenance of Plant and Fixed Charges, eight; Operation of Plant and Instructional Service, eleventh. Fort Lupton is exceptionally low in its expenditures for both Instructional Service and Operation of Plant.

By far the most important item of expense under Instructional Service is teachers' salaries. As already pointed out in Chapter IX, Fort Lupton does not in general succeed in keeping good teachers in her school system. As soon as teachers have received a few years of experience they go to better paying teaching positions. This relatively low ranking of Fort Lupton in regard to Instructional Service largely explains the 42% annual turnover of the Fort Lupton teaching staff.

An important item under Operation of Plant is Janitor's Salaries. Here as in salaries of teachers, Fort Lupton holds an unenviable position. If a greater expenditure were made for operation of plant, the building would probably receive better care.

The relatively higher expenditure for Auxiliary Agencies is due to the expenses incurred in the transportation of pupils. Some of the schools used for comparisons do not need to transport pupils, hence eliminating this expense. Fort Lupton's transportation is the main item under Auxiliary Agencies. The amount spent for health service, which is included under this item, is in Fort Lupton practically nihil.

Following are the percentage expenditures for Fort Lupton, 1923-24, under the following six heads: General Control, 12%; Instructional Service, 65.1%; Operation of Plant, 7.5%; Maintenance, 3.7%; Auxiliary Agencies, 11.1%; and Fixed Charges, 0.6%. The per cent for Instructional Service, Operation and Fixed Charges is relatively low when compared with other systems.

#### FORT LUPTON'S ABILITY TO PAY FOR EDUCATION

Fort Lupton ranks fourth among fifteen cities in assessed valuation per child in average daily attendance. This valuation is \$6822.00, three times as great as that of Aguilar, Colorado.

Six schools have a lower assessed valuation per child but spend more per child for current expenses than Fort Lupton does, even though the valuation back of each child is higher than that of these six schools. By referring to Tables XVII and XVIII it will be seen that one or more of these schools of lower valuation per child in average daily attendance ranks above Fort Lupton in one or more of the major items of current expense.

A way at arriving at a school district's ability to educate all the children in the district of school age is to determine the amount of assessable wealth there is in the district and divide it by the number of census children. Such a computation for all first and second class districts of the state of approximately the wealth of District No. 8 shows that 60% of all first or second class districts in the state with valuations between 3 to 4 million dollars have less wealth back of each census child than has Fort Lupton.\* For example, Fort Lupton is about 2½ times as able to pay for education as is Englewood, or 3½ times as able as Walsenburg.\*\*

\* Districts wealthier—Sargent, Silverton, Johnstown, Telluride, and Wray.

\*\* Tables submitted to Superintendent of Schools, Fort Lupton, Colorado.



TABLE XVII.

CURRENT EXPENSE AND EXPENSE PER PUPIL IN AVERAGE DAILY ATTENDANCE FOR THE SIX MAJOR CURRENT EXPENSE ITEMS OF THE BUDGET FOR SIXTEEN SCHOOLS FOR THE SCHOOL YEAR 1923-1924.

School	Rank	SCHOOL	General Control	Cost per Pupil in Average Attendance	School	Rank	Instructional Service	Cost per Pupil in Average Attendance	School	Rank	Operation of Plant	Cost per Pupil in Average Daily Attendance	School	Rank	Maintenance of Plant	Cost per Pupil in Average Daily Attendance	School	Rank	Auxiliary Agencies	Cost per Pupil in Average Daily Attendance	School	Rank	Fixed Charges	Cost per Pupil in Average Daily Attendance
A	1	Shelton, Nebraska .....	\$4,160.00	\$15.47	B	1	\$44,843.78	\$85.25	C	1	\$ 6,402.87	\$13.92	N	1	\$10,000.00	\$14.43	E	1	\$6,100.00	\$20.75	B	1	\$1,867.76	\$3.55
B	2	Wallace, Idaho .....	5,170.00	9.83	E	2	24,500.00	83.33	E	2	4,000.00	13.60	B	2	3,601.78	6.84	G	2	9,125.00	20.23	F	2	1,617.95	2.20
C	3	Ajo, Arizona .....	4,299.65	9.34	L	3	40,600.00	69.40	B	3	6,924.65	13.16	G	3	3,000.00	6.65	H	3	11,200.00	19.21	J	3	1,000.00	1.93
D	4	FT. LUPTON, COLORADO...	4,700.00	9.16	F	4	50,090.00	68.03	K	4	11,200.18	12.64	J	4	2,000.00	3.86	C	4	6,870.92	14.93	E	4	504.00	1.71
E	5	Burlington, Colorado .....	2,485.00	8.45	O	5	19,450.00	63.15	F	5	9,294.12	12.63	K	5	3,258.73	3.67	D	5	4,500.00	8.77	H	5	800.00	1.37
F	6	Florence, Colorado .....	5,911.00	8.03	N	6	39,000.00	56.27	L	6	6,230.00	10.65	O	6	960.00	3.12	O	6	2,263.00	7.34	L	6	640.00	1.09
G	7	Center, Colorado .....	3,500.00	7.76	H	7	32,500.00	55.74	O	7	2,665.00	10.64	F	7	2,241.57	3.05	P	7	2,750.00	7.00	K	7	916.65	1.03
H	8	Del Norte, Colorado.....	4,020.00	6.90	K	8	48,122.29	54.31	A	8	2,665.00	9.90	D	8	1,500.00	2.92	L	8	3,450.00	5.90	D	8	250.00	.48
I	9	Aguilar, Colorado .....	3,020.00	6.79	M	9	33,726.83	52.20	H	9	5,000.00	8.58	H	9	1,500.00	2.57	N	9	3,150.00	4.54	M	9	251.21	.39
J	10	Gallatin, Missouri .....	3,040.00	5.87	C	10	23,921.69	52.00	M	10	4,937.69	7.64	I	10	500.00	1.12	M	10	1,235.63	1.91	N	10	200.00	.30
K	11	Cripple Creek, Colorado.....	5,150.00	5.81	D	11	26,300.00	51.26	D	11	3,000.00	5.85	L	11	480.00	.82	J	11	450.00	.87	I	11	100.00	.22
L	12	Glenwood Springs, Colorado..	3,350.00	5.73	J	12	25,000.00	48.26	I	12	2,500.00	5.62	M	12	414.90	.64	I	12	200.00	.45	C	12	.....	.....
M	13	Eaton, Colorado† .....	3,489.00	5.40	G	13	17,000.00	37.69	P	13	2,000.00	4.92	A	13	85.00	.32	B	13	.....	.....	O	13	.....	.....
N	14	Primero, Colorado† .....	3,500.00	5.05	I	14	11,500.00	25.84	N	14	2,000.00	2.88	E	14	.....	.....	K	14	.....	.....	G	14	.....	.....
O	15	Bucklin, Kansas† .....	1,317.00	4.27	A	15	6,880.00	25.58	J	15	1,200.00	2.32	P	15	.....	.....	F	15	.....	.....	P	15	.....	.....
P	16	Mancos, Colorado† .....	1,500.00	3.70	P	16	9,340.00	22.95	G	16	.....	.....	C	..	.....	.....	A	16	.....	.....	A	16	.....	.....

† Incomplete returns.

NOTE: Capital letters have been used to designate the school. For the first item the letters, rank and city correspond. For other items refer to the capital letter to determine the city, e. g., Fort Lupton is designated by the letter "D".

If the one school in thirty-nine Colorado counties having a census enumeration approximately the same as Fort Lupton's is taken together with the assessed valuation back of each child it is found that Fort Lupton is tenth in wealth among the thirty-nine cities.

TABLE XVIII

TOTAL ASSESSED VALUATION OF 15 SCHOOL DISTRICTS, INCLUDING FORT LUPTON, AND THE ASSESSED VALUATION PER CHILD IN AVERAGE DAILY ATTENDANCE, 1923-24

SCHOOL DISTRICTS	Assessed Valuation	Assessed Val. Per Child in Av. Daily Attendance
1. Burlington, Colorado.....	\$2,850,000.00	\$9,693.00
2. Eaton, Colorado .....	5,732,000.00	8,886.97
3. Center, Colorado .....	3,400,000.00	7,538.00
4. FT. LUPTON, COLO.....	3,500,000.00	6,822.00
5. Glenwood Springs, Colo.....	3,943,000.00	6,740.17
6. Shelton, Nebraska .....	1,741,900.00	6,475.46
7. Wallace, Idaho .....	3,290,278.00	6,255.28
8. Cripple Creek, Colorado.....	5,062,790.00	5,714.00
9. Bucklin, Kansas .....	1,550,000.00	5,032.00
10. Del Norte, Colorado.....	2,720,000.00	4,665.00
11. Florence, Colorado .....	3,263,409.00	4,433.98
12. Gallatin, Missouri .....	2,125,877.00	4,104.00
13. Primero, Colorado .....	2,229,586.00	3,231.72
14. Mancos, Colorado .....	1,281,270.00	3,148.00
15. Aguilar, Colorado .....	1,133,000.00	2,540.00

The relatively large amount of wealth existing in District No. 8 which lightens the burden of paying for education and other governmental agencies is seen in Fort Lupton's relatively low tax levies for school purposes:

CITY	Part of Gen.	Special	Bond Levy Mills	Total for Education Mills
	Levy for Schools Mills	Dist. Levy Mills		
Florence, Colorado .....	11.9	14.0	...	25.9
Glenwood Springs, Colo.....	13.8	11.83	...	25.6
Del Norte, Colorado.....	4.5	17.0	4.0	25.5
Aguilar, Colorado .....	11.0	12.0	1.5	24.5
Cripple Creek, Colo.....	13.3	10.0	...	23.3
Mancos, Colorado .....	3.0	14.5	1.0	18.5
Center, Colorado .....	4.0	11.0	2.0	17.0
FT. LUPTON, COLO. ....	3.5	12.07	1.53	17.0
Burlington, Colorado .....	4.0	11.23	...	15.23
Eaton, Colorado .....	.348	.467	.13	.94

## INDEBTEDNESS

Table XIX compares the total bonded debt of 12 comparable cities. Fort Lupton's position among the cities is a little above the average. The Fort Lupton debt of \$88,300 is about one-half the debt of Florence, Colorado, or about one-third the debt of Glenwood Springs.

TABLE XIX

TOTAL BONDED INDEBTEDNESS OF 12 SCHOOL SYSTEMS AND AMOUNT PAID BY EACH DURING THE SCHOOL YEAR 1923-24

Schools	Remaining Indebtedness After 1923-24	Amount Paid for Debt Service
1. Glenwood Springs, Colorado....	\$230,000.00	\$31,000.00
2. Florence, Colorado .....	150,000.00	10,804.00
3. Del Norte, Colorado.....	130,000.00	8,000.00
4. Center, Colorado .....	105,000.00	9,200.00
5. Burlington, Colorado .....	95,000.00	.....
6. FT. LUPTON, COLORADO.....	88,300.00	5,000.00
7. Aguilar, Colorado .....	51,000.00	51,000.00
8. Bucklin, Kansas .....	50,000.00	.....
9. Mancos, Colorado .....	15,500.00	2,770.00
10. Eaton, Colorado .....	14,000.00	.....
11. Shelton, Nebraska .....	12,000.00	.....
12. Gallatin, Missouri .....	9,500.00	3,350.00

An analysis of the total of Fort Lupton's bond issues follows :

	Bond I	Bond II	Bond III	Bond IV	Bond V
Amount .....	\$16,800	\$5,500	\$18,000	\$8,000	\$40,000
Rate of Interest....	6%	6%	5¼%	5¼%	6%
Date Issued .....	7-1-13	6-1-14	7-1-19	9-15-19	7-1-21
Type .....	15-30	15-30	10-20	10-20	10-20
Optional Date ....	7-1-28	6-1-29	7-1-29	7-15-29	7-1-31
Date Due .....	7-1-43	6-1-44	7-1-39	9-15-39	7-1-41
How Payable.....	16 bonds of \$1,000, Then 8 of \$100 at the end	All in \$500 amounts	In the following cycles: \$500 \$500 \$500 \$100 \$100 \$100	In ten cycles as the following: \$500 \$100 \$100 \$100	All in denomina- tions of \$1,000

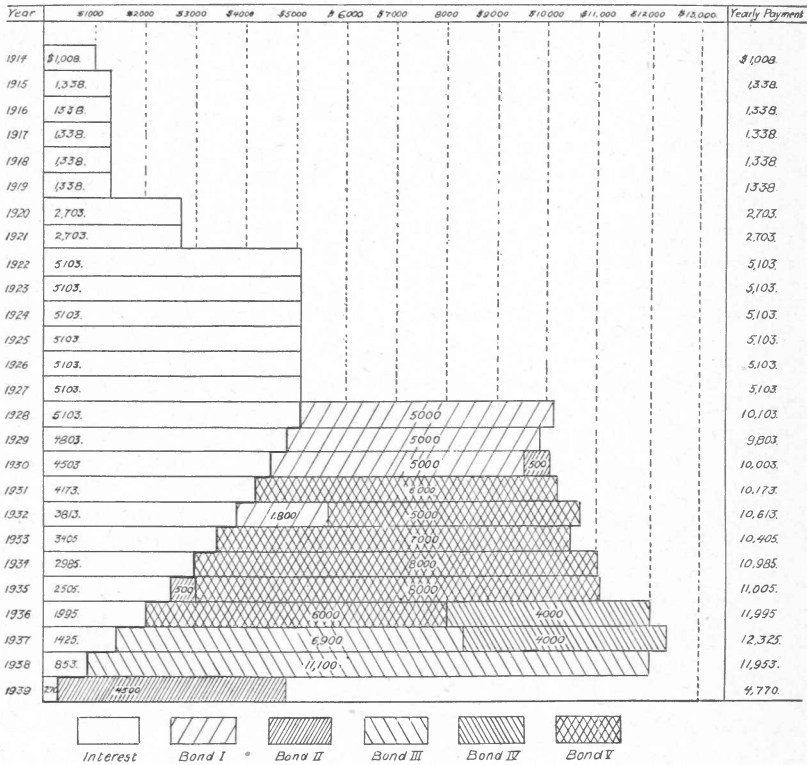
The first bonds were issued so that the payment on them was to be due in thirty years; the later bonds were issued so that payment fell due twenty years after date of issue. Thus all of the bond payments must be made by June 1, 1944.

A table presenting a schedule of payments made on bond issues to date and a proposed schedule that will by 1940 (four years ahead

of final due date) liquidate the district's indebtedness was prepared for the Board of Education. The schedule provides for about equal payments of approximately \$10,000 for each year from 1929 to 1939. A final payment of \$4770, to be made in 1940, clears the district of all existing indebtedness.

The above schedule proposes to pay off indebtedness as soon as possible, thereby obviating the payment of numerous heavy interest payments. (See Figure 18 for graphic presentation of proposed schedule.)

FIGURE 18 GRAPHIC PRESENTATION OF A PROPOSED SCHEDULE FOR MAKING PAYMENTS ON FORT LUPTON'S BONDED DEBT.



Either of two methods for raising the funds would be acceptable. The plan to leave the tax levy where it now is, which makes possible an annual saving that can be applied to principal and interest payments when they become due, has many features to recommend it.

A second plan of raising the money just as it is needed to make payments according to schedule on page 96 is presented in Table XX.

TABLE XX

THE LEVY REQUIRED TO MEET THE PAYMENTS ON FORT LUP-  
TON'S BONDED INDEBTEDNESS, ACCORDING TO THE PRO-  
POSED SCHEDULE

Year of Assessment	Assumed Valuation*	Amount to be Raised for the Following Year	Levy Required
1924	\$3,521,590.00	\$ 5,103.00	.00145
1925	3,680,120.00	5,103.00	.00139
1926	3,838,650.00	5,103.00	.00133
1927	3,997,180.00	10,103.00	.00254
1928	4,155,710.00	9,803.00	.00236
1929	4,314,250.00	10,003.00	.00232
1930	4,472,770.00	10,173.00	.00228
1931	4,631,300.00	10,613.00	.00229
1932	4,789,830.00	10,405.00	.00218
1933	4,948,360.00	10,985.00	.00222
1934	5,106,890.00	11,005.00	.00216
1935	5,265,420.00	11,995.00	.00228
1936	5,423,950.00	12,325.00	.00228
1937	5,582,480.00	11,953.00	.00214
1938	5,741,010.00	4,770.00	.00083

\* It was assumed that the annual increase in assessed valuation would approximately amount to what the average increase has been over a period of the last 11 years. During this period assessed valuation in Dist. No. 8 has mounted from \$1,732,030.00 in 1916 to \$3,521,590.00 in 1924, an average increase of \$158,530.00 annually.

RECOMMENDATIONS BASED ON FINDINGS OF THE SURVEY  
WHICH CONSTITUTES ELEMENTS FOR INCLUSION IN  
AN EDUCATIONAL PROGRAM

XIII. FINANCE

Findings No. 1.

Fort Lupton's method of accounting for funds makes it extremely difficult to make financial comparisons.

Recommended Program No. 1.

The system of Financial Accounting recommended by the National Education Association should be adopted.

Findings No. 2.

Eight of fourteen comparable cities spend from \$5.01 to \$49.39 more per year for each child in average daily attendance than does Fort Lupton. When Fort Lupton's expenditures are analyzed and compared with those of similar cities it is found that the relatively low costs are due partly to savings in salaries paid to teachers.

Recommended Program No. 2.

More funds should be made available for "Instructional Service" and "Operation of Plant." Then when better salaries are paid elementary

teachers, Fort Lupton can hope to prevent a 42 per cent annual teacher turnover, and can probably as a result build up a more efficient educational system. Janitors should receive more adequate salaries.

**Findings No. 3.**

Fort Lupton has from  $2\frac{1}{2}$  to  $3\frac{1}{2}$  times as much wealth per census child as have Englewood or Walsenburg. Fort Lupton's tax levies are relatively low.

**Recommended Program No. 3.**

Fort Lupton can easily afford to pay what is necessary to produce exceptionally good schools.

**Findings No. 4.**

Fort Lupton has a total bonded debt of \$88,300. This is only one-half the amount for which Fort Lupton is legally capable of borrowing. The school debt is about an average indebtedness compared with comparable school systems.

**Recommended Program No. 4.**

Fort Lupton is in a position to bond herself for whatever added expenditures are necessary to care for the school's steady and rapid growth.

**Findings No. 5.**

Fort Lupton can liquidate her present indebtedness by 1940 without appreciably raising her tax levy.

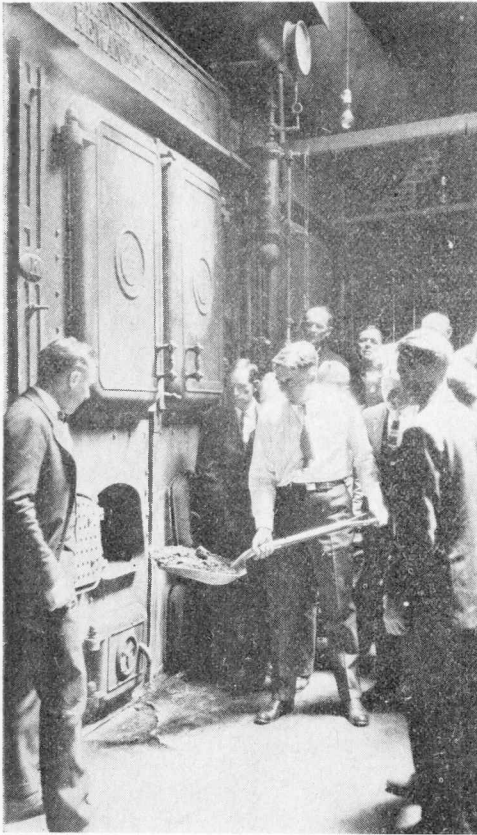
**Recommended Program No. 5.**

Bonds whose payment dates could be set for 1940 could now be floated to care for proposed additions to the school site and plant.



Colorado State Teachers College  
BULLETIN  
*for*  
SCHOOL JANITORS

*and*  
ENGINEERS



One Week Course  
*of*  
Intensive Training

Greeley, Colorado

JUNE 7—12, 1926



BETTER SCHOOL PLANTS

SERIES XXV

NUMBER 4

Published monthly by Colorado State Teachers College, Greeley, Colorado  
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August 24, 1912.



## TRAINED JANITORS SAVE MONEY

In instituting a short course for janitors and engineers last year, Colorado State Teachers College pointed out the serious mistake of school districts in erecting valuable school buildings and then placing incompetent men in charge of them. The large investments being made in school plants today demand the employment of trained men to care for them as a protection.

There is a vast difference between a janitor and a sweeper. There was a time when it was thought that any person, particularly one who was not capable of doing any other kind of labor, would do for janitor work. That day is past. School janitors today are the custodians of large properties, and they should know how to take care of those properties.

Colorado State Teachers College believes that school janitors should know how to handle the heating plants in such a manner as to produce the maximum amount of heat at a minimum cost; that they should know how to ventilate buildings in the best interest of the children and teachers; that they should know how to eliminate fire hazards. Furthermore, science has proven that there is a right and a wrong way to sweep floors, to oil them, and also that there is a right way and a wrong way to do many of the tasks which janitors and engineers are called on to do.

With these things in mind, Colorado State Teachers College conducted a school for janitors and engineers for one week last Spring. Twenty-three janitors attended the course, and the result was a nation-wide interest in a heretofore neglected field. How wide-spread was this interest will be noted by a reproduction of newspaper articles printed on the back page of this little folder.

### • WHAT SUPERINTENDENTS SAY:

Benefits derived by the men attending the course were noted during the school year which followed, as evidenced in the comments of school superintendents and school boards, which are reprinted herewith:

PUEBLO, COLO.—James H. Risley, Supt.

"A representative of our janitor force attended the school last year and is very enthusiastic about the results. We had slated him for a promotion in his work and feel that the instruction received in your school was just the thing that he needed to enlarge his vision of the possibilities of his task and to give him an insight into the technique of doing the work in a more acceptable way than it had been done before."

CHEYENNE, WYO.—A. S. Jessup, Supt.

"\*\*\* the greatest good which came to the three Cheyenne janitors

who attended the janitor school last spring was in the increased dignity which the experience lent to their jobs. \* \* \*

"Perhaps the biggest financial saving has been in the amount of coal saved by these men and others of our janitorial force with whom they have talked. \* \* \* I believe the effect was to reduce the cost of fuel all through the system."

"I believe there is no doubt that we will want to send our men again this year if the school is held."

LAFAYETTE, COLO.—  
B. V. McReady, Supt.

"I am hoping that we can send two men this year."

BRIGHTON, COLO.—  
Arthur J. Foster, Supt.

"\* \* \* We have two new janitors. I believe both of them will be sent to your school."

GILCREST, COLO.—E. A. Jackson, Supt.

"\* \* \* We have had a better janitor in every way. It gave us a 100% return on a 50% investment. I believe our school board will send him again."

FLEMING, COLO.—

Harold V. Baker, Supt.

"I think the outstanding result is that the work is done more willingly since he was shown the necessity for it. \* \* \* I am recommending that our janitor be sent again."

SNYDER, COLO.—C. A. Foster, Supt.

"\* \* \* Mr. Kraft, our janitor, states that there are countless tricks of the trade which he uses as occasion arises—which were first brought to his attention in your school. He is able to save considerable fuel as compared with the old method."

LARAMIE, WYO.—J. C. Knode, Supt.

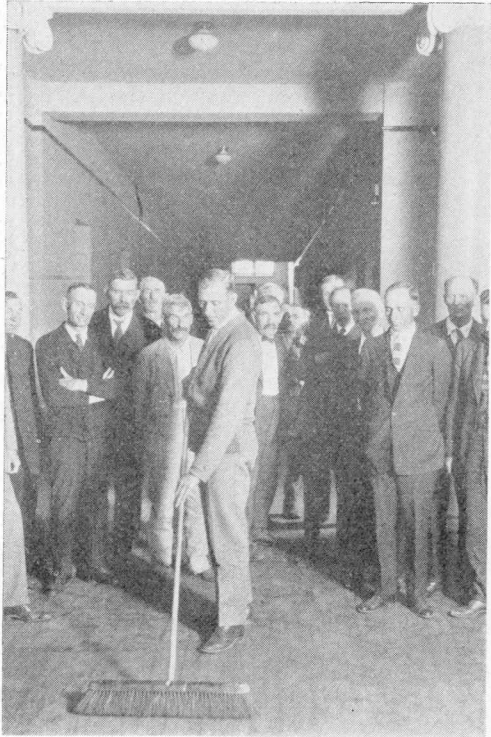
"\* \* \* He picked up a number of ideas that have resulted in a saving for us and on floor oil alone saved us half of our previous expenditure. I heartily recommend the school as you are conducting it."

CANON CITY, COLO.—O. B. Drake, Supt.

"\* \* \* he came back with a new enthusiasm and a better knowledge of what kind of material to use for cleaning—he has the idea that there is a real job for janitors. \* \* \*"

ENGLEWOOD, COLO.—G. Gordon, Supt.

"\* \* \* The district paid Mr. Donaghue's way and feel that they have gotten much more than their money's worth from the investment. We shall send one or two janitors to your school again this year."



(How to Handle the Floor Brush)

## ANOTHER COURSE WARRANTED

Such favorable reaction to the course was found that the College felt warranted in conducting another school this year. School janitors and school superintendents and boards have expressed their desire for a continuance of the work, with the result that the College has made plans for bringing in more instructors and specialists who will devote a week to solving the problems of school janitors and engineers and aiding these men to give better service to the schools they serve.



(Pointers on How to Oil a Floor)

### WHAT JANITORS SAY:

MONTE VISTA, COLO.—H. A. Becraft, Janitor.

"I hope to be there again next year as I got a great deal of good out of this first school. I think that every man that was there feels the same as I do."

CENTERVILLE, MICH.—John Fieberkom, Janitor.

"I am interested in taking a course in janitor engineering. Do you give courses by mail? Give full details in first letter."

### COMPETENT INSTRUCTORS

Following are some of the men who will serve on the staff of instruction during the school this year:

JAMES BALL, Chief Engineer, Denver Public Schools. Experience, 15 years.

R. G. DEMPSEY, Superintendent of Buildings and Grounds, Colorado State Teachers College. Experience, 28 years.

J. FLEIKEID, Instructor School for Janitors, Minneapolis, Minnesota. Sole duty is instruction of beginning janitors for the Minneapolis System.

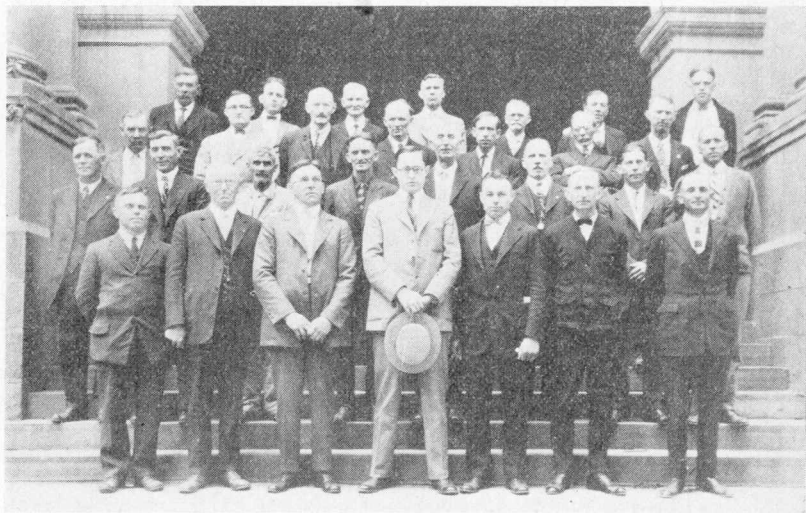
GUY C. GAMBLE, School Building Expert. Author Rules and Standards for Janitors—Chicago, Cleveland and Bowling Green. Now at Colorado State Teachers College.

HARRY S. GANDERS, Professor of School Administration, Colorado State Teachers College.

- J. D. HEILMAN, Professor of Psychology, Colorado State Teachers College. Has studied the effect of ventilation upon learning.
- E. S. KNOWLES (M. D.), Medical Adviser, Colorado State Teachers College, and Member of Board of Health, Greeley, Colorado.
- ROBERT H. MORRISON, former Superintendent of Schools, Extension Service and Director Placement Bureau, Colorado State Teachers College.
- W. S. RATHBUN, Fire Prevention Engineer, Mountain States Inspection Bureau, Denver, Colorado.
- C. E. REEVES, Scientific Investigator of Janitor Service. Author of "Janitor Service in Elementary Schools." Author of ten articles in the American School Board Journal on "The Work of the School Janitor." Elmira, N. Y.
- CHARLES STEVENS, Head Janitor, Greeley High School, Greeley, Colorado. Experience 34 years.
- FELIX STRICKLAND, Head Janitor, Pueblo, Colo.
- HARRY S. GANDERS, in charge of the school.
- JOHN HENRY SHAW, Publicity.
- DONALD W. McKAY, Personnel.

#### A—ARGUMENTS FOR THE BOARD

- a Many janitors do not have an adequate notion of what their job implies.
- b Among janitors of approximately the same degree of willingness to serve, some render an efficient service while others are near failures.
- c Right training will improve the methods of your inefficient willing



(Some of the Teachers and Janitor-Engineers who Attended School Last Year)

janitor. Contact with other competent janitors and opportunities to visit such janitors in their own schools where a high class service is being rendered should certainly inspire your careless janitor to more efficient service.

- d Ideals of better service will be emphasized.
- e How to economize time and effort and at the same time improve the quality of work will be demonstrated.

- f Your janitor will see the best method yet developed for washing blackboards, scrubbing floors, repairing certain fixtures, etc.
- g 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.
- h Sweeping compounds, brooms, brushes, oils, and other janitorial supplies will be exhibited at the school. Instructors will show how and under what conditions to use various materials and tools.
- i Moving pictures will depict methods of firing, cleaning, etc.
- j Your janitors will visit school buildings in operation that are being cared for as you would like your janitors to care for your buildings.

### B—ARGUMENTS FOR THE JANITORS

- a You will see how other janitors do their jobs.
- b Janitors from all parts of the country will be telling how they do various jobs.
- c You will be shown easier and better ways of doing things.
- d Your job ought to become easier because of improved methods.
- e You will receive a diploma showing that you have attended a school where your problems have been intelligently studied.
- f You will be in a position to render a more efficient service.
- g You do not need to be away from home on a week-end.
- h There will be moving pictures of how others are doing their work.
- i A tourist camp will be made free to you if you want to drive in your own car.
- j You will enjoy going to school again. You will be guests of the Colorado State Teachers College. There'll be horse-shoe tournaments, a picnic, and free tickets to Greeley theaters.
- k Business men have conventions, farmers have institutes, teachers have summer schools, WHY NOT A WEEK'S CONVENTION FOR JANITOR-ENGINEERS?

### GENERAL INFORMATION

**Time**—ONE WEEK.

**Date**—JUNE 7 to 12, 1926.

**Begins**—MONDAY MORNING, 8:00 a. m.

**Closes**—SATURDAY AFTERNOON, 3:00 p. m.

**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 75c 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—at GREELEY PARK.

**HORSESHOE TOURNAMENTS.**

**BIG BANQUET SATURDAY NOON.**

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.**

**LECTURES ON:**

IMPORTANCE OF THE JANITOR'S WORK  
RESPONSIBILITIES OF THE JANITOR  
LINES OF AUTHORITY—BOARD THRU SUPERINTENDENT AND PRINCIPAL TO JANITOR.

**A JANITOR'S DUTIES**

PRECAUTIONS AGAINST FIRE  
PRECAUTIONS AGAINST OTHER ACCIDENTS

**SANITATION**

**DISINFECTION**

RELATIONSHIPS WITH TEACHING PERSONNEL.

RELATIONSHIPS WITH PUPILS

**CARE OF GROUNDS**

MATERIALS FOR USE IN CLEANING AND PRESERVING

**VISITS TO ten school houses 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. (Discussions resulting from janitors' questions was one of the best features of last year's school.)

**MOVING PICTURES—**These include pictures of methods of fire prevention, handling of furniture, temperature control, cleaning, etc.

**TO TAKE HOME TO JANITORS WHO REMAINED BEHIND:**  
Mimeographed summaries of lectures given in some of the classes.

**Sympathetic Spirit—**Janitors in attendance last year attest to the fact that these problems were approached in a sympathetic spirit.



# What the Press Says

**The New York Times**  
NEW YORK, THURSDAY, June 12, 1920  
COLUMBIAN COLLEGE, Friday, June 12, 1920  
Frank Day School Janitor Goes to College

**THE ROCKY MOUNTAIN NEWS**

**THE WASHINGTON HERALD**  
SCHOOL JANITORS AND COLLEGE STUDENTS

**THE DENVER POST** - The Best Newspaper in the U. S. A.  
COMPLETE THEIR COURSE IN SCHOOL FOR JANITORS

**THE COLORADO SCHOOL JOURNAL**

**THE DENVER POST**  
The Paid Circulation of THE DENVER POST Yesterday Was 148,052  
Daily The Denver Post Circulation 163,722  
For Economy 241,263  
Denver's Digestive, 2007, 0149 265 110

**THE DENVER POST**  
26 PAGES  
CITY EDITION  
THE BEST NEWSPAPER IN THE WESTERN SCHOOL JANITORS TO HAVE COLLEGE EDUCATIONS

**THE READ MESSENGER**  
FRIDAY, JUNE 12, 1920

Colorado State Teachers College

BULLETIN



COURSES AND SPECIAL FEATURES  
IN  
THE DEPARTMENT OF EDUCATION

SUMMER QUARTER

June 15-August 26  
1926

FIRST HALF  
June 15—July 21

SECOND HALF  
July 22—Aug. 26

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SERIES XXV

NUMBER 5

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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.



# EDUCATION

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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.

During the Summer Quarter of 1926 over fifty regular and special courses will be offered by regular members of the department and by special instructors—experts on administration, curriculum making and general problems of education. Particular attention will be given to courses dealing with educational administration. (Note list of special teachers in this field, under II. A p. 3.)

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## I. CLASSES OF COURSES OFFERED

The following classification is suggestive of the types of courses to be offered. (See the Summer Bulletin, 1926, and the Year Book, 1926-27, for detailed descriptions of these Education courses.)

### A. TYPES OF COURSES:

1. Introductory courses: 1, 100a, 100c, 129.
2. Methods courses: 3, 4, 5, 51, 101, 104, 105, 106, 107, 150, 151.
3. Curriculum: 10, 52, 126, 210.
4. Philosophy: 111, 152, 211.
5. Administration and supervision: 106, 108, 113, 114, 115, 116, 120, 142, 144, 147, 217, 243.
6. History of Education: 133, 134.
7. Rural Education: 20, 21, 28, 125, 126.
8. Activity courses: 15, 16, 16a, 17, 28, 105, 110.
9. Courses in allied departments: Biology 1, Biotics 101, 201; Psychology 104, 105, 107, 108, 114, 115, 212, 214, 215; Sociology 100, 105, 130.

### B. COURSES IN:

1. Elementary Education: 1, 3, 4, 5, 10, 21, 26, 51, 52, 104, 106, 107, 110, 111, 115, 150, 151, 152, 154, 211.
2. Junior and Senior High School Education: 110, 111, 113, 116, 210, 217.
3. Education for Principals, Supervisors, and Critic Teachers: 104, 106, 108, 110, 111, 113, 114, 115, 116, 142, 147, 190, 210, 217, 243.
4. Education for Superintendents: 110, 111, 112, 113, 115, 116, 120, 142, 143, 144, 147, 210, 242.
5. Research in Education: 123, 210, 211, 217, 223, 224, 243.

## II. FACULTY OF THE DEPARTMENT OF EDUCATION SUMMER, 1926

The following regular members of the Department of Education will give courses in the department, Summer, 1926: Professors Rugg, (Head of the Department) Armentrout, Blue, Gamble, Ganders, Hargrove, and Mahan. Additional courses will be offered by the following members of the Training School faculty: Davis, Lyford, Dulin, Rosenquist, Turner, Van Meter, and McCowen.

Besides the courses offered by resident instructors the following special teachers and lecturers will cooperate in giving courses in Education:

### A. ADMINISTRATION:

Mr. C. R. Foster, First Assistant Superintendent, Pittsburgh Public Schools, Pittsburgh, Pennsylvania.

Mr. O. C. Pratt, Superintendent of Schools, Spokane, Washington.

Mr. J. H. Risley, Superintendent of Schools, Pueblo, Colorado.

Dr. G. D. Strayer, Professor of Educational Administration, Teachers College, Columbia University.

Mr. A. L. Threlkeld, Deputy Superintendent of Schools, Denver, Colorado.

### B. SPECIAL LECTURERS IN EDUCATION:

Dr. E. S. Evenden, Professor of Education, Teachers College, Columbia University.

Dr. L. A. Pechstein, Dean of the College of Education, University of Cincinnati.

Dr. David Snedden, Professor of Education, Teachers College, Columbia University.

Harden T. Raymond, Goldsmiths' College, University of London.

Dr. Carleton W. Washburne, Superintendent of Schools, Winnetka, Illinois.

### C. ELEMENTARY EDUCATION:

Miss Alice Hanthorn, Primary Supervisor, Cleveland Public Schools, Cleveland, Ohio.

Mrs. Otho Hanscom, Intermediate Supervisor, State Teachers College, Denton, Texas.

### D. SECONDARY EDUCATION:

Mr. Merle Prunty, Principal Central High School, Tulsa, Oklahoma.

### E. RESEARCH:

Dr. Frederick L. Whitney, Director of Research, Colorado State Teachers College.

### F. FACULTY ASSISTING IN ALLIED DEPARTMENT OF EDUCATIONAL PSYCHOLOGY:

Professors Heilman, Holst, Hamill, and Vernon Brown.

### G. ASSISTING IN THE DEPARTMENT:

Mr. John Casey, Superintendent of Schools, Eaton, Colorado.

Mr. Geo. Hay, Principal, Lockwood School, Webster Groves, Missouri.

Mr. R. L. Hunt, Superintendent of Schools, Las Animas, Colorado.

Mr. R. H. Morrison, Extension Division, Colorado State Teachers College.

- Mr. Earl B. Moore, Scout Executive, Weld-Morgan Counties, Colorado.
- Miss A. Evelyn Newman, Dean of Women, Colorado State Teachers College.
- Mrs. Carrie S. Turner, Greeley, Colorado.
- Mr. O. D. Wyatt, Principal, Fort Worth, Texas.

### III. TWO INNOVATING COURSES: ED. 100a and ED. 100c

100a. Problems of Education. Either half or full quarter. Two or four hours. When taken for credit students must be in attendance every day and take the prescribed examination. Two o'clock, M. T. W. Th. Little Theater.

This course will discuss present day educational problems. Each day a different lecturer, either a member of the regular faculty or a visiting lecturer or teacher, will take up for discussion a problem of current interest and significance, a problem to which the particular lecturer has given detailed and serious study. This course attempts, therefore, to bring to interested students the results of research concerning current educational problems.

The following lists the name of each lecturer in Ed. 100a and the title of the lecture:

DATE	NAME OF LECTURER	TITLE OF LECTURE
W June 16	Dr. G. W. Frasier.....	Trends in College Education.
Th June 17	Dr. G. E. Raiguel.....	The Effect of Education on Democracy.
M June 21	Dr. Edward S. Evenden..	Some Necessary Professional Attitudes for Teachers.
T June 22	Dr. David Snedden.....	Have We Forgotten Self-Education?
W June 23	Dr. E. A. Cross.....	The Place of Grammar in the Modern Curriculum.
Th June 24	Dr. George D. Strayer....	Progress in Educational Administration During the Past Twenty-five Years.
M June 28	Mr. Rollo Brown.....	The French Methods of Teaching Composition.
T June 29	Dr. C. W. Washburne....	Children's Books—Some of the Elements That Determine the Grade in Which a Book Can Be Most Effectively Read.
W June 30	Supt. O. C. Pratt.....	Training Teachers in Service.
Th July 1	Dr. W. D. Armentrout....	A Comparison of the Psychology of Koffka and Thorndike.
M July 5	Dr. E. H. Griggs.....	The Influence of the Parent and the Teacher in Character Education.
T July 6	Dean A. Evelyn Newman	Student Opinion at Home and Abroad.
W July 7	Warden T. Raymont.....	Contemporary Problems of Education in England.
Th July 8	Mr. John C. Ransom.....	The Problem of Instruction in Creative Writing.
M July 12	Professor Vernon Brown	Status of Psychology in England.
T July 13	Mr. John C. Stone.....	Diagnostic Testing and Remedial Drill as Essential Factors in Developing Skill in Arithmetic.

W July 14	Dr. H. S. Ganders .....	The Junior College.
Th July 15	Supt. James H. Risley ...	What Ails Our Youth?
M July 19	Dr. F. C. Jean .....	Science and Religion.
T July 20	Professor Frances Tobey	The Psychological Basis of the Appreciation of Literature.
W July 21	Mid Term Examination.	
Th July 22	Dr. E. U. Rugg .....	Privileges, Promises, Responsi- bilities.
M July 26	Dr. Paul Blanshard .....	The Ideals and Methods of the Workers' Education Movement.
T July 27	Dr. O. M. Dickerson .....	Current Events as an Adjunct to the Teaching of History and Civics.
W July 28	Miss Alice Hanthorn .....	Problems of Adjusting the Curri- culum to Meet the Needs of Elementary Children.
Th July 29	Dr. J. D. Heilman .....	Diagnosis and Remedial Treat- ment in Reading.
M Aug. 2	Supt. C. R. Foster .....	Extra-curricular Activities.
T Aug. 3	Mr. R. H. Morrison .....	Traits Making for Success and Failure in Teaching.
W Aug. 4	Dr. L. A. Pechstein .....	Intelligence and Pupil Effort.
Th Aug. 5	Dr. I. W. Howerth .....	The Problem of Interest.
M Aug. 9	Mr. Albert Carter .....	The Teacher and the School Library.
T Aug. 10	Professor H. G. Blue .....	A Plan for Contemporary Civili- zation Courses.
W Aug. 11	Dr. Samuel B. Harding ...	Geography as a Social Science.
Th Aug. 12	Professor Helen C. Davis	The Teaching of the Social Sciences in the Elementary School.
M Aug. 16	Mrs. Otho Hanscom .....	The Training of the Elementary Teacher.
T Aug. 17	Supt. A. L. Threlkeld .....	How Much Learning is Possible?
W Aug. 18	Dr. G. C. Gamble .....	The Status of Educational Re- search.
Th Aug. 19	Col. H. A. Hutchingson ...	Voice of the Class.
M Aug. 23	Dr. Herbert A. Gibbons ...	Stimulating Interest in Public Affairs and Public Speaking Among Our Students.
T Aug. 24	Dr. F. L. Whitney .....	Opportunities for Secondary Edu- cation.
W Aug. 25	Final Examination.	

100c. Unit Courses in Education—Either half or full quarter. One two, three, four or five hours. When taken for credit, students must be in attendance every day and take the prescribed examinations.

The plan here is to offer a series of five one-hour courses, each of which, or any one or more of which, may be taken. Each course will be taught for two weeks by one man of national reputation in his field as follows:

Dr. Strayer, of Teachers College, 'Columbia .....	School House Construction
Dr. Washburne, Superintendent of Schools in Winnetka, Illinois .....	Individual Instruction

Warden Raymont, of Goldsmiths' College, University of London .....	Education in England
Dr. Pechstein, Dean of the College of Education, University of Cincinnati .....	Character Education
Mr. C. R. Foster, First Ass't Superintendent of Schools, Pittsburgh .....	The Six-Year High School

#### IV. SPECIAL COURSES FOR TRAINING SUPERINTENDENTS, PRINCIPALS, AND SUPERVISORS

Ed. 108. Educational Supervision—Either half or full quarter. Two or four hours. Instructors: Superintendent James H. Risley, Pueblo, Colorado; First Assistant Superintendent C. R. Foster, Pittsburgh, Pennsylvania; Deputy Superintendent A. L. Threlkeld, Denver, Colorado.

This course will be of especial value to those who expect to become superintendents, principals, or supervisors. It will give consideration to 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.

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Ed. 112. School House Construction. Unit course I. First two weeks. One hour. Instructor—Dr. George D. Strayer, Professor of Educational Administration, Teachers College, Columbia University.

This course will give the superintendent an insight into the major problems involved in planning and carrying to completion a building program. Standards for various types of buildings will be discussed, building plans studied, and a procedure outlined. (Dr. Strayer is one of the foremost experts in the field of school buildings.)

Ed. 115. Organization and Administration of an Elementary School—First half. Two hours. Instructor—Superintendent James H. Risley, Pueblo, Colorado.

Cubberley's *The Principal and His School* will be used as the text in this course. The work of the elementary school will be analyzed from the standpoint of organization and administration. The following are some of the topics considered: The first day of school; yard and building organization; programs and schedules; the school janitor; health and sanitary control; discipline; use of the assembly period; classifying and promoting pupils; the curriculum; planning the supervision; teachers' meetings; measuring instruction; parent-teachers' associations; extra-curricular activities; etc.

Ed. 120. Educational Finance—First half. Two hours. Instructors: Dr. George D. Strayer, Teachers College, Columbia University; Superintendent O. C. Pratt, Spokane, Washington.

This course will deal with sources of income, wealth, taxation, distribution of state aid and equalization, the control of local school finance, the budget and accounting, unit and total costs, bonds and financing building programs.

Ed. 142. School Administration—Either half or full quarter. Two or four hours. Instructors: Dr. George D. Strayer, Teachers College, Columbia University; Superintendent O. C. Pratt, Spokane, Washington; First Assistant Superintendent C. R. Foster, Pittsburgh, Pennsylvania; Deputy Superintendent A. L. Threlkeld, Denver, Colorado.

The course is designed primarily for students preparing themselves to be principals, supervisors or superintendents. All phases of local school administration will be dealt with. Particular emphasis will be placed on such subjects as: National and state responsibility for education; financing schools; business administration of schools; school publicity; statistical methods applied to administration; buildings and equipment; health service; census and attendance; classification and progress of children; the organization of local school systems; supervision of instruction; curricula and courses of study; records and reports; extra-curricular activities; and personal management.

Ed. 144. School Publicity. First half. Two hours. Instructors: Professor J. H. Shaw, Director of Publications, Colorado State Teachers College; Superintendent J. H. Risley, Pueblo, Colorado.

It makes no difference how well the public school is organized, or how thoroughly the work is being done and how apparent inside success may be; unless there is the proper relationship with the public, the school's success as judged from the public viewpoint is handicapped.

Every school superintendent should "sell" his school to the public. It is true that he is doing that very thing, to a degree, first, through the pupils, and second, through his personal appearances in civic and other organizations. But he can do a much bigger and better job, and do it much more efficiently if he is acquainted with the different methods of getting publicity.

Ed. 144 is designed for the sole purpose of showing school superintendents and all others engaged in public school work who may be interested—and the entire school staff should be interested—just what makes for good school publicity and how to handle it.

The taxpayer in every community is guided in large degree in his attitude toward the public school by what the press says of education. The school superintendent may be getting a lot of information before the taxpayer through the public press. But many administrators go about the task blindly; while they are fortunate in getting publicity, the work would be much easier and they would get a great deal more of it if they knew the many sources of good school news that are never touched, and if they were acquainted with the technical knowledge of preparation of "copy." The course will therefore deal with the promotion of educational news and will reflect the points of view of a trained newspaper editor and a successful superintendent.

Ed. 147. Educational Surveys—First half. Two hours. Instructor: Dr. Harry S. Ganders, Professor of Educational Administration, Colorado State Teachers College.

In this course an opportunity will be given to study the technic of conducting surveys, the surveys which have been made, and the application of these surveys to educational thought and practice.

Ed. 190. Administration and Teaching in Teachers Colleges and Normal Schools. Either half or full quarter. Two or four hours. The course will be given for the first six days by Dr. E. S. Evenden, Professor of Normal School Administration, Teachers College, Columbia, and will be continued by the following members of the resident faculty: President G. W. Frasier, Vice-President Cross, Dr. Rugg, Dr. Ganders, Dr. Whitney, Dr. Heilman, Dr. Gamble, Mr. Morrison, Dr. Armentrout, and members of the staff of the Training Schools.

The following topics or problems will be considered: The rise and present status of teachers colleges; the relation of the teacher to the state; administration and organization problems; personnel and classification problems; curriculum making and problems pertaining to the development of the training schools—student teaching, supervision, etc.

The course is designed to prepare mature students for the increasing demand for teachers equipped for service in teaching in teachers colleges and normal schools.

Ed. 243. Problems in Educational Administration. First half. Two hours. Instructor—Dr. Harry S. Ganders, Colorado State Teachers College.

This advanced administration course is primarily intended for individuals who are active superintendents and principals of schools. The problems selected for work will be selected from the following: The professional training and experience of superintendents of the United States; present situation and procedures in classification of children; school house management; the superintendent and supervision of instruction; a system of records and reports for small cities; the budget, salaries, and unit costs; attendance; and health administration.

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- Ed. 243. Problems in Educational Administration.
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COLORADO STATE TEACHERS COLLEGE

THE  
SOCIAL AND ECONOMIC BACKGROUND  
OF  
STATE TEACHERS COLLEGE STUDENTS

(Research Bulletin No. 11)

COLORADO STATE  
TEACHERS COLLEGE  
Greeley, Colo.

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*Price 75 cents*



## PREFACE

Any study in the social sciences must from its inherent nature be cooperative. This investigation is no exception. Nearly two thousand college students willingly furnished confidential information for the core of the study, and facts about many thousands in a half dozen states comprised the comparative data used. Dean E. A. Cross, Colorado State Teachers College, permitted the use of his Massachusetts questionnaire, and Doctor H. T. Manuel, at that time Director of Educational Research, Western State College, Gunnison, Colorado, and Doctor J. C. DeVoss, Director of the Bureau of Research and Extension, State Teachers College, San Jose, California, undertook the management of the study in their colleges. Valuable material was furnished also by Mr. W. G. Binnewies, Assistant Professor of Sociology, Mr. R. H. Morrison, Associate Professor of Extramural Education, and Doctor J. D. Heilman, Professor of Educational Psychology, all of Colorado State Teachers College. Mr. Dale Patterson, Research Fellow, Colorado State Teachers College, helped in planning and starting the investigation, and Miss Jessie L. Thompson, Research Secretary, Colorado State Teachers College, directed the classification of data and helped in the interpretation of findings.

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## INTRODUCTION

The type of person admitted to and graduated from teacher training institutions is a vital matter. Natural qualities possessed, the personnel of the home, economic and social conditions, all will make their contribution in determining the kind of education furnished pupil groups. As a desirable criterion the teacher will act as leader so that character traits, civic attitudes, and the like will appear on successive levels of efficiency generation after generation. But it might happen that such low undesirable levels of social background would be represented by teachers that a static condition in society would result, or even that there might be retrogression.

Coffman's pioneer study<sup>1</sup> was a recognition of the importance of this problem so far as it applied to the teacher in service. His findings seemed to show that—

“The typical American female teacher is twenty-four years of age, having entered teaching in the early part of her nineteenth year when she had received but four years training beyond the elementary schools. Her salary at her present age is \$485 a year. She is native born of native born parents, both of whom speak the English language. When she entered teaching both of her parents were living and had an annual income of approximately \$800 which they were compelled to use to support themselves and their four or five children. The young woman early found the pressure, both real and anticipated, to earn her own way very heavy. As teaching was regarded as a highly respectable calling and as the transfer from the school room as a student to it as a teacher was but a step, she decided upon teaching.

---

1 Coffman, L. D., *The Social Composition of the Teaching Population*, Teachers College, Columbia University, Contributions to Education, No. 41, 1911

“Her first experience as a teacher was gotten in the rural school where she remained but two years. If she went from there to a town school her promotion was based almost solely upon her experience as no additional training was required by the officials of the town. If she desired to teach in a city school, she was compelled to secure at least one more year of training in all, but each additional year of training she found increased her salary.

“So far she has profited each year of her brief experience by having her salary increased and this will probably be true for the next two years should she find it necessary to remain in teaching that long.”

But during the last two decades there has been a marked increase in requirement of institutional attendance which results in the preparation of a larger and larger proportion of public school teachers in state teachers colleges and state normal schools. This makes an inquiry into the personnel of the student population in teacher training institutions of increasing importance and justifies the present study.

The Department of Educational Research of Colorado State Teachers College has undertaken this investigation, then, with a view to the discovery of an answer to the question, What are some of the important characteristics of the teacher in preparation in representative American state teachers colleges? First of all, the facts about social and economic levels have been determined for all of the teachers college students of Colorado and for a group in a representative teachers college of California (Table I). To these data have been added like findings from recent studies in Missouri (1920), Michigan (1922), Massachusetts (1923), Pennsylvania (1924), Louisiana (1924), and Connecticut (1924).

TABLE I

PERCENTAGE OF ENROLLED STUDENTS OF THREE TEACHER TRAINING INSTITUTIONS FURNISHING DATA FOR THIS STUDY, 1924-25

Institutions	Number students enrolled, Spring quarter, 1924-25	Students furnishing data		Percentage of enrollment
Colorado State Teachers College, Greeley, Colorado	1386			
Graduates		41		
Seniors		110		
Juniors		177		
Sophomores		445		
Freshmen		470		
Unclassified		42	1285	93.0
Western State College, Gunnison, Colorado	400			
Graduates		2		
Seniors		20		
Juniors		45		
Sophomores		127		
Freshmen		143		
Unclassified		8	345	86.0
San Jose State Teachers College, San Jose, California	1100			
Graduates		4		
Seniors		8		
Juniors		30		
Sophomores		52		
Freshmen		107		
Unclassified		2	203	18.0
<b>TOTAL</b>	<b>2886</b>		<b>1833</b>	<b>65.7</b>



It is recognized that this group of facts, both new and comparative, does not constitute a complete study of the personnel of teachers college students. Such an investigation, in addition to matters of social and economic background, would determine intelligence levels, achievement in scholarship, success in student teaching, physical equipment, moral and aesthetic attitudes and personality traits, extra-curricular efficiency, and the like. But it is worth while to make inquiry into this segment of the total problem and, so far as like factors appear, to determine whether progress has been made since Coffman's checking in the type of person found among the ranks of public school teachers.

# CHAPTER I

## PROCEDURE AND TECHNIC

### 1. COLLECTION OF FACTS

During the spring quarter of the school year, 1924-25, a questionnaire, similar to the personnel blanks used in Massachusetts,<sup>1</sup> were distributed at a general assembly period of Colorado State Teachers College. After the blanks were collected, a list was made of all students answering the questionnaire. This was checked with the enrollment list found in the registrar's office. An effort was then made to reach all students who had not been at the assembly. A third attempt was made through the cooperation of the College instructors. The second and third calls brought in many more blanks, leaving about one hundred unanswered. Many of these students had dropped out, and others could not be reached with time and facilities available.

A supply of the question lists was sent to Western State College, Gunnison, Colorado, and the same procedure was followed there. The completed question lists were received during the spring quarter, 1924-25.

This gave a very complete sampling of state teachers college students for the state of Colorado, a group of subjects as large as that used by Cross in Massachusetts and adequate for purposes of comparison with available data from other states.

It was thought desirable to include among the new data facts about state teachers college students from a second western state. California was selected and the San Jose State Teachers College used as representative of the six state teachers colleges of that state. Here, the question lists were used in the classrooms and filled out under the immediate supervision of the college instructors. The completed package was received at the close of the spring quarter, 1924-25.

### 2. THE SCOPE OF DATA

The extent of samplings from the student bodies of the three teacher training institutions used in Colorado and California is shown in Table I. The group in Colorado State Teachers College is practically complete, as the enrollment figure no doubt includes some students who were no longer in College. The group of subjects from Colorado totals over 1600. This is about as large as the sampling obtained by Cross in

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<sup>1</sup> See appendix. These blanks were used by Bagley and Cross, and the results compiled in Zook's study. Zook, G. F., Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts. Massachusetts Legislature, House Document, Number 1700, 1923

Massachusetts,<sup>2</sup> and represents a larger percent of total enrollment than that for nine Massachusetts schools.

The factor of time limited the sampling for California to one college, but the figures from San Jose seem to show a fair representation of students from each of the six groups in that institution.

The representativeness of groups of students included in the six previous studies used for comparative purposes is not clearly indicated in the published reports in every case. In the Missouri survey, seventy-six percent of the students in current attendance were included in the group studied.<sup>3</sup> In the Michigan survey, nearly all students enrolled in the four schools studied were included in every tabulation.<sup>4</sup> In the Massachusetts survey, "over ninety percent of all the students in attendance in the nine schools are included in the returns as tabulated."<sup>5</sup> In the state of Pennsylvania, final report is made in terms of percents so that the adequacy of sampling cannot be determined.<sup>6</sup> A similar comment may be made on the Louisiana survey, but an examination of the table totals seems to show about eighty percent of all students represented.<sup>7</sup> In Connecticut, no report is found on sampling, but the small total enrollment in the four schools (950 c.) is very probably well represented in each tabulation.<sup>8</sup>

### 3. CLASSIFICATION OF MATERIAL

The new data from the state teachers colleges of Colorado and California were drawn off onto large coordinate sheets by student clerks, under the direction of the Research Secretary of Colorado State Teachers College. This gave the frequency facts for each item of information. From this original classification one hundred and thirty-one tables were made representing the new facts and comparing them to similar data obtained in the six previous studies available.

### 4. INTERPRETATION OF FACTS OBTAINED

Only the most significant points of interpretation are included in the final report which follows. Each group of facts

<sup>2</sup> Zook, G. F., *Op. cit.* page 1.

<sup>3</sup> Learned, W. S., Bagley, W. C., and Others, *The Professional Preparation of Teachers for American Public Schools*, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920

<sup>4</sup> Moehlman, A. B. *A Survey of the Needs of the Michigan State Normal Schools*, Lansing, Michigan, State Board of Education, 1922

<sup>5</sup> Zook, G. F., *Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts*. Chapter by Cross, E. A. "The Teaching Personnel of the Normal Schools of Massachusetts." Massachusetts Legislature, House Document, Number 1700, 1923

<sup>6</sup> Rule, J. N., and Others, *Educational Survey*, Commonwealth of Pennsylvania, March, 1925

<sup>7</sup> Bagley, W. C., and Others, *Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute*, Baton Rouge, Louisiana, State Board of Education, 1924

<sup>8</sup> Meader, J. L., *Survey of the Normal Schools of Connecticut*. Unpublished report, 1925

is treated on two levels; first, that of discussion in which the analysis of the tabular form is made more complete; second, that of interpretation where real meanings are discovered and stated with reference to section heads and to chapter topics.

## 5. BRIEF SUMMARY OF FINDINGS

The study finds students in modern state teachers colleges coming in about equal number from the agricultural and laboring classes on the one hand and from other occupational and cultural levels on the other. Their homes are those of modest comfort with native American traditions and speech habits and with some definite church affiliation. Brothers and sisters are rather more numerous than in the typical American family, and the student is, as a rule, second or third in age. Students attend usually in the state of their birth and at the nearest teachers college available. They do not, as a rule, teach before entering college; and many are wholly or partly self-supporting, including an increasing number who receive scholarships or fellowships. Curricula are organized, as a rule, so that students must have rather definite professional objectives. Nearly one-half of them plan to stay only for two years and to teach in an elementary school classroom. The other half wish to teach in high school, and but very few are looking forward to rural school work or to administrative or supervisory positions. Eventually more than one-half of the women will marry.

## CHAPTER II

### THE FIELD SERVED BY STATE TEACHERS COLLEGES

It is important to know the extent and the character of service which state teachers colleges are giving the states where they are located. This is indicated, from one viewpoint, by the distance of the homes of students from the college. But it is more significant to know whether state teachers colleges are serving virtually as city normal schools in caring for the local situation or whether the farm or urban centers of various sizes constitute the constituency.

#### 1. THE DISTANCE STATE TEACHERS COLLEGE STUDENTS TRAVEL

There is a slight tendency in the United States toward the subsidy of state teachers college students to cover a part of their expenses during the period of preparation in a state professional school.<sup>1-2</sup> Transportation is one large item, and this varies with the relative location of home and college.

1 Hertzog, W. S., *State Maintenance for Teachers in Training*, Warwick and York, 1921

2 Judd, C. H. and Parker, S. C., *Problems Involved in Standardizing State Normal Schools*, Bureau of Education, Department of the Interior, Bulletin No. 12, 1916

The distance of the homes of college students from the institution they were attending is reported in Table II. Colorado State Teachers College serves the entire eastern part of the state and receives many students from other states as well. The student body at Western State College comes from a rather wide mountain area. San Jose State Teachers College is more local in its clientele. The spread of the distributions of distances for the three colleges is significant, and particularly the first quartile point, which is but a few miles for Colorado State Teachers College and San Jose State Teachers College.

Pennsylvania's figure is the approximate median. No definite distance facts are found in the Louisiana report. It is stated, however, that "nearly nine-tenths of students in the

TABLE II

DISTANCE OF THE HOMES OF STUDENTS FROM THE COLLEGE  
IN THE CASE OF TWENTY-EIGHT TEACHER TRAINING INSTI-  
TUTIONS IN FOUR STATES

Miles	Colorado State Teachers College	Western State College	San Jose State Teachers College	Pennsylvania (1)	Minnesota (2)
Over 1000	3.87	2.22	2.46		
901-1000	1.15	1.27	.49		
801- 900	.59	.32	.00		
701- 800	.82	.00	.00		
601- 700	1.06	.00	.49		
501- 600	1.40	.32	.00		
401- 500	3.04	.63	2.46		
301- 400	3.29	1.90	4.93		
201- 300	10.53	8.86	4.93		
101- 200	16.61	34.81	16.26		
51- 100	18.09	28.48	18.72		
26- 50	6.25	.94	8.37		
6- 25	6.66	.63	9.36		
0- 5	26.64	19.62	31.53		
Total	100.00	100.00	100.00		
1st Quartile	4.70	57.67	3.97		
Median	79.80	101.91	52.97	50.0	51.0
3rd Quartile	208.00	173.73	144.18		
Q	101.70	58.03	70.11		

1 Rule, J. N., and Others, *Educational Survey, Commonwealth of Pennsylvania, March, 1925*

2 Schutte, T. H., "Distance and the Normal School Graduate," *Educational Administration and Supervision, December, 1923*

three institutions were born in Louisiana. Most of the students not born in Louisiana are natives of one or the other of the three contiguous states"<sup>3</sup> In Missouri,<sup>4</sup> the data for Kirksville, Warrensburg, and Maryville show that the home county furnishes one-fourth of the student body, including eighteen

3 Bagley, W. C., *Op. cit.* p. 2

4 Learned, W. S., *Op. cit.*, p. 2

percent who come from the local town, that six or seven neighboring counties furnish another fourth, that twelve or fifteen counties in the immediate district contribute one-third, while one-seventh come from other portions of the state and three percent from outside. In Minnesota, the median distance is fifty-one miles, according to Schutte's study. This fact is supplemented by a checking the writer made in the Moorhead, Minnesota, State Teachers College in 1923. Fifty-six percent of the entering class were found to have come from ten neighboring counties and forty percent of the graduates of the previous year were teaching in the same area.

So far as these six states are concerned, state teachers colleges are found attracting students from a radius of one hundred-fifty to two hundred miles, and about half of them come from a distance of fifty to one hundred miles. Exceptions to this might be found, of course, in large and in small states like Iowa and Vermont with but one teacher training institution. But in the majority of situations the above generalization holds.

## 2. THE LOCAL COUNTY

For the new material obtained for Colorado and California, the distribution of resident college students coming from the high schools in the counties of the state was tabulated. It was found that fifty-three counties of Colorado contributed students to Colorado State Teachers College and thirty counties sent students to Western State College. Thirty-two California counties contributed in like manner to the state teachers college at San Jose.

Table III summarizes these facts in terms of the contribution of the home county. From seventeen to thirty-three percent of students, enrolled in the eight colleges reporting, come from the local county; and more than one-half of these are from the city itself. In the case of Colorado State Teachers College, this is accounted for in part by the fact that Weld County covers a wide area. It ranks, however, but fourth, both Greeley and Denver sending more students. At Western State College, the local county ranks third; while two outside counties are first and second, and the local high school is but fifth. In the case of San Jose State Teachers College, the local county ranks second only to the local high school. The writer's study in the Moorhead State Teachers College, referred to in the preceding section, found twenty-two percent of the incoming class from Clay county, Minnesota, and Cass county, North Dakota. The college is located on the boundary between these two counties. It was found, also, that seventeen percent of the graduates were teaching in this same area.

TABLE III

THE PROPORTION OF THE STUDENT POPULATION IN EIGHT  
TEACHER TRAINING INSTITUTIONS COMING FROM THE HOME  
COUNTY

College	College High School	City High School	Outside School	Total
Colorado State Teachers College	8.66	16.58	7.59	32.83
Western State College, Colorado	1.08	6.47	9.35	16.90
San Jose State Teachers College, California	.. ....	19.08	9.16	28.24
Missouri (1)	.. ....	18.00	7.00	25.00
Mean	4.87	15.03	8.27	25.74

1 Learned, W. S., Bagley, W. C., and Others, *The Professional Preparation of Teachers for American Public Schools*, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920

For the eight colleges considered, about one-fourth of the student enrollment seems to come from the local county, but a large proportion of this is from the city and college high schools.

### 3. OUTSIDE STATES

Shall the state teachers college serve exclusively the state in which it is located? Or shall it seek for a cosmopolitan clientele widespread like that of the state university? The study shows thirty-five states, Canada, and Hawaii furnished one-fourth of the student body of Colorado State Teachers College. At Western State College, fourteen percent came from sixteen outside states and Italy, and at San Jose State Teachers College eighteen percent came from thirteen states and Canada. Table IV summarizes these facts in terms of diversity of source. The central tendency for three colleges is nearly three dozen states and countries, while in California with six state teachers colleges fourteen other political units contribute to the student body.

These colleges are cosmopolitan with regard to the source of a small proportion of their students, and very probably a reasonable reciprocity which preserves a balance between enrollment and placement should tend to prevent an inbreeding of localized standards. This may eventually contribute toward a national system of public schools.

TABLE IV

NUMBER OF STATES AND FOREIGN COUNTRIES FURNISHING  
HIGH SCHOOL GRADUATES FOR EIGHT TEACHER TRAINING  
INSTITUTIONS

College	States	Foreign Countries	Total
Colorado State Teachers College	36	2	38
Western State College, Colorado	17	1	18
San Jose State Teachers College, California	14	1	15
Missouri (1)			
Mean	22.2	1.3	23.6

- <sup>1</sup> Learned, W. S., Bagley, W. C., and Others, *The Professional Preparation of Teachers for American Public Schools*, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920 "Three percent come from outside the state."

#### 4. THE HOME STATE

But the great majority of students in these colleges live in the home state. Table V speaks positively on this point, including data from twenty-nine schools in six states. The range is from the situation in the four two-year normal schools in Connecticut, with an exclusively local student body, to Colorado State Teachers College, enrolling in its five years of college work but three-fourths of its students from the home state.

No definite data can be given in Chapter IV to follow on the state nativity of students, but brief quotations will be included here from three state surveys. Bagley and Alexander report that "nearly nine-tenths of the students in the three institutions were born in Louisiana."<sup>5</sup> In the Carnegie Foundation report for Missouri, the statement is, "Natives of Missouri constitute nearly seven-eighths of the students. The local county furnishes about one-fourth of all the students in

<sup>5</sup> Bagley, W. C., *Op. cit.*, p. 2



TABLE V

THE PROPORTION OF THE STUDENT POPULATION IN TWENTY-NINE TEACHER TRAINING INSTITUTIONS COMING FROM THE HOME STATE

Rank	College	Percent
1	Connecticut (1)	99.40
2	Missouri (2)	93.31
3	Pennsylvania (3)	91.98
4	Louisiana (4)	90.00
5	Western State College, Colorado	85.80
6	San Jose State Teachers College, California	81.48
7	Colorado State Teachers College, Colorado	75.22
Mean		88.17

1 Meader, J. L., *Survey of the Normal Schools of Connecticut*. Unpublished report, 1925

2 Learned, W. S., Bagley, W. C., and Others, *The Professional Preparation of Teachers for American Public Schools*, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920

3 Rule, J. N., and Others, *Educational Survey*, Commonwealth of Pennsylvania, March, 1925

4 Bagley, W. C., and Others, *Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute*, Baton Rouge, Louisiana, State Department of Education, 1924

the normal schools, including eighteen percent who come from the local town. Six or seven contiguous counties furnish another fourth; the remaining twelve or fifteen counties in the district contribute a third, while one-seventh come from other portions of the state."<sup>6</sup> In Pennsylvania, it was found that "ninety-one and ninety-eight hundredths percent of students were born in Pennsylvania."<sup>7</sup>

State teachers colleges are serving, first of all, the home state, but a desirable exchange of matriculates and of graduates occurs to include small proportions of student bodies, and these groups seem to increase as the teacher training institution approaches the full stature of collegiate rank.

##### 5. THE FARM AND THE CITY

Approximately half of the population of the United States is urban and half agricultural, and up to within a few years rather distinct types of culture obtained in the farm situation and in the city. No doubt these differences are slowly disappearing with the increase in ownership of automobiles, ease of communication, and spread of scientific appliances and of information. However, it is probably still significant to know whether our public school teachers come from the country or from urban centers.

<sup>6</sup> Learned, W. S., Bagley, W. C., and Others, *Op. cit.* p. 2

<sup>7</sup> Rule, J. N., *Op. cit.* p. 2

It was found that in Colorado State Teachers College, over forty percent of the students come from the farm and from villages of less than 2500 people. In Western State College, the figure is sixty-eight percent, and in San Jose State Teachers College it is forty-two percent. The mean is forty-four percent, and so far as these three schools are concerned less than one-half of the students are of small town and farm origin.

In Table VI, data from five more states are included. The mean, which is based on figures from two western and three eastern states, confirms the findings of the paragraph preceding.

TABLE VI

POPULATION OF COMMUNITIES FURNISHING COLLEGE STUDENTS FOR THIRTY-SEVEN TEACHER TRAINING INSTITUTIONS IN SEVEN STATES IN TERMS OF PERCENTS

Item	Colorado State Teachers College	Western State College	San Jose State College	Louisiana	Massachusetts (2)	Michigan (3)	Pennsylvania	Connecticut (5)	Mean (6)
Farm	21.02	31.50	25.40	40.20	9.28	33.33	22.56	8	19.62
Less than 2,500	23.39	36.42	16.76	28.40	19.00	66.66	42.88	15	25.59
2,500 to 25,000	36.88	27.46	27.03	21.20(1)	32.00	— —	34.56(4)	20	29.65
Over 25,000	18.71	4.62	30.81	— —	39.72	— —	— —	57	25.14
Total	100.00	100.00	100.00	— —	100.00	— —	100.00	100	100.00

- 1 Bagley, W. C., and Others, *Report of the Survey Commission on the Louisiana Louisiana Institute*, Baton Rouge, Louisiana, State Department of Education, 1924
- 2 Zook, G. F., *Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts*. Chapter by Cross, E. A., "The Teaching Personnel of the Normal Schools of Massachusetts," Massachusetts Legislature, House Document, Number 1700, 1923
- 3 Moehlman, A. B., *A Survey of the Needs of the Michigan State Normal Schools*, Lansing, Michigan, State Board of Education, 1922
- 4 Rule, J. N., and Others, *Educational Survey*, Commonwealth of Pennsylvania, March, 1925
- 5 Meader, J. L., *Survey of the Normal Schools of Connecticut*. Unpublished report, 1925
- 6 These figures refer to the Colorado, California, Massachusetts, Pennsylvania, and Connecticut institutions.

When percents of student population coming from distinctly rural (farm) and from large city environment are compared, one finds no great preponderance either way. An exception is noticed in Connecticut where more than one-half of the students come from cities of over 25,000 population and but a small percent from farms. Very probably it is the location of the school which is the final determining factor. If it is in or near a large urban center, many city students will attend.

In Louisiana, the federal census gives the proportion of students classed as rural, 68.6 per cent; urban, 31.4 percent. The population of Louisiana in rural communities in 1920 was sixty-five percent of the total; in urban communities it was thirty-five percent. The figure 31.2 is for cities from 2,500 to 100,000. In Table VI, the figure 66.66 percent for Michigan is for communities of "less than 2,500 to over 25,000 population." In Pennsylvania, the figure 34.56 is for cities from 2,500 to over 25,000.

In general, it may be said that there seems to be rather an equal distribution of percents of teachers college student origin among the four types of communities considered, and about one-half come from the farm and small village and one-half from the city.

## 6. SUMMARY

On the basis of facts available for this study, the following tentative generalizations may be made.

A. One-half of teachers college students travel fifty to one hundred miles from home to college, many come from a radius of one hundred-fifty to two hundred miles, and the median distance is nearly seventy miles.

B. One-fourth of the enrollment in teachers colleges comes from the local county, and a large part of these students are from the college high school and the city high school in the community where the college is located.

C. A small percent of the student body in teachers colleges comes from a wide area including many states and an occasional foreign country.

D. State teachers colleges are serving, first of all, the local commonwealths, as a large percentage of their students come from the home state and are born there.

E. There is almost an equal distribution of student origin between rural and urban centers with about one-fourth of all coming from cities of over 25,000 population.

## CHAPTER III

### THE HOMES OF STATE TEACHERS COLLEGE STUDENTS

The subtle influence of the character traits of teachers upon pupils with whom they come in contact is well known; and it is probably true that the home the teacher comes from, as furnishing both remote and near ancestry, determines in large measure what he is. Is the father a day laborer or in the professions, including perhaps that of teacher? Is the home dominated by alien standards of living and is a foreign tongue spoken there? Is the home circle large and complete? Answers to such questions as these with regard to that group of prospective teachers who are in attendance at state teachers colleges are probably enormously significant in determining levels of teaching ability among the public school teaching group.

#### 1. OCCUPATION OF FATHERS

New facts about the occupation of the fathers of teachers college students in Colorado and California discovered over one-third of them to be farmers, and the professional group comprises only ten to fifteen percent. This generalization is not changed materially when data from forty-two colleges in eight states are considered. The facts are found in Table VII. The miscellaneous percentage figure for Michigan (28.1) includes extraction of minerals, 3.0 percent; manufacturing, 11.0 percent; transportation, 3.9; public service, 4.1; domestic and personal service, .7; clerical, 2.0; retired, 3.4. The miscellaneous figure for Missouri (48.7) includes manufacturing, 23.6 per cent, and "all others," 25.1 percent. The median column of the table shows that over one-fourth of college students' fathers are farmers, and less than ten percent are in the professions.

It is significant to note from the above data that sixty percent are found in the farm and laboring class and only some thirty percent in business and the professions.

#### 2. APPROXIMATE INCOME

The income of the family is one index of the standard of living maintained, and this is some indication of cultural levels. The central tendency of incomes reported in Colorado State Teachers College and Western State College is \$2500 and \$2200 respectively, but in San Jose State Teachers College it is nearly \$3800. The nature of the distributions is significant

TABLE VII

OCCUPATION OF THE FATHERS OF COLLEGE STUDENTS IN FORTY-TWO TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENTS: A, COLORADO STATE TEACHERS COLLEGE; B, WESTERN STATE COLLEGE; C, SAN JOSE STATE TEACHERS COLLEGE; D, LOUISIANA; E, MASSACHUSETTS; F, MICHIGAN; G, CONNECTICUT; H, MISSOURI; I, PENNSYLVANIA

Rank	Item	A	B	C	D	E (1)	F (2)	G (3)	H (4)	I (5)	Median
1	Farmer	37.57	46.23	31.48	34.20	7.60	33.33	8	35.50	19.1	29.73
2	Skilled labor	16.64	14.04	11.73	10.40	39.78	.....	47	.....	42.5	21.97
3	Business	23.04	13.36	26.54	23.40	29.70	28.60	27	11.10	23.6	20.75
4	Miscellaneous	.....	.....	.....	.....	.....	28.10	13	48.70	2.9	10.75
5	Professional	11.85	10.27	14.82	6.90	5.71	6.70	5	4.70	6.0	8.76
6	Unskilled labor	10.90	16.10	15.43	5.00	11.41	.....	.....	.....	5.9	8.04
	Total	100.00	100.00	100.00				100.00	100.00	100.0	100.00

- 1 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924
- 2 Moehlman, A. B., A Survey of the Needs of the Michigan State Normal Schools, Lansing, Michigan, State Board of Education, 1922
- 3 Meader, J. L., Survey of the Normal Schools of Connecticut. Unpublished report, 1925
- 4 Missouri State Census, 1910
- 5 Rule, J. N., Educational Survey, Commonwealth of Pennsylvania, March, 1925

also, Q being but \$700 in Western State College, but \$1100 in Colorado State Teachers College, and \$1600 in San Jose State Teachers College.

The facts for thirty-eight state teachers colleges in seven states are found in Table VIII. The Michigan survey reports that "fifty percent have incomes ranging from \$1000 to \$3000." The Missouri report says that fifty percent earned less than \$1001; twenty percent earned between \$1001 and \$1500, and thirty percent earned over \$1500. The mean of the eight approximate medians is \$2388.

It may be said then that the average income in the families of teachers college students represented in this study ranges from \$1000 to \$3800 with a central tendency at about \$2400.

### 3. NATIVITY OF PARENTS

It is important to inquire into the racial antecedents of our public school teachers. Are they of American stock, or are they one or possibly two generations removed from foreign ancestry? If they are of alien extraction, do they come from northern Europe, southern Europe, or Russia? It is not known which origin is most desirable, but a knowledge of the facts may lead to this further inquiry.

The nativity of the parents of state teachers college students in eleven institutions is detailed in Table IX. The mode is found in American nativity, although the western percentage of eighty plus is lowered by the presence of Canadians in Michigan and of Irish and Russians in Connecticut.

Table X reports the amount of foreign born parentage in forty-two state teacher training institutions. The range is from more than one-third in Connecticut to a negligible proportion in Louisiana, with the median at about one-fourth.

Meador's report<sup>1</sup> completes the data on nativity for the four normal schools of Connecticut. He adds to the fact that 37.1 percent of students have both parents foreign born the statement that 16.4 percent had one parent born in the United States and the other in a foreign country and that 46.5 percent

1 Meador, J. L., *Op. cit.* p. 2

**TABLE VIII**  
**APPROXIMATE INCOME OF FAMILIES FROM WHICH THE COLLEGE STUDENTS OF THIRTY-EIGHT TEACHER TRAINING INSTITUTIONS COME IN TERMS OF PERCENTS**

Intervals	Colorado State Teachers College	Western State College	San Jose State Teachers College	Louisiana (1)	Massachusetts (2)	Michigan (3)	Pennsylvania (4)	Missouri (5)	Percent (6)
Over \$10,000	4.41	1.23	5.13	2.9	....	....	....	....	3.59
\$9,001- 10,000	1.26	....	6.41	3.8	....	....	....	....	2.54
8,001- 9,000	.47	....	1.28	.4	....	....	....	....	.57
7,001- 8,000	2.37	1.23	3.85	2.5	....	....	....	....	2.47
6,001- 7,000	1.74	.61	4.49	1.7	....	....	....	....	2.28
5,001- 6,000	5.21	4.91	8.97	5.0	....	....	....	....	6.35
4,501- 5,000	5.52	1.84	13.46	9.3	....	....	....	....	6.94
4,001- 4,500	2.99	.61	3.20	1.7	....	....	....	....	2.25
3,501- 4,000	5.99	7.98	7.69	8.0	....	....	....	....	7.22
3,001- 3,500	5.84	4.30	7.69	3.2	....	....	....	....	5.93
2,501- 3,000	14.04	17.18	10.26	17.1	....	....	....	....	13.81
2,001- 2,500	12.78	15.95	10.26	10.3	....	....	....	....	12.98
1,501- 2,000	20.35	20.86	7.69	18.8	....	....	....	....	16.30
1,001- 1,500	10.88	14.72	4.49	7.2	....	....	....	....	10.03
501- 1,000	4.89	6.13	5.13	5.9	....	....	....	....	5.37
0- 500	1.26	2.45	....	2.1	....	....	....	....	1.37
Total	100.00	100.00	100.00	....	....	....	....	....	100.00
1st Quartile	\$1,696.74	\$1,541.44	\$2,376.00						\$1871.39
Median	2,494.83	2,183.69	3,792.67	\$2,665.00	\$3,231.50	\$1500.00	\$2236.00	\$1000.00	2823.73
3rd Quartile	3,915.47	2,934.04	5,572.43						4140.64
Q	1,109.37	696.30	1,598.22						1134.63

1 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924

2 Zook, G. F., Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts, Massachusetts Legislature, House Document, Number 1700, 1923

3 Moehlman, A. B., A Survey of the Needs of the Michigan State Normal Schools, Lansing, Michigan, State Board of Education, 1922

4 Rule, J. N., and Others, Educational Survey, Commonwealth of Pennsylvania, March, 1925

5 Learned, W. S., and Bagley, W. C., and Others, The Professional Preparation of Teachers for American Public Schools, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920

6 These figures refer to Colorado State Teachers College, Western State College, and San Jose State Teachers College,

TABLE IX

NATIVITY OF PARENTS OF STATE TEACHERS COLLEGE STUDENTS IN ELEVEN INSTITUTIONS IN FOUR STATES IN TERMS OF PERCENTS

Rank	Country	Colorado State Teachers College	Western State College	San Jose State Teachers College	Michigan (1)	Connecticut (2)	Mean
1	United States	84.6	85.8	81.1	72.2	46.5	74.0
2	Ireland	1.8	1.0	1.5	1.1	18.5	4.7
3	Canada	1.9	1.8	2.5	9.4	2.4	3.6
4	England	2.7	4.3	2.0	3.8	3.6	3.3
5	Sweden	2.8	.9	3.4	3.7	3.6	2.9
6	Russia	.3	.4	1.2	.2	10.5	2.5
7	Germany	2.4	1.3	1.5	2.6	3.6	2.2
8	Italy	1.1	2.1	.5	.3	4.6	1.7
9	Denmark	.4	.2	2.5	.6	---	.7
10.5	Scotland	.7	.5	---	.2	1.8	.6
10.5	Austria	.5	---	.5	.6	1.6	.6
14	Norway	.3	.2	.6	1.1	---	.4
14	Bohemia	.1	---	---	.13	---	.4
14	Finland	.1	---	---	1.9	---	.4
14	France	.1	.9	.5	.2	---	.4
14	Miscellaneous	---	---	---	---	2.1	.4
17	Poland	.2	---	---	.2	1.2	.3
18	Netherlands	---	---	---	1.0	---	.2
20.5	Holland	.1	---	.5	---	---	.1
20.5	Switzerland	.1	---	.4	.2	---	.1
20.5	Bavaria	---	---	.4	---	---	.1
20.5	China	---	---	.5	.03	---	.1
23.5	Belgium	---	.3	---	.1	---	.08
23.5	Azores	---	---	.4	---	---	.08
25	Philippine Islands	---	.3	---	.03	---	.07
27.5	Mexico	.1	---	---	---	---	.02
27.5	Lithuania	---	---	---	.1	---	.02
27.5	Hawaiian Islands	.1	---	---	---	---	.02
27.5	Spain	.1	---	---	---	---	.02
34	Porto Rico	---	---	---	.03	---	.01
34	Syria	---	---	---	.06	---	.01
34	Newfoundland	---	---	---	.03	---	.01
34	Turkey	---	---	---	.03	---	.01
34	Nova Scotia	---	---	---	.03	---	.01
34	Luxemburg	---	---	---	.03	---	.01
34	Wales	(3)	(3)	(3)	.03	---	.01
34	Persia	---	---	---	.03	---	.01
34	Australia	---	---	---	.04	---	.01
Total		100.0	100.0	100.0	100.0	100.0	100.00

- 1 Moehlman, A. B., A Survey of the Needs of Michigan State Normal Schools, Lansing, Michigan, State Board of Education, 1922
- 2 Meader, J. L., Survey of the Normal Schools of Connecticut. Unpublished report, 1925
- 3 Parents from Wales were totaled with England.



TABLE X

PERCENTAGE OF STUDENTS OF FOREIGN BORN PARENTAGE IN FORTY-TWO TEACHER TRAINING INSTITUTIONS IN EIGHT STATES

Rank	State	Percent
1	Connecticut (1)	37.1
2	Massachusetts (2)	35.5
3	Missouri (3)	31.0
4	Michigan (4)	27.8
5	California	19.0
6	Colorado	15.0
7	Pennsylvania (5)	14.5
8	Louisiana (6)	2.5
Median		23.4

- 1 Meader, J. L., *Survey of the Normal Schools of Connecticut*. Unpublished report, 1925
- 2 Zook, G. F., *Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts*. Massachusetts Legislature, House Document, Number 1700, 1923
- 3 Learned, W. S., Bagley, W. C., and Others, *The Professional Preparation of Teachers for American Public Schools*, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920
- 4 Moehlman, A. B., *A Survey of the Needs of the Michigan State Normal Schools*, Lansing, Michigan, State Board of Education, 1922
- 5 Rule, J. N., and Others, *Educational Survey*, Commonwealth of Pennsylvania, March, 1925
- 6 Bagley, W. C., and Others, *Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute and the Southwestern Louisiana Institute*, Baton Rouge, Louisiana, State Department of Education, 1924

had both parents born in the United States. In Table XI, Meader analyzes the last figure by giving sixteen items of nativity of parents of normal school students born in the United States. This is perhaps not so important as data on immediate ancestry. We hope that teachers from the second generation will be more skillful than the first in developing those common skills, knowledges, and character traits necessary in a democracy.

In view of the recent discussion about our Nordic stock, Table XII is interesting, if not significant. An attempt is made to distribute the nativity of the parents of state teachers college students into two more or less distinct racial groups. We have thought that northern Europe has sent us a more desirable citizenry than has come from farther south and east. If this be true, the comparative size of the two total percents (20 percent and 5.4 percent) is encouraging.

On the basis of samplings obtained, the generalization from the data of this section is that public school teachers in preparation come in large degree from native born stock and that the smaller proportion of foreign ancestry has a northern European origin.

TABLE XI

NATIVITY OF FAMILIES OF THE NORMAL SCHOOL STUDENTS  
OF FOUR CONNECTICUT INSTITUTIONS IN TERMS OF THE  
ANCESTRY OF PARENTS BORN IN THE UNITED STATES (1)

Country	Percent
Ireland	36.8
England	21.5
America	16.5
Germany	10.0
Scotland	5.5
France	3.6
Sweden	2.0
Wales	2.0
Poland	2.0
Belgium	2.0
Denmark	2.0
Lithuania	2.0
Holland	1.0
African (negro)	1.0
Palestine (Hebrew)	1.0
Italy	1.0

1 Meader, J. L., Survey of the Normal Schools of Connecticut. Unpublished report, 1925

TABLE XII

PROPORTION OF STUDENTS WHO HAVE PARENTS OF NORTH-  
ERN EUROPEAN AND OF RUSSIAN AND SOUTHERN EURO-  
PEAN ANCESTRY

Northern	Percent	Southern	Percent
Ireland	4.60	Russia	2.50
Canada	3.60	Italy	1.70
England	3.30	Austria	.60
Sweden	2.90	Bohemia	.40
Germany	2.20	Bavaria	.10
Denmark	.70	Lithuania	.02
Scotland	.60	Spain	.02
Norway	.40	Turkey	.01
Finland	.40	Persia	.01
France	.40	Syria	.01
Poland	.30		
Holland	.30		
Switzerland	.10		
Belgium	.08		
Nova Scotia	.01		
Newfoundland	.01		
Luxemburg	.01		
Wales	.01		
Total*	19.92	Total	5.37

#### 4. LANGUAGES SPOKEN IN THE HOME

The discussion in the preceding section revealed the fact that nearly one-fourth of state teachers college students come from foreign born parentage. One index of effective assimilation into complete understanding and sympathy in our democracy might be found in the vernacular used in the home.

If it be found that more than three-fourths of the homes use the English language, this would be an indication that foreign ancestry, remote or immediate, was very probably no serious handicap to teaching ability so far as citizenship objectives are concerned.

The facts about the home language for Colorado and San Jose State Teachers College, California, are detailed in Table XIII. It will be noticed that among Colorado State Teachers College students eighteen types and combinations of speech are found, in the case of Western State College eight, and in San Jose State Teachers College thirteen. The size of the first item in the mean column (English, 92.9 percent) is the significant fact, as intimated in the paragraph above, but it is

TABLE XIII  
LANGUAGES SPOKEN IN TERMS OF PERCENTS IN THE HOMES  
OF TEACHERS COLLEGE STUDENTS IN THREE TEACHER  
TRAINING INSTITUTIONS, 1924-25

Rank	Language	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
1	English	93.92	96.52	88.10	92.9
2	English-German	2.17	.58	2.47	1.8
3	English-Swedish	1.24	....	2.47	1.2
4	English-Italian	.77	1.45	.50	.9
5	English-Danish	.16	....	1.48	.8
6.5	English-French	.16	....	.99	.3
6.5	English-Spanish	.39	.29	.99	.3
10.5	English-Dutch-German	....	....	.50	.2
10.5	English-Spanish-German	....	....	.50	.2
10.5	English-French-German- Spanish	....	....	.50	.2
10.5	English-Finnish	....	....	.50	.2
10.5	English-Norwegian	....	....	.50	.2
10.5	Chinese	....	....	.50	.2
14	English-Russian-German	....	.29	....	.1
15.5	English-French-German	.08	.29	....	.07
15.5	Spanish	.08	.29	....	.07
17.5	English-Spanish-Latin- Irish	.31	....	....	.06
17.5	Italian	....	.29	....	.06
22	English-Dutch	.08	....	....	.03
22	English-Tyrol-Italian- German	.08	....	....	.03
22	English-Hebrew	.08	....	....	.03
22	English-Tyrol	.08	....	....	.03
22	English-Hungarian	.16	....	....	.03
22	English-Polish	.08	....	....	.03
22	English-French-Belgian	.08	....	....	.03
22	English-Spanish-Swedish- German	.08	....	....	.03
	Total	100.00	100.00	100.00	100.00

interesting to note the twenty-five other types of speech as well. The presence of English in combination with the other languages in all but three items is an indication that the home speech is in a transitional stage toward the accepted American vernacular.

In Table XIV, the preponderance of the English language in the homes of state teachers college students is shown by data from thirty-eight institutions in eight states. The Missouri survey reports that "English and German are the predominant foreign elements, and occur in nearly equal numbers." The Pennsylvania report states that "for the normal schools of Connecticut the proportion is even higher than thirty percent from non-English speaking homes." The Louisiana survey reports a special situation. "Louisiana occupies an almost unique position among the states of the country. While practically all of the Louisiana students represent native born stock, a considerable proportion comes from homes in which French is the language commonly used." The significant figure in the table is, of course, ninety-three percent, the proportion of student homes where English is used.

TABLE XIV

PERCENTAGE OF ENGLISH SPOKEN AS COMPARED WITH OTHER LANGUAGES IN THE HOMES OF TEACHERS COLLEGE STUDENTS IN THIRTY-EIGHT INSTITUTIONS

Language	Colorado State Teachers College	Western State College	San Jose State Teachers College	Michigan (1)	Pennsylvania (2)	Massachusetts (3)	Missouri (4)	Louisiana	Mean (6)
English	93.92	96.52	88.0	94.5	91.17	.....	.....	.....	92.84
English and other languages	6.00	2.90	11.5	.....	.....	.....	.....	.....	4.08
French	.....	.....	.....	.....	.....	.....	.....	(5)	.....
All other languages	.08	.58	.5	5.5	8.83	10.2	30.0	.....	3.03
Total	100.00	100.00	100.0	100.0	100.00	.....	.....	.....	100.00

- 1 Moehlman, A. B., *A Survey of the Needs of the Michigan State Normal Schools*, Lansing, Michigan, State Board of Education, 1922
- 2 Rule, J. N., and Others, *Educational Survey*, Commonwealth of Pennsylvania, March, 1925
- 3 Zook, G. F., *Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts*, Massachusetts Legislature, House Document, Number 1700, 1923
- 4 Learned, W. S., Bagley, W. C., and Others, *The Professional Preparation of Teachers for American Public Schools*, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920
- 5 Bagley, W. C., and Others, *Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute*, Baton Rouge, Louisiana, State Department of Education, 1924
- 6 The mean is computed from the Colorado, California, Michigan, and Pennsylvania columns.

The case is clear that in practically all of the homes from which state teachers college students come English is the sole mode of speech.

### 5. VITAL STATISTICS

Facts about the presence and the absence of fathers and of mothers in the homes of teachers in preparation are significant. Among other implications, it might be that certain individuals have enrolled in teachers colleges more or less under the force of circumstances and because they have been compelled through the loss of parental support to prepare as quickly and as cheaply as possible for a life vocation. If there is found to be a large proportion of such cases, very probably one might not be quite so sure of future teaching success in the group.

Table XV gives the facts on this inquiry with complete returns from Colorado and California. The percentage from the Massachusetts survey refers to "one parent living." In Pennsylvania, the report shows eighty-six percent of fathers living and ninety percent of the mothers. The central tendencies of new data give but 4.5 per cent orphaned, eight to eleven percent with one parent dead, and seventy-six percent

TABLE XV

VITAL STATISTICS OF THE PARENTS OF THE STUDENTS IN TWENTY-SIX TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENTAGES OF TOTAL SAMPLINGS

Item	Colorado State Teachers College	Western State College	San Jose State Teachers College	Massachusetts (1)	Pennsylvania (2)	Louisiana (3)	Mean (4)
Father and mother living	74.10	77.04	77.34	....	....	....	76.16
Mother living and father dead	13.45	8.72	12.31	....	90.51	....	11.49
Father living and mother dead	7.55	9.01	6.90	16.9 (1)	86.09	....	7.82
Father and mother dead	4.90	5.23	3.45	.86	....	6.7	4.53
Total	100.00	100.00	100.00	....	....	....	100.00

- 1 Zook, G. F., *Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts*. Chapter by Cross, E. A., "The Teaching Personnel of the Normal Schools of Massachusetts." Massachusetts Legislature, House Document, Number 1700, 1923
- 2 Rule, J. N., and Others, *Educational Survey, Commonwealth of Pennsylvania*, March, 1925
- 3 Bagley, W. C., and Others, *Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana*, State Department of Education, 1924
- 4 The mean is computed from the Colorado and California columns.

with both parents living.

In general, it may be said that state teachers college students come in rather large proportion from homes in which the family circle is complete so far as fathers and mothers are concerned, that but a very few are orphans, and that less than twelve percent have lost either father or mother.

## 6. SIZE OF FAMILY

Are the family groups from which state teachers college students come large or small? It may be that lower types of intelligence and culture are tending toward over-reproduction in America, while the intelligentsia are failing to perpetuate themselves in proper proportion.<sup>2</sup> Then, too, among other implications, large families might contribute more prospective teachers because of economic pressure.

However this may be, the facts on size of family for the students in thirty-eight state normal schools and state teachers colleges are given in Table XVI. In Missouri, the survey found five percent of students' homes containing one child, thirty-five percent two to four children, forty-four percent five to eight, fourteen percent nine to eleven, and two percent twelve or more. The figures for Louisiana, Michigan, and Pennsylvania were taken from the Louisiana survey. In the case of Michigan, the survey says: "The median size of family of these students is between three and four children. The native Americans average 4.5 children to the family."

The average number of children in American homes has decreased steadily from nearly four in the middle 1800's to less than three about 1900.<sup>3</sup> Our medians show that teachers college students are coming from families larger than the average, the more prolific element of our population. This is a most significant fact with important implications for the general character of the teaching population of the next decade.

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<sup>2</sup> Popenoe, P. I., and Johnson, R. H., *Applied Eugenics*, The Macmillan Company, 1918

<sup>3</sup> Reports of the United States Census.

TABLE XVI

NUMBER OF CHILDREN IN THE FAMILIES OF COLLEGE STUDENTS IN THIRTY-EIGHT TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENTS

Children	Colorado State Teachers College	Western State College	San Jose State Teachers College	Louisiana (1)	Missouri (2)	Massachusetts (3)	Michigan (3)	Pennsylvania (3)
Over ten	2.73	1.48	1.48	3.1	2.0	-----	-----	-----
Ten	1.56	1.48	2.46	4.0	-----	-----	-----	-----
Nine	3.74	.59	2.46	3.6	14.0	-----	-----	-----
Eight	4.99	8.29	4.43	8.1	-----	-----	-----	-----
Seven	6.70	5.92	6.40	9.2	-----	-----	-----	-----
Six	9.81	10.36	11.82	12.0	-----	-----	-----	-----
Five	13.47	15.98	13.80	15.0	44.0	-----	-----	-----
Four	17.99	16.57	11.33	13.9	-----	-----	-----	-----
Three	17.13	18.64	16.26	14.6	-----	-----	-----	-----
Two	15.73	14.50	18.72	11.9	35.0	-----	-----	-----
One	6.15	6.21	10.84	4.3	5.0	-----	-----	-----
Median	4.61	4.64	4.37	4.4	6.5	4.6	3.5	4.0

- 1 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924
- 2 Learned, W. S., Bagley, W. C., and Others, The Professional Preparation of Teachers for American Public Schools, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920
- 3 Only the median was given for these states.

In summation, it may be said that, on the basis of facts from thirty-eight schools, the number of children in the families of state teachers college students is from four to five; and it appears that this is a larger number of children than is found in the average American home.

## 7. TEACHING EXPERIENCE IN THE FAMILY

Are teachers in preparation in state teachers colleges recruited from families in which there is a teaching tradition? So far as fathers are concerned, Table VII would seem to say, No, for but ten percent are engaged in all types of professional work. But, although parents may not have been teachers, the family may be a teaching family in that a number of brothers and sisters are now in this work.

The data on teaching experience in the families of thirty-four state teachers colleges are given in Table XVII. The outstanding fact seen is that in one-half of the families no members have taught or are teaching. In Louisiana, the total figure means that, in the data on occupation of parents, 1.6 percent were found to be teachers. The total figure for Massachusetts refers to 15.3 percent of all students who have one or

TABLE XVII

TEACHING EXPERIENCE IN THE FAMILIES OF COLLEGE STUDENTS OF THIRTY-FOUR TEACHER TRAINING INSTITUTIONS IN SIX STATES IN TERMS OF PERCENTS

Item	Colorado State Teachers College (1)	Western State College (2)	San Jose State Teachers College (3)	Louisiana (4)	Massachusetts (5)	Pennsylvania (6)	Missouri (7)	Mean (8)
None	47.39	46.09	56.10	-----	-----	-----	38.0	49.86
Father	12.76	14.20	6.89	-----	-----	9.24	-----	11.29
Mother	24.20	26.08	19.21	-----	-----	12.60	-----	23.16
One brother or sister	28.09	27.82	18.72	-----	-----	26.86	47.0	24.87
Two brothers or sisters	3.81	2.60	2.46	-----	-----	-----	-----	2.96
Three brothers or sisters	.47	1.44	-----	-----	-----	-----	15.0	.63
Over three brothers or sisters	.78	-----	.49	-----	-----	-----	-----	.42
Totals	-----	-----	-----	1.6	15.3	-----	100.0	-----

- 1 The percents are computed from a base of 1285, the total number of question blanks used.
- 2 The percents are computed from a base 345, the total number of question blanks used.
- 3 The percents are computed from a base of 203, the total number of question blanks used.
- 4 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924
- 5 Zook, G. F., Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts, Massachusetts Legislature, House Document, Number 1700, 1923
- 6 Rule, J. N., and Others, Educational Survey, Commonwealth of Pennsylvania, March, 1925.
- 7 Laarned, W. S., and Bagley, W. C., and Others, The Professional Preparation of Teachers for American Public Schools, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920.
- 8 These figures refer to the California and Colorado colleges.

more brothers or sisters teaching. In Pennsylvania, 26.86 per cent of students are reported as having from one to three brothers or sisters teaching. In the case of Missouri, the report shows forty-seven percent who have one or two brothers or sisters teaching and fifteen percent who have three or over in this work.

It is evident that about half of state teachers college students come from families in which there is no teaching tradition, but that in the case of about one-fourth of them either the fathers or mothers, or some brothers or sisters have taught or are now teaching.

### 8. SUMMARY

On the basis of data available about the homes of state teachers college students, the following generalizations may be suggested. Where it appears to be particularly significant, the findings of Coffman's study of a decade ago among teachers in service are added.<sup>4</sup>

<sup>4</sup> Coffman, L. D., The Social Composition of the Teaching Population, Teachers College, Columbia University, Contributions to Education, No. 41, 1911



A. A decreasing number of state teachers college students are coming from the farm and laboring class, and the parents of but some thirty percent of them are in business and the professions. Coffman found fifty-seven percent of teachers in service coming from farms. There was a total of eighty-one percent who were children of farmers and laborers and but eighteen percent in business and the professions.

B. The family income among state teachers college students ranges from \$1000 to nearly \$4000 with a central tendency around \$2400. Coffman's study of 1911 found the median parental income of public school teachers to be but a little over \$700.

C. State teachers college students come in large proportion from native stock, and the small percentage of foreign ancestry have a northern European background. Coffman's investigation shows about eighty-eight percent "native born with native born parents," approximately eleven percent "native born with one or both parents foreign born," and over one percent "foreign born with foreign born parents."

D. The English language is spoken in all homes from which state teachers college students come, and it is the only mode of speech in practically all such families. Coffman found English spoken in but seventy-five percent of teachers' homes, German in nearly nine percent, and a Scandinavian language in four percent.

E. On the whole, state teachers college students now come from homes in which the family circle is complete, and Coffman found practically the same situation in 1911 (seventy-eight percent with both parents living, twelve percent with fathers dead, nine percent with mothers dead, and nearly two percent orphans).

F. The number of children in the homes of teachers college students is from four to five, a larger number than is found in the average American home. Coffman's findings for teachers in service were identical; four in the families of women students, five in the families of men.

G. About half of state teachers college students come from teaching families, and in the case of about one-fourth of them some member of the family is now teaching.

## CHAPTER IV

### TYPES OF STUDENTS IN STATE TEACHERS COLLEGES

This chapter and the next on students' objectives inquire somewhat more specifically into the personality of teachers college students. The maturity of teachers in preparation in terms of age and of previous teaching experience has too often been disregarded in determining the content of courses and in deciding on technic of college teaching. The economic status of the student must be considered also, if individual success is to be insured in both curricular and extra-curricular activities, and knowledge of attitudes and habits in matters of religion may contribute toward faculty efforts in the development of desirable character traits.

#### 1. CHRONOLOGICAL AGE

The investigation of the life age of teachers college students in Colorado State Teachers College and in San Jose State Teachers College, California, reveals the fact that the median entering age is between eighteen and nineteen years, from 18 years 9 months to 19 years 2.5 months. This fact, in conjunction with the data on teaching experience before matriculation, seems to indicate that a great many teachers in preparation come directly from the high schools where they have completed their secondary work.

The columns for the first three colleges in Table XVIII show also that the median age of seniors is between nineteen and twenty years, 19 years 4.5 months to 20 years 3 months. These figures seem to indicate for the typical teachers college student in the three institutions practically a continuous term of preparatory experience from secondary school to graduation from the four-year college course. In cases where this is found to be the fact, any background of professional understanding based upon interims of teaching experience in the field is, of course, precluded. The chances for exceptions to this generalization are seen to be very small for the freshman groups because of the compactness of the distribution ( $Q$  is 0.91), but the senior classes have a wider spread of ages ( $Q$  is 2.96).

Percentage facts on chronological age distributions are collected in Table XVIII for a total of forty-two state teacher training institutions. The figure for age twenty-six under Louisiana (3.36 percent) refers to ages twenty-six to thirty. In the Michigan survey, we find the statement, "Eighty-seven percent are twenty-one years of age or younger." In the Pennsylvania column, the figure found (18.9 years) is the average age at matriculation. The four figures for Missouri refer specifically to the following age spans with percents given:

TABLE XVIII  
CHRONOLOGICAL AGE OF COLLEGE STUDENTS AT THE TIME OF ENTRANCE TO FORTY-TWO TEACHER  
TRAINING INSTITUTIONS IN TERMS OF PERCENTS

Age	Colorado State Teachers College	Western State College	San Jose State Teachers College	Louisiana (1)	Michigan (2)	Mis- souri (3)	Connecticut (4)	Massachusetts (5)	Pennsylvania (6)	Mean (7)
30 and over	5.33	3.24	3.50	.....	2.4	.....	.11			2.92
29	1.11	1.48	1.00	.....	0.6	.....	.....			.84
28	1.11	1.18	.....	.....	1.0	.....	.11			.68
27	1.51	.30	.50	.....	1.4	.....	.11			.76
26	1.43	.30	2.50	3.36	1.7	.....	.....			1.19
25	1.27	.30	1.00	.68	3.3	.....	.21			1.22
24	1.43	.59	1.00	.56	2.8	.....	.21			1.21
23	2.63	2.65	.50	2.49	4.2	.....	.32			2.06
22	4.22	2.36	2.50	2.55	5.6	40.0	1.28			3.19
21	5.89	7.97	2.00	6.47	10.5	11.0	1.91			5.65
20	8.99	13.57	9.50	12.39	14.8	14.0	5.21			10.41
19	16.71	20.35	17.50	20.79	21.2	35.0	18.19			18.79
18	26.02	25.66	33.00	26.65	19.7	.....	45.00			29.87
17	17.42	16.81	23.00	16.68	9.6	.....	23.72			18.11
16 and under	4.93	3.24	2.50	7.33	1.2	.....	3.62			3.10
Total	100.00	100.00	100.00	.....	100.0	.....	100.00			100.00
1st Quartile	18.10	18.19	17.98	.....	.....	.....	.....	.....	.....	.....
Median	19.10	19.21	18.74	18.97	19.92	20.0	18.50	18.65	18.9	19.09
3rd Quartile	21.16	20.66	19.94	.....	.....	.....	.....	.....	.....	.....
Q	1.53	1.24	.98	.....	.....	.....	.....	.....	.....	.....

- 1 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924
- 2 Moehlman, A. B., A Survey of the Needs of the Michigan State Normal Schools, Lansing, Michigan, State Board of Education, 1922
- 3 Learned, W. S., Bagley, W. C., and Others, The Professional Preparation of Teachers for American Public Schools, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920
- 4 Meader, J. L., Survey of the Normal Schools of Connecticut. Unpublished report, 1925
- 5 Zook, G. F., Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts, Massachusetts Legislature, House Document, Number 1700, 1923
- 6 Ruie, J. N., and Others, Educational Survey, Commonwealth of Pennsylvania, March, 1925
- 7 Average figures refer to Colorado, California, Michigan, and Connecticut.

under twenty, thirty-five percent; twenty, fourteen percent; twenty-one, eleven percent; over twenty-one, forty percent.

In the table, the mean central tendency in the last column (19.09 years) is not changed materially when all nine medians are averaged (19.11 years). The findings for this section are, then, that the most usual age of entrance to our state teachers colleges is about nineteen years.

It is not known whether the entering age of teachers college students is changing, but an indirect answer to this important query may be had by a comparison of present matriculation ages with the ages of beginning teachers as reported by Coffman in 1911. Table XIX contains these arrays. The median entering age in the second column for the Colorado students and those in San Jose State Teachers College is found to be 18.68 (18 years 8 months). The median for 5,000 beginning teachers in 1911 is 19.49 (19 years 6 months), ten months

TABLE XIX

THE CHRONOLOGICAL AGE OF TEACHERS WHEN BEGINNING PREPARATION IN THREE MODERN TEACHERS COLLEGES (1924) COMPARED WITH THE CHRONOLOGICAL AGE OF TEACHERS WHEN BEGINNING TEACHING IN THE FIELD A DECADE AGO (1911)

Age	1924			1911 (1)
	Freshmen	Juniors		
30 and over	16	17		31
29	6	6		12
28	2	3		14
27	3	1		17
26	6	8		25
25	5	1		46
24	3	6		94
23	10	9		151
22	14	10		272
21	32	21		527
20	56	26		864
19	130	38		1099
18	240	40		1387
17	158	45		508
16 and under	36	10		168
Total	717	241		5215
1st Quartile	17.91	18.13		18.45
Median	18.68	19.67		19.49
3rd Quartile	19.80	22.08		20.86
Q	.95	1.98		1.21

1 Coffman, L. D., *The Social Composition of the Teaching Population*, Teachers College, Columbia University, Contributions to Education, No. 41, 1911

older. Probably it would not be safe to assume two years of preparation for this group, but if so they should be twenty-

four months older. If they have had on the average one year of preparation, then the central tendencies of ages are practically identical. Possibly a more significant comparison would be between the 1911 beginning age and the junior preparatory age in 1924 (19 years 6 months and 19 years 8 months). Here there is no appreciable difference, and the type of distribution is very similar in each case as shown by the two Q's (1.21 and 1.98).

On the whole, no very striking differences in maturity appear when the chronological ages of 1911 teachers in service and of modern teachers in preparation are compared. This is not an answer to the inquiry in the preceding paragraph, but it is indirect evidence pointing to a probable constancy of life age in groups of teachers when they begin their period of professional preparation.

This section shows that the usual entering age of students to our state teachers colleges is slightly less than nineteen years, that the central tendency of the ages of all such students is slightly over nineteen years, and that there is no great difference in chronological age between modern teachers in preparation and teachers in service of a decade ago.

## 2. RELATIVE AGE

It is interesting and perhaps significant to inquire about the chronological age status of state teachers college students in the families from which they come. Is the student the oldest child, the second in age, or younger with reference to brothers and sisters?

Data on this point are presented in Table XX. For example, the figure thirty-three in the second column means that, among 1280 Colorado State Teachers College students, thirty-three percent were oldest in the families from which they came. It can be seen, also, that there were four percent of the students who were seventh in age in their families. The median figure (1.66) shows that the usual situation in this group is to be second or third in age among the children of the family.

Percentage levels are compared in Table XX for a total of twenty-nine normal schools and teachers colleges. In the Louisiana survey, the statement is "Nineteen and four-tenths are oldest children; 42.5 are either the oldest or second oldest; 58.2 are either first, second, or third children." The Pennsylvania report makes but the general statement, "The average student is one of the two older." Detailed information in this summary refers to the summer session only. This would not be comparable to our data. The column of mean percents shows that relative ages in the three columns considered are very similar and about as reported in the previous paragraph.

Median locations in the family group are summarized in Table XXI. It is evident that this is either second or third in age rank.

The general fact emerging, then, is that for the 1833 students furnishing data one-third are the oldest children in the families and the most usual position among all children in the family is either second or third in life age.

TABLE XX

RELATIVE AGE OF THE CHILDREN IN THE FAMILIES OF COLLEGE STUDENTS IN TWENTY-NINE TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENTS

Item	Colorado State Teachers College	Western State College	San Jose State Teachers College	Louisiana (1)	Massachusetts	Pennsylvania (2)	Mean (3)
Over six older	4.14	3.83	4.93	.....	.....	.....	4.30
Six older	2.74	1.18	.98	.....	.....	.....	1.64
Five older	3.20	4.72	3.45	.....	.....	.....	3.79
Four older	6.09	5.31	6.40	.....	.....	.....	5.93
Three older	10.39	9.44	10.34	.....	.....	.....	10.05
Two older	14.45	17.70	10.84	58.2	.....	.....	14.33
One older	26.33	23.30	24.14	42.5	.....	.....	24.59
None older	32.66	34.52	38.92	19.4	.....	.....	35.37
Total	100.00	100.00	100.00	.....	.....	.....	100.00
Median	1.66	1.66	1.46	.....	2.9	.....	

- 1 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924
- 2 Rule, J. N., and Others, Educational Survey, Commonwealth of Pennsylvania, March, 1925
- 3 The average figures refer to Colorado and California colleges only.

TABLE XXI

RELATIVE AGE OF THE CHILDREN IN THE FAMILIES OF STATE  
TEACHERS COLLEGE STUDENTS IN THREE COLLEGES IN  
TERMS OF MEDIAN POSITION IN THE FAMILY GROUP, 1924-25

College	Graduate	Senior	Junior	Sophomore	Freshman	Unclassified	Total
Colorado State Teachers College	1.71	1.70	2.02	1.64	1.57	1.68	1.66
Western State College	1.50	2.00	1.50	1.80	1.52	2.00	1.66
San Jose State Teachers College	2.00	0.80	1.60	1.43	1.52	3.50	1.46
Mean	1.73	1.52	1.70	1.28	1.23	2.39	1.59

### 3. TEACHING EXPERIENCE

One important problem in curriculum making for teachers colleges has to do with an effective introduction of the high school graduate to the new field of endeavor which he is entering. It is not completely terra incognita, for as pupil he has recently taken active part in the teaching process in the high school. But it is probably true that on the whole only incomplete and distorted notions about education and its problems are obtained in this manner. It would perhaps be worth while to require a certain period of precollege teaching before matriculation. And, of course, the reason for including student teaching in the curriculum is that teachers in preparation may be at the same time teaching and learning.

In the first section of this chapter, it was intimated that the usual situation during the preparatory period of teachers college students did not include much interruption of college life for teaching under contract. Definite reports on teaching experience for the time after secondary work had been completed have been included among the new data secured for this study.

This report on professional experience between secondary school and college is summarized from the original classification in Table XXII. The shortest period of teaching experience is seen to be less than five months (.47 school years). The mean of all medians is .59 school years, five and one-half months.

The proportion of teachers college students having one to four and more years of teaching experience between high

school and college is given in Table XXIII. The table shows a large percentage (85 percent) with no teaching experience, but 5.5 percent with one year of teaching, and very small numbers with more than one year.

The Pennsylvania survey reports that on the average 12.9 percent had had such experience, but definite periods are not given. In Missouri, the statement is that "Two-fifths of the students have had teaching experience." The column of mean percents confirms the findings of the preceding paragraph in that "None" is found to be the mode, a very small number (5.5 percent) have taught but one year, and a total of less than ten percent from two to four years and more.

TABLE XXII

TEACHING EXPERIENCE OF STATE TEACHERS COLLEGE STUDENTS IN THREE INSTITUTIONS AFTER HIGH SCHOOL GRADUATION AND BEFORE ENTERING COLLEGE IN TERMS OF MEDIAN SCHOOL YEARS

College	Graduate	Senior	Junior	Sophomore	Freshman	Unclassified	Total
Colorado State Teachers College	.88	.72	.68	.68	.58	.59	.64
Western State College, Colorado	.50	.67	.58	.47	.93	.80	.58
San Jose State Teachers College, California	.50	.67	.56	.56	.52	.50	.54
Mean	.63	.69	.61	.57	.68	.63	.59

TABLE XXIII

TEACHING EXPERIENCE OF STATE TEACHERS COLLEGE STUDENTS AFTER HIGH SCHOOL GRADUATION AND BEFORE ENTERING COLLEGE IN THREE TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENTS

Item	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
Over four years	5.65	3.84	1.04	3.51
Four years	1.29	.89	1.04	1.07
Three years	2.91	1.48	1.55	1.98
Two years	4.44	2.07	1.55	2.69
One year	7.91	5.92	2.59	5.48
None	77.80	85.80	92.23	85.27
Total	100.00	100.00	100.00	100.00



The findings on inter-teaching experience before college matriculation are, then, that the great majority of students have none and that for the small percent who do teach the period is but for a very short school year.

#### 4. LENGTH OF TRAINING

A recently accepted slogan among public school administrators calls for a professionally trained teacher in every classroom in the United States. As an immediate objective, this is usually interpreted to mean two years of professional preparation beyond the secondary school level, although the ultimate aim looks toward the happy time when every public school teacher shall have earned a bachelor's degree granted by a teachers college or a college of education.

As this study deals with the pre-service group, it gives no definite data on the training of in-service teachers. Tables XXIV and XXV, however, give the proportionate size of student groups at different training levels. Three-fourths are two years above the high school and about one-fourth beyond this point. This is very probably the general situation in our four year state teachers colleges, but only a small part of all public school teachers are prepared there.

TABLE XXIV

THE PROPORTION OF STATE TEACHERS COLLEGE STUDENTS FOUND AT FIVE ACADEMIC LEVELS IN THREE TEACHER TRAINING INSTITUTIONS, 1924-25

Academic level	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
Graduate	3.0	(1)	(1)	1.0
Senior	9.0	1.0	4.0	4.0
Junior	14.0	15.0	16.0	15.0
Sophomore	36.0	39.0	26.0	34.0
Freshman	38.0	45.0	54.0	46.0
Total	100.0	100.0	100.0	100.0

1 A negligible percent

TABLE XXV

PROPORTION OF STATE TEACHERS COLLEGE STUDENTS GRADUATED AT THREE COMPLETION LEVELS AT COLORADO STATE TEACHERS COLLEGE DURING THE FOUR QUARTERS OF 1924-25

Completion Levels	Percent
Masters	3.42
Bachelors	21.92
Two-year graduates	74.66
Total	100.00

Recent checkings seem to say that the most usual length of training among all public school teachers is very close to the point of graduation from the secondary school, four years above the elementary level. It is interesting to compare this with the facts for 1911 as given in Table XXVI. Here, the median is slightly over four years.

It is not possible to carry this discussion further here, but very probably the clog on the wheel of progress toward our present day slogan would be found in the rural school situation. One-half of our public school pupils and teachers are found there, and no doubt there is our most serious public school problem, unsolved as yet.

### 5. LIVING EXPENSES AND FEES

In view of the tendency mentioned in Chapter II for the state to take care of a part of the budget of teachers in preparation, the facts about the annual college expenses of state teachers college students are worth reporting. What part of this comes from the family income? What part is borrowed, and what amounts are derived from other sources, including work during college attendance?

TABLE XXVI

THE NUMBER OF YEARS OF TRAINING OF TEACHERS IN SERVICE BEYOND ELEMENTARY SCHOOL, 1911 (1)

Years	Frequency	Percent
0	394	9.0
$\frac{1}{8}$	24	.5
$\frac{1}{4}$	16	.5
$\frac{3}{8}$	22	.5
1	305	6.5
2	524	10.8
3	737	13.7
4	1247	21.8
5	745	13.2
6	637	10.6
7	222	4.8
8	242	5.5
9	53	1.2
10	31	.9
11	8)	
12	6)	.5
13	2)	
Total	5215	100.0
Median	4.47	

1 Coffman, L. D., *The Social Composition of the Teaching Population*, Teachers College, Columbia University, Contributions to Education, No. 41, 1911

The data on living expenses are given in Table XXVII. In the original classification no great differences appeared on the five academic levels, but the Q's in the three colleges from which new figures were obtained varied from \$93 to \$135. In Michigan, the survey reports, "The range of the middle fifty percent is from \$376 to \$652, or a monthly range of \$37 to \$65. The range of weekly price for board is from \$4 to \$8 at all four schools. The weekly cost of room varies from \$1 to \$8." The Pennsylvania median is a rough estimate, and the report says, "Fees \$55.78, room and board \$303.15." The mean central tendency for twenty-one schools is \$400, and about fifty percent of the students use from about \$300 to nearly \$600 in the college year.

The proportion of this annual amount required for college expenses which was received from the home income of the student is shown in Table XXVIII. The total number of students reporting was small (47 percent), and very probably many of those not included in the table are independent of home support. In the original classification, where the class medians represented good samplings, no great differences appeared within the school, but the total median for Western

TABLE XXVII

LIVING EXPENSES AND COLLEGE FEES OF THE COLLEGE STUDENTS OF TWENTY-ONE TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENTS

Interval	Colorado State Teachers College	Western State College	San Jose State Teachers College	Michigan (1)	Pennsyl- vania (2)	Mean (3)
Over \$900	1.93	1.73	.62	2.0	.....	1.57
\$801- 900	1.68	1.04	1.88	4.5	.....	2.28
701- 800	2.52	1.38	1.88	9.6	.....	3.85
601- 700	6.71	4.48	5.62	11.5	.....	7.08
501- 600	15.52	11.03	13.75	23.2	.....	15.87
401- 500	20.05	22.76	15.63	16.5	.....	18.73
301- 400	24.83	31.38	24.37	14.7	.....	23.82
201- 300	13.67	20.69	14.38	9.7	.....	14.61
101- 200	2.60	3.10	3.12	8.3	.....	4.28
0- 100	10.49	2.41	18.75	...	.....	7.91
Total	100.00	100.00	100.00	100.0	.....	100.00
1st Quartile	\$288.12	\$296.83	\$222.74	.....	.....	\$269.23
Median	394.58	379.02	357.41	\$512.0	\$358.93	377.00
3rd Quartile	522.62	482.06	493.00	.....	.....	499.22
Q	117.25	92.62	135.13	.....	.....	115.00

- 1 Moehlman, A. B., A Survey of the Needs of the Michigan State Normal Schools, Lansing, Michigan, State Board of Education, 1922
- 2 Rule, J. N., and Others, Educational Survey, Commonwealth of Pennsylvania, March, 1925
- 3 The average percents refer to Colorado, California, and Michigan.

TABLE XXVIII

PERCENTAGE OF COLLEGE EXPENSES OF STUDENTS OF THREE  
TEACHER TRAINING INSTITUTIONS RECEIVED FROM RELATIVES  
(FATHER, MOTHER, BROTHER, OR SISTER)

Interval	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
81-100	53.93	41.81	58.15	51.30
61- 80	10.01	11.07	14.68	11.92
41- 60	13.56	15.16	13.04	13.92
21- 40	13.03	15.16	6.52	11.57
0- 20	9.47	16.80	7.61	11.29
Total	100.00	100.00	100.00	100.00
1st Quartile	44.69	31.81	57.67	44.73
Median	82.46	66.19	83.80	77.48
3rd Quartile	91.73	89.04	92.40	91.06
Q	23.52	28.62	17.37	23.17

State College is much lower than in Colorado State Teachers College or San Jose State Teachers College. Here also Q is much larger, and the most compact distribution is that of the California school. In Pennsylvania, the report is that students borrow seventy-two percent of their expenses from father and mother and five percent from other relatives. The table shows an average median of 77.5 percent of expenses coming from relatives.

The proportion of the expenses of state teachers college students which is borrowed money is reported in Table XXIX. In the original tabulations, great differences were found among central tendencies for the five academic levels and in the spread of distributions, but this is caused in part no doubt by the meager samplings (12, 15, and 1 percent respectively). For this reason the tables are not very significant. However, the facts as collected are reported, and it appears that about forty percent of the college expenses of teachers college students are borrowed. This figure is probably too high, as will appear later.

Two usual types of activities are engaged in by state teachers college students in order to defray expenses unprovided for by family or state aid. These consist (1) of all kinds of work both on the college campus and in the community, and (2) of professional service in the college. The latter is very significant from the viewpoint of the professional preparation of teachers. Scholarships and fellowships, as a rule, are awarded on the basis of outstanding qualities of intellect and

**TABLE XXIX**  
**PERCENTAGE OF COLLEGE EXPENSES OF STUDENTS OF THREE**  
**TEACHER TRAINING INSTITUTIONS WHICH WAS BORROWED**

Interval	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
81-100	16.98	17.39	20.00	18.13
61- 80	8.80	15.94	13.33	12.69
41- 60	24.53	14.49	13.33	17.45
21- 40	25.79	23.19	20.00	22.99
0- 20	23.90	28.99	33.34	28.74
Total	100.00	100.00	100.00	100.00
1st Quartile	21.85	17.25	15.00	18.03
Median	41.26	39.13	37.67	39.35
3rd Quartile	62.79	71.45	73.50	69.25
Q	20.47	27.11	29.25	25.61

character which are sure to carry over to the future classroom or school office and to insure higher types of service there. Ordinarily, also, the preparation period of the scholar or the fellow is lengthened beyond that necessary to complete the course pursued when the student's whole time is given to it. And the activities engaged in provide a regimen of learning while doing which is sure to enhance the value of the preparatory period.

The new data secured for this study include material on the proportion of college expenses provided for by scholarships, fellowships, and savings. This is set forth in Table XXX. One significant fact is that such a large number of students in each school report aid of this kind (52 percent). As one would expect, the older students report larger portions of their expenses covered by these stipends.

In the Pennsylvania survey, four schools report the median savings of students to be 12.5 percent of all expenses. Four percent of this comes from scholarships and 3.25 percent from other sources. The larger medians in the table for Colorado State Teachers College and the Michigan schools are accounted for, no doubt, because of the larger enrollment in upper classes, including those of graduate rank. The mean of the four medians in the table is forty-nine percent.

On the basis of data available, then, it appears that about one-half of the college expenses of teachers college scholars and fellows is covered by institutional stipends and that the middle half of such students take care of from one-fifth to three-fourths of their expenses in this way.

## 6. SELF-SUPPORT

It is important to inquire the type of person found in preparation for teaching in our state teachers colleges in terms

TABLE XXX

PERCENTAGE OF COLLEGE EXPENSES OF STUDENTS OF THIRTY-FIVE TEACHER TRAINING INSTITUTIONS COMING FROM SCHOLARSHIPS, FELLOWSHIPS, AND SAVINGS IN VARYING PROPORTIONS

Interval	Colorado State Teachers College	Western State College	San Jose State Teachers College	Michigan (1)	Pennsylvania (2)	Mean (3)
81-100	34.42	23.95	26.16	.....	.....	28.18
61- 80	11.44	9.58	10.28	.....	.....	10.44
41- 60	14.00	15.27	21.50	.....	.....	16.92
21- 40	13.07	17.67	21.50	.....	.....	17.41
0- 20	27.07	33.53	20.56	.....	.....	27.05
Total	100.00	100.00	100.00	.....	.....	100.00
1st Quartile	18.47	14.91	25.13	.....	.....	19.50
Median	55.08	39.64	48.39	51.0	.....	47.70
3rd Quartile	86.48	78.81	81.89	.....	.....	82.39
Q	34.00	31.95	28.38	.....	.....	31.44

1 Moehlman, A. B., *A Survey of the Needs of the Michigan State Normal Schools*, Lansing, Michigan, State Board of Education, 1922

2 Rule, J. N., and Others, *Educational Survey*, Commonwealth of Pennsylvania, March, 1925

3 The average percents refer to Colorado and California.

of degrees of economic independence resulting from self help. Very probably this will indicate to some extent levels of maturity of desirable social and character traits which will affect immediate success in school management after graduation.

The preceding section presents material on sources of support. Here, facts obtainable in the new data about students' savings and student work will be added, and reports on students' independence from a number of other states will be included.

The percent of students in Colorado and California furnishing data on savings is found to be twenty-eight, and this is some indication that over one-fourth are using this means of meeting college expenses. Table XXXI gives the distribution of these students among the five academic levels represented. The largest use of savings seems to be found in the freshman and sophomore classes, upper classmen depending on other sources.

The returns gave but a small proportion of students mentioning outside work during college life (14 percent). Table XXXII distributes percents found among the college classes. Here, too, the under classmen seem to be most independent, as indicated by the percent who are working. This similarity is further shown in Table XXXIII, where it appears that forty percent of freshmen and one-third of sophomores meet their college expenses from savings and by work.

TABLE XXXI

THE PERCENT OF STUDENTS IN EACH CLASS OF THREE STATE TEACHERS COLLEGES USING THEIR SAVINGS FOR COLLEGE EXPENSES

Academic Level	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
Graduate	4.8	0.0	1.5	2.1
Senior	10.5	5.9	4.3	6.9
Junior	15.8	14.6	13.0	14.5
Sophomore	33.3	37.1	21.7	30.7
Freshman	31.2	41.1	58.0	43.4
Unclassified	4.4	1.3	1.5	2.4
Total	100.0	100.0	100.0	100.0

TABLE XXXII

THE PERCENT OF STUDENTS IN EACH CLASS OF THREE STATE TEACHERS COLLEGES MEETING THEIR COLLEGE EXPENSES BY WORK

Academic Level	Colorado State Teachers College	Western State College	San Jose State Teachers College	Mean
Graduate	2.7	1.1	3.6	2.5
Senior	14.1	6.3	3.6	8.0
Junior	17.5	14.7	17.8	16.7
Sophomore	33.7	34.7	35.7	34.7
Freshman	27.1	42.1	39.3	36.1
Unclassified	4.9	1.1	...	2.0
Total	100.0	100.0	100.0	100.0

TABLE XXXIII

THE PERCENT OF STUDENTS IN EACH CLASS OF THREE STATE TEACHERS COLLEGES MEETING THEIR COLLEGE EXPENSES BY SAVINGS AND WORK

Academic Level	Savings	Work	Mean
Graduate	2.1	2.5	2.3
Senior	6.9	8.0	7.4
Junior	14.5	16.7	15.6
Sophomore	30.7	34.7	32.7
Freshman	43.4	36.1	39.8
Unclassified	2.4	2.0	2.2
Total	100.0	100.0	100.0

In the matter of the amount of outside work students do at Colorado State Teachers College, it is worth while to add here a group of findings on the distribution of the student's time taken from one volume of a survey made seven

years ago. This appears as Table XXXIV where material from the original report is rearranged in percentage form. The general fact seen here is that on the average students who did outside work used nearly one-fifth of the total hours available in the week in that way.

For the new data coming from the three state teachers colleges in Colorado and California, the average amount expended (Table XXXV) is found to be approximately \$400, about one-half of which may be classed as self-earned.

What facts are available on self-support among state teachers college students in six states are collected in Table XXXVI. In Michigan, the figure fifty-one percent represents all of those students who are self-supporting to any degree. The survey says, "Of those who work, 18.5 percent are one quarter self-supporting; 13.5 percent provide half of their expenses, and 44.8 percent earn practically all of the money necessary to keep them in school. There are 4.3 percent who work for room and board only, and 8.5 percent who worked before coming to school." In Massachusetts, the actual report is that "29.5 percent of students are partly or wholly self-supporting." In Missouri, seven percent are re-

TABLE XXXIV

PERCENTAGE OF THE TIME OF ONE HUNDRED TWENTY-NINE STUDENTS IN COLORADO STATE TEACHERS COLLEGE GIVEN TO COLLEGE WORK AND OUTSIDE WORK, 1917-18 (1)

College Year	Sampling	College Work	Outside Work	Total
Freshman	63	80	20	100
Sophomore	50	78	22	100
Junior, senior and graduate	16	85	15	100
Total	129			
Mean		81	19	100

1 Heilman, J. D., Educational Survey of Colorado State Teachers College, Section IV, Part II, "Student Load," 1920

TABLE XXXV

AN ESTIMATE OF THE EXPENSES AND INCOME OF THE TYPICAL STATE TEACHERS COLLEGE STUDENT IN COLORADO AND SAN JOSE STATE TEACHERS COLLEGE, CALIFORNIA, 1924-25

I. Annual expenses	\$377
II. Sources of income	
1. The family	75 (77.5) percent
2. Loans	25 (39.4) percent
3. Scholarships, fellow- ships, other work, and like sources	50 (47.7) percent



TABLE XXXVI

THE APPROXIMATE PROPORTION OF TEACHERS COLLEGE STUDENTS IN SIX STATES WHO ARE SELF-SUPPORTING

State	Percent
Michigan	51
Colorado and California	50
Massachusetts	29
Missouri	36
Connecticut	14
Mean	36

ported as partly self-supporting. In Connecticut, eighty-five percent are supported from family funds, four percent from scholarships, ten percent from their own savings, and less than one percent from loans.

This table shows, then, from one-tenth to one-half of state teachers college students to be wholly or partly self-supporting, with the central tendency near one-third. In 1922, a committee of the National Council of Education,<sup>1</sup> reported the number to be forty-five percent. The specific question was, "Estimated percent of your students who must pay for all or the larger part of their education?" As data in this study were "received from every state in the union," no doubt the figure reported is very near the facts for three years ago.

## 7. RELIGIOUS AFFILIATION

On the assumption that personality traits found among church members and attendants are desirable in the light of teaching success after graduation, distribution of the church preferences of state teachers college students available are presented in this section. At the time of registration, the Religious Council at Colorado State Teachers College secures an expression on this point from each entering student. The facts for the spring quarter, 1925, as taken from the College paper, *The Mirror*, are given in Table XXXVII. A total of thirty-two religious denominations are listed, but the upper half of students mentioned the Methodist, Presbyterian, and Christian churches.

The table gives also one other available distribution from Michigan. Here the upper fifty percent are included in the Methodist, Presbyterian, and Catholic churches; and in the column of means the order is Methodist, Presbyterian, Catholic. Another significant figure in this column is that indicating no church preference. This is but ten percent.

<sup>1</sup> McKenny, C., and Others, *Report of the Committee on Teachers Colleges*, National Council of Education, National Education Association, February 27, 1922

TABLE XXXVII

## RELIGIOUS AFFILIATION OF STUDENTS IN FIVE TEACHER TRAINING INSTITUTIONS

Denomination	Colorado State Teachers College		Michigan (1)	Mean
	Number	Percent	Percent	Percent
1 Methodist	375	27.06	31.60	29.33
2 Presbyterian	230	16.59	13.40	14.99
3 No church affiliation	152	10.96	9.91	10.43
4 Catholic	103	7.43	12.40	9.91
5 Congregational	91	6.56	8.50	7.53
6 Baptist	116	8.37	5.90	7.13
7 Episcopal	97	7.00	4.30	5.65
8 Christian	120	8.66	.60	4.63
9 Lutheran	19	1.37	6.60	4.00
10 Christian Scientist	24	1.73	1.10	1.41
11 Reformed	....	....	1.40	.70
12 Church of Christ	....	....	1.40	.70
13 United Presbyterian	18	1.30	....	.65
14 Swedish Evangelical	2	.15	.90	.52
15 United Brethren	1	.07	.40	.24
16 Unitarian	6	.43	....	.22
17 Reformed Presbyterian	6	.43	....	.22
18 Christian Reformed	....	....	.40	.20
19 Nazarene	4	.28	....	.14
20 Free Methodist	2	.15	.10	.13
21 Jewish	1	.07	.30	.13
22 Disciple	....	....	.20	.10
23 Unclassified	....	....	.20	.10
24 Latter Day Saints	2	.15	.03	.09
25 Church of God	2	.15	....	.08
26 Swedish Lutheran	2	.15	....	.08
27 English Lutheran	2	.15	....	.08
28 Evangelical	2	.15	....	.08
29 Free Church	2	.15	....	.08
30 Seventh Day Adventist	1	.07	.07	.07
31 Mennonite	1	.07	.03	.05
32 Universalist	....	....	.10	.05
33 Mission	1	.07	....	.04
34 German Lutheran	1	.07	....	.04
35 Undenominational Christian	1	.07	....	.04
36 Church of Brethren	1	.07	....	.04
37 International Bible Student Association	1	.07	....	.04
38 Apostle	....	....	.07	.04
39 Greek Orthodox	....	....	.03	.02
40 Friends	....	....	.03	.01
41 Moravian	....	....	.03	.01
Total	1386	100.00	100.00	100.00

1 Moehlman, A. B., A Survey of the Needs of the Michigan State Normal Schools, Lansing, Michigan, State Board of Education, 1922

Over one-fourth of these students prefer the Methodist church, ten percent are Catholic, and but ten percent have no church affiliation.

## 8. SUMMARY

On the basis of facts available the following general statements may be made descriptive of types of students found in American state teachers colleges:

A. State teachers college students now matriculate for their preparatory experience at slightly under nineteen years of age, the median age of all state teachers college students in all classes is slightly over nineteen years, and these groups of teachers in preparation are very nearly the age of teachers in service in 1911.

B. One-third of state teachers college students are oldest children in the families from which they come, and the central tendency of relative age is either second or third among all children in the family.

C. Nearly all state teachers college students come directly from high school to college without an inter-period of first teaching, and the experience of the small percent who do teach is for but a very short school year.

D. Three-fourths of state teachers college students are on an academic level two years beyond secondary school, but on the evidence of indirect proof obtainable it does not appear that the average length of training of all teachers has changed much in ten years' time.

E. On the average, the expenses of each state teachers college student for one year amount to \$400, and about three-fourths of this comes from the family income. But many students report nearly forty percent of their expenses covered by loans, and scholars and fellows receive about one-half of the funds they need as stipends.

F. About forty percent of freshmen reporting and one-third of sophomores in state teachers colleges meet their expenses through savings or by work. In the latter case, one-fifth of the total hours available in the week are given over to gainful occupations.

G. From one-tenth to one-half of state teachers college students are wholly or partly self-supporting, with a median of one-third.

H. All but a very small percent of state teachers college students are affiliated with some organized church, the larger part (about one-fourth) preferring the Methodist denomination and smaller groups the Presbyterian, Catholic, Congregational, Episcopal, and Christian churches. A total of forty denominations are represented in the five state teachers colleges reporting.

## CHAPTER V

VOCATIONAL OBJECTIVES OF STATE TEACHERS  
COLLEGE STUDENTS

The criterion for every activity in a state teacher training institution is success in teaching under contract after graduation; and the fact is gradually receiving recognition that the first step toward making the teacher training curriculum effective is a scientific analysis of this complex objective and a discovery of relationships among all variables involved, both dependent and independent.<sup>1-2</sup> Complete analyses of any teaching job have not as yet appeared, although at least two research centers have been at work in this field for more than a year.<sup>3</sup> The procedure used in these studies<sup>4</sup> consists in brief of concrete checkings of things done by teachers on the job in terms of duties, difficulties, and activities; of an evaluation of these items in terms of actual teacher training offerings of needed knowledges, skills, and attributes; and of the judgments of frontier thinkers in the special realm of thought under investigation.

This chapter suggests and illustrates analysis of our teacher training objective on another level, a study of (1) the hopes and plans of teachers in training as to "what they expect to do" after completing the period of training, of (2) specific requests for teachers coming in the spring quarter from superintendents and boards of education, of (3) actual placements of graduates for two calendar years, of (4) a checking of proportions of graduates actually found in one type of life occupation, and of (5) the percentage of state teachers college students who are not planning to teach.

The tabulations of new data available for this investigation from Colorado and one California college giving analyses of the future plans of 1924-25 students are too extensive to give here. The astonishing length of the list of teaching jobs (over one hundred and fifty) is the first significant fact noted. Is a recognition of this complexity of objective found in an effective differentiation of preparatory items in our teacher training curricula? Another important fact found is that the field of preference narrows as students progress

- 1 Whitney, F. L., *The Prediction of Teaching Success*, Journal of Educational Research Monograph No. 6, Public School Publishing Company, Bloomington, Illinois, 1924
- 2 Whitney, F. L., "The Determination of Objectives in Teacher Training," *Educational Administration and Supervision*, May, 1923
- 3 W. W. Charters at the University of Pittsburgh and the University of Chicago and E. A. Cross, E. U. Rugg, and F. L. Whitney constituting the Curriculum Committee at Colorado State Teachers College for 1924-25
- 4 Whitney, F. L., "Curriculum Revision in a Teacher Training Institution," *Educational Administration and Supervision*, February, 1926

through the teacher training period. Upper classmen seem to know more definitely what type of work they want than do freshmen.

The findings from five more states are included in a summary table (Table XXXVII). In Louisiana, the percent given for grade seven, the closing year of the elementary period, is 4.7. In the Massachusetts figures, the elementary section shows 2.78 percent for kindergarten, 14.47 percent for grades one and two, 25.03 percent for grades three and four, 15.39 percent for grades five and six, or a total of 57.67 percent. In Michigan, the statement is, "Seventy-one and nine-tenths percent intend to teach." In Pennsylvania, the seventh and eighth grades are included in the figures given for junior high school. Here also manual training shows 1.06 percent, health education an average of seven percent, and commercial education 1.23 percent. In Missouri, the figures are for three colleges out of five only and include those students who said that they intended to teach immediately upon graduation.

### 1. ADMINISTRATION

The distribution of vocational objectives among the eight main types of positions shown in the summary tables is instructive, and when administrative work is considered the figures are very small indeed. The largest number of students are looking toward this objective in Colorado State Teachers College. This might be expected from a five-year college institution, but in some of the other states represented in Table XXXVIII at least four years of college work are offered with good enrollment in upper classes.

This suggests the long-discussed question of the distinctive function of state normal schools and state teachers colleges, if they have such in contradistinction from the teacher training task of the state universities. It would seem that after nearly one hundred years of development, the question of fact might be pointed out, and it might be conceded that with the multiplication of secondary schools and the progressive acceptance of the ideal of a bachelor's degree for every teacher of American children a sharp line of demarcation cannot be drawn to delegate the preparation of administrators, supervisors, and high school teachers to the state universities and that of elementary teachers to state normal schools and state teachers colleges.<sup>5</sup>

<sup>5</sup> Hall-Quest, A. L., *Professional Secondary Education in Teachers' Colleges*, Teachers College, Columbia University, Contributions to Education, No. 169, 1925

TABLE XXXVIII

VOCATIONAL OBJECTIVES OF COLLEGE STUDENTS IN TWENTY-NINE TEACHER TRAINING INSTITUTIONS IN TERMS OF PERCENT OF TEACHING POSITIONS THEY PLAN TO ENTER

Objectives	Colorado State Teachers College	Western State College	San Jose State Teachers College	Louisiana (1)	Massachusetts (2)	Pennsylvania (3)	Missouri (4)	Mean (5)
I. Administration	1.21	0.67	----	----	----	----	----	0.63
II. Supervision								
1. Urban	5.51	3.70	13.22	----	2.7	3.21	----	7.48
2. Rural	0.92	0.67	0.44	----	----	----	----	0.68
III. Teaching								
1. Elementary	37.46	42.76	48.01	60.50	57.67	11.26	21	42.74
2. Rural	0.07	0.67	5.73	0.10	3.13	5.49	37	2.16
3. Junior High School	25.45	11.46	20.27	----	17.50	4.23	----	19.05
4. Senior High School	25.98	39.73	9.69	34.60	18.90	4.61	42	25.13
5. College	3.40	0.34	2.64	----	----	----	----	2.13
Total	100.00	100.00	100.00	----	----	----	100	100.00

- 1 Bagley, W. C., and Others, Report of the Survey Commission on the Louisiana State Normal College, the Louisiana Polytechnic Institute, the Southwestern Louisiana Institute, Baton Rouge, Louisiana, State Department of Education, 1924
- 2 Zook, G. F., Report of a Fact-finding Survey of Technical and Higher Education in Massachusetts. Chapter by Cross, E. A., "The Teaching Personnel of the Normal Schools of Massachusetts." Massachusetts Legislature, House Document, Number 1700, 1923
- 3 Rule, J. N., and Others, Educational Survey, Commonwealth of Pennsylvania, March, 1925
- 4 Learned, W. S., Bagley, W. C., and Others, The Professional Preparation of Teachers for American Public Schools, Carnegie Foundation for the Advancement of Teaching, Bulletin Number Fourteen, 1920
- 5 The mean refers to the Colorado and California institutions.

## 2. SUPERVISION

The figures for supervisory objectives are much larger, but still less than nine percent of all students reporting in Colorado and California. The relative size of the percent figure for San Jose State Teachers College and the fact that it is based on rather numerous cases from the lower classes casts some doubt upon its reliability. Very likely the mean (7.48 percent plus 0.68 percent) is too large to represent the facts.

It is important to note that these colleges are able to interest even a small number of students in the rural school problem, and a very few of these say that they wish to be rural supervisors. The aid of professional supervision is needed most where teachers are youngest in life age and in length of training and experience. Should the four-year state teachers college become effectively conscious of the need in this important segment of our total teacher training objective? Or should the preparation of rural teachers and supervisors be left to the high school and to the two-year normal schools of junior college rank with many classes on the secondary level?

## 3. TEACHING

But the larger part of our 800,000 American educators must function as classroom teachers, and the figures in Tables XXXVIII and XXXIX show a rough correspondence here between need in the field and preparatory enrollment in our state teachers colleges. Some forty-five percent of all students in three colleges are looking forward to work in elementary classrooms, and in two states reporting the pro-

TABLE XXXIX

LEVELS OF PROFESSIONAL ACTIVITY ON WHICH STATE TEACHERS COLLEGE STUDENTS PLAN TO FUNCTION

Objectives	Percent
I. Administration	1
II. Supervision	8
III. Teaching	91
Total	100

portion is more than one-half. But a comment must be made similar to that in the preceding paragraph about rural objectives, although a notable exception seems to appear in the figure for Missouri (thirty-seven percent). This is for the schools at Kirksville, Warrensburg, and Maryville, and represents the "kind of teaching sought by those intending to teach immediately upon leaving the normal school."

The rank order of preference for "teaching" objectives seems to be (1) Elementary, forty-three percent, (2) Senior High School, twenty-five percent, (3) Junior High School, nineteen percent, (4) Rural, two percent, and (5) College, two percent. The complexity of the situation in the secondary positions of the original tables was striking. One wishes that some supreme legislature might reenact a law of formal discipline! It would simplify attempts to fit our preparatory curriculum to actual needs in the field. Of the small number who are looking toward college teaching, many have in mind the position of training teacher in charge of student teaching. And this is another segment of our objective of which we must become more effectively conscious, as presidents and training school directors can testify<sup>6</sup>. At present it is necessary to take the successful classroom teacher and, through years of training in service, to develop the difficult technic required in the combined teaching and supervisory job involved in handling at the same time both pupil and student groups.

<sup>6</sup> Whitney, F. L., "The Equipment of State Normal School Critic Teachers," Educational Administration and Supervision, November, 1922

The tables on vocational objectives show that, among those students in our state teachers colleges who plan to teach, a very large proportion are looking forward to the classroom and that less than ten percent hope to have administrative or supervisory positions.

TABLE XL

VACANCIES REPORTED TO THE PLACEMENT BUREAU OF COLORADO STATE TEACHERS COLLEGE FOR THE YEAR 1925-26 (1)

Position	Frequency	Total
I. Elementary		
Kindergarten	4	
First grade	155	
Second grade	34	
Third grade	42	
Fourth grade	58	
Fifth grade	56	
Sixth grade	34	
Seventh grade	48	
Eighth grade	12	443
II. Secondary		
Junior high school	27	
Senior high school	8	35
III. Supervisors		
Public school principals	84	
Special teachers		
Commercial	76	
Domestic science	37	
English	72	
Manual training	31	
Science	27	
Spanish	11	
Mathematics	35	
Latin	23	
French	3	
Art	13	
Music	38	
History	40	
Physical Education	19	509
IV. College		
College instructors	40	40
V. Administrators		
Superintendents	34	34
VI. Rural		
Rural teachers	17	17
Grand total		1078

1 This table was furnished by Mr. R. H. Morrison, Executive Secretary of the Placement Bureau.



As suggested at the beginning of this chapter, one possible analysis of the teacher training objective in any preparatory school for teachers might consist of a statement of types of teachers called for from the field in terms of specific jobs to be filled. Analyses of this kind for Colorado State Teachers College are found in Table XL. A total of nearly thirty different types of "teachers" are called for by hiring bodies. About an equal number of these calls come for elementary and for secondary teachers.

Finally, there remains the analysis of fact which reports the actual vocational destination of all graduates placed at Colorado State Teachers College during two calendar years. Table XLI furnishes these data. Over one-half of all are now teaching in the elementary grades. Junior and senior high school subjects come next with a total of thirty percent, and supervision (secondary and elementary principalships) includes six percent of all. College teaching is next in order, with administrative work and rural teaching last including but three percent each.

It is significant to compare these proportions with the distributions of requests for teachers (Table XL) and with the teaching plans of students (Table XXXVIII). Arranging these percents in rough parallels and attempting no smoothing of distributions to total properly, they appear as in Table XLII. On the whole, the plans of state teachers college students seem to work out well, except that in some cases those who desire high school teaching are obliged to take grade work.

It is interesting to compare this correspondence of professional destination with rather definite vocational objectives in a strictly professional school with the blind groping

TABLE XLI

AN ANALYSIS OF THE ACTUAL PLACEMENT OF SEVEN HUNDRED AND FIFTY-THREE GRADUATES OF COLORADO STATE TEACHERS COLLEGE FOR THE CALENDAR YEARS 1924 and 1925 (1)

Positions	1924	1925	Total	Percent
Elementary teaching	201	207	408	54
Secondary teaching	102	126	228	30
High school principalship	19	11	30	4
College teaching	14	15	29	4
Superintendency	8	11	19	3
Rural teaching	8	18	26	3
Elementary principalship	3	8	11	2
Auditorium teaching	2	.....	2	....
Total	357	396	753	100

1 The facts for this table were furnished by Mr. R. H. Morrison, Executive Secretary of the Placement Bureau.

TABLE XLII

THE RELATIONSHIP OF VOCATIONAL OBJECTIVES OF STATE TEACHERS COLLEGE STUDENTS TO REQUESTS FOR THEIR SERVICES AND TO ACTUAL PLACEMENT AFTER GRADUATION IN TERMS OF PERCENTS FOR SIX TYPES OF TEACHING SERVICE

Position	Objectives	Requests	Placement
Elementary	43	55	54
Secondary	45	40	30
Supervision	8	5	6
College	2	4	4
Rural	2	1	3
Administration	1	2	3

through preparatory years to final occupational plans reported by Koos in the case of the high school principal.<sup>7</sup>

Column three of Table XLII shows that the distribution of requests for teachers bears some relation to both the market and the field of work. But no doubt buyers are familiar with the types of teaching offered, so that the column of requests does not reflect the total actual need.

#### 4. NO TEACHING PLANS

Our state teachers colleges are strictly professional schools with definite vocational objectives, so far as the intent of the law is concerned. But it would be interesting to determine definitely what proportion of state money expended in these institutions is used for the preparation of future business and professional men or for housekeepers. Such expenditure is not, of course, lost to the state, and in a pioneer educational situation like that in the United States we shall very probably have to await for a more complete professionalization of teaching before it can be expected that the majority of our educators shall make teaching a life career.

The management in our teachers colleges strives to enhance the future values of teaching, and in many states definite promises of teaching activity are required. It may be that this explains why no negative attitude toward teaching is reported in the original tables, but in the data for Colorado State Teachers College ten students among those reporting on vocational objectives say that they do not intend to teach. (Two of these are in the administrative offices of the College.)

Possibly, after all, this is not so important as a truthful report, if it could be obtained, as to how long students intend

<sup>7</sup> Koos, L. V., *The High School Principal: His Training, Experience, and Responsibilities*, Houghton Mifflin Company, 1924

to teach. In view of this query, the report from the Missouri survey is surprising. There, it is said that seventy-eight percent of the men and fifty-two percent of the women in three schools planned "to teach permanently." In the state of Michigan, the report is that "twenty-eight percent of the students do not intend to teach and are attending the normal schools for cultural and professional ends other than teaching."

It seems evident that the duties of the administration in every state teacher training institution lies in a limitation of matriculation to those persons who are to become public school teachers. And this to the same degree that enrollment in university medical schools is reserved for future doctors only. This is not the discussion at this point, but it will be noted that the dictum contains the verb "are to become" not "wish" to become. The well-known fact of individual differences should be recognized at the point of entrance to the state teachers college, and until the office of the registrar becomes skillful in functioning before classwork has begun elimination of the unfit must take place early in the first term of attendance.

## 5. THE MARRIAGE OF WOMEN GRADUATES

The place of the married woman in teaching is still under discussion. Restrictive school board regulations fluctuate with the available supply of teachers and with changes in the personnel of the boards. In view of this situation, and of the fact that a large proportion of state teachers college graduates are women (ninety percent in the last thirty-three years at Colorado State Teachers College), it is significant to know something of the relation of marriage to student personnel and to the future plans of state teachers college students.

Partial data for the past thirty-three years are available for Colorado State Teachers College and are presented in Table XLIII. The proportions in columns three and four give the percentage of all women graduates who were married at the time of completing their preparatory period. This is five percent (4.7 percent). But the discussion of this chapter is concerned in particular with the last column which gives the percent of women who have married since graduation. The arithmetic average here is fifty-five percent, but many in the more recent classes will marry eventually, as from eighty percent to ninety percent of all women who marry very probably do so before the age of thirty years. Cutting off the table at the year 1918, then, the percentage of those who have married since graduation is raised to

TABLE XLIII

MARRIAGE AS AN OBJECTIVE AMONG WOMEN GRADUATES OF COLORADO STATE TEACHERS COLLEGE, 1891-1924 (1)

Graduation year	Number grad- uating	Number of single women graduating	Number of married women graduating	Number of men graduating	Number of women married since graduation	Percent of wo- men graduates married since graduation
1891	11	7	....	4	4	57.14
1892	15	11	1	3	10	90.91
1893	21	16	2	3	12	75.00
1894	33	28	0	5	20	71.43
1895	29	22	1	6	12	50.00
1896	28	20	1	7	17	85.00
1897	43	33	3	7	26	78.78
1898	55	42	1	12	36	85.71
1899	72	59	3	10	46	77.96
1900	64	53	2	9	34	64.15
1901	61	46	1	14	35	76.09
1902	64	55	1	8	42	76.36
1903	69	64	2	3	50	78.12
1904	74	69	1	4	46	66.66
1905	88	83	0	5	57	68.67
1906	136	126	2	8	87	69.04
1907	177	163	2	12	85	52.14
1908	155	142	4	9	77	54.22
1909	146	127	3	16	82	64.56
1910	186	173	7	6	85	49.07
1911	186	175	6	5	92	52.57
1912	231	208	8	15	88	42.30
1913	261	228	17	16	103	45.18
1914	360	314	6	40	130	41.40
1915	315	276	12	27	103	37.32
1916	331	278	17	36	196	70.50
1917	394	339	23	32	152	44.83
1918	472	385	44	43	144	37.40
1919	183	151	12	20	70	46.35
1920	257	215	11	31	65	30.23
1921	221	186	8	27	30	16.12
1922	293	246	11	36	39	15.85
1923	410	331	24	55	15	4.53
1924	307	258	9	40	7	2.71
Total	5748	4929	245	574	2097	
Mean	168.8	144.9	7.2	16.8	61.7	55.24

1 The data for this table were furnished by Mr. W. G. Binnewies, Assistant Professor of Sociology, Colorado State Teachers College.

sixty-three with a range of thirty-seven percent to ninety-one percent. It is significant, also, to note the mean for the first sixteen years from 1891 to 1906 (seventy-three percent) and for the twelve years from 1907 to 1918 (forty-eight percent). Evidently, some factor in the situation is holding more women in teaching longer, so far as those who leave to marry are concerned.

Mr. Binnewies compared these findings for a representative state teachers college with like figures in twelve women's colleges and state universities. The period investigated was about that during which seventy-three percent of women graduates of Colorado State Teachers College had married. He found that for similar classes in these other institutions but sixty-seven percent have married since graduation, and that the figure for men graduates of Harvard, Yale, Stanford, and Syracuse is seventy-seven percent.

On the basis of the situation in one state teachers college, then, it may be said that but a very small number of women student undergraduates are married, that about one-half of women graduating from more recent classes marry after leaving the college, and that this proportion is somewhat smaller than like figures for both men and women from other types of institutions for higher education.

## 6. SUMMARY

A. Any effective determination of the objectives of teacher training must be in terms of scientific activity analyses with discovery of relationships among all variables for which expressions of amount are available.

B. An analysis of the plans of teachers in training contributes to knowledge of teacher training objectives. It appears that the large part of them wish to teach in the elementary school and that smaller proportions are looking toward high school teaching, supervision, college teaching, rural teaching, and administrative work in the order given.

C. Another type of analysis, which gives data about the criterion for teacher training, tabulates requests for teachers of all kinds as they come to the teachers colleges from the field. Over one-half of these are for elementary teachers, one-fifth are for high school teachers, and fewer calls come for teachers of special subjects, supervisors, college instructors, administrators, and rural teachers in the order named.

D. A third technic of analysis scrutinizes actual teaching jobs filled by state teachers college graduates. And here it is found that more than half take elementary positions, about one-third high school class work, and small percents secondary principalships, college teaching, superintendencies, rural schools, and elementary principalships in the order named.

E. All but a negligible few of students in state teachers colleges have rather definite vocational objectives looking toward teaching after graduation.

F. Only a small percent of the graduates of one state teachers college are married women, but more than one-half of the remaining women marry eventually.

## CHAPTER VI

### GENERAL SUMMARY

Changes in the curriculum of the public schools have resulted in the large from the impelling influence of social development and the indirect suggestion of leaders outside the teaching group. But educators themselves have for the past fifty years, and ever increasingly, expressed a desirable professional consciousness in active insistence upon improvement in their teaching personnel. A teacher is no longer "a teacher" from the viewpoint of the superintendent's office. And on the other hand the social mind, expressing itself haltingly in legislative enactment, is also accepting the fact of individual differences among members of the teaching corps.

The present study, then, of a modern group of teachers in preparation, even though based upon insufficient data and dealing with but one segment of the total problem of the personality of public school teachers, is worth while if it can contribute in any small degree to a revised generalization in the field of inquiry.

It appears that a decreasing number of students in our state teachers colleges are coming from families in the farm and labor class and more from families in business, the professions, and other like occupations, an equal proportion (thirty percent) being farmers on the one hand and in business and the professions on the other. The most usual family income is \$2400. The English language is spoken in nearly all of these homes, three-fourths of the parents are native-born, and four-fifths of the remainder are of northern European ancestry. The majority of these families are intact, consisting of father, mother, and four to five children, one-third of the students being oldest and the usual relative age second or third in the family. But half of the families have a teaching tradition, and only one-fourth of the students have brothers or sisters with teaching experience. The church has a place in nearly all homes, and one-half of the students are affiliated with the Methodist, Presbyterian, and Catholic denominations.

State teachers college students attend usually in the state of their birth and residence, one-fourth of them coming from the home county, and one-fifth from the city where the college is located. The usual distance traveled is sixty-five miles.

A large majority of students come directly from high school to college with no teaching experience, and the small number who have had contact with actual classroom problems

have taught but a few months. Their average age is 19 years 1.5 months, and they enroll in the college at the age of 18 years 8.4 months.

The yearly expense of students amounts to \$400, more than one-half of parents furnishing three-fourths of this. Over a third of the students are self-supporting, using one-fifth of their time in outside work. Savings, in particular among younger students, help to meet college expenses, and one-half of all students get one-half of their living from professional stipends as scholars or fellows.

All state teachers college students have rather definite professional objectives. Nearly one-half of them plan to graduate from the two year level and to teach in the elementary schools, and one-half want to teach in the high school. But a very small number are looking forward to administrative, supervisory, or rural school experience. However, more than half of the women will marry eventually.

It is interesting and significant to compare this characterization with the conditions found among teachers in service in 1911 as set forth in the "Introduction" and in the parallel columns of Table XLIV. Detailed point to point comparison here is left to the reader, but two or three striking differences may be mentioned. Our teaching corps has no longer an agricultural and labor background. It is being recruited more and more from higher economic levels in business and the professions. Very probably foreign strains of the second or third generation are appearing among our teaching group, but the home is English speaking and thoroughly Americanized. It is significant to note that teachers are still coming from prolific families and that the same proportion (three-fourths) have both parents living. Economic necessity in the family has not as yet begun to affect our teaching personnel. Family income and salaries are, of course, larger, but Norton<sup>1</sup> has shown that apparent differences are not actual because of the decrease in the purchasing power of the dollar.

From the viewpoint of the teacher training situation, this study and that of 1911 may be regarded as difficulty analyses at two points of progress in the professionalization of our public school teaching corps. And, so far as principles of curriculum making have appeared, we are probably agreed that preparatory courses must first of all deal with deficiencies revealed. This will leave as an ultimate aim that effective preparation for all important elements in our teacher training objective which teachers colleges and colleges of education must eventually undertake.

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1 Norton, J. K., *Public School Salaries in 1924-25*, Research Bulletin of the National Education Association, Vol. III, Nos. 1 and 2, January and March, 1925

TABLE XLIV

TEACHERS IN TRAINING IN MODERN STATE TEACHERS COLLEGES COMPARED WITH TEACHERS IN SERVICE OF A DECADE AGO

Item	Students	Teachers	
		Men	Women
<b>I. Family status</b>			
1. Percent of students' fathers in the farm and labor class	59.7	84.7	72.5
2. Percent of students' fathers who are in business and the professions	29.5	13.2	22.8
3. Percent of fathers farmers	29.7	67.7	44.8
4. Annual family income	\$2388.0	\$691.0	\$753.0
5. Percent of students coming from farms and towns of less than 2500	45.0	....	....
<b>II. Race and nationality</b>			
1. Percent native born of native born parents	76(c.)	91.3	83.8
2. Percent of parents of students born in the United States	74.0	....	....
3. Percent of students of foreign born parentage	23.4	....	....
4. Percent of students with parents of northern European ancestry	19.9	....	....
5. Percent of students with parents of southern European ancestry	5.4	....	....
6. Percent of parents speaking the English language	92.8	76.4	73.3
<b>III. Size and vital statistics of the family</b>			
1. Number of children	4.6	5.0	4.0
2. Percent of students who are orphans	4.5	....	....
3. Percent of students with father only living	7.8	....	....
4. Percent of students with mother only living	11.5	....	....
5. Percent of parents (both) living	76.0	79.5	75.5
<b>IV. Church affiliation</b>			
1. Number of churches represented in the student body	40.0	....	....
2. Percent of students in Methodist, Presbyterian, and Catholic churches	54.2	....	....
3. Percent of students expressing no church preference	10.0	....	....
<b>V. Chronological age</b>			
1. Median age	19.1	29.0	24.0
2. Percent of students who are "oldest children"	35.4	....	....
3. Median relative age of students	1.6	....	....
4. Median age of freshmen	18.7	....	....
5. Median age of juniors	19.7	....	....
6. Median age when beginning to teach	....	20.0	18.0



TABLE XLIV (Cont'd)

Item	Students	Teachers	
		Men	Women
VI. Field served by the college			
1. Median distance of home from college (miles)	67.0	....	....
2. Percent of students coming from the home county	26.0	....	....
3. Percent of students coming from the college city	20.0	....	....
4. Number of states sending students to the college	22.0	....	....
5. Percent of students coming from the home state	88.0	....	....
6. Percent of students born in the home state	93.0	....	....
VII. Training			
1. Years of professional training beyond elementary schools	....	3-4	4
2. Percent of students in freshman classes	46.0	....	....
3. Percent of students in sophomore classes	34.0	....	....
4. Percent of students in junior classes	15.0	....	....
5. Percent of students in senior classes	4.0	....	....
6. Percent of students on the graduate level	1.0	....	....
7. Percent of students graduated from the two-year level	74.7	....	....
8. Percent of students graduated as bachelors	21.9	....	....
9. Percent of students graduated as masters	3.4	....	....
VIII. Teaching experience and salary			
1. Percent of the families of students with no teaching experience	49.9	....	....
2. Percent of the fathers of students with teaching experience	11.3	....	....
3. Percent of the mothers of students with teaching experience	23.2	....	....
4. Percent of students who have one brother or sister with teaching experience	24.9	....	....
5. Precollege teaching experience of students (school years)	0.6	....	....
6. Percent of students with no precollege teaching experience	85.3	....	....
7. Percent of students with one year of precollege teaching experience	5.5	....	....
8. Percent of students with two to four years of precollege teaching experience	5.7	....	....
9. Median years of teaching experience	....	7	4
10. First teaching in rural schools			
a. Years of experience	....	2	2
b. Salary	....	\$390	\$366
11. Median annual salary	....	\$489.	\$450.

TABLE XLIV (Cont'd)

Item	Students	Teachers	
		Men	Women
IX. College expenses			
1. Median annual college expenses of students	\$400.0	....	....
2. Percent of students whose expenses are paid in part by relatives	46.5	....	....
3. Percent of expenses of students paid by relatives	77.5	....	....
4. Percent of students whose expenses are met in part by loans	9.2	....	....
5. Percent of students' expenses met by loans	39.4	....	....
6. Percent of students whose expenses are met in part by professional stipends	51.6	....	....
7. Percent of students' expenses met by professional stipends	49.0	....	....
8. Percent of students whose expenses are met by savings	28.3	....	....
9. Percent of freshmen using savings for college expenses	43.4	....	....
10. Percent of sophomores using savings for college expenses	30.7	....	....
11. Percent of juniors using savings for college expenses	14.5	....	....
12. Percent of seniors using savings for college expenses	6.9	....	....
13. Percent of graduate students using savings for college expenses	2.1	....	....
14. Percent of students doing outside work for college expenses	14.4	....	....
15. Percent of freshmen meeting part of expenses by work	36.1	....	....
16. Percent of sophomores meeting part of expenses by work	34.7	....	....
17. Percent of juniors meeting part of expenses by work	16.7	....	....
18. Percent of seniors meeting part of expenses by work	8.0	....	....
19. Percent of graduate students meeting part of expenses by work	2.5	....	....
20. Percent of freshmen meeting part of expenses by savings and work	39.8	....	....
21. Percent of sophomores meeting part of expenses by savings and work	32.7	....	....
22. Percent of juniors meeting part of expenses by savings and work	15.6	....	....
23. Percent of seniors meeting part of expenses by savings and work	7.4	....	....
24. Percent of graduate students meeting part of expenses by savings and work	2.3	....	....
25. Percent of students' time used in college activities	81.0	....	....
26. Percent of students' time used in outside work	19.0	....	....
27. Percent of students who are self-supporting	36.0	....	....

TABLE XLIV (Cont'd)

Item	Students	Teachers	
		Men	Women
X. Teaching plans			
1. Percent of students planning to teach in elementary schools	43.0	....	....
2. Percent of requests for elementary teachers	55.0	....	....
3. Percent of students placed in elementary schools	54.0	....	....
4. Percent of students planning to teach in secondary schools	45.0	....	....
5. Percent of requests for secondary teachers	20.0	....	....
6. Percent of students placed in secondary schools	30.0	....	....
7. Percent of students planning to teach in rural schools	2.0	....	....
8. Percent of requests for rural school teachers	1.0	....	....
9. Percent of students placed in rural schools	3.0	....	....
10. Total number of students with no teaching plans	10.0	....	....
11. Percent of married women graduating	4.7	....	....
12. Percent of women teachers who have married since graduation	63.0	....	....

## APPENDIX

### The Question List used in This Study

#### THE PERSONNEL OF THE STUDENT POPULATION

- Name of College \_\_\_\_\_
- Your Academic ranking (Freshman, Sophomore, Junior, Senior, Graduate) \_\_\_\_\_
1. Name of student (Last name first) \_\_\_\_\_ (M \_\_\_\_\_)
  2. Where was your father born? \_\_\_\_\_ Your mother? \_\_\_\_\_  
(e. g. United States) (e. g. Ireland, Germany)
  3. Is your father living? \_\_\_\_\_ Your mother? \_\_\_\_\_
  4. What language or languages are spoken in your home? \_\_\_\_\_
  5. Where were you born \_\_\_\_\_  
City \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_
  6. How many children did your parents have? \_\_\_\_\_ How many older than you? \_\_\_\_\_
  7. How many children still make their home with your parents? \_\_\_\_\_
  8. What is your father's occupation? \_\_\_\_\_
  9. Your father's total annual income at the time you entered this College? About \$ \_\_\_\_\_
  10. Approximate total income of the whole family at that time? \_\_\_\_\_
  11. How many contribute substantially to that income? \_\_\_\_\_
  12. Did your father ever teach school one or more years? \_\_\_\_\_ Your mother? \_\_\_\_\_
  13. Have you a brother or sister who has taught or is now teaching? \_\_\_\_\_
  14. Your home address \_\_\_\_\_  
Distance in miles from the College you are attending \_\_\_\_\_
  15. Your age at the time you entered College? Years \_\_\_\_\_ and \_\_\_\_\_ months
  16. From what high school or preparatory school did you graduate? \_\_\_\_\_
  17. How many years in the course beyond the eighth grade? \_\_\_\_\_
  18. If not a graduate, how many years of high school work did you have? \_\_\_\_\_
  19. Did you teach between completion of the eighth grade and the beginning of your high school course? \_\_\_\_\_  
If so, how many years? \_\_\_\_\_
  20. Did you teach between the completion of your high school (or preparatory) course and your entrance into the College? \_\_\_\_\_  
If so, how many years? \_\_\_\_\_
  21. Place a check in the blank applying to you. Is your home  
a. On a farm? \_\_\_\_\_ b. In a village (small town) of less than 2500 inhabitants? \_\_\_\_\_  
c. In an urban community or 2500 to 25,000 inhabitants? \_\_\_\_\_ d. In a city of over 25,000 \_\_\_\_\_
  22. About what do you expect your expense to be for the nine month school year, covering the items of room and board? \$ \_\_\_\_\_ School fees \$ \_\_\_\_\_
  23. About what percent of the money you are using for your expenses this year comes from the following sources?  
a. Father or mother? \_\_\_\_\_ d. Brother, sister, or other relative? \_\_\_\_\_  
b. Borrowing? \_\_\_\_\_ e. Scholarships \_\_\_\_\_  
c. Your own savings? \_\_\_\_\_ f. Other sources? (please specify) \_\_\_\_\_
  24. Check the type of teaching you expect (or hope) to do after completing your college course.  
Kindergarten \_\_\_\_\_ First Grade \_\_\_\_\_ Second Grade \_\_\_\_\_ Third Grade \_\_\_\_\_  
Fourth Grade \_\_\_\_\_ Fifth Grade \_\_\_\_\_ Sixth Grade \_\_\_\_\_ Seventh Grade \_\_\_\_\_  
Eighth Grade \_\_\_\_\_ Junior High School (specify what subject or subjects) \_\_\_\_\_  
Other types of teaching (specify) \_\_\_\_\_

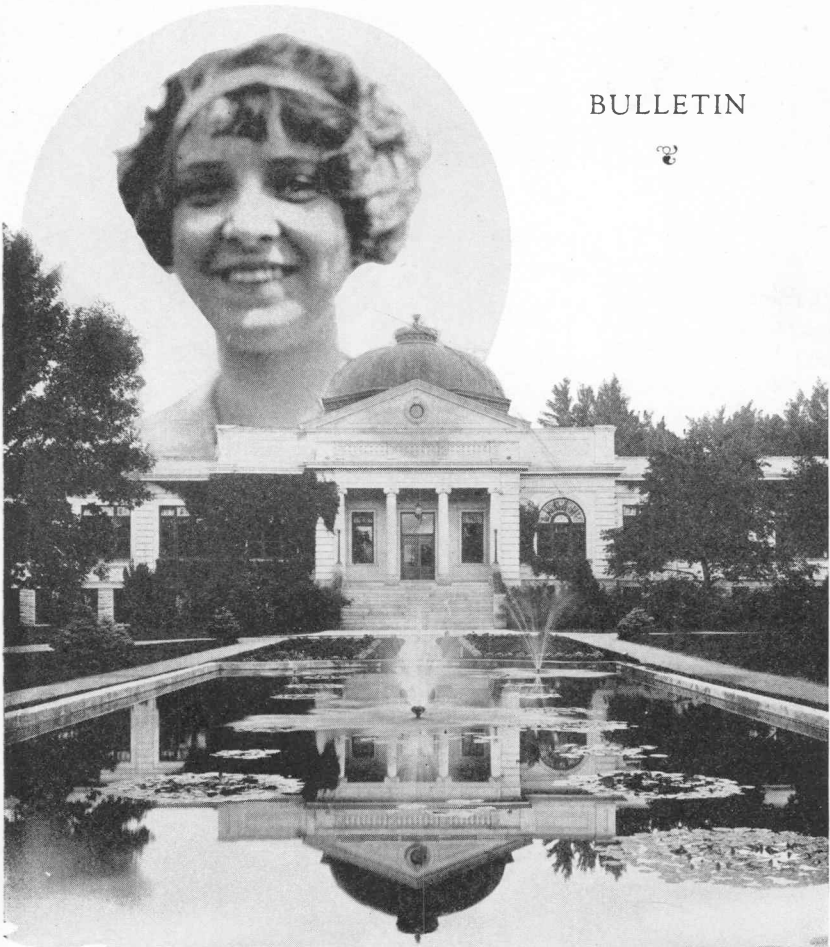






COLORADO STATE TEACHERS COLLEGE

BULLETIN



*College  
Life*

[1926?]



# Colorado State Teachers College



OLORADO STATE TEACHERS COLLEGE is a professional college for the training of teachers. Its graduates are members of the teaching staffs in public schools, normal schools, and colleges all over the United States, and a number of them are engaged in educational work in several foreign countries. Its graduates will be found in every grade and in positions as supervisors and superintendents.

Colorado State Teachers College is the foremost teachers college in the West, and one of the outstanding Teachers Colleges of the country.

Students are admitted on graduation credentials from accredited high schools and on approved credits from other institutions of higher learning.

The demand for teachers is still many times greater than the supply. With each succeeding year, too, the salaries for teachers are being increased to their proper level, thus increasing the attractiveness of the profession.

Colorado State Teachers College maintains its own Placement Bureau, to the end that its graduates are placed in the most attractive positions, and where they are best fitted to serve.

Colorado State Teachers College is located at Greeley,

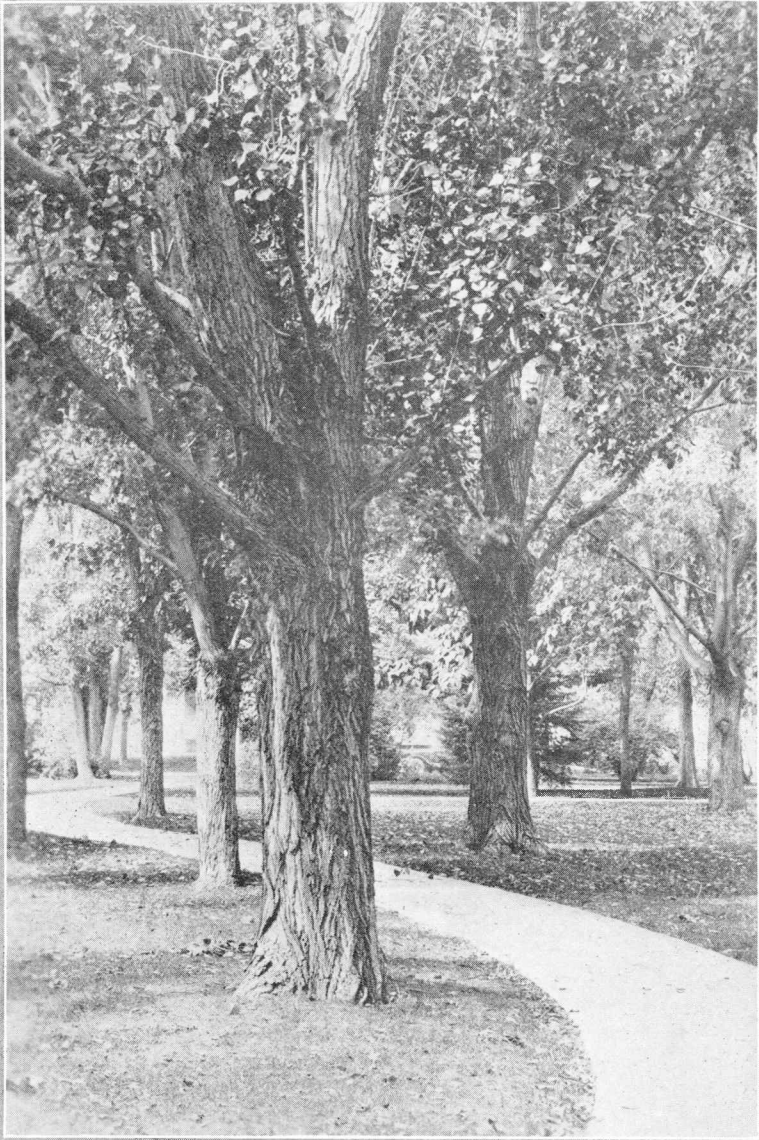
(Continued on Page 25)

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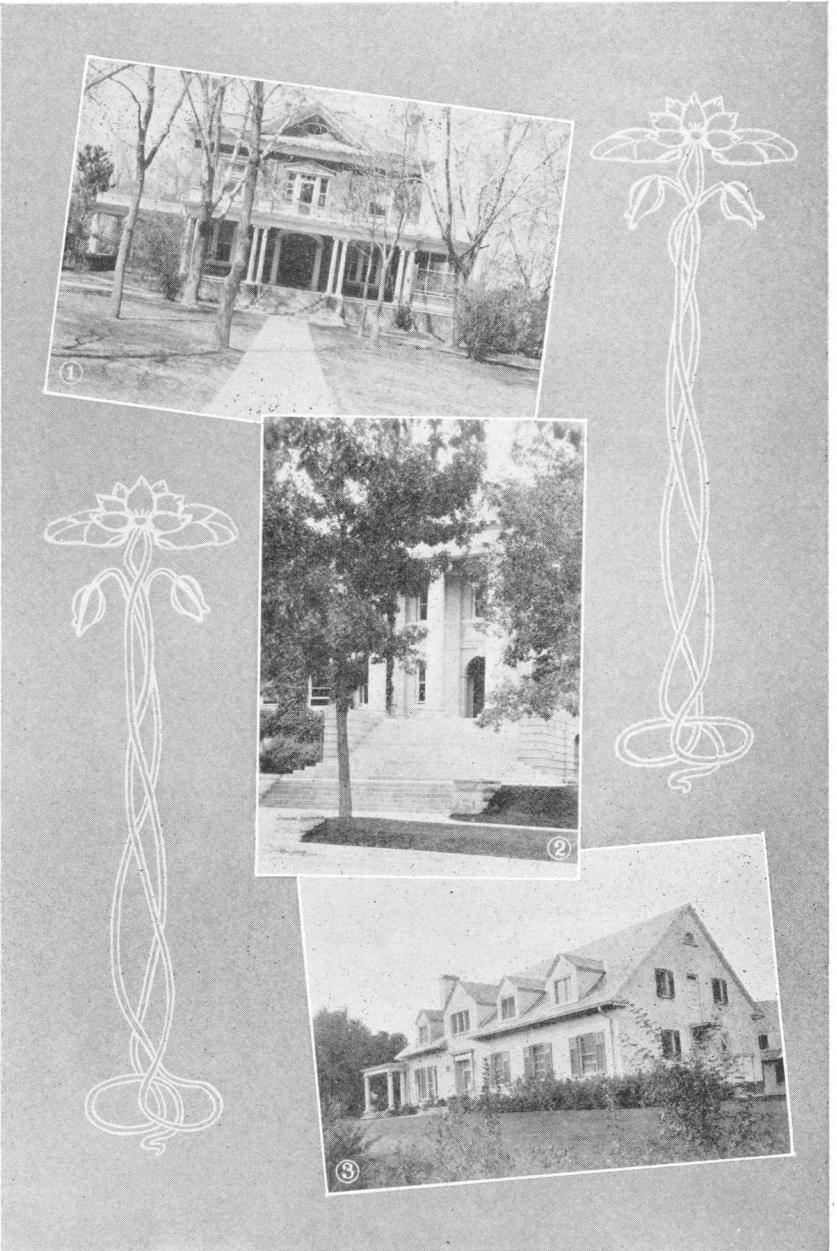
SERIES XXV

NUMBER 7

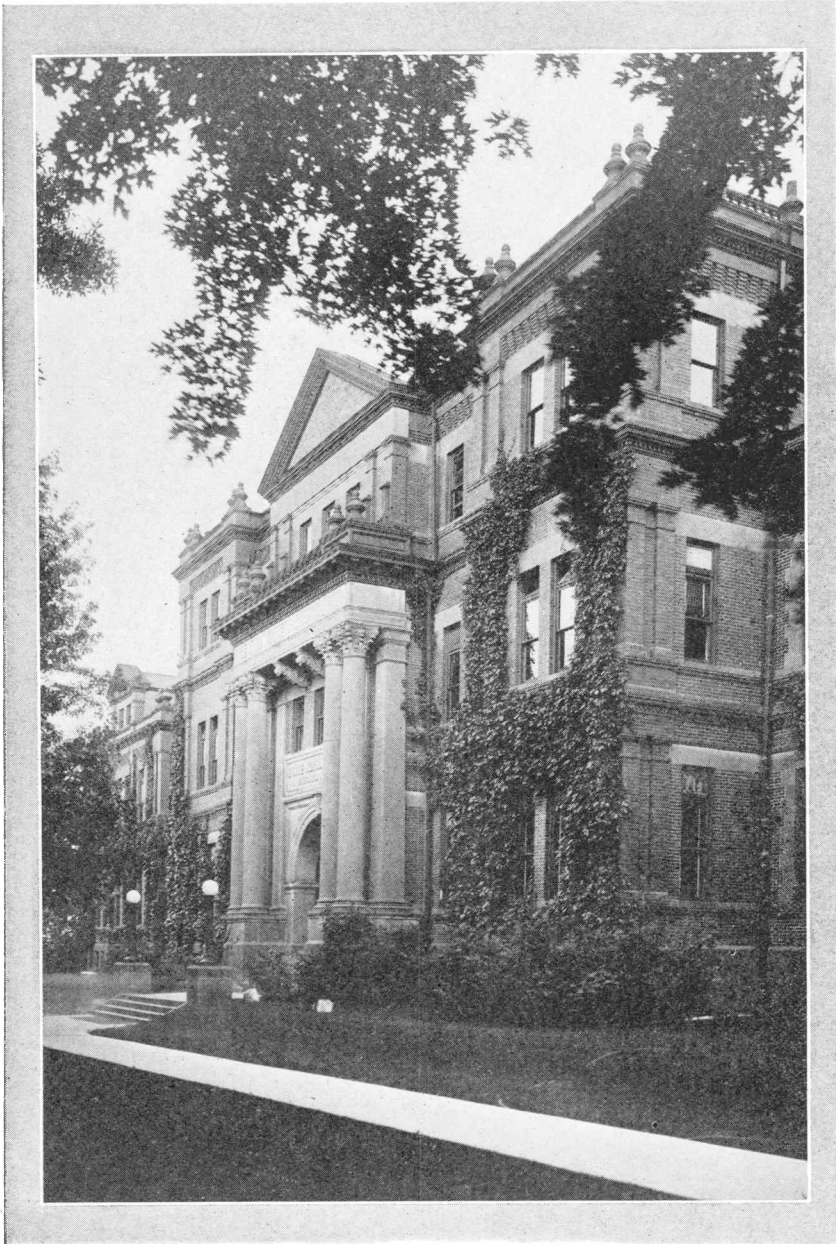
Published monthly by Colorado State Teachers College, Greeley, Colorado  
Entered as second class matter at the Postoffice at Greeley, Colorado, under the Act  
of August 24, 1912.



Serpentine Path



1—The Conservatory of Music. 2—Imposing Entrance to Guggenheim Hall of Industrial Arts. 3—One of the Dormitories



Main Entrance Administration Building



Glee Club





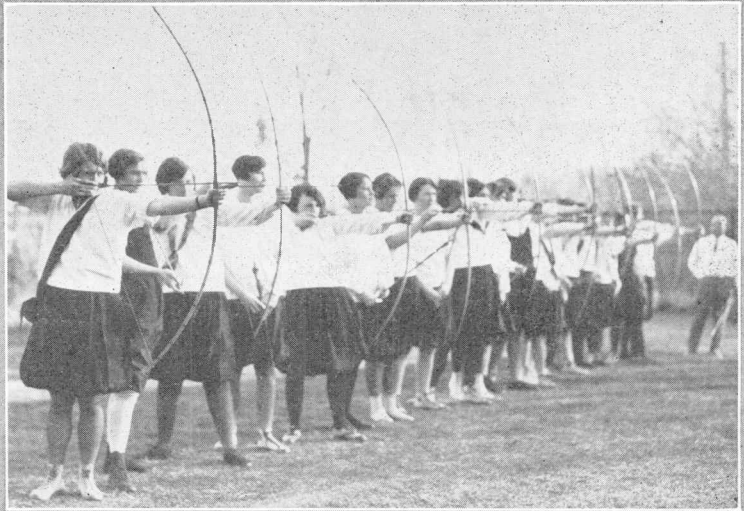
Girls' Octette, and Their Accompanist



“I Did It with My  
Bow and Arrow”



Archery Is One of  
the Favorite Pas-  
times of the Coeds





Fencing Is Another Popular Activity on the Campus

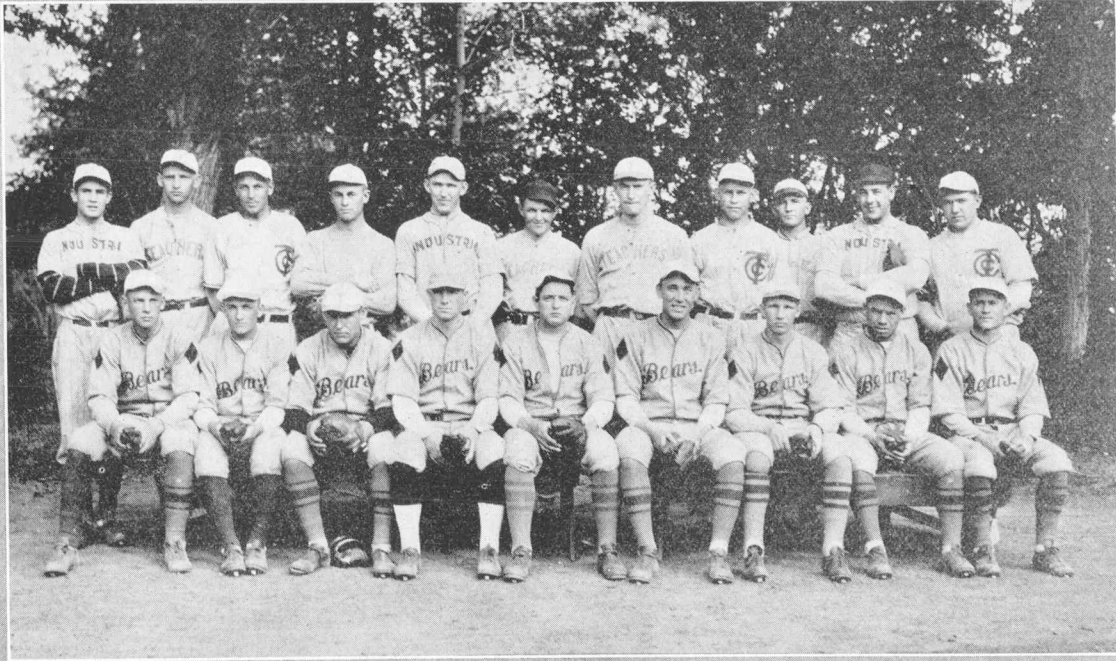




A Shakespearean Outdoor Cast



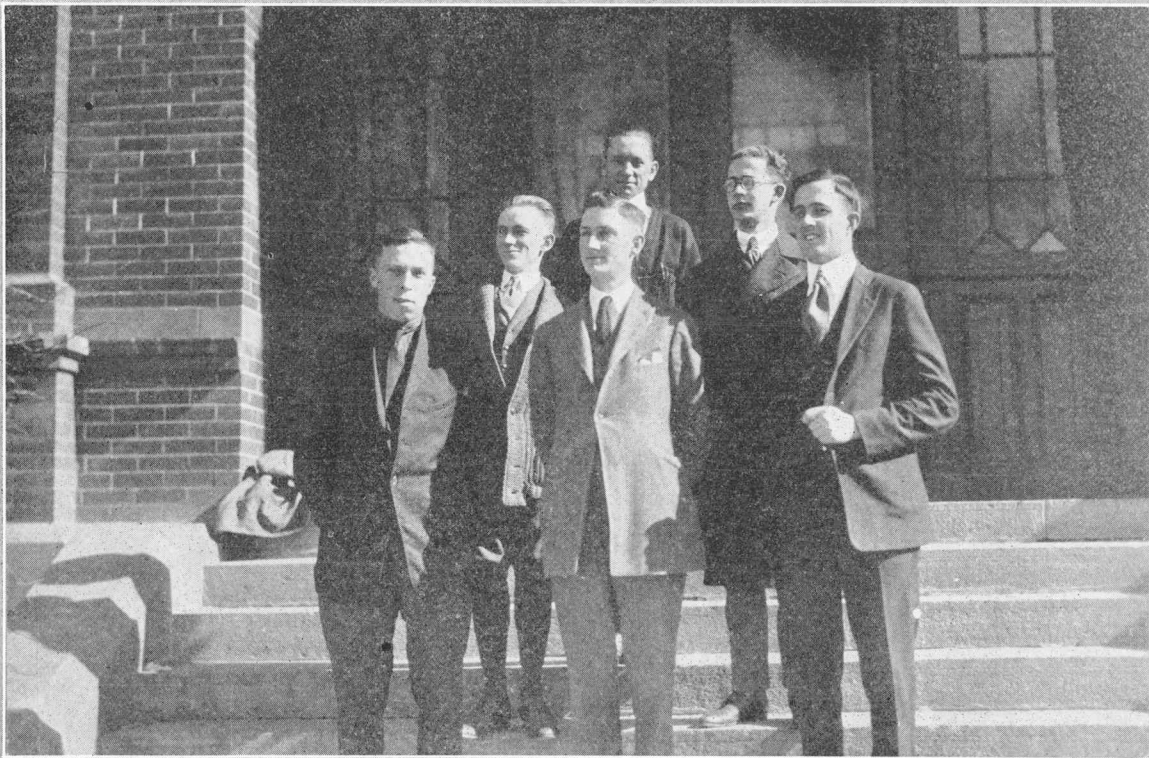
A Scene from the Opera "Eileen," Presented by Students



Baseball Championship Squad—Winners of the 1925 Rocky Mountain Intercollegiate Championship



The Girls Play Baseball Too at Colorado State Teachers College—One of the Teams



A Debate Team

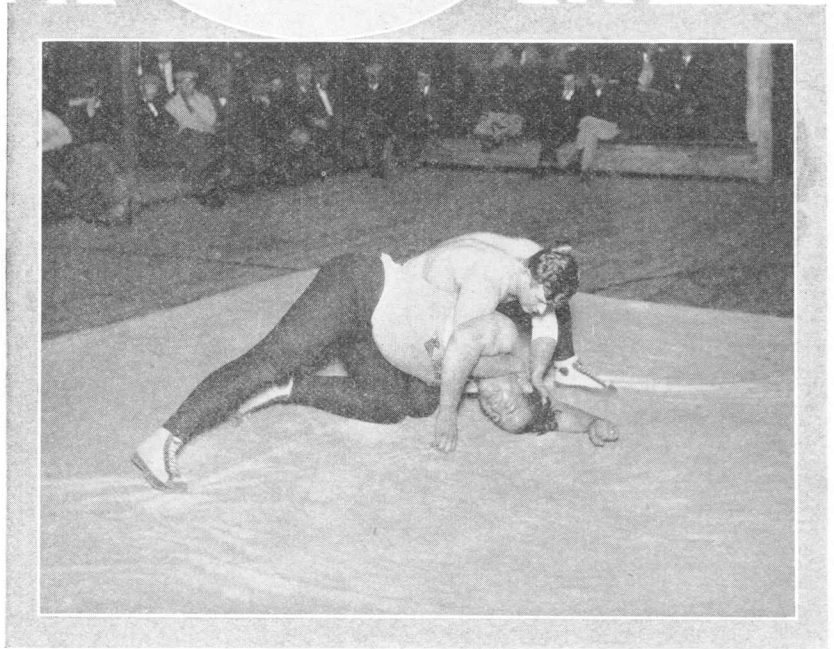




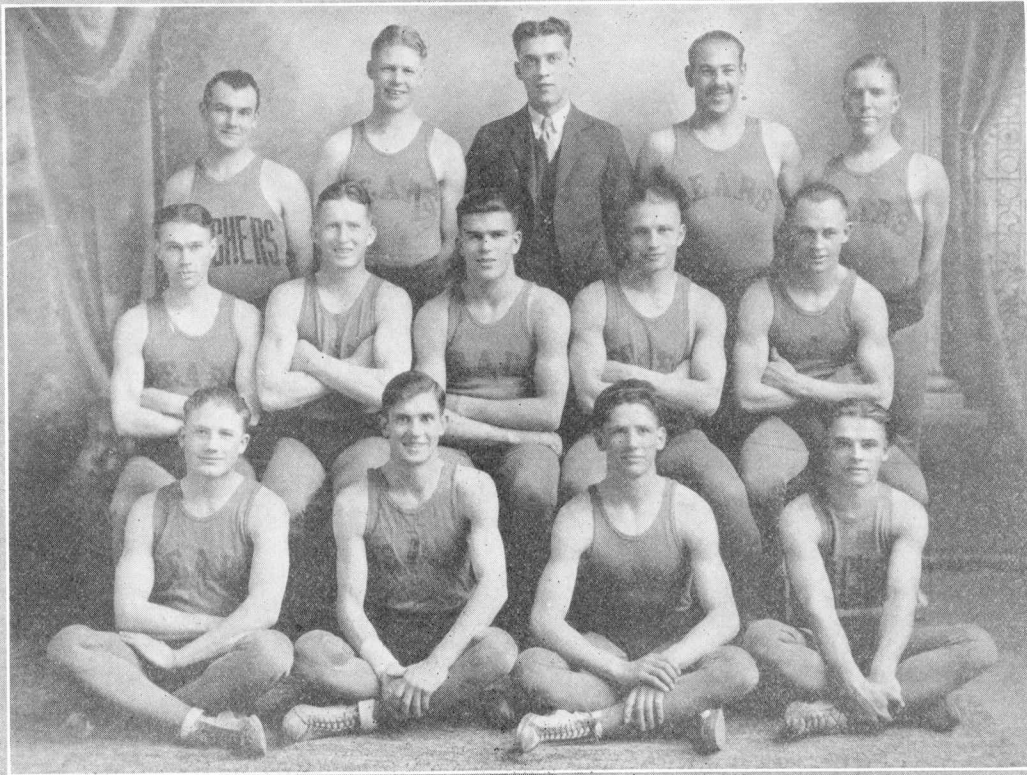
A Squad of Girl Debaters



Winter On the Campus; A Coed Showing Her Fellow-Students How To Ski.



"A Tough One to Down." The Man Underneath Is Conference Champion



1926 Wrestling Squad, Champions of the Eastern Division of the Rocky Mountain Intercollegiate Conference.

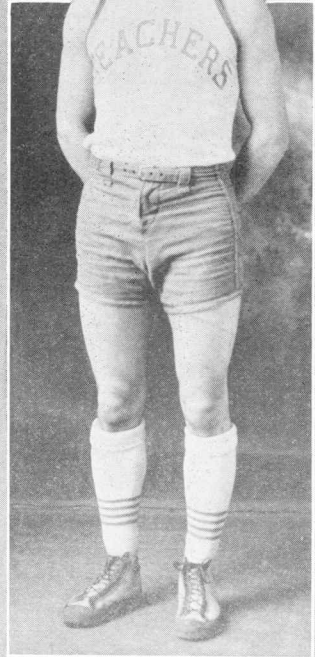
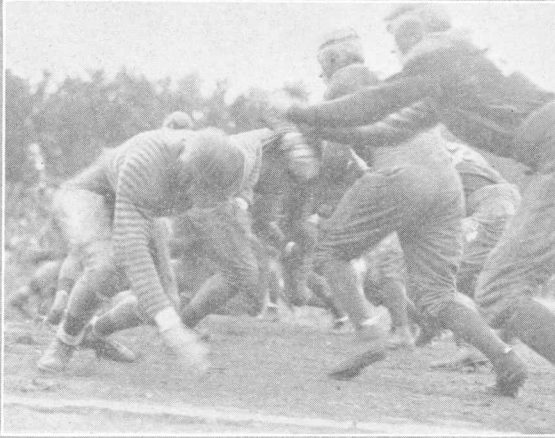




Crack Colorado Teachers College Band, Resplendent in Purple and Gold Uniforms



A Student Trio



Upper Picture—Scrimmage on Cranford Field. Lower Left—"The Mascot."  
Lower Right—Captain Glidden of 1926 Basketball Champions



Above—Member of  
Girls' Track Squad  
Clearing Easily.

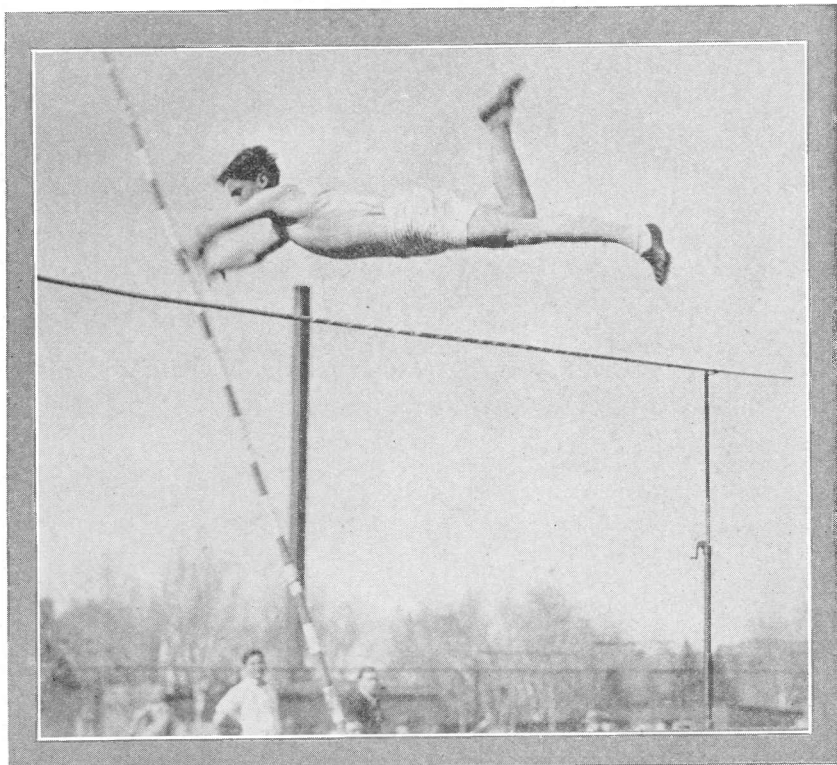
Right—"A Home  
Run."



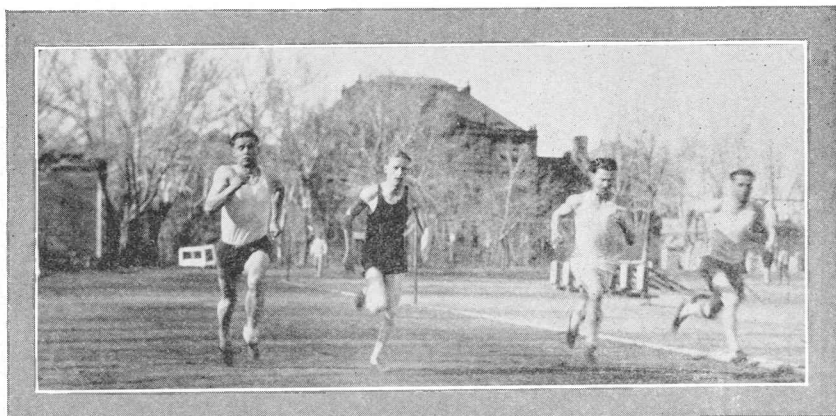


Squad of College Hockey Players

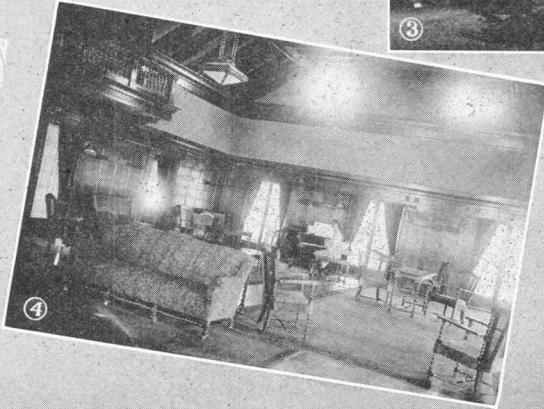
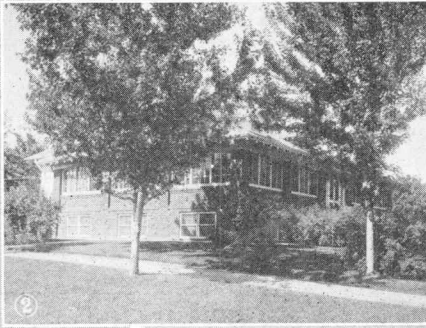
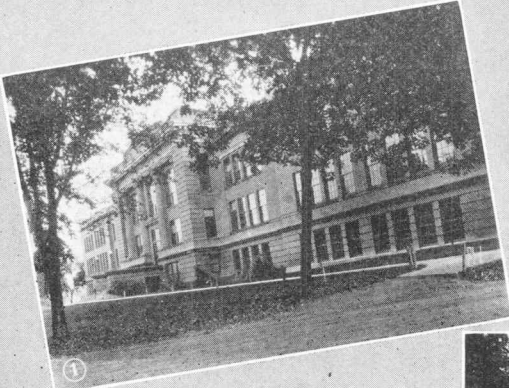




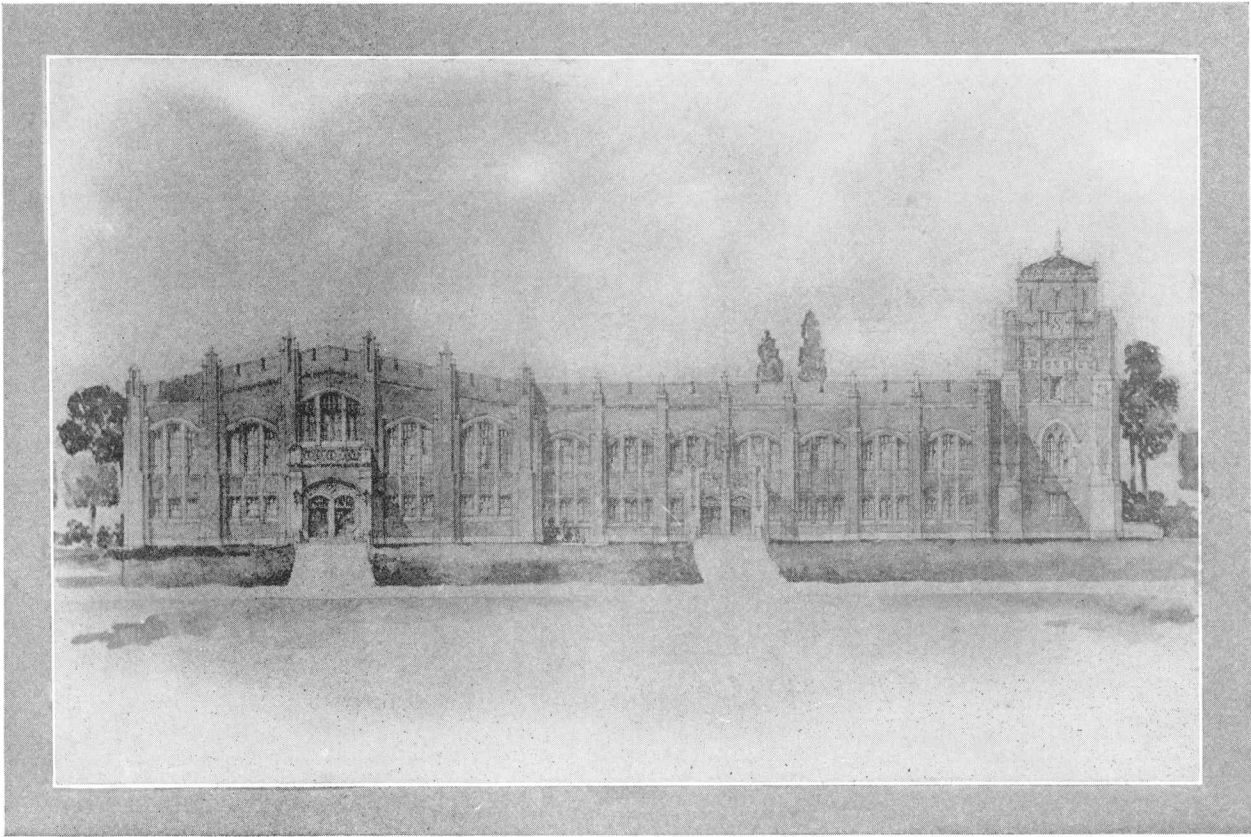
Ten Feet, and Plenty of Room To Spare



Out for Practice

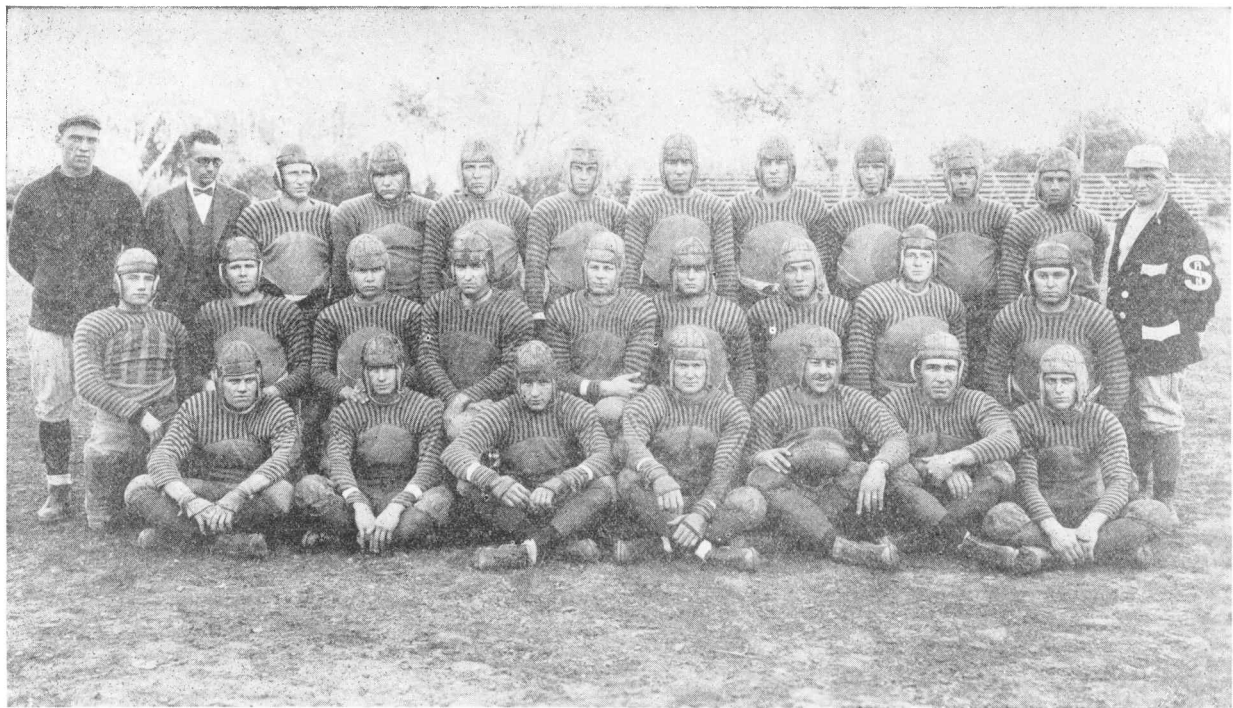


1—The Training School. 2—The Clubhouse. 3—The Colonnades, Entrance to Home Economics Building. 4—Reception Room in the Clubhouse



Architect's Drawing of the New \$250,000 Gymnasium





Football Squad, 1925

Colorado, on the Union Pacific and the Colorado & Southern Railroads, fifty-two miles north of Denver.

The location is ideal. The city of Greeley is one of the most attractive communities in the West. It is in the heart of the richest agricultural districts of the state. Its streets are wide and densely shaded with fine trees. Beautiful homes add to its attractiveness as a place in which to live. The moral atmosphere is all that could be desired for student life. The laws incorporating the city prohibited the sale of intoxicating liquors, and there has never been a saloon in Greeley. It boasts churches for all the principal denominations. Its citizens are a church-going people. This atmosphere permeates the life on the campus and this influence is reflected in the educational development of the students.

Courses offered in Colorado State Teachers College lead to the bachelor and master of arts degrees, in

Biology	Fine and Applied Arts
Commercial Arts	Geology, Physiography, and Geography
Education	History and Political Science
Superintendents,	Home Economics
Principals for	Hygiene and Physical Education
Grades	Industrial Arts
Junior High Schools	Literature and English
Senior High Schools	Mathematics
Supervisors and Teachers for	Music
Kindergarten-Primary	Physical Sciences
Intermediates	Chemistry
Upper Grades	Physics
Rural Schools	Romance Languages and Latin
Educational Psychology	Social Sciences



For detailed information as to courses, tuition, etc., write to Dr. George Willard Frasier, president, Greeley, Colo.



Colorado  
State  
Teachers  
College

Bulletin



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## HOW TO STUDY NATURE

**O**NE is bound to acknowledge the fact that the best way to study Nature is to get close to Nature. It is to make possible, study under such conditions that Colorado State Teachers College has arranged to take a group of students, organized into two classes, on a tour of the three outstanding National Parks on the Continental Divide, for

### BOTANY AND NATURE STUDY

Besides the joy and pleasure of a real vacation, which every teacher needs, these courses will give the students an unprecedented opportunity for study, for which full COLLEGE CREDIT will be given.

Aside from the few days spent in organization of classes on the campus and the preparation of papers and notebooks on returning, the group will spend forty days on one of the most wonderful sight-seeing trips ever arranged for college students.

This travel-study trip makes it possible for Colorado State Teachers College to offer courses not only in the environment of its own superb campus and under the ideal

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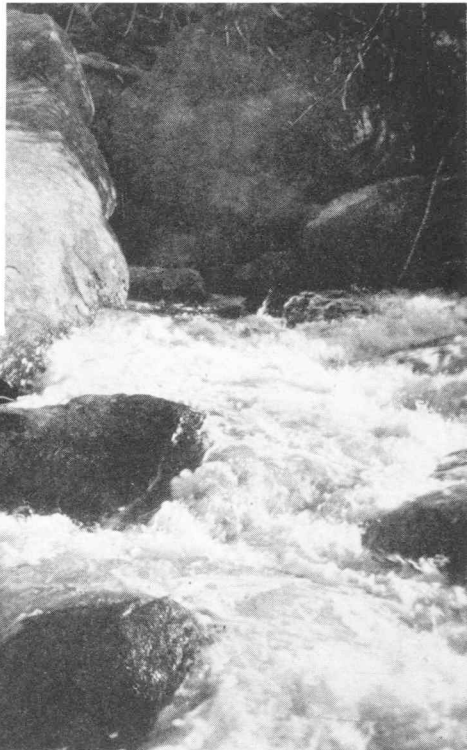
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conditions that obtain in Colorado, but to organize classes in the biological sciences and those kindred subjects in which Nature herself supplies the most valuable equipment far up in the Rockies within the shadow of magnificent mountain peaks and at the edge of enormous drifts of snow.

Under the tutelage of college instructors, students will find under these ideal conditions the greatest advantages for studying nature under practically every form and condition.

In the Mountain School, the student of Nature is in a paradise of constructive suggestion. Flowers grow in endless profusion and borrow their tints from the sky and





*The Top of the World*

sun, trees battle for life against fierce winds and killing frosts as heroically as ever mammal fought the life and death struggle on primeval shore, and the rocks tell the story of all the cycles of the ages that are gone, and the stars reveal in their remarkable alpine vividness the illimitable reaches of space in which suns far mightier than our own dwindle to mere specks of light.

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## ESTES PARK

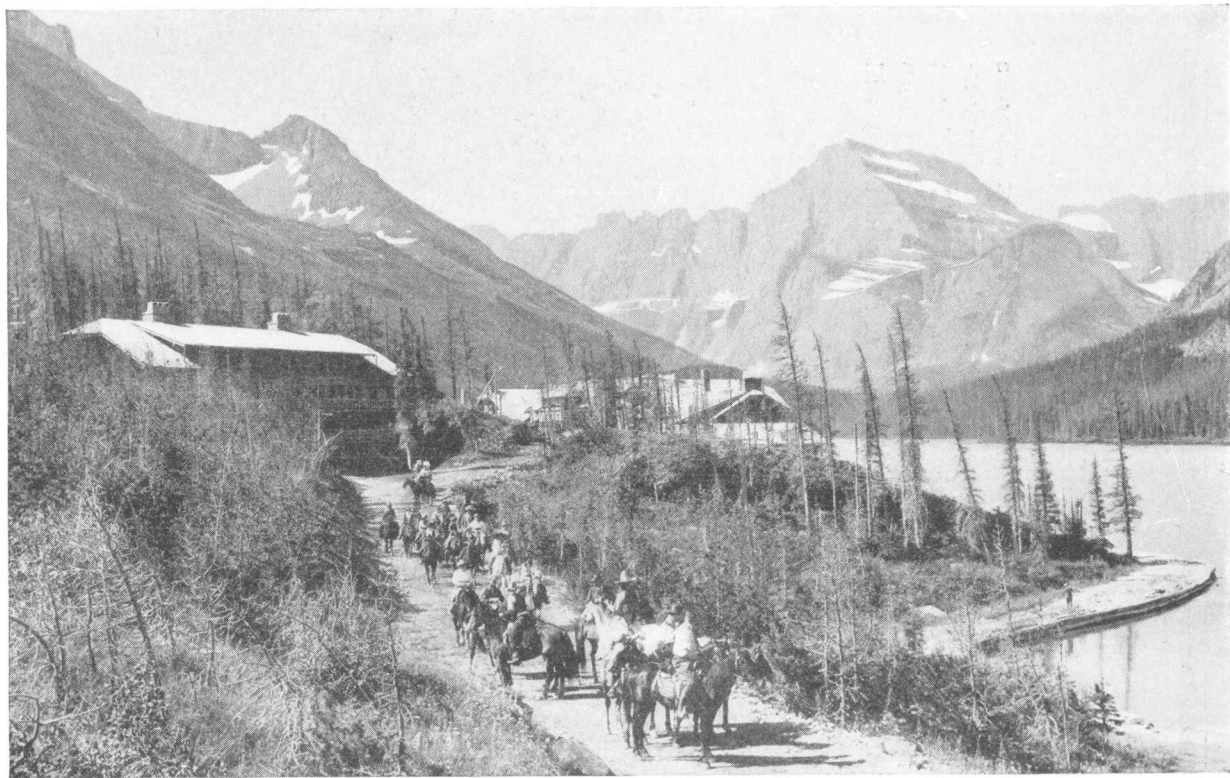
**T**HE classes will be organized on the campus at Colorado State Teachers College, Greeley, Colorado, on Wednesday, July 21, and on the afternoon of July 23 will start for Estes Park, stopping for the first lesson at the mouth of the Big Thompson Canon. The second lesson will be given after supper at

## CAMP OLYMPUS



*A Group of Students in Front of the Main Lodge*





*Off For a Morning's Ride*

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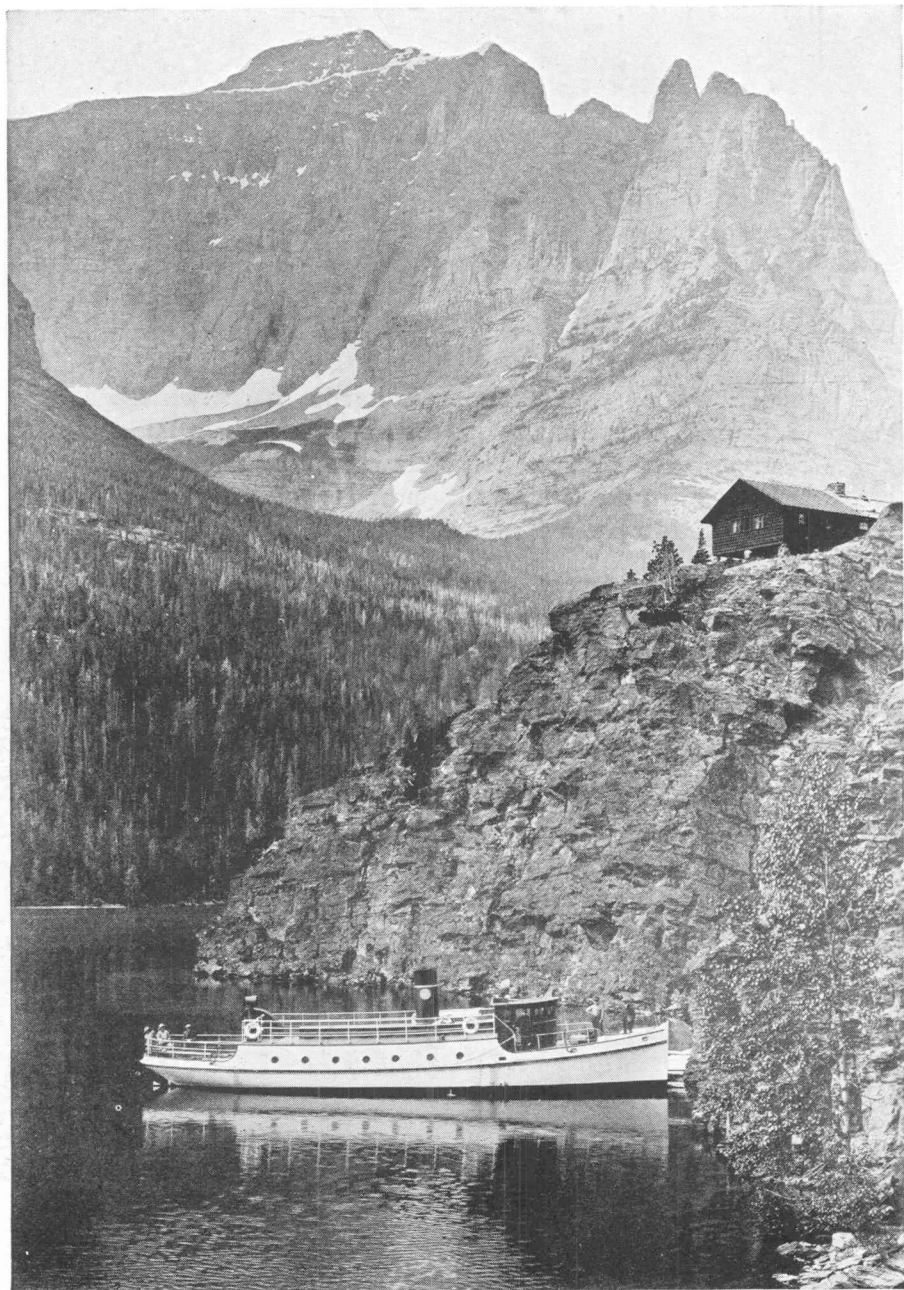
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## ESTES PARK OUTINGS

THE Outing Committee of Colorado State Teachers College, co-operating with the Rocky Mountain Parks Transportation Company, has arranged a series of wonderful trips to the wildest and most magnificent parts of the Rocky Mountain National Park.

Rather than depend on an attempted description of the beauty and splendor of these selected outings, the committee is content to give just a hint by word and picture in this brochure and then leave to the imagination, the inspiration and revitalization that will come to each individual who takes advantage of the opportunities thus afforded.

Loch Vale, Long's Peak (Timberline, Keyhole and Summit), The Devil's Gulch, Fern and Odessa Lakes, Lost Valley, The Fall River Road to the Summit of the Continental Divide, and Grand Lake, are only a few of the many points of interest, beauty, wonder and inspiration and awe that are included in these outings.



*Upper St. Mary Lake—Going-to-the-Sun Chalets*

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## GLACIER PARK

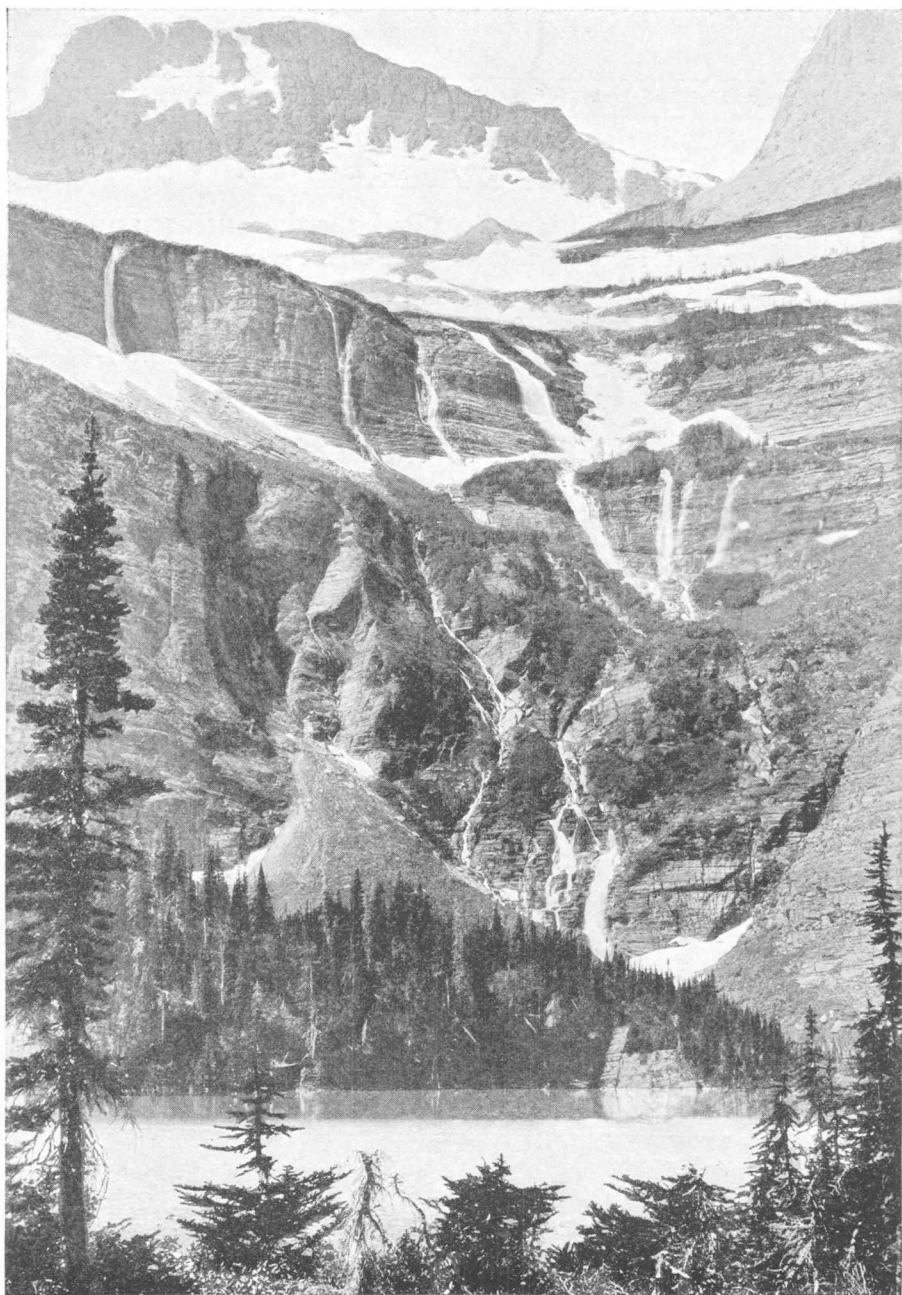
**T**HE classes will leave Estes Park shortly after noon on August 12. On the way out of the canon they will stop for a picnic supper at Loveland Dam. They will leave Loveland by train on the evening of the same day and start for Glacier Park, arriving at this great national playground on August 14.

### GLACIER PARK HOTEL

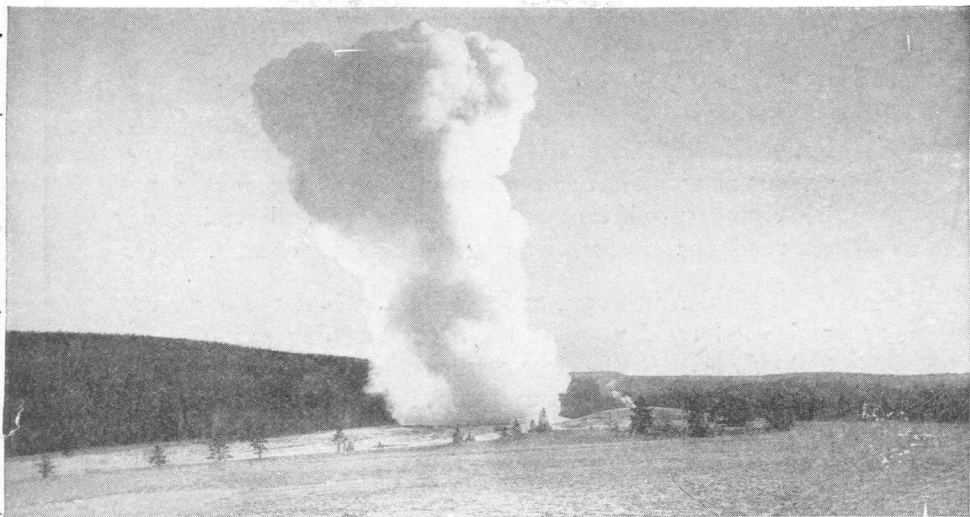
**T**HIS will be the headquarters of the classes during a part of the study tour of Glacier Park. From this point, observation tours will be made and lectures given. Then, too, Many-Glacier Hotel, with its wonderful surroundings will be visited and a part of the time spent there will be used for study and observation.



*Glacier's Mountains Rise from Their Bases Clear and Sharp as the Pyramids*



*Grinnell Glacier and Lake—"near by" Many-Glacier Hotel*



*In the Topsy-Turvy Land of Eternal Wonder—"Old Faithful" Geyser*

## YELLOWSTONE PARK

**T**HE students will leave Glacier Park on August 18, for Gardner, where they will arrive on the afternoon of the next day, for a visit of four and one-half days in Yellowstone Park.

To see "Old Faithful" hurl a million and a half gallons of boiling water 170 feet into the air is alone worth a trip to Yellowstone. Yet "Old Faithful" is but one of dozens of geysers which play in Yellowstone. To hear their mighty roar, and see their gigantic columns shoot skyward, is an experience that comes but once in a lifetime and can never be forgotten.

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## PLAN OF STUDY

THE beneficial results derived from study in the National Parks are not due to decreasing the credit-hour load, but to its vitalization and to the unique arrangement of the periods of recitation and study and their alternation with life-giving expeditions to the interesting and fascinating retreats in America's three most celebrated mountain parks.

The plan in vogue at Estes Park, where the party remains twenty days, is to begin the morning recitation at 8:00 A. M. At the close of the recitation period, waiting busses carry the students to distant lake or base of mountain peak, where Nature, by her artful teaching, makes clear and vivid the lessons of the classroom.



*The Cody Road Loops the Loop Below Sylvan Pass*

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Sometimes the study group returns in time for lunch; on other occasions, however, when distances are great, lunches are provided and the party is free to return at its leisure. There is always time for rest and recreation in the afternoon. A second recitation begins at 7:00 P. M.

In Glacier and Yellowstone, this plan will be adhered to as nearly as is consistent with the exigencies of transportation.

## CREDIT

**F**OR each hour (48 quarter-hours constitute a year's work at Greeley) of credit the full amount of work is required that would be demanded upon the campus at Greeley or in any other standard institution of higher learning.

Saturday is used as a school day; the entire number of school days, therefore, from July 21 to August 31, exclusive of Sundays, is 35. This would be equivalent to seven weeks in the standard summer school. Subtracting, therefore, the time lost in railroad and bus travel, there is still left the equivalent of a full standard half-summer session.

The students are restricted to two courses and receive four quarter-hours for each course; the total credit, therefore, is eight quarter-hours, the same that would be received by attending Greeley either the first or second half of the summer quarter.



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## COST

THE entire cost, including all expenses except meals taken in the diner en route, is \$350. These figures represent the exact amounts that will be paid for railroad fare, pullman, bus hire, meals, lodging, tuition, with a nominal fee added to cover guides, instructors and management.

The expense of forty days in this truly remarkable tour will be less than it would cost an individual or a party to spend the same amount of time in the same places without instructors and without credit.

When coming from the East, students may make a considerable saving by buying a round-trip ticket through the three National Parks with stop-over privileges in Greeley and Denver. For those buying this class of tickets, the cost of the Study Tour from Greeley will be \$300.

## RESERVATIONS

In view of the fact that the College is planning to take only fifty individuals on this initial trip to Glacier, Yellowstone, and Rocky Mountain National Park, it is essential that those desiring to go make reservations with Dr. George Willard Frasier, President of Colorado State Teachers College, at the earliest possible moment.

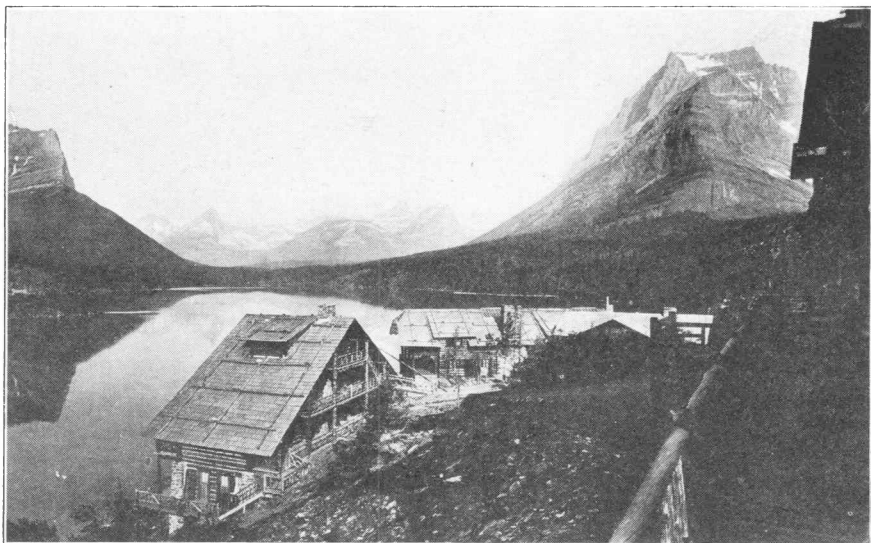
The first fifty enrolling will be given preference (to enroll, it is necessary to forward in advance the twenty-dollar tuition fee). All others will have their fees returned.

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## ITINERARY

- July 21-23 (inclusive)—Greeley.  
July 23-Aug. 12 (Inclusive)—Estes Park.  
Aug. 12-Aug. 14—En route to Glacier Park.  
Aug. 14-Aug. 18—Glacier Park.  
Aug. 18-Aug. 20—En route to Yellowstone.  
Aug. 20-Aug. 27—Yellowstone.  
Aug. 27-Aug. 29—En route to Greeley.  
Aug. 29-Aug. 31—Completion of courses at Greeley.

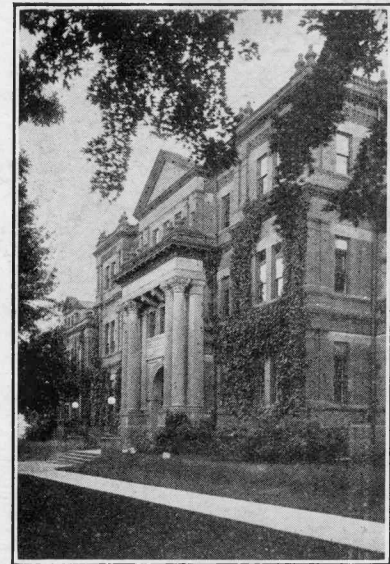




Colorado State Teachers College

BULLETIN

*Summer Quarter*  
1926



PRELIMINARY ANNOUNCEMENT

OPENS JUNE 15

CLOSES AUGUST 26

SERIES XXV

NUMBER 9

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

COLORADO STATE  
TEACHERS COLLEGE  
Greeley, Colo.

**PLEASE POST**



# Why Go To Europe?

**R**EALIZING the increasing desires on the part of teachers and others engaged in the field of education to broaden their knowledge and vision by contact with the thinkers and the teachers of Europe and to make comparative studies in special fields, Colorado State Teachers College has gone across the waters and brought these people to this country, thus

## SAVING THE EXPENSE

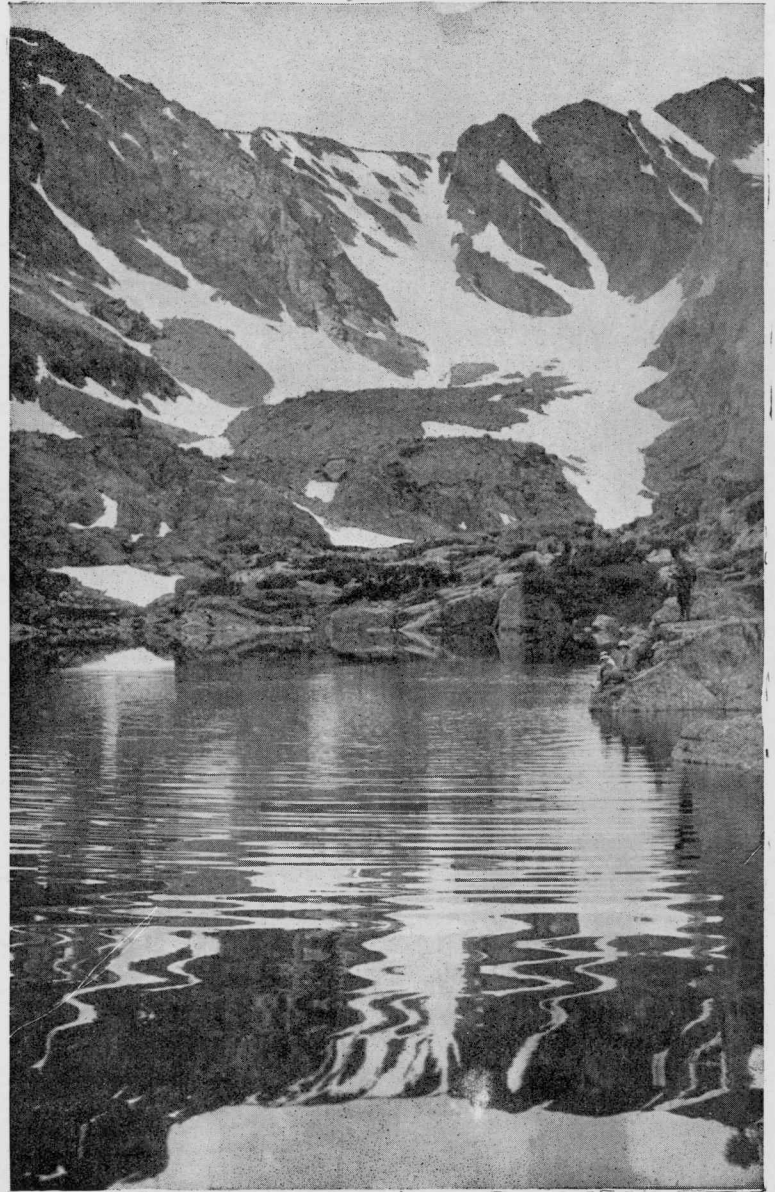
It is the policy of Colorado State Teachers College to heed the demands of progress, and awake to the desires of the teachers and the students of Education for the European viewpoint, the administration set about to get outstanding teachers in the foreign field and bring them to the campus at Greeley. The result is the announcement for the Summer Quarter, 1926, of three

## EUROPEAN EDUCATORS

Warden T. Rayment of Goldsmiths' College, University of London, will give courses in Contemporary Education in England; Professor Vernon Brown of Durham University, Newcastle-On-Tyne, will give courses in Educational Psychology, and Professor Ellen C. Oakden, of the English faculty of Goldsmiths' College, will conduct classes in Literature and English.

In addition to the regular faculty, who will give their full courses during the summer quarter, the College has obtained the services of forty other outstanding classroom teachers and also lecturers from leading universities and colleges of this country. Included among these are

*Dr. David Snedden, Dr. Edward S. Evenden, Dr. George D. Strayer, and Prof. Lucia Dement, of Columbia University; Dr. L. A. Pechstein of the University of Cincinnati, Professor John Crowe Ransom of Vanderbilt University, Dean J. H. Holst of Montana State College, Dr. Samuel B. Harding of the University of Minnesota, Dr. Carleton Washburne of Winnetka, Associate Superintendent C. R. Foster of Pittsburgh, Pa., Dr. H. C. Abbott of the University of South Dakota, Professor John C. Stone of Montclair State Normal School, Dr. Paul Blanshard of New York, Dr. George E. Raiguel of Philadelphia, Rollo Walter Brown of Cambridge, Herbert Adams Gibbons of Princeton.*



LOCHVALE, A FAVORITE SPOT OF SUMMER SCHOOL STUDENTS

# 1926 SUMMER SCHOOL 1926

Begins June 15: First half, June 15-July 21; Second half, July 22-August 26.



THE ADMINISTRATION BUILDING

LOCATED close to the Rocky Mountains, Colorado State Teachers College is an ideal place for Summer study. The climate is equable, with days never uncomfortably hot and nights that are always cool. The beautiful campus, forty acres in extent, carpeted with velvety green and densely shaded with towering spruce and other trees, is a haven of rest and comfort when the rest of the world is sweltering in the mid-summer heat.

## ESTES (National) PARK

is the playground of the Summer School students at Colorado State Teachers College. The gateway to the mountain park can be reached in less than an hour's ride by auto from the College campus. Many students spend the week-ends in the park, climbing the mountains, and by other forms of outdoor recreation combine pleasure with their summer's work.

## Educational Features

The administration has planned another program of outstanding features for the Summer, 1926, quarter. Aside from the regular classroom program, two hours every afternoon will be given over to lectures and discussions of big problems, and one hour for book reviews. A different lecturer will have charge of these classes every hour.

If you haven't already done so, now is the time to make your plans for attending Summer School. Write for catalog and detailed information to

GEORGE WILLARD FRASIER, President  
Greeley, Colorado

# COLORADO STATE TEACHERS COLLEGE

Colorado  
State Teachers College  
**BULLETIN**

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SERIES XXV

JANUARY, 1926

NUMBER 10

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**HAND BOOK**  
OF THE  
**EXTENSION DEPARTMENT**



GREELEY, COLORADO

Published Monthly by Colorado State Teachers College,  
Greeley, Colorado

Entered as Second-Class Matter at the Postoffice at Greeley,  
Colo., under the Act of August 24, 1912





## EXTENSION DEPARTMENT

### *Executive Staff*

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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.  
Assistant Director Extension Department  
Associate Professor of Extramural Education

STEPHEN C. GRIBBLE, B. S., A. M., Ph. D.  
Extension Field Instructor  
Assistant Professor of Extramural Education

NORMA S. GILBERT  
Secretary

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Director of Training Schools;  
Professor of Education

GEORGE A. BARKER, M. S. .... Professor of Geology, Geography  
and Physiography

SAMUEL C. BEDINGER, LL. B. ... Assistant Professor of Commercial Education

HAROLD G. BLUE, A. B. .... Principal of Teachers College High School;  
Professor of Secondary Education

LESTER W. BOARDMAN, A. M. .... Professor of Literature and English  
Head of Division

WILLIAM G. BOWERS, Ph. D. .... Professor of Chemistry

M. E. BRYSON, M. D. .... Medical Adviser of Women;  
Associate Professor of Physical Education

JEANNETTE HELEN CAMPBELL, A. B. .... Assistant to the Dean of Women

ELIZABETH CLASBEY, A. M. .... Assistant Professor of Household Science

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HELEN C. DAVIS, A. M. .... Professor of Elementary Education;  
Principal of Teachers College Elementary School

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Head of Division

GRACE HAMILL, A. M. .... Associate Professor of Educational Psychology

WILLIAM H. HARGROVE, B. S. .... Professor of Rural and Agricultural Education

JOSEPHINE MARY HAWES, A. M. .... Associate Professor of Secondary English  
JACOB DANIEL HEILMAN, Ph. D. .... Professor of Educational Psychology  
Head of Division  
FRED LOUIS HERMAN, B. S. .... Associate Professor of Secondary Science  
IRA WOODS HOWERTIL, Ph. D. .... Professor of Sociology and Economics;  
Head of Division  
FRANK COVERT JEAN, Ph. D. .... Professor of Biology; Head of Division  
WINFIELD L. KNIES, A. B. .... Assistant Professor of Commercial Education  
GENEVIEVE L. LYFORD, A. M. .... Associate Professor of Kindergarten  
Education  
ARTHUR E. MALLORY, A. M. .... Professor of Secondary Mathematics  
VIVIEN MERRIMAN, A. M. .... Associate Professor of Commercial Education  
LESTER E. OPP, Mus. B. .... Assistant Professor of Music  
ORA B. PEAKE, A. M. .... Associate Professor of Secondary History  
EARLE UNDERWOOD RUGG, Ph. D. .... Professor of Education; Head of Division  
FRANCES TOBEY, A. B., Litt. B. .... Professor of English; Acting Head of  
Division  
EDITH GALE WIEBKING, A. B. .... Associate Professor of Household Arts

# HAND BOOK

## OF THE

# EXTENSION DEPARTMENT

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During the year 1924-25 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 twenty-nine states of the Union, and Porto Rico.

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

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

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

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

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

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

### Growth of Extension Service

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

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

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

### The Significance of Preparedness

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

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

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

### Compensation Dependent Upon Preparation

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

### The Professionalization of Teaching

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

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

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

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

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

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

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

### The 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.

### A Two-fold Responsibility

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

### Teachers College Rises to the Occasion

Both responsibilities are being met in a spirit of utmost devotion and consecration. By means of the widespread organization of group extension courses and the development of individual extension courses that meet the needs of every teacher, no matter how far he may be

removed from the centers of learning, it is possible for every teacher in the state (who held at the time the new Certification Law was enacted a first or second grade certificate) to meet the requirements of the law without giving up his work as a teacher for a single year and without going to summer school more than one year in three.

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

#### Teachers Placement Bureau

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. During the calendar year of 1924, 357 teachers were placed through the Placement Bureau. The grand total in salaries paid to these teachers was \$465,924.00. A careful survey of the success of these teachers reveals that 94 percent of the placements have proved satisfactory to the communities concerned.

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 as 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 co-operation of all concerned.

#### Guiding Principles in Making Nominations

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

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

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

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

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

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

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

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

#### Confidential Information Accompanying Nominations

1. A digest of Qualifications.

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

2. Nominee's Personal Record.

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

3. Professional and Educational Record.

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

4. Copies of Original Recommendations.

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



## Field of Operation

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

## 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	

## Professional Training of Our Graduates

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

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.

## DETAILED INSTRUCTIONS

## Relative to Group and Individual Extension Courses

## TWO DISTINCT TYPES

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

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

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

## Details Relative to the Group Plan

The University of Colorado, the University of Denver and 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.

## How Individual Extension Courses Are Conducted

The Extension Department sends the student the first four study units of the course he has chosen and the material sheet and book list. He studies the books as directed and works out his first recitation paper—covering the work outlined in the first study unit.

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*.

2. Use clean letter-size paper. Remember that the character of the teacher is often judged by the care with which she prepares manuscripts. *It pays to be neat.*

3. Leave a margin one inch wide on left hand side of each sheet for the criticisms and suggestions of the instructor.

4. Always copy the number of the item or question or assignment with your answer; i. e., let your answer bear the same number as the question you are answering.

5. The student is expected to answer every question asked, or else when it is not possible to work out a fairly satisfactory answer independently, to ask questions of the instructor. The instructor expects to do as much teaching as the course requires.

6. Similarly the student is expected to work out all assignments (such as "List the factors—," or "Illustrate—," etc.) with deliberate care, or else to ask questions of the instructor.

#### How Mail Is Forwarded

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

The reason for this request is that both the director and his 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 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. No diploma or degree can be earned wholly by extension study. Three full quarters of residence work must be done by all who

graduate from the Junior College; graduation from the Senior College requires at least two additional quarters of residence work; and graduation from the Graduate School requires three additional quarters of residence study.

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

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

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

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

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

5. No enrollment can be made until the necessary fees have been paid. Note that the fees are \$2.50 per quarter hour, plus 25 cents per quarter hour for postage.

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

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

8. 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.

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

10. Students finishing graduation requirements by extension work must 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.

### The Question of Cost

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 and Transfers

*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.*

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

## NECESSARY PROCEDURE

### Before Extension Credits Can Be Counted Toward Graduation at Colorado State Teachers College

#### I. High school graduates

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

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

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

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

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

In order that experienced teachers who are not high school graduates may get in touch with the new ideas and movements in educa-

tion which the College faculty are presenting to teachers of the country through the medium of extension courses, special provision is made for teachers and mature individuals with broken educational careers.

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

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

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

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

1. By passing an intelligence test with a minimum score of 70.

2. By adjustment through the Ungraded School for Adults.

3. Teachers College High School has prepared a group of most excellent high school courses in Literature, History, Science, and Mathematics that may be taken by adult students for high school credit.

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

## BIOLOGICAL SCIENCES

### 1. EDUCATIONAL BIOLOGY—Three hours.

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

### 4. PRACTICAL ZOOLOGY—Four hours.

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

## CHEMISTRY

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

## 3. GENERAL CHEMISTRY—Three hours.

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

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

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

## 108. ORGANIC CHEMISTRY—Three hours.

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

## 109. ORGANIC CHEMISTRY—Three hours.

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

## 112. FOOD CHEMISTRY—Three hours.

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

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

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

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

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

## COMMERCIAL EDUCATION

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

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

## 1. PRINCIPLES OF SHORTHAND I—No credit.

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

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

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

## 11. PRINCIPLES OF TYPEWRITING I—No credit.

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

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

A study of letter forms and tabulating.

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

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

## 15. BUSINESS REPORTS AND COMPOSITION—Four hours.

The aim of this course is to give the commercial teacher a better background for the subject of business English in high school. Emphasis is put upon the use of words in such a way that people will be induced to act. The principles of literary composition will be applied to commercial correspondence. 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 sales letter will be analyzed, and principles derived from this analysis will be applied in actual practice. Special consideration will be given to letters of application, letters of complaint, sales letters, follow-up letters, and collection letters.

## 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.

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

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

## 52. PRINCIPLES OF ACCOUNTING III—Four hours. Prerequisite, C. E. 51 or the equivalent.

This course is designed to cover the more advanced principles of accounting, emphasizing especially the problems of corporation accounting. The proper evaluation of balance sheet items, as regards depreciation and the maintenance of fixed assets,



is especially stressed. Principles considered are developed by means of class discussion and illustrative laboratory exercises. A complete set of corporation books with a minimum of bookkeeping detail are written up in this course.

### 53. SALESMANSHIP—Three hours.

Special attention is given in this course to methods of teaching, textbooks suitable for high school classes in salesmanship, and special references and aids. Selling and the prime essentials of selling are considered in this course. Attention is given to the problem of selling personal services. Sales talks are given to the class by experienced salespeople while students prepare written analyses of the processes.

### 144. COMMERCIAL LAW II—Four hours.

The law of corporations, partnerships, real property, bailments, and bankruptcy will be treated in this course. Considerable time will be devoted to the study of the necessary legal forms and procedure in connection with these topics.

### 151. COST ACCOUNTING—Four hours.

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

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

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

## EDUCATION

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

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

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

### 3. PRIMARY METHODS—Four hours.

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

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

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

20. GENERAL AGRICULTURE—Four hours.

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

21. RURAL SCHOOL PROBLEMS—Four hours.

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

28. SCHOOL AND HOME GARDENS—Four hours.

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

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. The three books used for the school year 1925-26 are:

1. Progressive Methods of Teaching by Stormzand.
2. Teaching of Reading by Wheat.
3. Constructive Discipline by Smith.

38. VOCATIONS FOR WOMEN—Two hours.

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

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

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

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

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

## 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. Some of the topics to be considered are: characteristics of adolescence; types of disciplinary control; economical class room 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.

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

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

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

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

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

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

## 129. 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 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, Romans and the Medieval Church to educational progress, the following topics will be discussed and evaluated in terms of their influence upon modern times: the Renaissance, the Reformation, the rise of Science, the development of vernacular schools, the influence of the educational reformers—Comenius, Rousseau, Pestalozzi, Herbart, Froebel, and Dewey—upon recent educational theory and practice and a comparative study of the educational systems of the chief countries of the world.

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

Beginning with the old world background this course will trace the development of free public education in America up to the present time. Special emphasis will be

given to a consideration of how the school subjects came to be, what they are, the development of methods of teaching in terms of children's interest and capacities and the influence of recent educational tendencies such as the widened concept of citizenship training, the scientific study of education and the economy of time movement. Contemporary educational problems will be used as the basis of explaining the educational and cultural history of the United States.

#### 142. CITY SCHOOL ADMINISTRATION—Four hours.

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

#### 210. PROBLEMS OF THE SCHOOL CURRICULUM—Four hours.

This course may be substituted for Education 10 for Senior College and Graduate students. This is an advanced course in curriculum construction. It will deal with the sources of curriculum materials, and with methods of investigation and evaluation of school courses in terms of impersonal or objective standards. Each student will be required to make a study or investigation of some aspect of the curriculum in order that he may more thoroughly understand the 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

##### Four Years for Majors in Psychology

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

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

SECOND YEAR: Psychology 3.

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

FOURTH YEAR: Psychology 108a, 108b, 109, 111, 113 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. They need not take psychology 105 and 108b. They will also be held for some practice teaching in special classes.

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

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

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

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

2a. EDUCATIONAL PSYCHOLOGY—Three hours.

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

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

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

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

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

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—Four hours.

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

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

## GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY

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

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

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

### 2. PHYSIOGRAPHY—Four hours.

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

### 7. BUSINESS GEOGRAPHY—Four hours.

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

### 103. CLIMATOLOGY—Four hours.

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

### 113. MATHEMATICAL GEOGRAPHY—Three hours.

A recitation course designed to cover such problems as proofs of the earth's rotation and evolution, 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 selvas hot deserts, taiga tundra are taken up. We shall consider animal life in so far as it takes on peculiar forms or habits of life in these varying habitats. The effect of island isolation on animal and plant forms will be discussed.

## HISTORY AND POLITICAL SCIENCE

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

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

### History

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

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

#### 2. AMERICAN HISTORY, NATIONAL DEVELOPMENT, 1820-1865—Four hours.

Consolidation of the new West; the tariff controversy; financial readjustment; Removal of the Indians beyond the Mississippi; westward expansion; Jacksonian democracy; the slavery controversy; secession and civil war; saving the Union; foreign relations; economics of the Civil War.

#### 3. RECONSTRUCTION AND THE NEW UNITED STATES—Four hours.

Problems of reconstruction; radical ideas in Congress; the negro problem in the South; carpet bag rule; rebuilding of political parties; railroad and commercial expansion; the United States as a world power; the new era of industrial consolidation; regulating industry; Roosevelt and Wilson Americanism; the World War.

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

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

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

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

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

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

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

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

#### 27. CONTEMPORARY HISTORY—Two hours.

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

## 102. ANCIENT SOCIAL HISTORY—Four hours.

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

## 107. THE BRITISH EMPIRE—Four hours.

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

## 116. SPANISH-AMERICAN HISTORY—Four hours.

A course designed to furnish a background for understanding the growing relations between the United States and the republics to the south. In tracing the experiences of the Latin-American people, attention is given to the work of Spain, to the securing of independence, to the social, political, and economic growth, to international relations and the Monroe Doctrine, to Panama, and the purchase of the Danish West Indies, and to the new Pan-Americanism.

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

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

## Political Science

## 1. GOVERNMENT OF THE UNITED STATES—Four hours.

A detailed study of the origin of the federal government; the selection and powers of the president; congress and its relations to the other departments; the federal judiciary; conduct of elections; the actual work of the national government; foreign relations; the preservation of peace and the enforcement of law; the police power and social legislation; relations to the state and local governments.

## 2. STATE GOVERNMENT—Four hours.

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

## 3. MUNICIPAL GOVERNMENT—Three hours.

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

## 101. AMERICAN DIPLOMACY—Four hours.

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

## 102. INTERNATIONAL RELATIONS—Four hours.

In this course there is a study of the principles governing the relations of civilized nations, which includes the problems of citizenship, the position of aliens and



of alien enemies, the rights of nations with respect to war, neutrality, and intervention, and the regard for treaties. American ideals, Pan-Americanism, and the League of Nations.

### HOME ECONOMICS

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

#### 1. TEXTILES—Four hours.

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

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

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

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

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

### INDUSTRIAL ARTS

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

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

The aim of this course is to give a better understanding of the underlying principles essential in teaching, and involves a study of the 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. Graduate credit may be secured in some courses, indicated by a supplementary number over 200.

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

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

## 6. AMERICAN LITERATURE—Four hours.

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

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

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

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

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

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

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

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

## 31. THE SHORT STORY—Four hours.

A study of typical, modern short stories to observe the technical methods of modern short story writers and the themes they have embodied in the magazine fiction of the present. The course is based upon Mr. Cross' book, "The Short Story," supplemented by O'Brien's "The Best Short Stories" and other recent volumes. Current magazine stories are also used.

## 125. NINETEENTH CENTURY PROSE—Four hours.

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

## 127. SHAKESPEARE'S COMEDIES—Four hours.

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

## 131. WRITING THE SHORT STORY—Four hours.

In this course a careful study is made of the principles underlying the writing of the short story. Each student will outline and submit an original plot and develop it into a short story.

## 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. Students should not enroll for this course unless a good library is available.

## MATHEMATICS

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

## 1. SOLID GEOMETRY—Four hours.

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

## 2. PLANE TRIGONOMETRY—Four hours.

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

## 5. COLLEGE ALGEBRA—Four hours.

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

## 6. COLLEGE ALGEBRA—Four hours.

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

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

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

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

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

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

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

## 101. DIFFERENTIAL CALCULUS—Four hours.

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

## 102. INTEGRAL CALCULUS—Four hours.

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

## 103. THEORY OF EQUATIONS—Four hours.

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

## 108a. 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 DIFFERENTIAL CALCULUS—Four hours.

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

## 201. DIFFERENTIAL EQUATIONS—Four hours.

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

## MUSIC

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

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

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

## ROMANCE LANGUAGES

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

## French

## 5. INTERMEDIATE FRENCH—Four hours.

Les Contes de Maupassant and Lavissee's Histoire de France.

## 7. INTERMEDIATE FRENCH—Four hours.

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

## 9. INTERMEDIATE FRENCH—Four hours.

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

## 105. ADVANCED FRENCH—Four hours.

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

## 107. ADVANCED FRENCH—Four hours.

Hugo's Notre Dame de Paris and Les Miserables.

## 109. ADVANCED FRENCH—Four hours.

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

## Spanish

## 5. INTERMEDIATE SPANISH—Four hours.

Alarcon's Novelas Cortas and El Final de Norma.

## 7. INTERMEDIATE SPANISH—Four hours.

Eserich's Amparo and Benavente's Ganarse la Vida.

## 9. INTERMEDIATE SPANISH—Four hours.

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

## 105. ADVANCED SPANISH—Four hours.

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

## 107. ADVANCED SPANISH—Four hours.

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

## 109. ADVANCED SPANISH—Four hours.

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

## 225. GRADUATE SPANISH—Three hours.

Ford's Old Spanish Readings.

## Latin

## 110. ADVANCED LATIN—Four hours.

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

## 112. ADVANCED LATIN—Four hours.

The *Agricola* and *Germania* of Tacitus.

## SOCIOLOGY

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

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

## 3. EDUCATIONAL SOCIOLOGY—Three hours.

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

## 105. PRINCIPLES OF SOCIOLOGY—Four hours.

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

## 132. THE FAMILY—Three hours.

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





COLORADO STATE TEACHERS COLLEGE

# BULLETIN



# SUMMER QUARTER

June 15 -- August 26

1926

GREELEY, COLORADO

SERIES XXV

NUMBER 11



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## IMPORTANT ANNOUNCEMENT

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### 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 13, 14, 15. 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 before September 1, 1923, care should be taken to determine whether an adjustment is required under regulations governing admission and credits already established on the College records. (See pages 16, 17, 18, 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.

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.

### REGISTRATION BY MAIL

Full instructions concerning registration by mail will be found on Pages 2 and 3.

### EVENING LECTURES AND SPECIAL LECTURE COURSES

See the notice concerning the afternoon and evening lectures under Special Courses of Lectures, on Page 12.

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COLORADO STATE TEACHERS COLLEGE

# BULLETIN

Summer Quarter

1926

THE QUARTER

June 15-August 26

First Half  
June 15-July 21

Second Half  
July 22-August 26

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

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All students who expect to be in attendance for the full quarter should make up a program for the whole quarter. The quarterly 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.

Class cards will not be given out until the opening date of permanent registration. Whether the student registers by mail or on June 15, only the following blanks will be provided:

1. Registration Card (in duplicate).
2. Temporary Enrollment Card.

The Registration Card gives complete personal data, and must be filled out each quarter.

The Temporary Enrollment Card when completed shows your proposed schedule of classes, and the amount of your fees.

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 "Application for Registration" is received in mail registration, or when the student presents himself for residence registration, detailed printed instructions will be supplied. The "Application for Registration" by mail will be received only on the dates shown on page 3. No mail registrations will be handled for the second half. Temporary residence registration will take place in the College gymnasium beginning at 7:00 A. M., June 15. Students whose registration has been approved by mail need not appear at the gymnasium on that date.

### II. PERMANENT REGISTRATION.

The "Student's Daily Schedule" and "Class Cards" (permanent blanks) will not be given out until after June 15. Attend classes by presenting the Temporary Enrollment Card to teachers until you, your adviser and teachers are satisfied with the proposed schedule. If you are ready to transfer to permanent blanks Monday, June 21, the opening date of permanent registration, do so. Permanent registration, which includes payment of fees, will be conducted through the offices in the Administration Building on the following dates: June 21, 22, 23, 24, and 25.

### III. LATE REGISTRATION.

A late registration fee of \$1.00 will be charged if temporary registration has not been completed and approved by 5:00 P. M., June 15. Transfer to the permanent blanks must be completed by 5:00 P. M., Friday, June 25, 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 three days late, the total number of hours on his program will be reduced in proportion to the time lost.

Any student absent from class on the last day of the quarter will have his quarter report for that class turned in as incomplete, unless he has a written permission from the dean of the College to leave before the close of the quarter. Application for such a permit shall be made in writing. No teacher has authority to excuse a student from any class before the close of the quarter.

# APPLICATION FOR REGISTRATION BY MAIL

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This application must be received at the registrar's office between May 3-7 inclusive. Material with instructions will be mailed promptly. Your completed registration must be mailed so that it will reach the registrar's office between May 17-21 inclusive. Mail registrations will not be handled under any other conditions.

Are you a graduate of a four-year high school course?.....

What school?.....Year graduated?.....

Are you 20 years of age or over?.....Age if under 20?.....

If under 20 years of age, are you properly matriculated in this college?  
(See Page 17, concerning this point)

.....

Have you attended college or other higher institution of learning?.....

Name institutions, giving degrees secured, if any.....

.....

What is your present occupation?.....

Have you ever taught school?.....If so, state where and when?.....

.....

.....

It should be understood that the College may find it necessary to make some changes, either in the courses offered or in the hours scheduled, or both. Get a program change sheet when you arrive at the College.

Name .....  
(Family name) (First name) (Middle initials)

Permanent Address .....

Address where mail will reach you quickest.....

Date....., 1926.

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*Remove this page and mail to the Registrar, Colorado State Teachers College, Greeley, Colorado. In an emergency, make a copy of this blank and do not wait for a Summer Bulletin.*

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\*On leave.



## SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER, 1926

Herewith is a partial list of eminent educators and lecturers who will serve on the special faculty for the Summer Quarter, 1926. 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.

- T. RAYMONT, Warden Goldsmiths' College, University of London. Courses in Education.
- VERNON BROWN, Psychologist; Lecturer in Education and Educational Psychology, Armstrong College, Durham University; Secretary of the Durham University Committee for Education and for the Examining Board for the Teachers' Certificate. Courses in Psychology.
- PROF. ELLEN C. OAKDEN, Member of the faculty of Goldsmiths' College, University of London. Courses in English Literature.
- DR. L. A. PECHSTEIN, Dean of the College of Education, University of Cincinnati. Courses in Educational Psychology.
- MR. J. H. HOLST, Dean of Montana State College. Courses in Educational Psychology.
- MR. B. W. PEET, Head of Department of Chemistry, Michigan State Normal College. Courses in Chemistry.
- DR. SAMUEL B. HARDING, Head of Department of History, University of Minnesota; Author, Lecturer, and Teacher in Historical subjects. Courses in History and Political Science.
- MR. HOWARD JONES, Head Coach, University of Southern California. Courses in Coaching.
- MR. JOHN C. STONE, Head of Department of Mathematics, State Normal School, Montclair, New Jersey. Special Lecturer, New York University; Author. Courses in Mathematics.
- DR. GEORGE B. STRAYER, Professor of Education and Director of the Division of Field Studies, Institute of Educational Research, Teachers College, Columbia University; Lecturer and Author. Courses in Education.
- MR. C. R. FOSTER, Assistant Superintendent of Schools, Pittsburgh, Pa. Courses in Education.
- MR. A. L. THRELKELD, Deputy Superintendent of Schools, Denver, Colorado; Specialist in Public School Curriculum Work. Courses in Education.
- DR. EDWARD S. EVENDEN, Professor of Education, Teachers College, Columbia University; Special Lecturer and Author. Courses in Education.

- COL. J. E. HUCHINGSON, Head of Department of Commercial Education, Public Accountant and expert in Efficiency Organization and Administration. Courses in Commercial Education.
- PROF. LUCIA DEMENT, Department of Fine Arts, Teachers College, Columbia University. Courses in Art.
- MR. JOHN AIKMAN, Nebraska Wesleyan University. Courses in Biology.
- PROF. OTHO HANSCOM, Intermediate Supervisor State Teachers College, Denton, Texas. Courses in Intermediate Supervision.
- 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. DAVID SNEDDEN, Professor of Education, Columbia University; Author and Lecturer. Lecturer.
- MISS ALICE HANTHORN, Supervisor Cleveland Public Schools, Cleveland, Ohio. Courses in Education.
- DR. CARLETON W. WASHBURNE, Superintendent of Schools, Winnetka, Illinois; expert in the field of Individual Instruction. Courses in Education.
- PROF. ROLLO BROWN, Author and Lecturer on Literature and Philosophy. Lecturer.
- DR. EDWARD HOWARD GRIGGS, Author and Lecturer on Literature and Philosophy. Lecturer.
- DR. PAUL BLANSHARD, Special Lecturer for the League for Industrial Democracy. Lecturer.
- DR. HERBERT ADAMS GIBBONS, Historian and Political Economist; Author and Lecturer on International Relations. Lecturer.
- MR. JOHN WELLS RAYHILL, Topeka, Kansas; Lecturer on Modern Religious Thought. Lecturer.
- DR. H. C. ABBOTT, Member of the faculty of the University of South Dakota. Courses in Biology and Nature Study.
- MR. JOHN CROWE RANSOM, Professor of English, Vanderbilt University. Courses in Literature.
- MR. O. C. PRATT, Superintendent of Schools, Spokane, Washington. Courses in Education.

## COLORADO STATE TEACHERS COLLEGE

SUMMER QUARTER, 1926

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 forty 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.

The round trip from the College campus to Camp Olympus is to cost the Summer school students who go in groups of twenty or more

the sum of \$3.00. College students and faculty members can obtain board and lodging at Camp Olympus for \$2.00 per day, or fifty cents a meal and fifty cents a night. Five successive week-end trips to the camp, including ten days board and lodging, will cost \$30.00. The reduced rate for successive week-end trips makes the camp an extension of the campus and enables students interested in subjects like nature study and art to have their classes upon the campus and their field work under able instructors in Estes Park. Those expecting to avail themselves of these outings should be provided with warm clothing suitable for hiking and climbing, heavy-soled, low heeled shoes, and a raincoat.

#### FEEES AND EXPENSES

**BOARD**—Students board in private houses, and in the College cafeteria. The cafeteria was started to enable students to keep the outlay for board down to a figure of approximately cost. Last Summer the average cost of board for 600 students in the cafeteria was \$5.50 a week. It will not be higher than that this year. In private boarding houses the rate averages \$6.00 per week.

**ROOMS**—Private houses in the vicinity of the College provide rooms 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.

**DORMITORIES**—The Dormitory Triangle provides accommodations for 114 women students. Each room is provided with two beds, with complete accommodations for two students. Rooms in the dormitories cost from \$25.00 to \$28.00 for the quarter. Students in the dormitories are required to furnish their own bedding and towels. The College has found it much more satisfactory for students to see the rooms before renting them. It is urged, therefore, that students come several 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 assistant to the dean of women.

Students who wish to find roommates after they arrive in Greeley should go 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.

**LIGHT HOUSEKEEPING**—A limited number of rooms for light housekeeping are available at a reasonable rental. The price varies from \$16.00 to \$24.00 per month.

**RESERVATIONS**—Reservations will be held until noon of Registration day, June 15. If students are prevented from arriving at that time, and will notify the assistant to the dean of women by telegraph or telephone, their 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 finds it necessary to draw its financial support largely from student fees. Each student pays \$16.00 for a half quarter, or \$32.00 for the full quarter. Students not citizens of Colorado pay an additional fee of \$5.00 for the full quarter and \$2.50 for a half quarter.

All students who expect to be in the College for the full quarter are expected to make out their programs of studies for the full time. The fees, however, may be paid in two parts, one-half on June 15, and the other, July 22.

Books—New books may be bought from the College bookroom.

Students may check towels from the bookroom upon the deposit of \$1.50. Clean towels may be drawn by returning the soiled ones. When all towels are returned, fifty cents will be returned to the depositor.

#### APPROXIMATE EXPENSE FOR TWELVE WEEKS

The table below represents a median of expense—neither the least possible nor the highest—and covers the three large items:

Room .....	\$ 40.00
Board .....	70.00
College Fees .....	32.00
Books and Supplies.....	10.00

Total .....\$150.00

#### 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. 100a—Problems in Education
3:00 to	3:50—Ed. 100b—Unit Courses in Education
4:00 to	4:50—Book Reviews
7:00 to	8:00—General Lectures in the Gymnasium Auditorium.

#### SPECIAL COURSES OF LECTURES

The College Assembly and Evening Lectures—For fourteen 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. The first will be devoted to the subject of problems in education, the second 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 in the Summer Quarter of 1924-25, the College is continuing a book review hour, four 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 Department, either the Elementary School or High School, during the Summer Quarter, are asked to correspond with the director of the Training Schools before the opening of the quarter.

#### NEW REQUIREMENTS IN STUDENT TEACHING

1. The required amount of student teaching for the life certificate shall be one quarter instead of two.
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) shall be given one hour credit.
4. Students shall be required to pass satisfactorily an achievement test and make a grade 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 (Ed. 102) or the high school (Ed. 103), shall be required to repeat the course.
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. 5, and the method courses required for the majors listed on page 69 of the Year Book, 1925-26. 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 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. The life certificate or the A.B. degree will not be granted to any student who has not taken at least one quarter's work in the Training Schools of Colorado State Teachers College.

#### 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 has been reorganized and put in charge of a director whose chief business is to look after securing 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. There is no charge or commission for the services of the Placement Bureau. The bureau will be open and active through the entire Summer.

#### 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 the 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

Persons holding 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, may be admitted as graduate students by Colorado State Teachers College upon the presentation of official credentials, including a transcript of records of 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.

Excess Bachelor of Arts work taken in Colorado State Teachers College may be applied toward the Master of Arts degree only when arrangement is made in advance with the Dean of the College so that he may see that the work is of graduate standard and that it is in

line with the specialization necessary for the degree of Master of Arts. Such credit will be granted only to students in their fourth year who do not need all their time for the completion of the undergraduate work.

Students must offer among their undergraduate courses or later among courses offered to meet the requirements for the master's degree at least three which acquaint them with current practices in the organization and administration of public education, and one or two courses which introduce them to the literature of educational science and to the methods of investigation in the educational field.

Before beginning the work of the fifth year, each student must arrange with the head of his major department a three quarter program of courses which must be approved by the dean of the College.

### FEES FOR GRADUATE COURSES

Fees in connection with the fifth, or graduate, year of work will be the same as for undergraduate work.

### THE DEGREE OF MASTER OF ARTS

1. **ADMISSION TO CANDIDACY FOR DEGREE**—Admission to graduate work does not guarantee admission to candidacy for the degree of Master of Arts. Not later than the tenth week of the first quarter's work application must be made in writing to the dean of the College. Such admission shall be determined by a committee consisting of the president of the College, the director of educational research, the head of the department in which the student is majoring, and one member of the faculty with whom the student has had work, to be chosen by the dean of the College. The following are the requirements in the case of each student: personal fitness, intelligence above average as determined by a standard test, the ability to use good English, both oral and written, the ability to do superior work in the field of specialization, and ability to do independent research. Also each student will be required to take a preliminary oral and written examination.

#### 2. REQUIREMENTS FOR THE DEGREE

(a) **Residence**—Three quarters of work in residence are required beyond a four-year undergraduate course.

(b) **Course Credits Required**—A year's graduate work shall be interpreted as forty-eight quarter-hours. Thirty-eight hours credit will be given for graduate courses pursued and ten hours for research in education leading to the completion of the master's thesis. To this end, every graduate student shall enroll in Ed. Res. 223, Research in Education.

No graduate student may enroll for more than sixteen hours of work in any quarter. This regulation is essential to the maintenance of the standard of intensive work for the master's degree. In determining the maximum amount of work permitted, research upon the thesis must be included within the limit stated.

Before the degree of Master of Arts may be conferred, a student must have had at least sixty-four quarter-hours of undergraduate and graduate work in his major, and not less than thirty-two hours of professional work in education and related fields such as psychology, educational sociology, and educational biology. Where the candidate majors in education, sixty-four quarter hours will be required, but only work in education or educational psychology will be accepted for such undergraduate and graduate work.

(c) **Level of Work**—In order that the standard of intensive and specialized work for the master's degree may be maintained, no graduate credit will be given for courses numbered under 100 or for scat-



tered and unrelated courses. No credit will be given for any course taken by a graduate student in which students with less than senior college status (96 quarter-hours credit) are registered.

Sixteen hours credit toward the degree of Master of Arts shall be the maximum amount allowed to be earned in a regular school year (three quarters) by any person employed on full time, except upon the recommendation of the Dean of the College.

All work for the degree of Master of Arts shall be done with distinction. Work barely passed (mark of "D" under the present grading system) shall not be considered creditable for an advanced degree in the College, and the average should be distinctly above "C."

(d) The Thesis—Research culminating in the writing of a thesis upon some vital problem in the field of education shall be an integral part of the work for the degree of Master of Arts.

In order that progress in the research problem which the candidate has undertaken may be continuous and systematic throughout the graduate year, he shall register for Ed. Res. 223, Research in Education, each quarter of his graduate work. A Thesis Committee of three will be appointed for each student. This committee will consist of the head of the department in which the student is majoring, the director of educational research, and one other faculty member chosen by these two. In the first quarter, the candidate must submit to his Thesis Committee for approval the topic and detailed agendum of procedure and technic for his investigation. Not later than the fourth week of the third quarter of work, the candidate must submit to his committee evidence that the research upon his thesis has been completed.

At least four weeks before the date upon which the degree is to be conferred, three copies of the thesis must be sent to the thesis committee for final judgment, and at least three weeks before the date upon which the degree is to be conferred, the completed thesis in final form must be approved by his committee and by the dean of the College; and two copies must be filed in the dean's office.

The thesis is to conform to definite standards. It must be type-written on paper of good quality, size 8½x11 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)

## 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 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) }
  4. Mathematics (may include Advanced Arithmetic, after Algebra, but does not include Commercial Arithmetic) } 5
  5. The Physical and Natural Sciences (Physics, Chemistry, Biology, General Science, Botany, Zoology, Physical Geography, Physiology, Hygiene, Agriculture) }

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

6. Music and Fine Arts }
  7. Commercial Arts }
    8. Home Economics } 6
    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 intelligence score. The fee for this examination 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. 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 college entrance 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.

School for Adults—Mature students (twenty years of age or over) who have less than 14 high school units of credit, and who are not admitted through the entrance test, will be assigned to the School for Adults—a division between the high school and the College. As soon as they have completed the equivalent of 15 high school units, or shown the learning power which such completion usually gives, they may be admitted to the College.

## 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 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 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 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 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. 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.

**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 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 12 to 16 hours will be dropped at the end of the quarter and may not enroll again except by special permission of the dean, 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 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 extended. By special arrangement in advance with the dean 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 dean 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, at least forty-eight of his ninety-six hours may be granted on advanced standing or for extension courses.

**THE FOUR-YEAR COURSE**—At the end of the fourth year of study, and upon the completion of one hundred ninety-two quarter-hours of credit, the degree of Bachelor of Arts in Education 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 14, 15, 16.

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 forty-four quarter-hours to applicants who fall short of admission to the Graduate work. Students transferring to Colorado State Teachers College when they are within one or two quarters of the A.B. 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 heads of the departments giving those courses.

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 should be sharply differentiated from that of other technical schools and also from that 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' work. The following departments shall prepare teachers to receive the Bachelor's degree:

Biology	Fine and Applied Arts
Commercial Education	Geology, Physiography, and
Education	Geography
Superintendents	History and Political Science
Principals for	Home Economics
Grades	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

But 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 division of the grades or grade department in which he elects to take his certificate. The following departments are those referred to:

Kindergarten-Primary	Fine Arts
Intermediate Grades	Manual Training
Upper Grades	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.

**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 in Education will be granted. The courses shown above 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 7, Sociology 3, Education 1, Education 5, 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.

## ATHLETICS AND MEN'S PHYSICAL EDUCATION

(For detailed description of courses, see the Year Book)

12a. ATHLETIC TRAINING—Two periods. First half Quarter. One hour.

Emergency treatment of common injuries, theories of training, massage, and the treatment of sprains and bruises are the topics considered.

67. INTRA-MURAL SPORTS—Three periods. First half Quarter. One hour.

Discussion and demonstration of group and mass games such as speedball, handball, soccer, etc.

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)

1. EDUCATIONAL BIOLOGY—Core subject for first year students. Either half or full Quarter. Three hours. Fee, \$1.00.

### BOTANY

1. GENERAL BOTANY—General botany of the flowering plants. Full Quarter. Four hours. Fee, \$1.00.

103. PLANT PHYSIOLOGY—Deals with the general functions of plants. Full Quarter. Four hours. Prerequisite, Botany 1 or its equivalent. Fee \$1.50.

202. BOTANICAL RESEARCH—Problems for graduate theses. Conference course. Fee, \$3.00. Students should register for this course only after consultation with Prof. Jean.

### ZOOLOGY

5. BIRD STUDY—An elementary course in the study of our common birds. Full Quarter. Four hours. Fee, \$1.00.

102. VERTEBRATE ZOOLOGY—A course designed to give the student a wider knowledge of the vertebrates than course 2. Full quarter. Four hours. Prerequisites, Zoology 1 and 2, or their equivalent. Fee, \$1.50.

107. **ELEMENTARY ENTOMOLOGY**—An elementary study of the leading insect groups. Full Quarter. Four hours. Prerequisites, Zoology 1 and 2, or their equivalent. Fee, \$1.50.

202. **ZOOLOGICAL PROBLEMS**—Problems preliminary to a thesis. Conference course. Fee, \$3.00. Before registering for this course students should consult with Prof. Harrah.

### BIOTICS

101. **HEREDITY AND EUGENICS**—Full Quarter. Four hours. Desirable prerequisite, Biology 1.

### ELEMENTARY SCIENCE

1. **ELEMENTARY BIOLOGICAL SCIENCE**—Required for Kindergarten, Primary and Intermediate majors. Full Quarter. May be taken for half quarter by special arrangement made at beginning of quarter. Fee, 50 cents.

### BACTERIOLOGY

1. **ELEMENTARY BACTERIOLOGY**—Full Quarter. Four hours. Prerequisite, Biology 1. Fee, \$1.50.

### CHEMISTRY

(For detailed description of courses, see the Year Book)

1. **GENERAL CHEMISTRY**—Full Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period on the theory of chemistry and non-metals.
2. **GENERAL CHEMISTRY**—Full Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period. A continuation of Course 1.
3. **GENERAL CHEMISTRY**—Full Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period on the chemistry of metals. A continuation of Course 2.
4. **GENERAL CHEMISTRY**—Full Quarter. Four hours. Fee, \$4.00.  
This course covers the same textbook work as Course 1, but requires more laboratory work. Two lectures and two laboratory periods.
5. **GENERAL CHEMISTRY**—Full 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**—Full Quarter. Four hours. Fee, \$4.00.  
A continuation of Course 5. Two lectures and two laboratory periods.
7. **QUALITATIVE ANALYSIS**—Full Quarter. Four hours. Fee, according to hours of credit.  
A laboratory and consultation course on the separation and identification of the common elements. Eight hours attendance. Prerequisite Courses 1, 2, and 3 or 4, 5 and 6.
108. **ORGANIC CHEMISTRY**—Full Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period. A study of the hydrocarbons and their derivatives.
109. **ORGANIC CHEMISTRY**—Full Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period. A continuation of Course 108. A study of benzene derivatives.  
Prerequisites for 108 and 109 are 1, 2, or 4, 5. Recommended to students specializing in biology or physics.
110. **ORGANIC CHEMISTRY**—Full Quarter. Four hours. Fee, \$4.00.  
Two lectures and two laboratory periods. Same textbook work as Course 108, but more extensive laboratory work.



111. ORGANIC CHEMISTRY—Full Quarter. Four hours. Fee, \$4.00.  
Two lectures and two laboratory periods. A continuation of Course 110. Prerequisites for Courses 110 and 111 are Courses 4, 5. Required of students specializing in chemistry and of four-year Home Economics students.
112. FOOD CHEMISTRY—Full Quarter. Three hours. Fee, \$3.00.  
Two lectures and one laboratory period. A study of foods, detection of adulterants, metabolism and dietary lists. Recommended as a general cultural course. Prerequisite for Course 112 is 1, 2, 108 and 109.
113. FOOD CHEMISTRY—Full Quarter. Four hours. Fee, \$4.00.  
A more comprehensive course than 112. Required of students specializing in chemistry and of four-year Home Economics students. Prerequisites 4, 5, 110, 111.
114. and 114b. QUANTITATIVE ANALYSIS—Either half or full Quarter. Four or eight hours. Fee, \$4.00.  
Gravimetric and volumetric analysis. A laboratory and consultation course. Eight or sixteen hours attendance. Prerequisites, Courses 4, 5, 6, 7.
117. THE TEACHING OF CHEMISTRY—Full Quarter. Three hours.  
Discussion and reports on the teaching of high school chemistry, and setting up demonstration apparatus. Required of chemistry students specializing to teach the subject.

## COMMERCIAL EDUCATION

(For detailed description of courses, see the Year Book)

1. PRINCIPLES OF SHORTHAND I—First half Quarter. No credit.
2. PRINCIPLES OF SHORTHAND II—Second half Quarter. Four hours.
3. SECRETARIAL PRACTICE I—Full Quarter. Four hours.
4. METHODS OF TEACHING SHORTHAND—First half Quarter. One hour.
11. PRINCIPLES OF TYPEWRITING I—First half or full Quarter. No credit. Fee, \$1.00.
12. PRINCIPLES OF TYPEWRITING II—Full Quarter. Four hours. Fee, \$1.00.
13. PRINCIPLES OF TYPEWRITING III—Full Quarter. Three hours. Fee, \$1.00.
14. METHODS OF TEACHING TYPEWRITING—Second half Quarter. One hour.
15. BUSINESS REPORTS AND COMPOSITIONS—Second half Quarter. Four hours.
36. HANDWRITING METHODS—Either half or full Quarter. Two hours.
37. BUSINESS MATHEMATICS—First half Quarter. Four hours.
38. COMMERCIAL LAW I—First half Quarter. Four hours.
50. PRINCIPLES OF ACCOUNTING I—First half Quarter. Four hours.
51. PRINCIPLES OF ACCOUNTING II—Second half Quarter. Four hours.
105. SECRETARIAL PRACTICE II—Full Quarter. Four hours.
110. OFFICE APPLIANCES AND SPECIAL EQUIPMENT—Either half or full Quarter. Two or four hours.
144. COMMERCIAL LAW II—Second half quarter. Four hours.
150. BANK ACCOUNTING—Second half quarter. Three hours.
157. PRINCIPLES AND METHODS IN COMMERCIAL EDUCATION—First half Quarter. Two Hours.
158. PROBLEMS IN BUSINESS EDUCATION—Second half Quarter. Four hours.
220. SEMINAR IN COMMERCIAL EDUCATION—Either half or full Quarter.

## EDUCATION

(For detailed description of courses, see the Year Book)

## I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

1. AN INTRODUCTION TO EDUCATION—Required of all first year students. Full Quarter three times a week or either half Quarter five times a week. Three hours.

2a. PRE-TEACHING OBSERVATION—Full Quarter. One hour.

2b. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL. Full Quarter. Hours according to schedule.

3. PRIMARY METHODS—Either half or full Quarter. Two or four hours.

4. INTERMEDIATE GRADE METHODS—Either half or full Quarter. Two or four hours.

5. PRINCIPLES OF TEACHING—Full Quarter three times a week or either half five times a week. Three hours. Prerequisites, Ed. 1.

10. THE ELEMENTARY SCHOOL CURRICULUM—Full Quarter. Three hours. Prerequisites, Ed. 1, Ed. 5, and Sophomore standing.

15. EDUCATIONAL GUIDANCE—First half Quarter. Two hours.

16. ELEMENTARY TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Either half 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 do the work usually required of girls in such groups.

16a. ADVANCED TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Either half Quarter. One hour.

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

17. BOY SCOUT WORK—First half Quarter. One hour.

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

20. AGRICULTURAL EDUCATION—Either half or full Quarter. Two or four hours.

21. RURAL SCHOOL PROBLEMS—Either half or full Quarter. Two or four hours.

25. Now numbered Ed. 125.

26. Now numbered Ed. 126.

28. SCHOOL AND HOME GARDENS—Second half Quarter. Two hours.

51. LITERATURE, SONGS, AND GAMES FOR KINDERGARTEN AND PRIMARY

CHILDREN—Either half or full Quarter. Two or four hours.

52. THE KINDERGARTEN CURRICULUM—Full Quarter. Four hours.

100a. PROBLEMS OF EDUCATION—Either half or full Quarter. Two or four hours. When taken for credit students must be in attendance every day and take the prescribed examinations.

This course offers students an opportunity to obtain in one Summer, from different lecturers, either members of the regular faculty or visiting lecturers or teachers, discussions of problems of current interest and significance, problems to which the particular lecturers have given detailed and serious study. This course attempts, therefore, to bring to interested students the results of research concerning current educational problems.

100c. UNIT COURSES IN EDUCATION—Either half or full Quarter. One, two, three, four, or five hours. When taken for credit, students must be in attendance every day and take the prescribed examinations.

The plan here is to offer a series of five one-hour courses, each of which, or any one or more of which, may be taken. Each course will be taught for two weeks by one man of national reputation in his field as follows: Dr. Strayer, of Teachers College, Columbia, School House Construction; Dr. Washburne, Superintendent of Schools in Winnetka, Illinois, Individual Instruction; Warden Rayment of Goldsmiths' College, University of London, Education in England; Dr. Pechstein, Dean of the College of Education, University of Cincinnati; Mr. C. R. Foster, Associate Superintendent of Schools, Pittsburgh, the Six Year High School.

## II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS

101. PRINCIPLES OF HIGH SCHOOL TEACHING—Full Quarter. Four hours.

102. ADVANCED STUDENT TEACHING IN 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.

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

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 AND LEARNING—Either half or full Quarter. Two or four hours.

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.

110. EXTRA-CURRICULAR ACTIVITIES—Either half or full Quarter. One and a half or three hours.

111. PHILOSOPHY OF EDUCATION—Full Quarter. Required fourth year. Four hours.

112. SCHOOL HOUSE CONSTRUCTION—Unit Course. One hour.

113. ORGANIZATION AND ADMINISTRATION OF THE JUNIOR HIGH SCHOOL—Full Quarter. Four hours. Primarily for Junior High School majors.

114. PRIMARY SUPERVISION—Either half or full Quarter. Two or four hours.

115. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL—First half. Two hours.

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

120. EDUCATIONAL FINANCE—Formerly Ed. 220—First half Quarter. Two hours.

123. EDUCATIONAL RESEARCH FOR SENIOR COLLEGE STUDENTS—Either half or full Quarter. Two or four hours. Arrange for this course with the head of the department.

This course is a seminar and conference course for qualified senior college students. Students with definite problems will carry on research on their topic under the direction of the instructor in whose field the problem lies.

125. RURAL EDUCATION—Formerly Ed. 25—Either half or full Quarter. Two or four hours.

126. THE PROJECT CURRICULUM FOR RURAL SCHOOLS—Formerly Ed. 26. First half. Two hours.

129. CURRENT EDUCATIONAL THOUGHT—Formerly Ed. 229—Full Quarter. Four hours.

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

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

136. COMPARATIVE EDUCATION—First half. 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—First half. Two hours.

142. CITY SCHOOL ADMINISTRATION—Either half or full Quarter. Two or four hours.

143. NATIONAL, STATE, AND COUNTY EDUCATIONAL ADMINISTRATION—Second half. Two hours.

144. SCHOOL PUBLICITY—First half Quarter. Two hours.

147. EDUCATIONAL SURVEYS—First half. Two hours.

148. METHODS OF TEACHING UNDER THE PLAN OF INDIVIDUAL INSTRUCTION—Unit course. One hour.

150. FOUNDATIONS OF METHOD—Either half or full Quarter. Two or four hours.

151. THE PRE-SCHOOL—Either half or full Quarter. Two or four hours.

152. THE CHILD AND HIS SCHOOL—Either half or full Quarter. Two or four hours.

154. RECENT INVESTIGATIONS IN ELEMENTARY EDUCATION AND THEIR PRACTICAL APPLICATION TO THE WORK OF THE INTERMEDIATE GRADES—Either half or full Quarter. Two or four hours.

This course considers the most important investigations in reading, language, spelling, geography, history, arithmetic and training in citizenship and their influence on the teaching of these subjects in the intermediate grades.

165. BIBLE STUDY—Great Personalities of the Old Testament—First half Quarter. One hour.

166. BIBLE STUDY—The Personality and Teachings of Jesus—Second half Quarter. One hour.

168. PROBLEMS OF RELIGIOUS EDUCATION—Either half or full Quarter. Two or four hours.

The purpose of the course is to give practical help to teachers or prospective teachers in Sunday Schools, Week-Day Schools of Religion, and to leaders of clubs, in the problems of method of teaching in these schools, curriculum, worship services, etc. The course will include a study of objectives of moral and religious education.

190. THE ADMINISTRATION OF NORMAL SCHOOLS AND TEACHERS' COLLEGES—Either half or full Quarter. Two or four 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—Full Quarter. Three hours.

211. CONCEPTION OF THE MIND IN EDUCATIONAL THEORY—Second half Quarter. Two 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—Not given Summer, 1926.

217. PROBLEMS OF SECONDARY EDUCATION—Either half or full quarter. Two or 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 other problems related to secondary education. Intensive study and investigation will be organized along the lines of individual interest.

220. EDUCATIONAL FINANCE—This course is now numbered Ed. 120.

223. RESEARCH IN EDUCATION—Full Quarter. Three or four hours.

224. EXPERIMENTAL EDUCATION—Either half or full Quarter. Two or four hours.

229. CURRENT EDUCATIONAL THOUGHT—This course is now numbered Ed. 129.

240. WOMEN IN ADMINISTRATION—First half. Two hours.

243. PROBLEMS IN EDUCATIONAL ADMINISTRATION—Either half or full Quarter. Two or 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 educational 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.

## EDUCATIONAL PSYCHOLOGY

(For detailed description of courses, see the Year Book)

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

2. EDUCATIONAL PSYCHOLOGY—

a. Second year. Either half Quarter. Three hours credit, four hours recitation. Required of all students.

b. Second year. Either half Quarter. Three hours credit, four hours recitation. Required of all students.

104. PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS—Third year. Either half or full Quarter. Two or four hours. Required of students who teach or supervise elementary or junior high school work.

105. PSYCHOLOGY OF THE HIGH SCHOOL SUBJECTS—Third year. Either half or full Quarter. Two or four hours. Required of students preparing to teach in the senior high school.

107. MENTAL TESTS AND MEASUREMENTS—Full Quarter. Four hours. Required of 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.

110. GENERAL PSYCHOLOGY—Full Quarter. Four hours.

111. SPEECH DEFECTS—First half Quarter. Two hours.

114. PSYCHOLOGY OF THE KINDERGARTEN-PRIMARY CHILD—Second half Quarter. Two hours.

115. PSYCHOLOGY OF THE JUNIOR HIGH SCHOOL CHILD—Second half Quarter. Two hours.

212. PSYCHOLOGICAL AND STATISTICAL METHODS APPLIED TO EDUCATION—Full quarter. Four hours.

213. CONFERENCE, SEMINAR, AND LABORATORY COURSES—Either half or full Quarter. Hours depending upon the amount of work.

214. ADVANCED EDUCATIONAL PSYCHOLOGY—Full Quarter. Four hours.

215. ADVANCED EDUCATIONAL TESTS AND MEASUREMENTS—Any Quarter. Four hours.

## FINE ARTS

(For detailed description of courses, see the Year Book)

1. METHODS OF TEACHING FINE ARTS IN INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—First half or full Quarter. Two or four hours. Fee 50 cents.

2. METHODS OF TEACHING FINE ARTS IN PRIMARY GRADES—Either half or full Quarter. Two or four hours. Fee, 50 cents.

3. FREEHAND DRAWING I—Either half or full quarter. Two or four hours.

4a. ART STRUCTURE II—Either half or full Quarter. One and a half or three hours.

Art structure, the basis of the 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—First half or full Quarter. Two or four hours.

5. WATER COLOR PAINTING—Either half or full Quarter. Two or four hours.

6. ART APPRECIATION—Full Quarter. One hour.

7. CONSTRUCTIVE DESIGN—Either half or full Quarter. Two or four hours. Fee 50 cents.

Prerequisite Art 4a or 4b or the equivalent.

9. HISTORY OF ART—Full Quarter. Three hours.

11. HISTORY OF ARCHITECTURE—Either half Quarter. One half or one hour.

13. METHOD OF TEACHING INDUSTRIAL ART IN PRIMARY GRADES—Half or full Quarter. Two or four hours. Fee \$1.50.

14. METHODS OF TEACHING INDUSTRIAL ART IN INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—Either half or full Quarter. Two or 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—Either half or full Quarter. One or two hours.

The aim of this course is to familiarize the student with alphabets used in fine printing and 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 FINE ARTS EDUCATION—Full Quarter. Two hours.

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

103. ART STRUCTURE III—Either half or full Quarter. Two or four hours.

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

104. DESIGN AND COMPOSITION—Either half or full Quarter. Two or four hours.

Advanced design and color. Principles of design and ways of creating harmony in design and color.

101. DRAWING FROM LIFE—Either half or full Quarter. Two or four hours.

105. OIL PAINTING—Either half or full Quarter. Two or four hours.

108. POTTERY—Either half or full Quarter. Four hours. Fee \$2.00.

115. POTTERY—Either half or full Quarter. One or two hours. Fee \$2.00.

## GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY

(For detailed description of courses, see the Year Book)

4. REGIONAL GEOGRAPHY OF NORTH AMERICA—Either half or full Quarter. Two or four hours.

5. GEOGRAPHY OF THE NEW EUROPE—Either half or full Quarter. Two or four hours.

7. BUSINESS GEOGRAPHY—Either half or full Quarter. Two or four hours.

12. METHODS IN INTERMEDIATE GEOGRAPHY—Two hours. Repeated each half Quarter.

14. JUNIOR HIGH SCHOOL METHODS—Two hours. Repeated each half Quarter.

103. CLIMATOLOGY—Two or four hours. Either half or full Quarter.

150. GEOGRAPHY OF COLORADO—Two or four hours. Either half or full Quarter.

## HISTORY AND POLITICAL SCIENCE

(For detailed description of courses, see the Year Book)

### HISTORY

3. RECONSTRUCTION AND THE NEW UNITED STATES—Full Quarter. Four hours.

4. WESTERN AMERICAN HISTORY—Full Quarter. Four hours.

5. EARLY MODERN EUROPE—Full Quarter. Four hours.

6. MODERN EUROPEAN HISTORY, 1815-1918 — Full Quarter. Four hours.

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

27. CONTEMPORARY WORLD HISTORY—Either half Quarter. Two hours.

103. THE REFORMATION—Either half or full Quarter. Two or four hours.

106. THE FRENCH REVOLUTION—Either half or full Quarter. Two or four hours.

108. THE AMERICAN REVOLUTION—Either half or full Quarter. Two or four hours.

117. TEACHING OF HISTORY AND CIVICS IN JUNIOR AND SENIOR HIGH SCHOOLS—First half Quarter. Three hours.

## POLITICAL SCIENCE

## 5. PROBLEMS IN CITIZENSHIP—Second half Quarter. Two hours.

This course is offered for the first time this quarter. Its object is to give teachers an opportunity to study the content of the material that is being organized for some of the newer 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—Either half or full Quarter. Two or four hours.

## HOME ECONOMICS

(For detailed description of courses, see the Year Book)

## HOUSEHOLD SCIENCE

1. FOODS AND COOKERY—Full Quarter. Four hours. Fee, \$3.00.

3. COOKING AND SERVING—Full Quarter. Four hours. Fee, \$3.50. H. Sc. 1 and H. Sc. 2 are prerequisite.

4. ELEMENTARY NUTRITION—First half or full Quarter. Two or four hours.

A course designed for non-majors. No chemistry required. Choice of foods for body needs.

7. HOUSEHOLD MANAGEMENT—Either half Quarter. Lecture course. Two hours.

Required of all Home Economics majors. Open to any student.

7a. HOUSEHOLD MANAGEMENT—Full Quarter. Three 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.

104. DEMONSTRATION COOKERY—First half or full Quarter. One or two hours. Fee \$3.50.

105. CHILD CARE—Either half Quarter. Two hours. Fee \$1.00. Open to any student.

106. HOME NURSING—Full Quarter. Four hours. Fee, \$1.00.

Practical course in care of the sick at home.

108. HOUSING AND HOUSE 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 training, and interests of the student.

## HOUSEHOLD ARTS

1. TEXTILES—Full Quarter. Three hours. Fee \$1.00.

3. GARMENT MAKING—Full Quarter. Four hours.

The fundamentals of plain sewing. This course is for students who have had no sewing in high school. A similar course is offered for those who have had sewing.

4. MILLINERY—First half or full Quarter. Two or four hours. Fee \$2.50.

Designing and making hats for the individual. Some choice as to fabrics.

5. PATTERN DESIGNING—First half or full Quarter. Two or four hours. Fee 50 cents.

This course is prerequisite to H. A. 6.



102. APPLIED DESIGN—First half or full Quarter. Two or four hours.

Open to students who have had color work in design.

108. COSTUME DESIGN—First half or full Quarter. Two or four hours. Fee 50 cents.

A lecture course on the application of the principles of art to the selection of the individual costume.

112. HOME DECORATION—Full Quarter. Four hours.

The application of art principles to the selection of furnishings and to the decoration of simple homes.

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.

HOME ECONOMICS, ED. 111—First half or full Quarter. Two or four hours.

Subject matter, methods, courses of study, texts and equipment for Home Economics work.

HOME ECONOMICS, 101—THE HOME—First half 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.

## HYGIENE AND PHYSICAL EDUCATION

During the summer, the usual physical training requirement for first and second year students has been waived but several physical training and recreational courses of interest to students in other departments are offered for credit. Courses open to the general student body are indicated in the description below.

### I. REQUIRED HEALTH EDUCATION COURSES

(For detailed description of courses, see the Year Book)

1. INDIVIDUAL AND SOCIAL HYGIENE—Five periods. Either half quarter. Two hours.

Separate sections for men and women.

108. EDUCATIONAL HYGIENE—Five periods. Either half Quarter. Three hours.

This is a course in methods of teaching health.

Health Education—Report of Joint Committee on Health Problems in Education will be followed.

2. ANATOMY—Five periods. First half Quarter. Three hours. Fee, 50 cents.

A second year course for Physical Education majors.

2a. KINESIOLOGY—Five periods. Second half Quarter. Three hours. Fee, 50 cents.

A continuation of P. E. 2.

5. HISTORY OF PHYSICAL EDUCATION—Four periods. First half Quarter. Two hours.

A first year course. No prerequisites.

Text—Leonard's History of Physical Training.

12. FIRST AID—Four periods. First half Quarter. Two hours. Fee, 50 cents.

The American Red Cross Textbook on First Aid is used.

101. PHYSIOLOGY—Five periods. First half Quarter. Three hours. Fee, 50 cents.

A third year course for students of Physical Education and others who expect to teach Physiology.

101a. PHYSIOLOGY OF EXERCISE—Five periods. Second half Quarter. Three hours. Fee, 50 cents.

A continuation of P. E. 101 with special emphasis on muscle-nerve physiology and the effects of muscular activity upon the various organs of the body. Text—McCurdy, Physiology of Bodily Exercise.

103. PHYSICAL EXAMINATIONS AND ANTHROPOMETRY—Four periods. Full Quarter. Four hours. Fee, 50 cents.

## II. COURSES PRIMARILY FOR STUDENTS MAJORING IN PHYSICAL EDUCATION

50. CHARACTERISTIC DANCING—Four periods. Second half Quarter. Two hours. Fee, 25 cents.

50a. GYMNAS TIC DANCING—Four periods. Either half or full Quarter. One half or one hour. Fee, 25 cents.

53. GYMNAS TIC S—Five periods. Second half Quarter. Two hours. A beginning course. Open to general students only by permission of the instructor. A course primarily for Physical Education majors.

56. SINGING GAMES AND ELEMENTARY FOLK DANCES—Three periods. Either half or full Quarter. One-half or one hour. No prerequisites. Open to all. Fee, 25 cents.

57. FOLK AND NATIONAL DANCES—Three periods. Either half or full Quarter. One-half or one hour. Open to all. Fee, 25 cents.

58. ESTHETIC DANCING—Three periods. Each half Quarter. One-half or one hour. Open to all. Fee, 25 cents.

58a. ESTHETIC DANCING FOR PHYSICAL EDUCATION MAJORS—Five periods. First half Quarter. Two hours. Fee, 25 cents.

59a. NATURAL DANCING—Five periods. Second half Quarter. Two hours. Fee, 25 cents.

Prerequisite P. E. 58a. Primarily for Physical Education students. Open to others only by permission of the instructor.

62. PLAYS AND GAMES—Three periods. Either half Quarter. One-half or one hour. Open to all.

64a. ATHLETICS FOR WOMEN—Five periods. Either half Quarter. Two hours.

64b. BASKETBALL COACHING (Women)—Five periods. Either half Quarter. Two hours.

A course for Physical Education majors. Others who have had playing experience in basketball as a prerequisite may be admitted.

64c. ATHLETICS FOR WOMEN—Three periods. Either half or full Quarter. One-half or one hour. No prerequisite. Open to all.

65. RECREATION COURSE—Three periods. Either half or full Quarter. One half or one hour. Open to all.

Group games and tennis are emphasized. Fee for tennis, 50 cents each half.

102. REMEDIAL GYMNAS TIC S—Four periods. Second half Quarter. Two hours. Prerequisite P. E. 2.

A course covering the applications of remedial gymnastics, individual gymnastics, and other physical measures to different type cases. Both theory and practice will be considered.

113. ADMINISTRATION OF PHYSICAL EDUCATION—Full Quarter. Two periods. Two hours.

The general organization and administration of a department of physical education and athletics. Aims, types of activities and courses; personnel; relation to medical advisory work and health service; athletics, etc. Williams' Organization and Administration of Physical Ed. the text.

167. ATHLETIC COACHING PRACTICE—Five periods. Either half Quarter. Two hours. Open by permission only.

This is an elective course for qualified students desiring practical experience in coaching athletic games under supervision.

## INDUSTRIAL ARTS

(For detailed description of courses, see the Year Book)

1. TECHNIC AND THEORY OF WOODWORKING—Either half or full Quarter. Two or four hours. Fee, \$1.00 or \$2.00.

1a. 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.

5. PRINCIPLES OF TEACHING PRACTICAL ART SUBJECTS—Either half or full Quarter. One and one-half or three hours.

8a. ART METAL—Either half or full Quarter. Two or four hours. Fee, \$2.00.

11. PROJECTIONS, SHADE, AND SHADOW—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. Fee, \$1.00.

31b. ELEMENTARY PRINTING—Either half or full Quarter. Two or four hours. Fee, \$1.00.

32a. INTERMEDIATE PRINTING—Either half or full Quarter. Two or four hours. Fee, \$1.00.

Emphasizes typographic design in production of different classes of printing.

32b. INTERMEDIATE PRINTING—Either half or full Quarter. Two or four hours. Fee, \$1.00.

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. Four hours. Fee, \$1.00.

A continuation of Bookbinding 41a.

41c. ELEMENTARY BOOKBINDING—Either half or full Quarter. Two or four hours. Fee, \$1.00.

A continuation of Bookbinding 41b.

42a. INTERMEDIATE BOOKBINDING—Full Quarter. Two or four hours. Fee, \$1.00.

117. ELEMENTS OF MACHINE DESIGN I—Either half or full Quarter. Two or four hours. Fee, \$1.00.

133a. ADVANCED PRINTING—Either half or full Quarter. Two or four hours. Fee, \$1.00.

136. SHOP MANAGEMENT IN PRINTING—On request either half or full quarter. One or two hours.

143a. ADVANCED LEATHER CRAFT AND ART BINDINGS—Either half or full Quarter. Two or four hours. Fee, \$1.00.

143b. ADVANCED LEATHER CRAFT AND COMMERCIAL BINDINGS—Either half or full Quarter. Two or four hours. Fee, \$1.00.

144. SHOP MANAGEMENT IN BOOKBINDING—On request. Two hours. Elective.

145. SECRETARIAL SCIENCE IN BOOKBINDING—On request. Four hours. Elective.

201. SEMINAR—On request. Full Quarter. Four hours.

Individual research in the field of practical arts. Problems to be selected upon consultation.

This is a conference course. Conference hours to be arranged.

## LIBRARY SCIENCE

(For detailed description of courses, see the Year Book)

103. CLASSIFICATION AND CATALOGUING—Full Quarter. Three hours.

107. ADMINISTRATION AND HISTORY OF LIBRARIES, TRAVELING LIBRARIES, AND COUNTY LIBRARIES—Full Quarter. Two hours.

## LITERATURE AND ENGLISH

(For detailed description of courses, see the Year Book)

1. MATERIAL AND METHODS IN READING AND LITERATURE—Full Quarter and either half Quarter. Three hours.
2. THE TEACHING OF ENGLISH IN JUNIOR HIGH SCHOOL—First half Quarter. Three hours.
4. SPEAKING AND WRITING ENGLISH—Required of all students unless they pass English 4 Exemption Test. Full Quarter and either half Quarter. Three hours.
6. AMERICAN LITERATURE—Full Quarter. Four hours.
11. THE ENGLISH LANGUAGE—Full Quarter. Four hours.
13. THE ART OF STORY TELLING—Either half Quarter. Three hours.
15. TYPES OF LITERATURE—Either half Quarter. Three hours.
16. TYPES OF CONTEMPORARY LITERATURE—Either half Quarter. Three hours.
20. ADVANCED COMPOSITION—Full Quarter. Four hours.
31. THE SHORT STORY—Second half Quarter. Three hours.
- 102a. JOURNALISTIC WRITING—Full Quarter. Three hours.
103. ADVANCED PUBLIC SPEAKING—Either half Quarter. Three hours.
105. ORAL ENGLISH IN THE HIGH SCHOOL—Second half Quarter. Two hours.
106. THE TEACHING OF ENGLISH IN THE HIGH SCHOOL—First half Quarter. Three hours.
109. COMPARATIVE LITERATURE—Full Quarter. Four hours. Includes the study of Faust.
117. DRAMATIC INTERPRETATION—Full Quarter and either half Quarter. Four hours.
121. EARLY NINETEENTH CENTURY POETRY—Full Quarter. Four hours.
126. THE INFORMAL ESSAY—First half Quarter. Three hours.
128. SHAKESPEARE'S HISTORIES—Full Quarter. Four hours.
130. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE—Full Quarter. Four hours.
132. THE DEVELOPMENT OF THE NOVEL—Full Quarter. Four hours.
134. MODERN PLAYS—Full Quarter. Four hours.
150. LITERARY INTERPRETATION—Either half Quarter. Two hours. Daily practice in the oral reading of literature.

## MATHEMATICS

(For detailed description of courses, see the Year Book)

1. SOLID GEOMETRY—Either half or full Quarter. Two or four hours.  
This course takes up the ordinary theorems of solid geometry and at the same time emphasizes the main points to be kept in mind by the teacher in presenting the subject of geometry.
2. PLANE TRIGONOMETRY—Either half or full Quarter. Two or four hours.
5. COLLEGE ALGEBRA—Either half or full Quarter. Two or four hours.

6. COLLEGE ALGEBRA—Either half or full Quarter. Two or four hours.
7. ANALYTIC GEOMETRY—Either half or full Quarter. Two or four hours.
- 8a. JUNIOR HIGH SCHOOL MATHEMATICS—First half Quarter. Two 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.

- 8b. THE TEACHING OF ARITHMETIC—First half Quarter. Two 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.

- 100a. THE TEACHING OF ALGEBRA—First half Quarter. Two hours.
- 100b. GEOMETRY FOR TEACHERS—Second half Quarter. Four hours.
101. DIFFERENTIAL CALCULUS—First half or full Quarter. Two or four hours.
102. INTEGRAL CALCULUS—First half or full Quarter. Two or four hours.

More advanced work in the field of mathematics may be arranged for by consultation with the head of the department.

201. DIFFERENTIAL EQUATIONS—Either half or full Quarter. Two or four hours.

## MUSIC

(For detailed description of courses, see the Year Book)

1. SIGHT SINGING—Five periods. First half. Three hours.  
A course for beginners.
- 1b. SIGHT SINGING—Five periods. Second half. Three hours.  
An advanced course for music majors.
2. TONE THINKING AND MELODY WRITING—Five periods. Second half. Three hours.  
Introductory Course to Beginning Harmony. Required of all music majors.
3. INTRODUCTORY HARMONY—Five periods. First half. Three hours.  
Required of music majors. Prerequisite Music 2.
4. ADVANCED HARMONY—Five periods. Second half. Three hours.  
Continuation of Music 3. Required of majors in music. Prerequisite Music 3.
10. PRIMARY METHODS—Five periods. First half. Three hours.  
Required of public school majors. Prerequisite Music 1 and 2.
11. INTERMEDIATE METHODS—Five periods. Second half. Three hours.  
Required of all music majors. Prerequisite Music 1 and 2.
20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Five periods. First half. Three hours.  
Required of majors in music.
21. MODERN COMPOSERS—Five periods. Second half. Three hours.  
Required of majors in music.
22. APPRECIATION OF MUSIC—Five periods. First half. Three hours.
23. MUSICAL LITERATURE—Five periods. Second half. 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. INDIVIDUAL LESSONS IN OBOE—One-half period. Full Quarter. One hour.
35. INDIVIDUAL LESSONS IN SAXOPHONE—No credit. Full Quarter. One-half period.
36. INDIVIDUAL LESSONS IN CELLO—One-half period. Full Quarter. One hour.
37. CLASS LESSONS IN VOICE—First and second half Quarter. No Credit.
40. ORCHESTRA—One period. Full Quarter. One hour.
41. BAND—One period. Full Quarter. One hour.
43. ADVANCED ORCHESTRA—Full Quarter. One hour.
44. ADVANCED BAND—Full Quarter. One hour.
45. ORCHESTRAL INSTRUMENTS—A course in instrument study for supervisors. No credit.
103. COUNTERPOINT—Three periods. Full quarter. Three hours. The principles of harmony are here applied to polyphonic writing.
110. SUPERVISOR'S COURSE—Five periods. Second half. Three hours. Required of majors in public school music. Prerequisite, Music, 1, 2, 3, 4, 10, and 11.
111. CONDUCTING (by assignment)—Four periods. Full Quarter. Four hours.
114. METHODS IN CONDUCTING—Two periods. First half. One hour.
123. OPERA—Learning to appreciate opera. First half Quarter. One hour.
130. INDIVIDUAL VOCAL LESSONS AND METHODS—One-half period. Full Quarter. One hour.
131. INDIVIDUAL PIANO LESSONS AND METHODS—One-half period. Full Quarter. One hour.
132. INDIVIDUAL VIOLIN LESSONS AND METHODS—One-half period. Full Quarter. One hour.
133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS—One-half period. Full Quarter. One hour.

## PHYSICS

(For detailed description of courses, see the Year Book)

1. MECHANICS AND HEAT—Full Quarter. Four hours. Fee, \$3.00. An elementary course, especially for secondary school teachers. Lectures and discussion, including one three-hour laboratory period.
2. ELECTRICITY AND MAGNETISM—Full Quarter. Four hours. Fee, \$3.00. A continuation of Physics 1.
11. MECHANICS—Full Quarter. Three hours. Fee, \$3.00. Advanced course similar to Physics 1, but more theoretical and requiring careful quantitative analysis. Prerequisite: Trigonometry.
103. THEORY OF RADIO RECEPTION AND TRANSMISSION—Full Quarter. Four hours. Fee, \$4.00.
108. METHOD OF TEACHING PHYSICS IN ELEMENTARY AND HIGH SCHOOLS—Full Quarter. Four hours. Fee, \$3.00.

## ROMANCE LANGUAGES AND LATIN

(For detailed description of courses, see the Year Book)

## SPANISH

1. ELEMENTARY SPANISH—Four hours.
5. INTERMEDIATE SPANISH—Four hours.
105. ADVANCED SPANISH—Four hours.
131. THE TEACHING OF SPANISH, OR GRADUATE SPANISH, 225 will be offered. Four hours.

## FRENCH

1. ELEMENTARY FRENCH—Four hours.
5. INTERMEDIATE FRENCH—Four hours.
105. ADVANCED FRENCH—Four hours.
131. TEACHING OF FRENCH OR FRENCH 225, GRADUATE FRENCH, will be offered. Four hours.

## LATIN

1. FIRST YEAR LATIN, FOR BEGINNERS, OR LATIN 5, SECOND YEAR LATIN—Four hours.
5. FOURTH YEAR LATIN—Four hours.
105. FIFTH YEAR LATIN—Four hours.
125. ADVANCED LATIN OR LATIN 131, THE TEACHING OF LATIN—Four hours.

## SOCIOLOGY, ANTHROPOLOGY, AND ECONOMICS

(For detailed description of courses, see the Year Book)

1. AN INTRODUCTION TO THE SOCIAL SCIENCES—Either half Quarter. Three hours. A substitute for Sociology 3.
101. THE ORIGIN AND ANTIQUITY OF MAN—Full Quarter. Four hours.
102. EARLY CIVILIZATION IN AMERICA—Full Quarter. Four hours.
105. THE PRINCIPLES OF SOCIOLOGY—Full Quarter. Four hours. Required of third year students.
110. PRINCIPLES OF ECONOMICS—Full Quarter. Four hours.
150. MODERN SOCIAL PROBLEMS. Full Quarter. Three 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—Full Quarter. Four hours.

A study of the means, methods and possibilities of the conscious improvement of society. Only graduate students or those capable of doing graduate work will be admitted.

## 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 the Gymnasium from 8:00 to 12:00 and from 1:00 to 4:00, Tuesday, June 15.

2. ORDER OF REGISTRATION—Do *only two 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.

The Temporary Card must be exchanged for Permanent Cards at the registrar's office. This exchange should be completed by 5:00 P. M. of the last day for permanent registration, June 25. 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 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 Extra Hour Test, given at 1:30 P. M. on Registration Day, Little Theatre, Administration Building. No schedules will be approved for more than eighteen hours under any condition.



4. LATE REGISTRATION—A fee of \$1.00 is charged for registration after 4:00 P. M. the regular day, June 15. This fee is also exacted of students who register after the final date for permanent registration. Students more than two days late will have their programs cut in proportion to the time they miss from recitations.

5. PHYSICAL EXAMINATIONS—An annual health examination is required for each student. Unclassified students are NOT exempt from this requirement.

6. 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 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 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.

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 half of a required course without thought of completing the course in a succeeding Summer quarter. This completion cannot be arranged in non-residence or during the Fall, Winter, and Spring quarters.

## 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.

Fees for less than a full program of sixteen hours:

1-2 quarter hours .....	\$ 5.00
3 quarter hours .....	7.50
4 quarter hours .....	10.00
5, 6, 7, 8 quarter hours .....	16.00
9 quarter hours (if taken during one half) .....	16.00
9 quarter hours (if taken during whole quarter) .....	20.00
10-11 quarter hours .....	25.00
12, 13, 14, 15, 16 quarter hours .....	32.00

Non-resident fee to be added to above.

### Fees for Laboratory and Materials

#### Art

Art 1, 2, 7, per course .....	\$0.50
Art 13, 14, per course .....	1.50*
Art 108, 115, per course .....	2.00

\*Fees are one-half the figures quoted when courses are taken for half quarter.

#### Biology

Bacteriology 1 .....	\$1.50
Biology 1 .....	1.00
Botany 1 .....	1.00
Botany 103 .....	1.50
Botany 202 .....	3.00
Elementary Science 1 .....	.50
Zoology 5 .....	1.00
Zoology 102, 107, per course .....	1.50

#### Chemistry

Chemistry 1, 2, 3, 108, 109, per course .....	\$3.00
Chemistry 4, 5, 6, 7, 110, 111, 113, 114, per course .....	4.00

#### Commercial

Commercial Ed. 11, 12, 13, per course .....	\$1.00
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#### Home Economics

H. A. 1 .....	\$1.00
H. A. 4 .....	2.50
H. A. 5, 108, per course .....	.50
H. S. 1, 103, per course .....	3.00
H. S. 3, 104, per course .....	3.50
H. S. 105, 106, per course .....	1.00

*Industrial Arts*

Ind. Art 1, 1a, 2, 8a, 19, per course.....	\$2.00*
Ind. Art 11, 117, per course.....	1.00
Bookbinding, all courses.....	1.00
Printing 31a, 31b, 32a, 32b, 133a, per course .....	1.00*

*Music*

Music 30, 31, 32, 33, 34, 35, 36, 130, 131,  
132, 133 and 134. Individual lessons.  
Fees paid before taking lessons. For  
fees see Mr. Cline, Director of the Con-  
servatory.

*Physics*

Physics 1, 2, 11, per course.....	\$3.00
Physics 103.....	4.00

*Physical Education*

Physical Education 2, 2a, 12, 101, 101a, 103, per course.....	\$0.50
Physical Education 50, 50a, 56, 57, 58, 58a, 59, per course.....	.25
Physical Education 65.....	1.00*

\*Fees are one-half the figures quoted when courses are taken for half quarter.

**SCHEDULE OF CLASSES**  
(Summer Quarter, 1926)

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
<b>I. 7:00 to 7:50</b>						
Art 2	Art Methods—Primary	MTWTF	Ei. Half or Full Qr.	2 or 4	Gregory	G-200
Art 3	Freehand Drawing I	MTThF	Ei. Half or Full Qr.	2 or 4	Klee	G-203
Art 4a	Art Structure II	MWF	1st Half or Full Qr.	1½ or 3	Moore	G-204
Art 17	Lettering and Poster Composition	TTh	Ei. Half or Full Qr.	1 or 2	Moore	G-204
Biol. 1	Ed. Biol. (Must be taken at 12:00 also)	MTWTF	Either Half	3	Abbott	L-1
Biol. 1	Educational Biology	MTWTh	Full Quarter	3	Frasier	L-13
Bot. 1	General Botany (Lab. at 8:00 TTh)	MTWTh	Full Quarter	4	Jean	304
Chem. 108	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	3	Peet	300
Chem. 110	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	4	Peet	300
C. E. 15	Bus. Reports and Comp. (double pd.)	MTWTh	Second Half	4	Huchingson	212
C. E. 50	Prin. of Accounting I (double pd.)	MTWTh	First Half	4	Colvin	214
C. E. 51	Prin. of Accounting II (double pd.)	MTWTh	Second Half	4	Colvin	214
C. E. 150	Bank Accounting	MTWTh	First Half	3	Huchingson	212
Ed. 1	Introduction to Education	MTTh	Full Quarter	3	Hunt	T-13
Ed. 3	Primary Methods	MTThF	Ei. Half or Full Qr.	2 or 4	Turner	T-9
Ed. 4	Intermediate Methods	MTWTh	Ei. Half or Full Qr.	2 or 4	Hanthon	T-11
Ed. 107	Meth. of Imprvg. Instrn. in Reading	MTWTh	Ei. Half or Full Qr.	2 or 4	Davis	T-209
Ed. 110	Extra Curricular Activities	MTTh	Ei. Half or Full Qr.	1½ or 3	Rugg	203
Ed. 111	Philosophy of Education	MTWTh	Full Quarter	4	{ Raymont Blue }	T-219
Ed. 133	History of Education	Daily	Second Half	3	Morrison	207
Ed. 134	History of Education in the U. S.	Daily	First Half	3	Morrison	207
Ed. 240	Women in Administration	MTWTh	First Half	2	Newman	100a
El. Sci. 1	Elementary Science	MTWTh	Full Quarter	4	Aikman	303
Eng. 4	Speaking and Writing English	Daily	Either Half	3		101
Eng. 4	Speaking and Writing English	MWF	Full Quarter	3		202
Eng. 13	The Art of Story Telling	Daily	Either Half	3	Campbell	100
Eng. 15	Types of Literature	Daily	Either Half	3	Hawes	Little Theatre
Eng. 109	Comparative Literature	MTWTh	Full Quarter	4	Goebel	T-216
Geog. 12	Intermediate Geog. Methods	MTThF	Either Half	2	Blaine	T. S. Aud.

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Hist. 4	Western American History	MTWTh	Full Quarter	4	Dickerson	104
H. A. 3 (Sec. 1)	Garment Making (2 pds.—prev. exp. req.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Jean	HE-301
Hyg. & P. E. 2	Anatomy	Daily	First Half	3	Long	1
Hyg. & P. E. 2a	Kinesiology	Daily	Second Half	3	Long	1
Ind. Arts 1	Tech. and Theory of Wdwkg.	MTWTh	Full Quarter	2		T-14
Ind. Arts 1a	Tech. and Theory of Wdwkg. (Lab. at 8:00)	MTWTh	Full Quarter	4	Foulk	G-1
Ind. Arts 8a	Art Metal	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-101
Ind. Arts 31a	Elementary Printing (Double Pd.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. Arts 32a	Intermediate Printing (Double Pd.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. Arts 41a	Elem. Bkdg. and Leather Craft	MTWTh	Full Quarter	2	Schaefer	G-100
Math. 1	Solid Geometry	MTThF	Ei. Half or Full Qr.	2 or 4	Tobey	T-210
Math. 7	Analytic Geometry	MTThF	Ei. Half or Full Qr.	2 or 4	Finley	210
Mus. 110	Music Supervisor's Course	Daily	Second Half	3	Roesner	T-12
P. E. 58	Esthetic Dancing	MWF	Ei. Half or Full Qr.	½ or 1	Keyes	6
Psych. 104	Psych. of Elem. School Subjects	MTWTh	Ei. Half or Full Qr.	2 or 4	Heilman	103
Psych. 111	Speech Defects	Daily	First Half	2	Willsea	102
Soc. 209	Seminar (Limited to 10)	MTWF	Full Quarter	4	Howerth	208
Zool. 5	Bird Study	MTThF	Full Quarter	4	Harrah	301
<b>II. 8:00 to 8:50</b>						
Art 2	Art Methods—Primary	MTThF	Ei. Half or Full Qr.	2 or 4	Baker	G-200
Art 5	Water Color Painting	MTWTh	Ei. Half or Full Qr.	2 or 4	Moore	G-203
Art 13	Indus. Art. Methods—Primary	MTWF	Ei. Half or Full Qr.	2 or 4	Gregory	G-204
Art 103	Art Structure III	MTWTh	Ei. Half or Full Qr.	2 or 4	Dement	G-206
Art 104	Design and Composition	MTWTh	Ei. Half or Full Qr.	2 or 4	Dement	G-206
Biol. 1	Educational Biology	MTThF	Full Quarter	3	Harrah	301
Chem. 112	Food Chemistry (Lab. by Appt.)	MW	Full Quarter	3	Peet	300
Chem. 113	Food Chemistry (Lab. by Appt.)	MW	Full Quarter	4	Peet	300
C. E. 4	Methods of Teaching Shorthand	TW	First Half	1	Merriman	213
C. E. 110	Office Appliances	TWThF	1st Half or Full Qr.	2 or 4	Knies	211
C. E. 157	Prin. and Methods in Commercial Ed.	MTWTh	First Half	2	Huchingson	212
Ed. 1	Introduction to Education	Daily	Either Half	3	{ Risley { MacKay }	100
Ed. 3	Primary Methods	MTWTh	Ei. Half or Full Qr.	2 or 4	Dulin	203
Ed. 4	Intermediate Methods	MTWTh	Ei. Half or Full Qr.	2 or 4	Van Meter	T-13

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 4	Intermediate Methods	MTWTh	Ei. Half or Full Qr.	2 or 4	Hanthorn	T-16
Ed. 5	Principles of Teaching	Daily	Either Half	3	Mahan	L-13
Ed. 52	Kindg. Curriculum and Materials	MTWTh	Full Quarter	4	Lyford	T-9
Ed. 116	Org. and Adm. of a Senior H. S.	MTWTh	Full Quarter	4	Prunty	202
Ed. 120	Educational Finance	MTWTh	First Half	2	{ Strayer Pratt }	L-1
Ed. 125	Rural Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	T-211
Ed. 129	Current Educational Thought	MTWTh	Ei. Half or Full Qr.	2 or 4	{ Strayer Pratt Foster Threlkeld }	T-12
Ed. 136	Comparative Education	MTWTh	First Half	2	Raymont	HE-306
Ed. 210	Prob. of the School Curriculum	MTTh	Full Quarter	3	Rugg	207
El. Sci. 1	Elementary Science	MTWF	Ei. Half or Full Qr.	2 or 4		303
Eng. 20	Advanced Composition	MTWTh	Full Quarter	4	Hawes	T-210
Eng. 103a	Extemporaneous Speaking	MTWTh	Either Half	2	Randall	T-222
Eng. 134	Modern Plays	MTWTh	Full Quarter	4	Tobey	100a
Geog. 5	Geography of the New Europe	MTThF	Ei. Half or Full Qr.	2 or 4	Barker	101
Hist. 10	Soc. and Ind. History of the U. S.	MTWTh	Full Quarter	4	Permenter	Little Thtre.
Hist. 103	The Reformation	MTWTh	Ei. Half or Full Qr.	2 or 4	Harding	104
Hyg. 1	Indiv. and Soc. Hygiene (Women)	Daily	Either Half	3	Bryson	T. S. Aud.
Hyg. 1	Indiv. and Soc. Hygiene (Men)	Daily	First Half	3	Long	1
Ind. Arts 143a	Adv. Bkdg. and Leather Craft (Lab. 9:00)	MTWTh	Full Quarter	4	Schaefer	G-100
Math. 5	College Algebra	MTThF	Ei. Half or Full Qr.	2 or 4	Tobey	T-216
Math. 8	The Teaching of Arithmetic	MTWTh	First Half	2	Stone	210
Math. 201	Differential Equations	MTThF	Ei. Half or Full Qr.	2 or 4	Finley	T-212
Mus. 40	Beginning Orchestra	TTh	Full Quarter	1	Thomas	Consv.
Mus. 114	Methods in Conducting	MTWTh	First Half	2	Cline	Consv.
P. E. 59a	Natural Dancing	Daily	Second Half	2	Keyes	6
P. E. 62	Plays and Games	MWF	First Half	1	Keyes	6
P. E. 64c	Athletics for Women	Daily	Either Half	2		Field
P. E. 169	Baseball Coaching	Daily	First Half	2	{ Cooper Jones }	Field
Physics 1	Mechanics and Heat (Lab. TTh 8:00-10)	MTThF	Full Quarter	4	Valentine	HE-106
Psych. 108a	Educ. Tests and Measurements	MTWTh	Ei. Half or Full Qr.	4	Heilman	103

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Psych. 110	General Psychology	MTWTF	Full Quarter	4	Hamill	102
Soc. 3	Educational Sociology	Daily	Either Half	3	Howerth	208
Spanish 1	First Year Spanish	MTWTh	Full Quarter	4	Du Poncet	205
<b>III. 9:00 to 9:50</b>						
Art 2	Art Methods—Primary	MTThF	Ei. Half or Full Qr.	2 or 4	Klee	G-200
Art 14	Indus. Art. Methods—Int. and Jr. H. S.	MTWTF	Ei. Half or Full Qr.	2 or 4	Lowe	G-204
Art 100	Supervision of Art Education	TTh	1st Half or Full Qr.	1 or 2	Baker	G-201
Art 105	Oil Painting I	MTWTh	Ei. Half or Full Qr.	2 or 4	Dement	G-203
Biol. 1	Educational Biology	MTWTh	Full Quarter	3	Aikman	303
Biot. 101	Heredity and Eugenics	MTWTh	Full Quarter	4	Jean	301
Chem. 7	Quantitative Chemistry (Lab. by Appt.)	MTWTh	Full Quarter	2 or 4	Peet	302
Chem. 114	Quantitative Chemistry (Lab. by Appt.)	MTWTh	Full Quarter	2 or 4	Peet	302
C. E. 1	Prin. of Shorthand I (Double Pd.)	TWThF	First Half	4	Merriman	212
C. E. 2	Prin. of Shorthand II (Double Pd.)	TWThF	Second Half	4	Merriman	212
C. E. 11	Principles of Typewriting I	TWThF	Full Quarter	2	Knies	213
C. E. 36	Handwriting Methods	TWThF	Ei. Half or Full Qr.	1 or 2	Bedinger	214
C. E. 37	Business Mathematics (Double Pd.)	MTWTh	First Half	4	Colvin	HE-306
C. E. 158	Problems in Bus. Education (Double Pd.)	MTWTh	Second Half	4	Colvin	HE-306
Ed. 1	Introduction to Education	Daily	Either Half	3	Wyatt	L-13
Ed. 10	Elementary School Curriculum	MTTh	Full Quarter	3	Mahan	T-9
Ed. 28	School and Home Gardens	MTWTh	First Half	2	Hargrove	T-217
Ed. 51	Songs, Games and Story Telling—Kindg.	MTWTh	Ei. Half or Full Qr.	2 or 4		T-13
Ed. 106	Types of Teaching and Learning	MTWTh	First Half	2	Ganders	101
Ed. 107	Meth. of Imprvng. Instrn. in Reading	MTWTh	Ei. Half or Full Qr.	2 or 4	Hanthorn	T-16
Ed. 108	Education Supervision	MTWTh	Ei. Half or Full Qr.	2 or 4	{ Risley Foster Threlkeld }	100
Ed. 113	Org. and Adm. of a Jr. H. S.	MTWTh	Full Quarter	4	Prunty	203
Ed. 123	Educ. Research (Sr. Coll. Students)	MTWTh	Ei. Half or Full Qr.	2 or 4	Rugg	207
Ed. 126	Project Curric. for Rural Schools	MTWTh	Second Half	2	Hargrove	T-217
Ed. 150	Foundations of Method	MTWTh	Ei. Half or Full Qr.	2 or 4	Armentrott	T-211
Ed. 216	Prob. of Secondary Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Blue	T-218
Eng. 2	Teaching of Written English	MTThF	Full Quarter	4	Johnson	202
Eng. 11	The English Language	MTWTh	Full Quarter	4	Crates	L-1

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Eng. 102a	Journalistic Writing	MWTh	Full Quarter	3	Shaw	100a
Eng. 103	Advanced Public Speaking	MTWTh	Full Quarter	3	Randall	T-212
Eng. 121	Early 19th Century Poetry	MTWTh	Full Quarter	4	Oakden	T-12
Geog. 14	Geog. Method—Jr. H. S.	MTThF	Either Half	2	Blackburn	T. S. Aud.
German 1	Beginning German	MTWTh	Full Quarter	4	Goebel	1
Hist. 108	The American Revolution	MTWTh	Ei. Half or Full Qr.	2 or 4	Dickerson	104
H. Sci. 1	Foods and Cookery (Double Pd.)	MTThF	Full Quarter	4	Pickett	HE-202
H. Sci. 4	Ele. Nutrition (Open to All)	MTWTh	Full Quarter	4	Jean	HE-301
H. Sci. 7	Household Management (Open to All)	ThF	Full Quarter	2	Clasbey	HE-207
H. Sci. 106	Home Nursing (Open to All)	MTWF	Full Quarter	4	Wiebking	HE-304
Ind. Arts 1	Tech. and Theory of Wdwkg.	MTWTh	Full Quarter	2		T-14
Ind. Arts 2	Tech. and Theory of Wdwkg. (Lab. at 10:00)	MTWTh	Full Quarter	4	Fouk	G-1
Ind. Arts 5	Prin. of Tehg. Prac. Arts Subjects	MWF	1st Half or Full Qr.	1½ or 3	Hadden	G-105
Ind. Arts 31b	Ele. Printing (Double Pd.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. Arts 133a	Advanced Printing (Double Pd.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Lib. Sci. 103	Classifications and Cataloging	MWF	Full Quarter	3	Carter	Library
Lib. Sci. 107	Admin. and Hist. of Libraries, etc.	TTh	Full Quarter	2	Carter	Library
Math. 6	College Algebra	MTThF	Ei. Half or Full Qr.	2 or 4	Tobey	T-216
Math. 108	Teaching of Jr. H. S. Math.	MTWTh	First Half	2	Stone	210
Mus. 22	Music Appreciation	Daily	First Half	3	Opp	Consv.
Mus. 23	Music Literature	Daily	Second Half	3	Opp	Consv.
Mus. 103	Counterpoint	MWF	Full Quarter	3	Thomas	Consv.
P. E. 50a	Gymnastic Dancing (Open to All)	MTWTh	Ei. Half or Full Qr.	1 or 2		Gym.
P. E. 58a	Esthetic Dancing (P. E. Majors)	Daily	First Half	2	Keyes	6
P. E. 60	Interpretative Dancing	Daily	Second Half	2	Keyes	6
P. E. 65	Tennis	MWF	Ei. Half or Full Qr.	½ or 1		Courts
P. E. 166	Basketball Coaching	Daily	First Half	2	Cooper	Gym
Psych. 2a	Educational Psychology	Daily	Either Half	3	Hamill	T-11
Psych. 108b	Educ. Tests and Measurements	MTWTh	Ei. Half or Full Qr.	2 or 4	Heilman	103
Psych. 215	Educ. Tests and Measurements (Adv.)	MTThF	Full Quarter	4	Gamble	102
Soc. 18	Rural Sociology	MTWTh	Full Quarter	4	Binnewies	300
Soc. 101	Origin and Antiquity of Man	MTWTh	Full Quarter	4	Howerth	208
Spanish 5	Intermediate Spanish	MTWTh	Full Quarter	4	Du Poncet	205



Time and Cat. No.

Description

Days

May Be Taken  
for Credit

Teacher  
Qr. Hrs.

Room 48

IV. 10:00 to 10:50

Art 6	Art Appreciation	W	Full Quarter	1	Dement	G-200
Art 9	History of Art	MTTh	Full Quarter	3	Dement	G-200
Art 14	Indus. Art Methods—Int. and Jr. H. S.	MTWF	Ei. Half or Full Qr.	2 or 4	Lowe	G-204
Art 16	Freehand Drawing II	MTThF	Ei. Half or Full Qr.	2 or 4	Baker	G-203
Art 101	Drawing from Life	MTThF	Ei. Half or Full Qr.	2 or 4	Baker	G-203
Bact. 1	Elem. Bacteriology (Lab. 2:00-4:00 TTh)	MTWTh	Full Quarter	4	Aikman	303
Biol. 1	Educational Biology	MTWTh	Full Quarter	3	Jean	301
Chem. 1	Inorganic Chemistry (Lab. by Appt.)	MW	Full Quarter	3	Peet	300
Chem. 4	Inorganic Chemistry (Lab. by Appt.)	MW	Full Quarter	4	Peet	300
C. E. 12	Principles of Typewriting II	TWThF	Ei. Half or Full Qr.	2 or 4	Knies	213
C. E. 36	Handwriting Methods	TWThF	Ei. Half or Full Qr.	1 or 2	Bedinger	214
Ed. 1	Introduction to Education	TWTh	Full Quarter	3	Hay	T-9
Ed. 5	Principles of Teaching	Daily	Either Half	3	Mahan	T-11
Ed. 21	Rural School Problems	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	L-13
Ed. 101	Prin. of High School Teaching	MTWTh	Full Quarter	4	Prunty	203
Ed. 114	Primary Supervision	MTWTh	Ei. Half or Full Qr.	2 or 4	Hanscom	T-13
Ed. 115	Org. and Adm. of the Elem. School	MTWTh	First Half	2	Risley	212
Ed. 142	Educational Administration	MTWTh	Ei. Half or Full Qr.	2 or 4	{ Strayer Pratt Foster Threlkeld }	207
Ed. 243	Problems in Educational Adminis.	MTWTh	First Half	2	Ganders	T-221
El. Sci. 1	Elementary Science	MTWF	Full Quarter	4		304
Eng. 1	Mat. and Meth. in Reading and Lit.	Daily	Either Half	3	Tobey	202
Eng. 4	Speaking and Writing English	MWF	Full Quarter	3		L-1
Eng. 16	Contemporary Literature	Daily	First Half	3	Newman	100
Eng. 31	The Short Story	MTWTh	Second Half	2	Hawes	T-220
Eng. 106	Teaching of English in H. S.	MTWTh	First Half	2	Hawes	T-220
Eng. 126	The Informal Essay	MTWTh	First Half	2	Oakden	100a
French 1	Beginning French	MTWTh	Full Quarter	4	Goebel	T-216
French 5	Intermediate French	MTWTh	Full Quarter	4	Crates	T-211
Geog. 12	Geography Method—Intermediate	MTThF	Either Half	2	Blaine	T. S. Aud.
Geog. 103	Climatology	MTThF	Ei. Half or Full Qr.	2 or 4	Barker	101
Hist. 3	Hist. of U. S. Since 1870	MTWTh	Full Quarter	4	Permenter	102

COLORADO STATE TEACHERS COLLEGE

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Hist. 27	Contemporary World History	MTWTh	Either Half	2	Harding	104
H. A. 1	Textiles (Open to All)	MTW	Full Quarter	3	Wiebking	HE-304
H. A. 3 (Sec. 2)	Garment Making (Double Pd. Any Studnt.)	MTWTh	Full Quarter	2 or 4	Jean	HE-305
H. Sci. 108	Housing and Sanitation	TWThF	1st Half or Full Qr.	2 or 4	Roudebush	HE-301
H. Econ. 111	Home Economics Education	MTWTh	1st Half or Full Qr.	2 or 4	Clasbey	HE-207
Hyg. & P. E. 113	Administration of Phys. Ed.	MTWTh	First Half	2	Long	1
Ind. Arts 1	Tech. and Theory of Wdwdg.	MTWTh	Full Quarter	2		T-14
Ind. Arts 11	Projection Shade and Shadow	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-105
Ind. Arts 42a	Int. Bkdg. and Leather Craft	MTWTh	Full Quarter	4	Schaefer	G-100
Math. 101	Differential Calculus	MTThF	Ei. Half or Full Qr.	2 or 4	Finley	210
Math. 102	Integral Calculus	MTThF	Ei. Half or Full Qr.	2 or 4	Finley	210
Mus. 3	Introductory Harmony	Daily	First Half	3	Thomas	Consv.
Mus. 4	Intermediate Harmony	Daily	Second Half	3	Thomas	Consv.
Mus. 20	Ancient Hist. of Music	Daily	First Half	3	Opp	Consv.
Mus. 21	Modern Composers	Daily	Second Half	3	Opp	Consv.
P. E. 56	Rhythmic Games (Sec. 1.)	MWF	Ei. Half or Full Qr.	½ or 1	Keyes	6
P. E. 56	Rhythmic Games (Sec. 2)	MTTh	Ei. Half or Full Qr.	½ or 1	Keyes	6
P. E. 64a	Athletics for Women (Baseball, etc.)	Daily	Either Half	1 or 2		Field
P. E. 65	Tennis	MWF	Ei. Half or Full Qr.	½ or 1		Courts
P. E. 165	Football Coaching	Daily	First Half	2	{ Jones Cooper Hancock }	Field
Physics 2	Elec. & Magnetism (Lab. TTh 9:00-11:00)	MTThF	Full Quarter	4	Valentine	HE-106
Psych. 104a	Psychology of Music	MTWTh	First Half	2	Brown	T-212
Psych. 105	Psych. of H. S. Subjects	MTWF	Ei. Half or Full Qr.	2 or 4	Hamill	103
Psych. 107	Mental Tests and Measurements	MTWTh	Full Quarter	4	Holst	T-219
Psych. 213	Conference Course	Arrange	Ei. Half or Full Qr.	2 or 4	Heilman	Arrange
Soc. 102	Early Civilization in America	MTWTh	Full Quarter	4	Howerth	208
Soc. 110	Principles of Economics	MTWTh	Full Quarter	4	Binnewies	T-16
Spanish 105	Advanced Spanish	MTWTh	Full Quarter	4	Du Poncet	205

GRIFFIN, COLORADO

**V. 11:00 to 11:50**

Art 1	Art Methods—Int. and Jr. H. S.	MTWF	Ei. Half or Full Qr.	2 or 4	Lowe	G-203
Art 2	Art Methods—Primary	MTWTh	Ei. Half or Full Qr.	2 or 4	Moore	G-204
Art 13	Industrial Art Methods—Primary	MTThF	Ei. Half or Full Qr.	2 or 4	Klee	G-200

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Biol. 1	Educational Biology	MTWTh	Full Quarter	3	Frasier	301
Bot. 103	Plant Physiology (Lab. 1:00-4:00 W.)	MTTh	Full Quarter	4	Jean	304
Chem. 2	Inorganic Chemistry (Lab. by Appt.)	MW	Full Quarter	3	Peet	300
Chem. 5	Inorganic Chemistry (Lab. by Appt.)	MW	Full Quarter	4	Peet	300
C. E. 3	Secretarial Practice I	TWThF	Full Quarter	4	Merriman	212
C. E. 36	Handwriting Methods	MTWTh	Ei. Half or Full Qr.	1 or 2	Huchingson	214
C. E. 38	Commercial Law I (Double Pd.)	TWThF	First Half	4	Bedinger	T-6
C. E. 144	Commercial Law II (Double Pd.)	TWThF	Second Half	4	Bedinger	T-6
Ed. 1	Introduction to Education	TWTh	Full Quarter	3	Hay	T-9
Ed. 15	Educational Guidance	MTWTh	First Half	2	Mahan	203
Ed. 20	Agricultural Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	L-13
Ed. 51	Story Telling, Songs, Games, Kindg.	MTWTh	Ei. Half or Full Qr.	2 or 4	Hanscom	T-11
Ed. 104	The Project Method of Teaching	MTWTh	Second Half	2	Mahan	203
Ed. 144	School Publicity	MTWTh	First Half	2	{ Risley Shaw }	HE-306
Ed. 147	Educational Surveys	MTWTh	First Half	2	Ganders	T-7
Ed. 152	Prin. Underlying Ed. of Kg.-Primary	MTWTh	Ei. Half or Full Qr.	2 or 4	Lyford	T-13
Ed. 190	Normal School Administration	MTWTh	Ei. Half or Full Qr.	2 or 4	{ Evenden Frasier Cross Rugg Ganders Whitney Armentrout }	100
Ed. 211	Conceptions of Mind in Ed. Theory	MTWTh	First Half	2	Armentrout	T-205
El. Sci. 1	Elementary Science	MTWTh	Ei. Half or Full Qr.	2 or 4	Aikman	L-1
Eng. 6	American Literature	MTWTh	Full Quarter	4	Hawes	T-209
Eng. 117	Play Production	MTWTh	Ei. Half or Full Qr.	2 or 4	Randall	T-206
Eng. 128	Shakespeare's Histories	MTWTh	Full Quarter	4	Oakden	202
Eng. 132	The Development of the Novel	MTWTh	Full Quarter	4	Tobey	100a
Geog. 150	Geography of Colorado	MTThF	Ei. Half or Full Qr.	2 or 4	Barker	101
Hist. 106	The French Revolution	MTWTh	Ei. Half or Full Qr.	2 or 4	Harding	104
Hist. 117	Teaching of Hist. in Jr. and Sr. H. S.	Daily	First Half	3	Dickerson	102
H. A. 4	Millinery (Double Pd. Exp. required)	MTThF	Full Quarter	2 or 4	Roudebush	HE-301
H. A. 102	Applied Design (Open to all)	MTWF	Full Quarter	2 or 4	Wiebking	HE-304

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
H. Sci. 103	Dietetics (Lab. by Appt., Sr. HE Maj.)	MTThF	Full Quarter	4	Pickett	HE-202
Hyg. 1	Indiv. and Social Hygiene (Women)	Daily	Either Half	3	Bryson	T. S. Aud.
Hyg. 1	Indiv. and Social Hygiene (Men)	Daily	Second Half	3	Long	1
Hyg. & P. E. 5	History of Physical Education	MTWTh	First Half	2	Keyes	1
Hyg. & P. E. 103	Anthropometry	MTWTh	Full Quarter	4		T-218
Ind. Arts 19	Wood Turning (Lab. at 12:00)	MTWTh	Full Quarter	4	Fouk	G-7
Ind. Arts 31b	Ele. Printing (Lab. at 12:00)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. Arts 32b	Inter. Printing (Lab. at 12:00)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. Arts 117	Elements of Machine Design I	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-105
Latin 1	Beginning College Latin	MTWTh	Full Quarter	4	Crates	T-217
Math. 1	Trigonometry	MTThF	Ei. Half or Full Qr.	2 or 4	Mallory	T-210
Math. 8	The Teaching of Arithmetic	MTWTh	First Half	2	Stone	210
Math. 100a	The Teaching of Algebra	MTThF	First Half	2	Tobey	T-216
Math. 100b	Geometry for Teachers	MTThF	Second Half	2	Tobey	T-216
Math. 106	Descriptive Astronomy	MTThF	Ei. Half or Full Qr.	2 or 4	Finley	207
Mus. 1b	Sight Singing (Adv.)	Daily	First Half	3	Cline	Consv.
Mus. 2	Melody Writing	Daily	Second Half	3	Cline	Consv.
P. E. 12a	Athletic Training (Men)	MWTh	First Half	2	Cooper	T-204
P. E. 65	Tennis	MWF	Ei. Half or Full Qr.	½ or 1		Courts
P. E. 168	Track and Field Coaching	Daily	First Half	2	Hancock	Field
Physics 108	Meth. of Teaching Physics—General	MTWTh	Full Quarter	4	Valentine	HE-106
Pol. Sci. 5	Prob. of Democracy	MTWTh	Second Half	2	Dickerson	102
Psych. 2b	Educational Psychology	Daily	First Half	3	Brown	103
Psych. 115	Psychology of Jr. H. S. Child	MTWTh	Second Half	2	Pechstein	103
Psych. 214	Advanced Educational Psychology	MTWTh	Full Quarter	4	Holst	T-211
Soc. 3	Educational Sociology	MTTh	Full Quarter	3	Howerth	208
Soc. 125	Social Problems	MTW	Full Quarter	3	Binnewies	207
Spanish 131	Teaching of Spanish	MTWTh	Full Quarter	4	Du Poncet	205
Spanish 235	Graduate Course	MTWTh	Full Quarter	4	Du Poncet	205
Zool. 107	Entomology (Lab. 2:00-4:00 T.)	MTThF	Full Quarter	4	Harrah	303

## VI. 12:00 to 12:50

Art 4b	Design	MTWTh	Ei. Half or Full Qr.	2 or 4	Dement	G-203
Art 7	Constructive Design	MTWF	Ei. Half or Full Qr.	2 or 4	Baker	G-204
Art 13	Indus. Art Methods—Primary	MTThF	Ei. Half or Full Qr.	2 or 4	Klee	G-300

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Biol. 1	Ed. Biol. (Must be taken at 7:00 also)	MTWTF	Either Half		Abbott	303
C. E. 13	Principles of Typewriting III	MTW	Full Quarter	3	Knies	213
C. E. 14	Methods of Teaching Typewriting	ThF	Second Half	1	Knies	213
C. E. 36	Handwriting Methods	MTWTh	Ei. Half or Full Qr.	1 or 2	Huchingson	214
C. E. 105	Secretarial Practice II	TWThF	Full Quarter	4	Merriman	212
Ed. 1	Introduction to Education	MTW	Full Quarter	3	Hunt	203
Ed. 3	Primary Methods	MTThF	Ei. Half or Full Qr.	2 or 4	Rosenquist	T-9
Ed. 19	Parent-Teacher Education	TW	First Half	1	Dick	L-13
Ed. 105	Practical Projects—Primary	MTWTh	Ei. Half or Full Qr.	2 or 4	Hanscom	T-16
Ed. 141	Special Types of Education	MTWTh	First Half	2	Ganders	207
Ed. 151	The Pre-School	MTWTh	Ei. Half or Full Qr.	2 or 4	Lyford	T-210
Ed. 154	Recent Investigations in Ele. Ed.	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowan	T-209
Ed. 224	Experimental Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Whitney	T-211
Eng. 4	Speaking and Writing English	MWF	Full Quarter	3		100
Eng. 4	Speaking and Writing English	Daily	Either Half	3		T-11
Eng. 105	Oral English in the H. S.	MTWTh	Either Half	2	Randall	T-206
Eng. 130	Elizabethan Drama	MTWTh	Full Quarter	4	Oakden	100a
Eng. 150	Literary Interpretation	MTWTh	Either Half	2	Tobey	202
French 105	Advanced French	MTWTh	Full Quarter	4	Crates	T-216
Geog. 4	Regional Geography of N. A.	MTThF	Ei. Half or Full Qr.	2 or 4	Barker	101
Geog. 7	Business Geography	MTThF	Ei. Half or Full Qr.	2 or 4	Permenter	104
H. A. 112	Home Decoration (Open to all)	MTWTF	Full Quarter	4	Wiebking	HE-304
H. Sci. 105	Child Care (Any Sr. Coll. Students)	MTThF	Either Half	2	Roudebush	HE-304
Hyg. & P. E. 12	First Aid	Daily	Either Half	2		1
Ind. Arts 142a	Adv. Bkdg. and Leather Craft	MTWTh	Full Quarter	2	Schaefer	G-100
Ind. Arts 144	Shop Management (On demand)	MTWTh	Full Quarter	2	Schaefer	G-100
Ind. Arts 145	Secretarial Sci. in Bkdg. (On demand)	MTWTh	Full Quarter	4	Schaefer	G-100
Ind. Arts 201	Seminar (On demand)	Arrange	Ei. Half or Full Qr.	2 or 4	Hadden	G-105
Math. 108	Teaching of Jr. H. S. Math.	MTThF	Second Half	2	Mallory	T-13
Mus. 10	Primary Grade Methods	Daily	First Half	3	Roesner	T-12
Mus. 11	Intermediate Grade Methods	Daily	Second Half	3	Roesner	T-12
Psych. 1	Child Hygiene	MTWTF	Full Quarter	4	Hamill	L-1
Psych. 2b	Educational Psychology	Daily	Either Half	3	Holst	103
Psych. 106a	Indirect Teaching	MTWTh	First Half	2	Brown	102
Psych. 114	Psychology of Kg.-Primary Child	MTWTh	Second Half	2	Pechstein	102

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Psych. 212	Statistical Methods	MTThF	Full Quarter	4	Gamble	205
Soc. 105	Principles of Sociology	MTWTh	Full Quarter	4	Binnewies	208
Zool. 101	Inv. Zoology (Lab. M. F. 2:00-4.00)	MTThF	Full Quarter	4	Harrah	304

### VII. 2:00 to 2:50

Art 108	Pottery	MTWTh	Full Quarter	4	Lowe	G-204
Art 115	Pottery and Glazing	WTh	Full Quarter	2	Lowe	G-204
Ed. 16	Campfire Leadership—Ele.	MW	Either Half	1	Turner	T-12
Ed. 16a	Campfire Leadership—Adv.	TTh	Either Half	1	Turner	T-12
Ed. 17	Training of Boy Scout Masters	MW	First Half	1	Moore	T-13
Ed. 100a	Problems of Education	MTWTh	Ei. Half or Full Qr.	2 or 4		Little Theater

### FORTY SPECIAL TEACHERS

Ed. 165	Bible Study—Old Testament	MW	First Half	1	Wilson	100
Ed. 166	Bible Study—New Testament	MW	Second Half	1	Wilson	100
Ed. 223	Research in Education	MTW	Full Quarter	3	Whitney	T-16
Hist. 5	Early European History	MTWTh	Full Quarter	4	Permenter	104
H. A. 108	Costume Design (Open to all)	MTWTh	Ei. Half or Full Qr.	2 or 4	Roudebush	HE-301
H. Sci. 3	Cookery and Serving (Double Pd.)	MTWTh	Full Quarter	4	Pickett	HE-202
H. Econ. 201	The Home	MTWTh	Full Quarter	4	Roudebush	HE-301
Hyg. 108	Educ. Hygiene (Men and Women)	Daily	Either Half	3	Long	1
Mus. 125	Appreciation of Opera	MTWTh	First Half	2	Southard	Consv.
P. E. 53	Gymnastics	Daily	Either Half	2		Gym
Physics 103	Radio Reception and Trans. Theory	MTWTh	Full Quarter	4	Valentine	HE-106
Pol. Sci. 101	American Diplomacy	MTWTh	Full Quarter	4	Dickerson	202

### VIII. 3:00 to 3:50

Ed. 100c	Unit Courses in Education	MTWTh				
	1. School House Construction	Ju. 16-24		1	Strayer	
	2. Individual Instruction	Ju. 28-Jul. 8		1	Washburne	
	3. Contem. Ed. in England	Jul. 12-22		1	Raymont	Little Thtre
	4. The Six Year H. S. Plan	Jl. 26-Ag. 5		1	Foster	
	5. Character Education	Aug. 9-16		1	Pechstein	

Time and Cat. No.	Description	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 168	Religious Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Wilson	100
Hyg. & P. E. 101	Physiology	Daily	First Half	3	Long	1
Hyg. & P. E. 101a	Physiology of Exercise	Daily	Second Half	3	Long	1
Mus. 43	Advanced Orchestra	MW	Full Quarter	1	Thomas	Consv.
Mus. 44	Advanced Band	TTh	Full Quarter	1	Thomas	Consv.
P. E. 50	Characteristic Dancing	MTWTh	Second Half	2	Keyes	6
P. E. 64c	Athletics for Women (Hockey, etc.)	Daily	Either Half	2		Field
P. E. 65	Tennis	MWTh	Ei. Half or Full Qr.	½ or 1	Lehan	Courts
Physics 11	Mechanics (Lab. by Appt.)	MW	Full Quarter	3	Valentine	HE-106

### IX. 4:00 to 4:50

Book Reviews—No Credit—Little Theatre—Special Teachers and Lecturers. MTWTh

Mus. 101	Chorus	TTh	Full Quarter	1	Cline	Consv.
P. E. 57	Folk and National Dancing	MTTh	Ei. Half or Full Qr.	½ or 1	Keyes	6
P. E. 64b	Athletics for Women (Basketball, etc.)	Daily	Either Half	2		Gym
P. E. 65	Tennis	MWTh	Ei. Half or Full Qr.	½ or 1	Lehan	Courts
P. E. 167	Coaching Practice	Daily	Ei. Half or Full Qr.	2 or 4	Long	Field

### X. 5:00 to 5:50

P. E. 65	Tennis	MWTh	Ei. Half or Full Qr.	½ or 1	Lehan	Courts
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### XI. 7:00 to 8:00 P. M.

EVENING LECTURE COURSE—NO CREDIT—REQUIRED OF ALL.

## TEXT-BOOKS

The following list of text-books used in the courses offered is given for the convenience of prospective students. Text-books may be obtained in the College bookroom.

### Art

- Art 1 and 2. Sargent & Miller, How Children Learn to Draw.  
Art 9. Reinach, Apollo.  
Art 13 and 14. Sargent, Fine and Industrial Arts for Elementary Schools.

### Biology

- Zoology 5. Reed, Western Bird Guide.  
Zoology 101. Van Cleave, Vertebrate Zoology.  
Zoology 107. Comstock, Introduction to Entomology (Complete Ed.).  
Biology 1. Burlingame, Heath, Martin and Pierce, General Biology.  
Botany 1. Holman & Robbins, Textbook of General Botany.  
Botany 103. Coulter, Barnes & Cowles, Textbook of Botany (Pt. II).  
Biotics 101. Popenoe & Johnson, Applied Eugenics.  
Elementary Science 1. Downing, Our Living World.  
Bacteriology 1. Buchanan, Bacteriology.

### Chemistry

- Chemistry 1, 2, 3, 4, 5, 6. Newell, Inorganic Chemistry for Colleges; Noyes & Hopkins, Laboratory Exercises in Chemistry.  
Chemistry 108, 109, 110, 111. Remsen & Orndorff, Organic Chemistry; W. R. Orndorff, Lab. Manual of Organic Chemistry.  
Chemistry 112-113. Vulte, Household Chemistry.  
Chemistry 7. W. W. Scott, Qualitative Analysis.  
Chemistry 114. Popoff, Quantitative Analysis.

### Commercial Education

- C. E. 1, 2, 3. Gregg Shorthand Manual; Gregg Speed Studies.  
C. E. 11, 12, and 13. Weise-Coover; Gregg, New Rational.  
C. E. 15. Babenroth, Modern Business English.  
C. E. 36. Palmer, Method Manual; Zaner, Method Manual.  
C. E. 37. Business Mathematics, Smith's Arithmetic of Business.  
C. E. 38. Commercial Law I, Elements of Business Law, Huffcut-Bogert.  
C. E. 50. Kester, Accounting Theory and Practice.  
C. E. 51. Kester, Accounting Theory and Practice.  
C. E. 105. Gregg & Hagar, Secretarial Studies.  
C. E. 144. Conyngton, Business Law.  
C. E. 150. Harris, Practical Banking; Kniffin, The American Bank; Twentieth Century Laboratory Material.  
C. E. 157. Jay W. Miller, The Teaching of Commercial Subjects.



## Education

- Ed. 1. Frasier & Armentrout, Introduction to Education.  
Ed. 3. Penell & Cusack, How to Teach Reading; Moore, The Primary School.  
Ed. 4. Phillips, Modern Methods and the Elementary Curriculum.  
Ed. 5. Parker, Methods of Teaching in the Elementary School.  
Ed. 10. Bonser, Elementary School Curriculum; Department of Superintendence, N. E. A., Third Yearbook.  
Ed. 15. Procter, Educational Guidance.  
Ed. 20. Widtsoe, Western Agriculture.  
Ed. 21. Pittman, Problems of the Rural Teacher.  
Ed. 23. Ells, Moeller & Swain, Rural School Management.  
Ed. 24. MacGarr, The Rural Community.  
Ed. 28. Davis, School and Home Gardens.  
Ed. 51. International Kindergarten Union, Selected List of Poetry and Stories; Sies, Spontaneous and Supervised Plays and games.  
Ed. 52. Lyford, Textbook for Training Kindergartners.  
Ed. 101. Colvin, An Introduction to High School Teaching; Waples, Procedures in High School Teaching.  
Ed. 104. Stevenson, Project Method of Teaching.  
Ed. 106. Parker, Types of Teaching and Learning.  
Ed. 107. University of Chicago, Supplementary Monograph, Summary of Investigations on Reading; National Society for the Study of Education, Twenty-fourth Yearbook, Part I.  
Ed. 108. Nutt or Burton, Supervision of Instruction.  
Ed. 110. National Society for the Study of Education, Twenty-fifth Yearbook, Part II.

- Ed. 112. Strayer & Engelhardt, Standards for City School Buildings, Standards for Elementary School Buildings, Standards for High School Buildings.  
Ed. 113. Briggs, The Junior High School; Davis, Junior High School Education.  
Ed. 115. Cubberly, The Principal and His School.  
Ed. 116. Belting, The Community and Its High School.  
Ed. 120. Case, Handbook of Expenditures, C. F. Williams & Sons, Albany; Pittinger, An Introduction to School Finance.  
Ed. 125. O. G. Brinn, Rural Education.  
Ed. 126. Collins, An Experiment With a Project Curriculum.  
Ed. 133. Cubberley, History of Education (large edition).  
Ed. 134. Cubberly, Public Education in the United States.  
Ed. 142. Strayer & Engelhardt, Problems in Educational Administration.  
Ed. 144. Miller & Charles, Publicity and Public Schools.  
Ed. 150. Kilpatrick, Foundations of Method.  
Ed. 151. Cleveland, Training the Toddler.  
Ed. 152. Parker-Temple, Unified Kindergarten-First Grade Education.  
Ed. 154. Third Yearbook, Department of Superintendence, N. E. A.  
Ed. 210. Bobbitt, The Curriculum; Department of Superintendence, N. E. A., Third Yearbook.  
Ed. 211. Bode, Fundamentals of Education.  
Ed. 213. Smith, The Junior High School.  
Ed. 216. Uhl, Principles of Secondary Education.

## Geography

- Geog. 7. Huntington & Williams, Business Geography; Goode's School Atlas.  
Geog. 8. Hadden, Races of Men and Their Distribution.  
Geog. 12. Holtz, Principles and Methods of Teaching Geography.

## History

- History 1. Greene, Foundation of American Nationality.  
History 4. Turner, Rise of the New West.  
History 5. Hoyes, Political and Social History of Europe.  
History 10. Lippincott, Economics and Social History of the United States.  
History 3. Paxson, Recent History of the United States.  
History 117. Tryon, Teaching of History in Junior and Senior High Schools.  
Political Science 101. Adams, History of the Foreign Policy of the United States.

## Literature and English

- English 15. Watt & Munn, Ideas and Forms in English and American Literature.  
English 11. Cross, Modern English, Fundamentals in English.  
English 105, 106, and 2. U. S. Bulletin 1917, No. 2.  
English 6. Newcomber & Andrews, Three Centuries of American Poetry and Prose.  
English 102a. Bastian, Editing The Day's News.  
English 20. Lathrop, Freshman Composition.  
English 31. Cross, The Short Story.  
English 109. Bayard Taylor, Goethe's Faust.  
English 130. Six Elizabethan Plays, The World's Classics.  
English 121. Poems of Wordsworth, Coleridge, Shelley, Keats.

## Mathematics

- Math. 1. Smith, Solid Geometry.  
Math. 2. Rothrock, Trigonometry.  
Math. 5 and 6. Reitz and Crathorne, Introduction to College Algebra.  
Math. 7. Smith and Gale, Analytics.  
Math. 101 and 112. Granville, Calculus.  
Math. 201. Murray, Differential Equations.  
Math. 106. Moulton, Astronomy.

## Music

- Music 1. McLaughlin & Gilcrest, Song Reader.  
Music 3. Preston Ware Orem, Harmony.  
Music 20. Topper-Goetscheus, Essentials in Music History.  
Music 103. Francis York, Counterpoint.  
Music 107. Topper-Goetscheus, Musical Form.

## Physics

- Physics 1 and 2. Hadley, Everyday Physics, and Millikan, Gale & Bishop's Laboratory Physics.  
Physics 11. Millikan's Mechanics, Molecular Physics and Heat, and Stewart's College Physics.  
Physics 14. Millikan & Mills' Electricity, Sound and Light, and Stewart's College Physics.  
Physics 15. Berthoud's The New Theories of Matter and the Atom.  
Physics 16. Rusk's How to Teach Physics.  
Physics 1 and 2. Black & Davis, Physics; Black's Manual.  
Physics 11. Millikan's Mechanics, Molecular Physics and Heat.  
Physics 103. J. S. Thomas, Fundamentals of Radio.

## Psychology

- Psych. 1. Terman, Hygiene of School Child.  
Psych. 2a. Freeman, How Children Learn.  
Psych. 2b. Gates, Psychology for Students of Education.  
Psych. 104. Freeman, Psychology of Common Branches.  
Psych. 105. Judd, Psychology of High School Subjects.  
Psych. 107. Terman, Measurement of the Intelligence.  
Psych. 108a. Monroe, DeVoss & Kelley, Educational Tests and Measurements (Revised).  
Psych. 108b. Same text as for 108a.  
Psych. 110. Woodworth, Psychology, A Study of Mental Life.  
Psych. 212. Otis, Statistical Method in Educational Measurements.  
Psych. 214. Thorndike, Educational Psychology, Part II, Psychology of Learning.  
Psych. 215. Monroe's Theory of Educational Tests and Measurements.

## Romance Languages

- Spanish 1. Wagner's Spanish Grammar.  
Spanish 5. Johnson's Cuentos Mexicanos.  
Spanish 105. La Malquerida, Benavente.  
Spanish 131. Palmer's The Teaching of Modern Languages.  
French 1. Camerlynck's France.  
French 5. Hathaway's Modern French Stories.  
French 105. Corneille's Le Cid.  
Latin 105. Horace's Odes.  
German 1. Manfred's Ein Praktischer Anfang.

## Sociology

- Sociology 3. Howerth, The Art of Education, also Syllabus, Introduction to Social Science.  
Sociology 18. Galpin, Rural Social Problems.  
Sociology 101. Wilder, Man's Prehistoric Past.  
Sociology 102. Wissler, The American Indian.  
Sociology 105. Ross, Outlines of Sociology.  
Sociology 110. Johnson, Introduction to Economics.



A guide to Greeley, showing the streets and their relation to the College. Student securing rooms within the area shown will be within walking distance of the College.



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# THE CALENDAR

FOR THE

SUMMER QUARTER

1926

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*June 15—Tuesday. . . . .Registration Day for the Summer Quarter*

*June 16—Wednesday. . . . .Classes begin*

*A fee of two dollars is collected for late registration, after Tuesday, June 15.*

*July 21—Wednesday. . . . .The first half of the Summer Quarter closes*

*Students, if possible, should enroll June 15 for the full quarter, but they have the privilege of enrolling for either 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 22—Thursday. . . . .New Enrollment for the second half Quarter  
Classes begin*

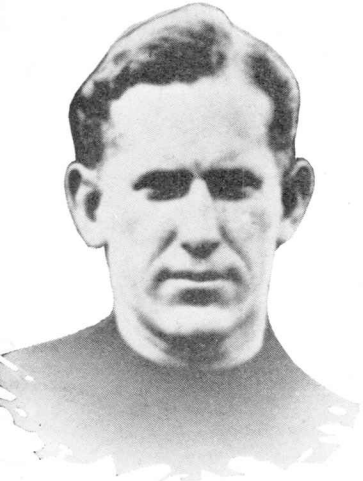
*Aug. 26—Thursday. . . . .The Summer Quarter closes  
Graduation Day*

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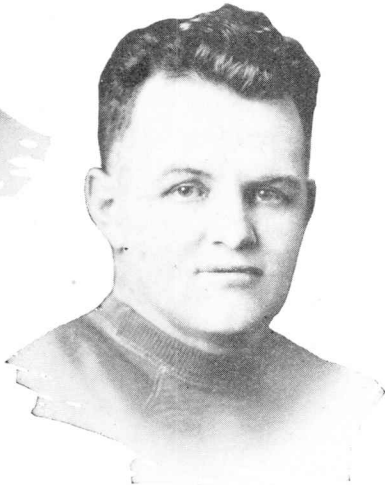


# COLORADO STATE TEACHERS COLLEGE BULLETIN



JONES

SCHOOL



COOPER

for

COACHES



HANCOCK

CLOSE TO THE MOUNTAINS

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SERIES XXV

NUMBER 12

Published monthly by Colorado State Teachers College, Greeley, Colorado  
Entered as second class matter at the Postoffice at Greeley, Colorado, under the Act of  
August 24, 1912.





# School for Coaches

## Colorado State Teachers College

GREELEY, COLORADO

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GEORGE WILLARD FRASIER, PH. D., LL. D.....*President*  
 GEORGE E. COOPER PD. B., PD. M.....*Head Coach*  
 JOHN W. HANCOCK, A. B.....*Assistant Coach*  
 HOWARD JONES, HEAD COACH UNIVERSITY OF SOUTHERN  
 CALIFORNIA .....*Special Instructor*

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COACHES of athletics in University, College, or High School, and those young men who are contemplating taking up athletic coaching as a career will find it to their advantage to investigate the special attention given this phase of educational work both in the special Summer School for Coaches and during the regular academic year, at

**COLORADO  
 STATE  
 TEACHERS  
 COLLEGE**

A special School for Coaches was instituted for the first time at Colorado State Teachers College during the Summer Quarter, 1925, and the response was so gratifying, as were also the results,



that the administration decided to make this feature of the big Summer School a permanent fixture.

Simultaneous with the introduction of this special



Summer School for Coaches the College created a department of Athletics for Men which is giving special attention to the training of coaches for schools, colleges, and universities. Heretofore this work was conducted as a part of

the Physical Education course.

### THE KIND OF COACHES IN DEMAND

In strengthening and featuring the regular work of the Department of Athletics in the regular academic year as well as in establishing a Summer School for Coaches, Colorado State Teachers College is seeking to meet a demand which comes from the school administrators. That demand is for coaches who can teach academic subjects.

While athletics demand a large share of attention in all the educational institutions of today, still it is only in a very few instances that institutions can afford to employ men exclusively for coaching athletics. Coaches today must be able to do something else in addition to their work as coaches. High Schools, normal schools, and colleges everywhere can employ coaches who are fitted particularly to do classroom teaching in one or more of the academic subjects.

### DEMAND LARGE, SALARIES GOOD

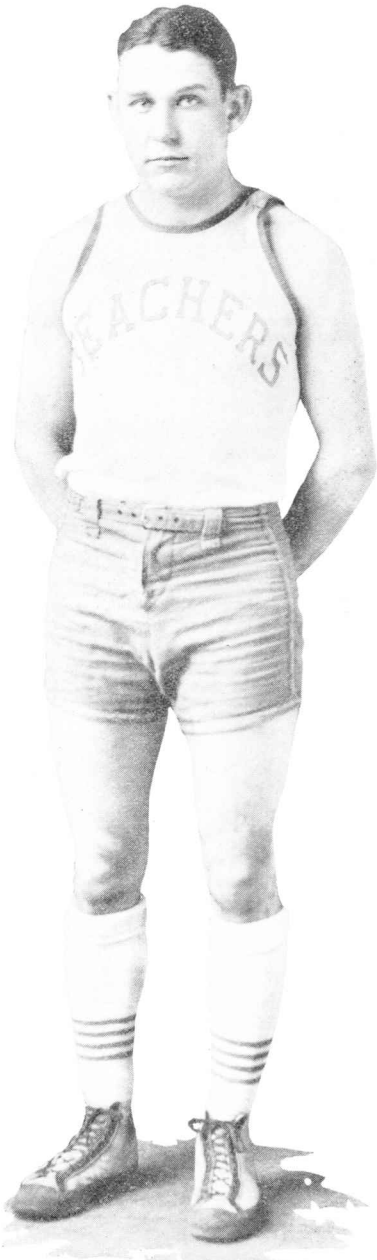
There is a constant demand for young men fitted as outlined above. Requests for this type of graduate come to Colorado State Teachers College from all parts of the country. It is impossible for the College to meet the demand. Last year the Placement Bureau received seventy-eight requests from schools for young men

who could teach athletics and teach one or more academic subjects. The salaries for these positions ranged from \$1,500 to \$2,400.

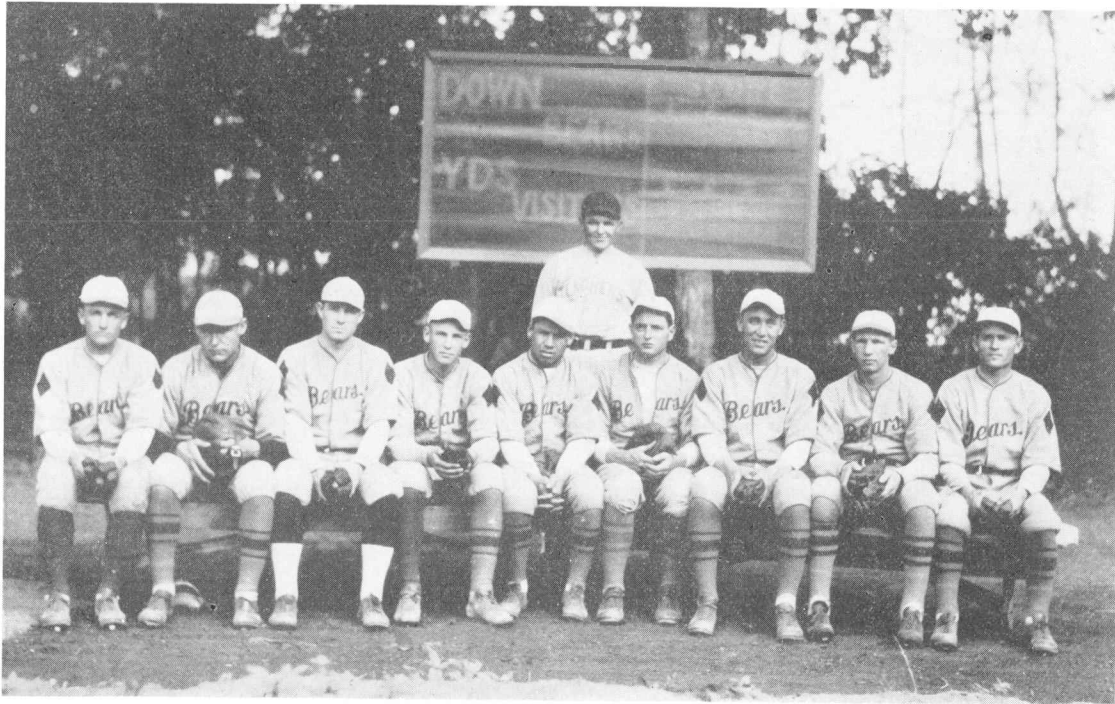
Colorado State Teachers College is particularly fitted to turn out this type of graduate. It is primarily a professional teachers college. The preparation of teachers is its first duty and in doing this service it counts the training of coaches a part thereof. It is natural, then, that the graduate of Colorado State Teachers College Department of Athletics for Men is qualified to coach and also to take his place in the classroom.

### THE SUMMER SCHOOL FOR COACHES

Nearly one hundred students enrolled in the School for Coaches conducted for the first time last Summer. The number was surprising, especially so in view of the fact that it was the first attempt in conducting such a school in the Rocky Mountain West and, further, it was not extensively advertised because of a desire to



CAPTAIN GLIDDEN



BASEBALL CHAMPIONS, 1925, ROCKY MOUNTAIN INTERCOLLEGIATE CONFERENCE

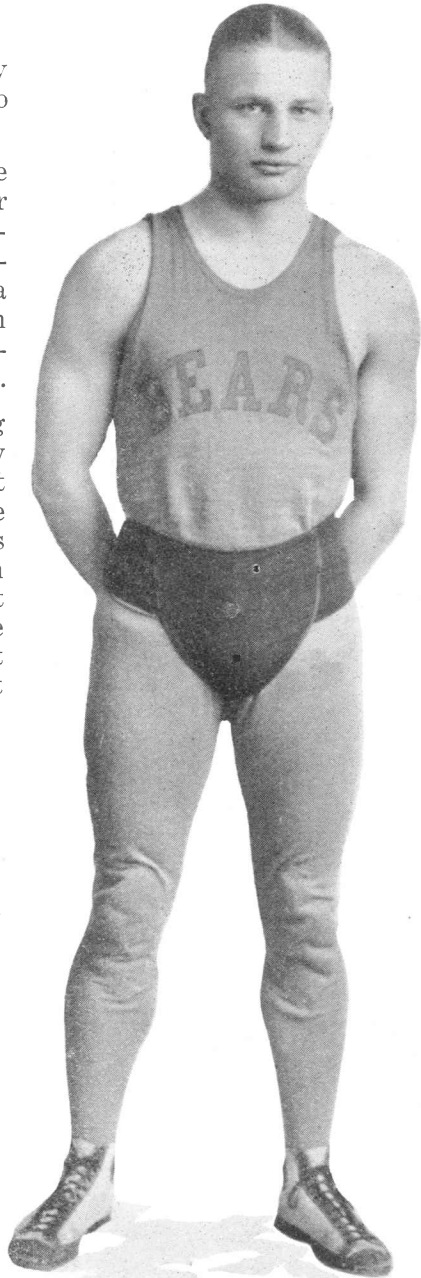
start modestly and try it out before going too far.

Those in attendance came from a number of high schools scattered throughout Colorado, with quite a few from other high schools and some colleges in outside states.

One of the striking results of this new movement on the part of Colorado State Teachers College was the attention which came from prominent athletic coaches in the east. Several made it a point to declare that this was an

### IDEAL LOCATION FOR COACHING SCHOOL

With its rare climate, dry and health-giving, close to the mountains, the campus at Colorado State Teachers College has particular advantages for the athlete not enjoyed by a large part of the country. Its ad-



**BRUCE McLEOD**  
A Star Wrestler



BASKE  
EASTERN DIVISION, ROCKY M



CHAMPIONS, 1926  
N INTERCOLLEGIATE CONFERENCE





vantages are presented both for the Summer School and the regular collegiate year.

In the Summer School all of the work can be given



outdoors without discomfort. The days are never uncomfortably hot; the nights are always cool. Blankets are frequently needed for comfort during the nights in the middle of summer. Sunstrokes are unknown in Greeley.

During the fall and winter months the climate is such that the work of the athletic department can be conducted

out of doors much of the time. The air is invigorating, but not too cold, and because of its rarity outdoor exercise becomes a pleasure in the very middle of winter at Greeley, Colorado.

### CELEBRATED COACHES AS INSTRUCTORS

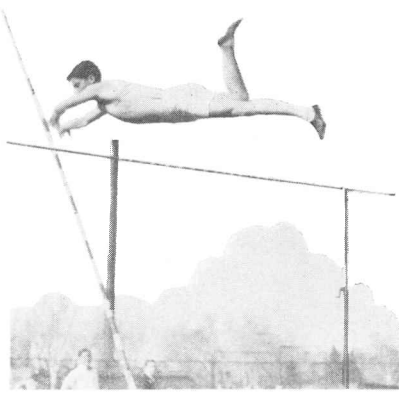
With the record which has been established by the different athletic teams at Colorado State Teachers College it is especially fitting that George E. Cooper, who for the past three years has been Head Coach at the Institution, should be instrumental in directing the organization and the operation of the School for Coaches.

With the development of the Department of Athletics for Men, Coach Cooper was obliged to get an assistant and he added materially to the department when he obtained the services of John W. Hancock, former all-star end and tackle at Iowa State University. Mr. Hancock, in addition to coaching the line in foot-

ball training, coached the wrestling squad which won the championship of the Eastern Division of the Rocky Mountain Inter-Collegiate Conference this year. He has complete charge of the track coaching.

### COACH HOWARD JONES

Coach Jones, who is now Head Coach at the University of Southern California, will again serve as special instructor in the Summer School for Coaches, which will be conducted from June 15 to July

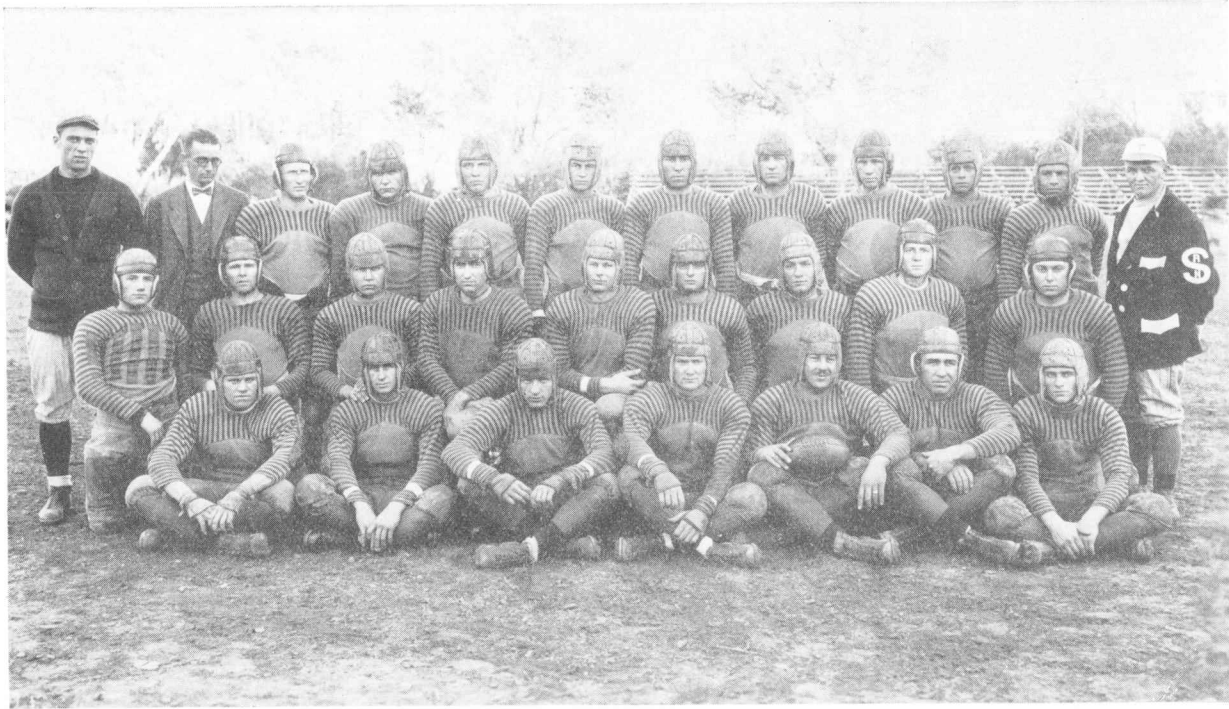


21. Coach Jones played an important part in the opening of the Summer School for Coaches at Colorado State Teachers College last year. His prominence in the work of coaching was largely instrumental in the success of the opening course.

Coach Jones will conduct courses in football coaching, Coach Cooper will conduct courses in football, basketball, and baseball, and Coach Hancock will conduct classes in line formation and track.

### HIGH SCHOOL GRADUATES NEEDED

Colorado State Teachers College offers an excellent opportunity for boys to prepare for a life of activity in athletic coaching and physical education. The attention of boys now in high school and those who have recently graduated is directed to the Catalog and Year Book of the College. In this they will find detailed information concerning all the courses offered. The work of the Athletic Department and the Department of Physical Education is clearly set forth. A copy of the Catalog and Year Book will be sent on application. Address Dr. George Willard Frasier, president, Greeley, Colorado.



FOOTBALL SQUAD, 1925

## THE COURSES OFFERED

(Summer School)

12a. ATHLETIC TRAINING—Two periods. First half Quarter. One hour.

Emergency treatment of common injuries, theories of training, massage, and the treatment of sprains and bruises are the topics considered.

67. INTRA-MURAL SPORTS—Three periods. First half Quarter. One hour.

Discussion and demonstration of group and mass games such as speedball, handball, soccer, etc.

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.

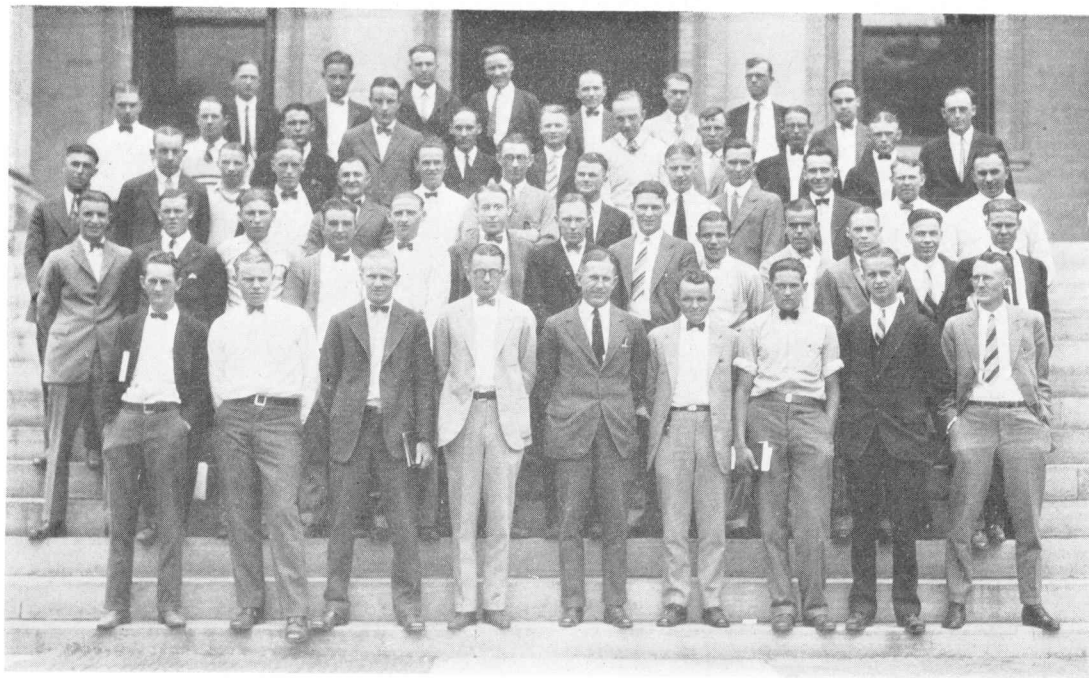
Theory of coaching, different styles of offense and defense used by leading coaches, goal throwing, out of bounds plays, and the handling of men will be among the topics considered.

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.



COACHES ATTENDING SUMMER SCHOOL AT GREELEY, 1925

## ATHLETIC RECORD OF TEACHERS COLLEGE

**C**OLORADO STATE TEACHERS COLLEGE is the baby member of the Rocky Mountain Intercollegiate Conference. In the first fifteen months as a member of the conference, dating from entrance, in the Spring of 1925, the following record was established:

RUNNERS UP IN BASKETBALL—1925.

CHAMPIONS IN BASEBALL—1925.

CHAMPIONS (Eastern Division) IN BASKETBALL—1926.

CHAMPIONS (Eastern Division) IN WRESTLING—1926.

Their basketball record for four years past is as follows:

Games Played	Opponents	Games Won
8	Colorado University	7
7	School of Mines	5
8	Colorado Aggies	8
6	Colorado College	2
2	Denver University	2
6	Wyoming University	6
4	Western State College	4
2	Brigham Young University	1
2	Utah University	1
3	Montana State University	2
3	Utah Aggies	0
<hr/> 51		<hr/> 36
		Per cent 702

Their baseball record for three years past is as follows:

Games Played	Opponents	Games Won
6	Colorado University	5
2	School of Mines	2
6	Colorado Aggies	2
4	Wyoming University	3
<hr/> 18		<hr/> 12
		Per cent 667



**SILVER TROPHY**

**Eastern Division, Rocky Mountain Conference, 1926, Won by  
Colorado Teachers**

# The EVENING LECTURES



Summer Quarter

1926



## THE PURPOSE OF THE LECTURES

For nearly twenty years Colorado State Teachers College has rendered a service to teachers and prospective teachers through the agency of its evening lecture course. In college classes students get the specific knowledge and training that they require for their work, but students who have no other educational contacts than those of their classes miss the larger education that puts them in touch with all the fields of thought. To make this broader education possible the college has in the past brought the great leaders of thought to its students in an open lecture course. At first attendance was required, notes taken on the lectures, and examinations given. College credit was allowed for this work.

A few years ago the credit for attending lectures was discontinued. The college administration has for some time wished to make the attendance voluntary but has continued to require attendance for two reasons: 1. The indifferent and frivolous students would not voluntarily put themselves in touch with these leaders of thought unless required to do so. They would thus miss the best the college has to give them. 2. The over-serious student would attach undue importance to his routine daily class work and so fail to attend the open, liberalizing lectures in order to prepare for recitations the following day. To see to it that both the serious and the frivolous student should come into contact with these great men and their thought, the college thus far has required attendance at the evening lectures.

**Voluntary Attendance this Year.** Believing that we have provided lectures this year that no one can afford to miss, and also that the students who have come to us year after year have learned the value of the lecture course in keeping them in touch with what is new and significant in modern thought, the administration has decided to try the experiment of voluntary attendance this year.

**The Fields Covered by the Lectures:** Each year the college makes an effort to secure lectures in as many fields of thought and investigation as possible. If you wonder why we do not have lectures upon some art, science, or philosophy that you are interested in but do not find upon our list, you may be pretty well assured that we have sought for such lectures, but have been unable to obtain them. For example, this year we made persistent efforts to employ a great man in art and another in science. None were to be had. Perhaps next year we shall find these and use them instead of lectures in fields that we have covered this year.



**Music and Drama.** In addition to the customary lectures the college is adding this year two musical and two dramatic numbers to the regular evening lecture schedule. Admission to these numbers will be by the regular ticket without extra charge. Two plays given by the faculty players as benefits for the Little Theater will be given in the regular series, but a nominal charge of fifty cents will be placed upon each of these comedies.

**The Course This Year.** The lecture course this year, open without admission fees to all regularly enrolled college students, provides usually for three lectures or entertainments each week. These are usually on Monday, Tuesday, and Thursday. The fields covered are: 1. International relations. 2. American Education. 3. Comparative Education. 4. Philosophy of Living. 5. Philosophy in Literature. 6. History. 7. Political and Social Problems. 8. Drama. 9. Religion

## THE PROGRAM

### The First Week. Dr. George Earle Raiguel.

Dr. Raiguel is a physician living in Philadelphia who has become a world traveler and student of international affairs in close touch with foreign diplomats and political leaders. After his week in Greeley he leaves at once to lecture in London and Paris.

Wednesday, June 16, The New Europe: The Spirit of Locarno.

Thursday, June 17, Central Europe: Germany, Russia, Poland and The Balkans

Friday, June 18, Some Oriental Problems.

On Saturday evening, June 19, at 8:15 in the Little Theater, the Denver Community Players will present **The Servant in the House**. Admission fifty cents.

### The Second Week. Dr. David Snedden and Dr. George D. Strayer.

Three lectures on current problems in American Education. Two of these lectures will be given by Dr. David Snedden, of Teachers College, Columbia University, formerly Commissioner of Education for the state of Massachusetts, an outstanding man in the field of social and vocational education. The third lecture of the week will be given by Dr. George D. Strayer, of Teachers College, Columbia University. Professor Strayer is probably the best known man in the United States in the field of school administration and school finance. He is an interesting speaker on general educational topics and has in the past been one of the popular lecturers during our summer quarter. Both Drs. Snedden and Strayer will be teaching courses in the college during the time they are here and will give these special evening lectures in addition to their classwork.

Monday, June 21, Dr. Snedden, Building a Science of Education.

Tuesday, June 22, Dr. Strayer, The Nation's Part in the Development of Public Education.

Thursday, June 24, Dr. Snedden, Self Culture for Teachers.

### The Third Week. Rollo Walter Brown.

The three lectures for the third week will be given by Mr. Rollo Walter Brown, author of the recently popular book entitled **Creative Thinking**. Mr. Brown is the author of a number of textbooks on writing and has been an inspiring teacher of English in Wabash College and Carlton College, but he is now living in Cambridge, Massachusetts, and is giving all of his time to creative writing and lecturing. His most recent work in book form is an attractive biography of one of the most influential teachers of the past generation, Dean Briggs of Harvard. Mr. Brown's three lectures will deal with some of the topics he has used in his book on **Creative Thinking**.

Monday, June 28, The Romance of Being a Student.

Tuesday, June 29, The Creative Spirit and Youth.

Thursday, July 1, The Creative Spirit and Conduct.

### **The Fourth Week. Dr. Edward Howard Griggs.**

All those students who have acquired an enthusiasm for the lectures of Edward Howard Griggs will be delighted to hear him once more in three literary and philosophic lectures. Dr. Griggs has a genius for making clear and interesting the best that the literary artists have written. This year his lectures will be on the general theme of the poetry and philosophy of Browning.

Monday, July 5, Music and the Spirit: Abt Vogler.

Tuesday, July 6, Browning's Philosophy of Art and Life: The Ring and the Book.

Wednesday, July 7, The Jewels of the Ring: Caponsacchi and Pompilia.

Thursday and Friday, July 8 and 9, Mr. Pim Passes By, The Faculty Players. (Benefit Little Theater. Admission fifty cents.)

### **The Fifth Week. Dr. Thomas Raymont.**

Dr. Thomas Raymont, who will give the three evening lectures for the fifth week, is a prominent English educator, and warden of Goldsmith's College, the teachers training college of the University of London. Warden Raymont is teaching through the half quarter in courses in Education. Our summer students will be glad to hear him as he speaks in a popular way of education in England as compared with that of the United States.

In addition to the three lectures of the week a concert will be given Tuesday evening by Miss Ver Haar of the Metropolitan Opera.

Monday, July 12, the Training of Teachers in England.

Tuesday, July 13, Concert, Ver Haar.

Wednesday, July 14, Education and Labor.

Thursday, July 15, Schools and Scholars in Old England.

**The Sixth Week.** The lectures for the week in which the first half quarter closes and the second half begins will be given by three members of our own teaching staff. The first lecture of the week will be given by Dr. Samuel B. Harding, of the University of Minnesota, a full-time member of the summer faculty of Teachers College. The second will be the opening lecture of the second half quarter and will be given by Dr. Ira W. Howerth, distinguished sociologist, author, and lecturer, a member of the regular Teachers College faculty. The third will be given by President George Willard Frasier.

Monday, July 19, **Dr. Harding**, Erasmus of Rotterdam, Prince of Humanists.

Tuesday, July 20, **Dr. Ira W. Howerth**, Let There Be Light.

Wednesday, July 21, **President Frasier**. Subject to be announced.

Thursday and Friday, July 22 and 23, **Dolly Reforming Herself**. The Faculty Players. (Benefit Little Theatre. Admission 50 cents.)

### **The Seventh Week. Dr. Paul Blanshard.**

The lectures for the three evenings of this week will turn from education to political conditions, especially those involved in the question of labor and government. The lecturer is Dr. Paul Blanshard, secretary of the League for Industrial Democracy, of New York City. Dr. Blanshard is a thoroughly trained man and a popular speaker, who presents in a sane, balanced manner, the problems involved in the labor situation in this and other countries. He is a wide traveler and observer and comes to us from a recent trip around the world, which he took under conditions enabling him to observe in an unbiased way the labor conditions of the countries he visited and to compare them with our own.

An extra evening lecture on Educational Conditions in China will be given Monday evening at 8:15 in the Little Theater by Mr. T. Y. Wang, official representative of Fengtien Province. Mr. Wang is recommended to us by John Dewey.

Monday, July 26, Labor and Imperialism in China and Japan.

Tuesday, July 27, What I Saw in Soviet Russia.

Thursday, July 30, The Ideals of International Labor.

### **The Eighth Week. Dr. John Niven.**

The three evenings of this week will be devoted to dramatic readings. It has been a number of years since we have had interpretive readings from Shakespeare. The reader is Dr. John Niven of London. Dr. Niven comes to us for the first time this year, but is enthusiastically recommended by those who have heard him in his interpretations of Shakespeare, both in England and America. All his dramatic readings are from memory. We have asked him to read three of the Shakespearean plays most commonly used in schools.

### **Lecture-Readings from Shakespeare.**

Monday, August 2, Macbeth.

Tuesday, August 3, Hamlet.

Thursday, August 5, As You Like It.

### **The Ninth Week. The Coffe-Miller Players.**

For the first time the college is including in the regular open lecture series some musical, dramatic, and entertainment numbers. Last year the Coffe-Miller Players delighted all who heard them in the two comedies which they presented. This year the college is making no charge for the players in the hope that everybody may have a chance to hear them. These players are real artists in their profession. Whether we shall include the musical, dramatic, and entertainment numbers in the open lecture series next year, without charge, will depend largely upon the attendance and interest in these programs this year. The two plays of this week will be given in the Greeley High School auditorium.

Thursday, August 12, Moliere's **The Imaginary Invalid**.

Friday, August 13, Marivaux, **Love In Livery**.

### **Tenth Week. John Wells Rahill.**

The unusual interest in religious thinking of the past two or three years has prompted the college to secure a series of lectures which would set forth in a popular way the recent conclusions of the best thinkers in the field of religion. We have been fortunate in securing a young man, thoroughly acquainted with all that is being said and written in this field, who looks upon religious questions from the point of view of a twentieth century thinker, and yet has the spiritual attitude of a great religious teacher. The Reverend Mr. Rahill, a graduate of Oberlin and Yale, comes to us from the Central Congregational Church of Topeka, Kansas, a church made famous by Mr. Rahill's predecessor, Dr. Charles M. Sheldon, author of **In His Steps**.

Monday, August 16, The Living Universe.

Tuesday, August 17, The Literature of Life.

Wednesday, August 18, Concert, by Rousseau.

Thursday, August 19, The Creative Society.

### **The Eleventh Week.**

The last week of the quarter is left open except for a concert to be given Wednesday evening, August 25, by the Conservatory of Music. Thursday, August 26, at ten o'clock, the Convocation exercises of the quarter will take place. The address on this occasion will be delivered by Dr. Jesse H. Newlon, Superintendent of Schools, Denver.

*The* BOOK-REVIEW  
HOUR



*Summer Quarter*

1926

4 p. m. Monday, Wednesday *and* Thursday

Little Theater

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# The BOOK-REVIEW HOUR

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Following the custom begun in 1925 the college will conduct a book-review hour three days per week through the summer quarter. The significant books of the year will be reviewed by competent readers and speakers. Many of the reviewers will be members of the college faculty and of the visiting teachers group. Occasionally the evening lecturers will be called upon for reviews.

This is a non-credit course. The hour is four o'clock. The reviews will be held in the Little Theater. The books reviewed and the persons participating in the course are indicated below.

No one registers for the course, but any person interested, whether a student, a member of the faculty, or a member of the community, is welcome to attend all of the lectures or any one or more desired. No one needs to feel obligated to attend any of the reviews except those in which he or she is especially interested, but anyone is welcome to attend one or all of the reviews.

## FIRST WEEK—

Wednesday, June 16, Dr. George Earle Raiguel, *Books that Explain Present-Day History.*

Thursday, June 17, Dean A. Evelyn Newman, Hendrick Van Loon's *Tolerance.*

## SECOND WEEK—

Monday, June 21, Miss Ellen C. Oakden, H. G. Wells' *Christina Alberta's Father.*

Wednesday, June 23, Dr. George Willard Frasier, A book of his own selecting.

Thursday, June 24, Miss Carolyn Tobey, Bertrand Russell's *The A B C of the Atom.*

## THIRD WEEK—

Monday, June 28, Warden Thomas Raymont, A significant British book of his own selecting.

Tuesday, June 29, Mr. Harold Loring, *The Western American Indian.*

Wednesday, June 30, Dr. Carleton Washburne, Sorokin's *Leaves from a Russian Diary.*

Wednesday, June 30, 3:00 p. m., Mr. Harold Loring, *The Indian in Song and Story*.

Thursday, July 1, Mr. Rollo Walter Brown, Emile Guillaumin's *The Life of a Simple Man*.

Friday, July 2, 7:00 p. m., Mr. Loring, *Indian Song and Story* (Continued).

(A transferable ticket for Mr. Loring's three recitals may be had for fifty cents. The charge is made to cover a part of the expense of the lectures.)

#### FOURTH WEEK—

Monday, July 5, Professor Vernon Brown, Allen F. Shaud's *The Foundations of Character*.

Wednesday, July 7, Dr. Frederick L. Whitney, *The Educational System of the Philippines*.

Thursday, July 8, Dr. Samuel B. Harding, John Morley's *Life of Gladstone*.

#### FIFTH WEEK—

Monday, July 12, Dr. Earle U. Rugg, Carl Sandburg's *Abraham Lincoln*.

Wednesday, July 14, Miss Frances Toby, *The Letters of Sir Walter Raleigh*.

Thursday, July 15, Dr. Guy Gamble, *Personal Problems of the Teaching Staff*.

#### SIXTH WEEK—

Monday, July 19, Mr. Charles J. Woodbury, *Personal Recollections of Emerson*.

Tuesday, July 20, Mr. Charles J. Woodbury, *Luther Burbank*.

Thursday, July 22, Dean J. H. Holst, E. O. Sisson's *Educating for Freedom*.

#### SEVENTH WEEK—

Monday, July 26, Mr. T. Y. Wang, *Political, Social, and Economic Conditions in China*.

Tuesday, July 27, Professor Lucia W. Dement, *An Illustrated Review of Landscape Painting*.

Wednesday, July 28, Dr. L. A. Pechstein, Van Water's *Youth in Conflict*.

Thursday, July 29, Dr. Paul Blanshard, Stuart Chase's *The Tragedy of Waste*.

#### EIGHTH WEEK—

Monday, August 2, Professor George A. Barker, Spengler's *Decline of the Western World*.

Wednesday, August 4, Dr. Harry Ganders, Judge Lindsey's  
*Revolt of Modern Youth.*

Thursday, August 5, Professor Albert F. Carter, *Illustrated  
Lecture on Colorado Birds.*

NINTH WEEK—

Monday, August 9, Professor Harold G. Blue, Walter Lip-  
mann's *The Phantom Public.*

Wednesday, August 11, Dr. J. D. Heilman, Cyril Burt's *The  
Young Delinquent.*

Thursday, August 12, Dr. W. D. Armentrout, Whiting  
William's *Mainsprings of Men.*

TENTH WEEK—

Monday, August 16, Dr. Ira W. Howerth, John Langdon-  
Davies, *The New Age of Faith.*

Wednesday, August 18, Mrs. John Wells Rahill, William  
Bade's *Life and Letters of John Muir.*

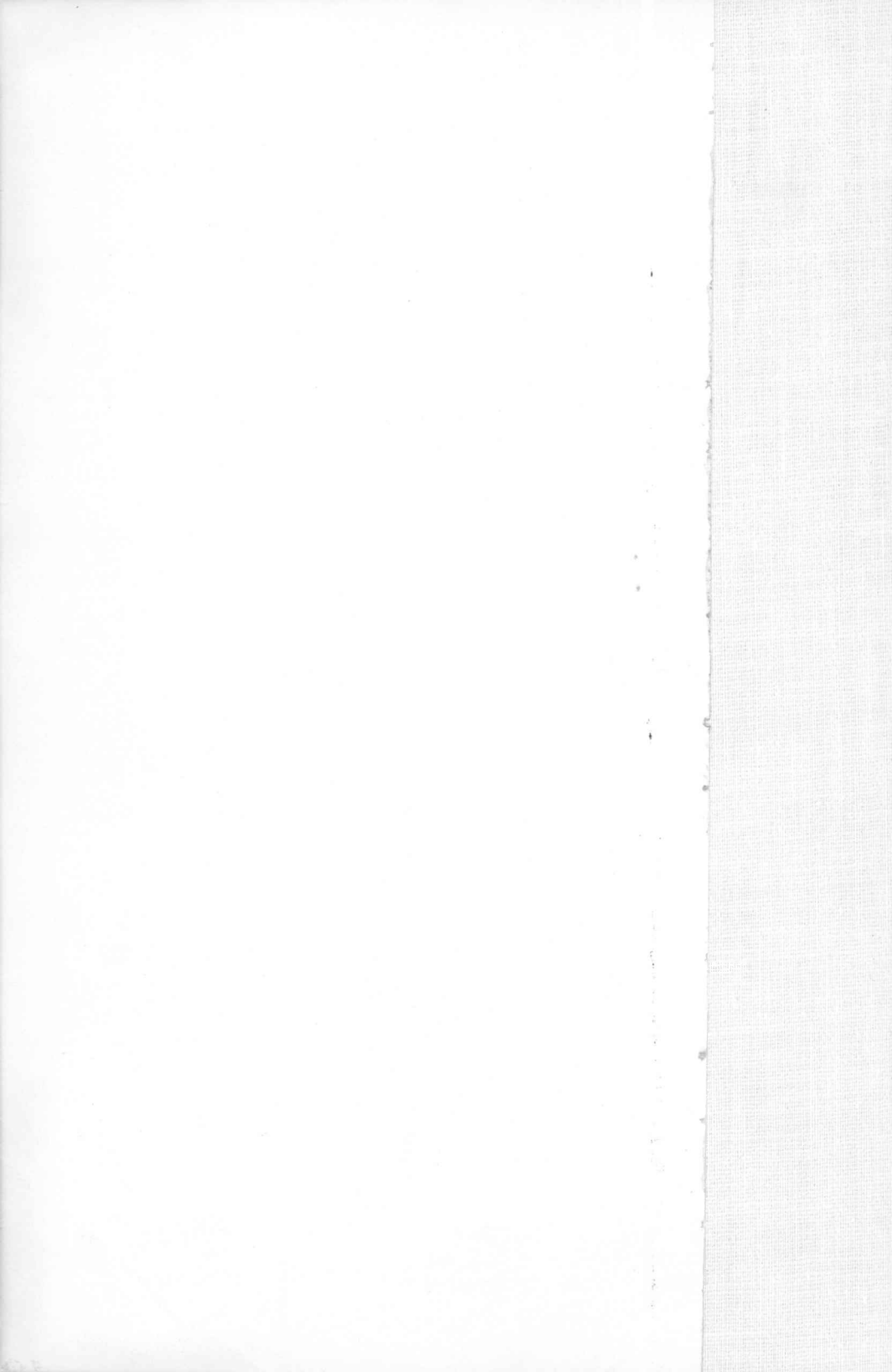
Thursday, August 19, Mr. A. L. Threlkeld, Thurstone's *The  
Nature of Intelligence.*

ELEVENTH WEEK—

Monday, August 23, Professor John Crowe Ransom, Readings  
from his own poems.

Wednesday, August 25, Dr. Frank C. Jean, Dorsey's *Why We  
Behave Like Human Beings.*







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