

**University of California Bulletin**

**SOUTHERN BRANCH**

**FOURTH SERIES. Vol. II, No. 1**

**ANNOUNCEMENT**  
OF THE  
**SOUTHERN BRANCH**  
FOR THE  
**ACADEMIC YEAR 1920-21**

**JULY, 1920**

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# Administrative Bulletins of the University of California

Southern Branch, No. 1

## CIRCULARS OF INFORMATION

For the Announcement of the Southern Branch of the University of California address the Director, Southern Branch, University of California, Los Angeles, California. Price 10 cents; by mail 15 cents.

Letters of inquiry concerning the College of Agriculture should be addressed to the *Dean of the College of Agriculture, Berkeley, California.*

For the following circulars of information concerning the several colleges and departments of the University apply to the *Mailing Division, President's Office, University of California, Berkeley, California.*

The Circular of Information, Academic Departments (Colleges of Letters and Science; Agriculture, Commerce, and Engineering, and the first two years of Medicine). Containing general information about the University, its organization, government, requirements for admission to undergraduate status, requirements for degrees, expenses, and outline announcement of courses of instruction. Price, 10 cents. Sent by mail by the Mailing Division, President's Office, for 15 cents. Detailed information is given in the other publications mentioned in this list.

The Annual Announcement of Courses of Instruction in the Academic Departments. Price, 15 cents. Sent by mail by the Mailing Division, President's Office, for 20 cents.

The Announcement of the Graduate Division.

The Annual Commencement Programme. Containing the list of degrees conferred, scholarships, prizes, and other honors.

Specimen entrance examination papers.

The Annual Announcement of the School of Education.

The Annual Announcement of the School of Jurisprudence.

The Announcements of the Summer Sessions, Berkeley and Los Angeles. Published annually in April.

The Catalogue of Officers and Students. Published in September and in February. Price, 25 cents. Sent by mail by the Mailing Division, President's Office, for 28 cents.

The Monthly Meteorological Synopsis of Berkeley.

The Annual Register. Sent by mail by the Mailing Division, President's Office, for 25 cents.

For the Annual Report of the President, apply to the *Manager of the University of California Press, at Berkeley.*

(Continued on third page of cover)

UNIVERSITY OF CALIFORNIA

ANNOUNCEMENT

OF THE

SOUTHERN BRANCH

FOR THE

ACADEMIC YEAR 1920-21

UNIVERSITY OF CALIFORNIA

1920

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Letters of inquiry concerning the University in general should be addressed to the *Recorder of the Faculties, Berkeley, California.*

Inquiries concerning the Southern Branch should be addressed to the *Director, Southern Branch of the University of California, Los Angeles, California.*

For the list of bulletins of information concerning the several colleges and departments see page 2 of the cover.

In writing for information, please mention the college, department, or study in which you are chiefly interested.

CALENDAR, 1920-1921

1920

- September 10, Friday }  
September 11, Saturday } Registration of new students.  
September 13, Monday—Registration of old students.  
September 14, Tuesday—Instruction begins at 9 A.M.  
November 25, Thursday }  
November 27, Saturday } Thanksgiving recess.  
December 27, Monday }  
January 1, Saturday } Christmas recess.

1921

- January 15, Saturday—Semester closes.  
January 24, Monday—Registration of students for the second half-year.  
March 23, Wednesday—Charter Day.  
March 28, Monday }  
April 2, Saturday } Spring vacation.  
June 11, Saturday—Semester closes.  
June 20, Monday } Summer Session of the Academic Colleges in Los  
July 30, Saturday } Angeles and Berkeley.

## REGENTS OF THE UNIVERSITY

NOTE.—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before Commencement, at such places as may from time to time be determined, ordinarily at the California School of Fine Arts, California and Mason streets, San Francisco. The Los Angeles office of the Regents is in Room 417, Union League Building, Los Angeles.

## REGENTS EX OFFICIO

His Excellency WILLIAM D. STEPHENS  
Governor of California and President  
of the Regents  
Sacramento

CLEMENT CALHOUN YOUNG, B.L.  
Lieutenant-Governor of California  
Sacramento (276 Post st, San Fran-  
cisco)

HENRY W. WRIGHT  
Speaker of the Assembly  
1009 Fair Oaks av, South Pasadena

WILL C. WOOD  
State Superintendent of Public In-  
struction  
Sacramento

GEORGE C. RORDING  
President of the State Agricultural  
Society  
Roeding Place, Fresno

BYRON MAUEY  
President of the Mechanics' Institute  
250 Stockton st, San Francisco

WARREN GREGORY, A.B., LL.B.  
President of the Alumni Association  
Merchants Exchange bldg, San Fran-  
cisco

DAVID PRESCOTT BARROWS, Ph.D.,  
LL.D.  
President of the University  
217 California Hall, Berkeley

## APPOINTED REGENTS

The term of the appointed Regents is sixteen years, and terms expire March 1 of the year indicated in parentheses. The names are arranged in the order of original accession to the Board.

ARTHUR WILLIAM FOSTER, (1932)  
Southern Pacific bldg, San Francisco

GARRETT WILLIAM McENERNEY (1936)  
2002 Hobart bldg, San Francisco

RUDOLPH JULIUS TAUSSIG (1932)  
1521 Van Ness av, San Francisco

GUY CHAFFER EARL, A.B. (1934)  
14 Sansome st, San Francisco

JOHN ALEXANDER BRITTON (1930)  
445 Sutter st, San Francisco

CHARLES STETSON WHEELER, B.L.  
(1928)  
Nevada Bank bldg, San Francisco

WILLIAM HENRY CROCKER, Ph.B.  
(1924)  
Crocker National Bank, San Fran-  
cisco

PHILIP ERNEST BOWLES, Ph.B. (1922)  
American National Bank, San Fran-  
cisco

JAMES KENNEDY MOFFITT, B.S. (1924)  
First National Bank, San Francisco

CHARLES ADOLPH RAMM, B.S., M.A.,  
S.T.B. (1928)  
1100 Franklin st, San Francisco

EDWARD AUGUSTUS DICKSON, B.L.  
(1926)  
637 Wilton pl, Los Angeles

JAMES MILLS (1926)  
Hamilton City

CHESTER HARVEY ROWELL, Ph.B.  
(1936)  
Fresno

MORTIMER FLEISHHACKER (1934)  
Anglo-California Trust Company, San  
Francisco

GEORGE I. COCHRAN, LL.D. (1930)  
501 West Sixth st, Los Angeles

Mrs. MARGARET SARTORI (1922)  
725 West Twenty-eighth st, Los  
Angeles

OFFICERS OF THE REGENTS

His Excellency William Dennison  
Stephens  
President  
Sacramento

Mortimer Fleishhacker,  
Treasurer  
Anglo-California Trust Company, San  
Francisco

Comptroller, Secretary of Regents,  
and Land Agent  
220 California Hall, Berkeley

James M. Mannon, Jr., LL.B.  
Attorney  
1107 Merchants Exchange bldg, San  
Francisco

Robert Gordon Sproul, B.S.  
Assistant Comptroller, Assistant Sec-  
retary, and Assistant Land Agent  
220 California Hall, Berkeley

STANDING COMMITTEES OF THE BOARD OF REGENTS  
FOR THE YEAR 1920-21\*

*Agriculture:*

Regents Foster, Roeding, Dickson,  
Mills, Cochran, and Taussig.

*Committee on Conference with Faculty:*

Regents Moffitt, Gregory, Britton,  
Taussig, Rowell, and Ramm.

*Endowments:*

Regents Crocker, Britton, Mrs. Sar-  
tori, Bowles, Cochran, McEnerney,  
and Fleishhacker.

*Engineering:*

Regents Ramm, Fleishhacker, Brit-  
ton, Roeding, and Bowles.

*Executive Committee:*

This committee consists of the chair-  
men of all standing committees  
and the President of the Alumni  
Association.

*Finance:*

Regents Earl, Foster, Britton, Moffitt,  
and Taussig.

*Grounds and Buildings:*

Regents Britton, Wheeler, Bowles,  
Dickson, and Fleishhacker.

*Jurisprudence:*

Regents McEnerney, Cochran, Wheel-  
er, Gregory, and Young.

*Letters and Science:*

Regents Rowell, Wheeler, Ramm,  
Wood, Gregory, and Mills.

*Library, Research and Publications:*

Regents Bowles, Moffitt, Mauzy,  
Gregory, Wood, Earl, and Rowell.

*Lick Observatory:*

Regents Fleishhacker, McEnerney,  
Young, Crocker, Mauzy, and  
Wright.

*Medical Instruction and University*

*Hospitals:*

Regents Crocker, Taussig, Britton,  
Earl, Moffitt, Ramm, Mrs. Sartori,  
and Bowles.

*Southern Branch of the University of*

*California and Scripps Institution*  
*for Biological Research:*

Regents Dickson, Cochran, Gregory,  
Mrs. Sartori, Wood, Rowell, and  
Taussig.

*Wimmerding School:*

Regents Taussig, Earl, Moffitt, and  
Mauzy.

\* The President of the Board of Regents and the President of the University are *ex officio* members of all committees of the Board. In each committee the name of the chairman is first and the name of the vice-chairman is second.



## ADMINISTRATIVE OFFICERS

## IN BERKELEY

*President of the University:*

David P. Barrows  
217 California Hall

*Executive Secretary to the President:*

Morse A. Cartwright  
217 California Hall

*Comptroller, Secretary of the Board of Regents, and Land Agent:*

220 California Hall

*Assistant Comptroller, Assistant Secretary of the Regents, and Assistant Land Agent:*

Robert G. Sproul  
220 California Hall

*Recorder of the Faculties:*

James Sutton  
204 California Hall

## IN LOS ANGELES

*Southern Branch of the University of California—*

*Director:* Ernest O. Moore  
*Assistant Director:* O. H. Marvin  
Millspaugh Hall

*Summer Session in Los Angeles:*

*Dean:* Monroe E. Deutsch  
105 California Hall, Berkeley

*†Los Angeles Medical Department—*

*Dean:* George H. Kress  
245 Bradbury Building

*Extension Division—*

*Representative in Southern California:*  
Miss Nadine Crump  
Metropolitan Building

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† Graduate instruction only is offered in the Los Angeles Medical Department.

# CIRCULAR OF INFORMATION

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## I. THE UNIVERSITY

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### INTRODUCTION

The following general information concerning the University is important for students in all of its branches and is, therefore, published for the guidance of those interested in the Southern Branch.

### HISTORY

The establishment of the University of California in 1868 came as the result of three separate movements—one originating in private initiative, one in state action, and one in federal action.

Private action owed its inception to the foresight of Rev. Henry Durant. In 1853, under the auspices of the Presbytery of San Francisco, and of the Congregational Association of Oakland, Mr. Durant opened in Oakland the "Contra Costa Academy," soon changed to the name of "College School," in order to signify that the undertaking was only preparatory to a projected college. In 1855, such an institution was incorporated under the name of "College of California." In 1860 that college was formally opened and classes were graduated from 1864 to 1869 inclusive. The instruction was given in buildings in Oakland, but in 1856 a tract of land was secured five miles to the north, and in 1866 the name of Berkeley was given to the townsite about the college campus.

State action had its start in the Constitutional Convention of 1849, which incorporated into the fundamental law recognition of and provision for a state university. There was constant public agitation down to 1868 for making the provisions effective.

Federal action began in 1853 when Congress gave the state 46,000 acres of land for a "seminary of learning." A further impulse was given in 1862 by the passage of the Morrill Act for the establishment of an Agricultural, Mining and Mechanical Arts College.

In 1867 these three forces began working together to one end—the establishment of a University of California, the private enterprise known as the College of California throwing in its buildings and four blocks of land in Oakland and its 160 acres of land in Berkeley, the federal government, the Congressional gift of 150,000 acres of public lands, and

the state, its property accumulated for the purpose, together with new legislative appropriations. The University of California was formally organized on March 23, 1868.

The University of California is governed by a Board of Regents of twenty-four members, sixteen of whom are appointed by the Governor and hold office for sixteen years, and eight are ex-officio in character and tenure. The internal management is in the hands of the President and Academic Senate, consisting of the faculties and instructors of the University.

The first appointee to the Presidency was Henry Durant (1869-72), followed by Daniel Coit Gilman (1872-75), John LeConte (1875-81), William T. Reid (1881-85), Edward S. Holden (1885-88), Horace Davis (1888-90), Martin Kellogg (1890-99), Benjamin Ide Wheeler (1899-1919), and David Prescott Barrows (1920- ).

In 1896 a movement, which had been undertaken for a permanent and comprehensive building plan on the Berkeley campus, was taken over and financed by Mrs. Phoebe Apperson Hearst. The ultimate plan was selected after two international competitions. A large group of buildings has already been erected on the site, partly from private donations and partly from state appropriations and bond issues.

The Southern Branch of the University of California was established by an act of the Legislature which went into effect July 24, 1919. On that date the Regents of the University assumed control of the grounds, buildings, and equipment of the institution theretofore known as the Los Angeles State Normal School.

## DEPARTMENTS

### I. IN BERKELEY

#### The Colleges of

Letters and Science,

Commerce,

Agriculture (including the courses at Berkeley, the University Farm at Davis, the Graduate School of Tropical Agriculture at Riverside, and the United States Agricultural Experiment Station, which includes Stations at Berkeley and Davis, the forestry stations at Chico and Santa Monica, the Citrus Experiment Station at Riverside, the Imperial Valley Experiment Station near Meloland, "Whitaker's Forest" in Tulare County, and the M. Theo. Kearney Experiment Station at Kearney Park, Fresno County),

Mechanics,

Mining,

Civil Engineering,

Chemistry.

The Schools of  
Architecture,  
Education,  
Jurisprudence,  
Medicine (first and second years).

The University Extension Division (offering instruction wherever classes can be formed, or anywhere in California by correspondence, providing lectures, recitals, motion pictures and other material for visual instruction, etc., giving guidance and suggestions to debating clubs, and offering aid to communities through its Bureau of Information and Social Welfare).

The California Museum of Vertebrate Zoology.

DEPARTMENTS OF INSTRUCTION IN THE COLLEGES AT BERKELEY

Agriculture (including Agricultural Science, Agronomy, Animal Industries, Forestry, Horticulture, and Landscape Gardening), Anatomy, Anthropology, Architecture, Astronomy, Biochemistry and Pharmacology, Botany, Celtic, Chemistry, Civil Engineering, Drawing and Art, Economics, Education, English, French, Geography, Geology, German, Greek, History, Home Economics, Hygiene, Irrigation, Italian, Jurisprudence, Latin, Library Science, Mathematics, Mechanical and Electrical Engineering, Military Science and Tactics, Mineralogy, Mining and Metallurgy, Music, Oriental Languages, Palaeontology, Pathology and Bacteriology, Philosophy and Psychology, Physical Education, Physics, Physiology, Political Science, Public Speaking, Sanskrit, Semitic Languages, Slavic Languages, Social Institutions, Spanish, Zoology.

II. AT MOUNT HAMILTON

The Lick Astronomical Department (Lick Observatory).

III. AT SANTIAGO, CHILE

Lick Observatory, Chile Station.

IV. IN SAN FRANCISCO

California School of Fine Arts,  
Hastings College of the Law,  
Medical School (third, fourth, and fifth years, including Hospitals),  
The George Williams Hooper Foundation for Medical Research,  
College of Dentistry,  
California College of Pharmacy,  
The Museum of Anthropology, Archaeology, and Art.

*University of California***V. IN LOS ANGELES**

Los Angeles Medical Department, graduate instruction only.  
Southern Branch of the University.

**VI. AT DAVIS**

The University Farm School; college instruction and research in Agronomy, Animal Husbandry, Dairy Industry, Farm Mechanics, Olericulture, Poultry Husbandry, Pomology, Soils, and Veterinary Science.

**VII. AT RIVERSIDE**

The Graduate School of Tropical Agriculture.

**VIII. AT LA JOLLA**

The Scripps Institution for Biological Research.

**IX. AT SWANTON**

The Summer School of Surveying.

**ORGANIZATION**

The University of California is an integral part of the public educational system of the state. As such it completes the work begun in the public schools. Through aid from the state and the United States, and by private gifts, it furnishes facilities for instruction in literature and in science, and in the professions of art, law, medicine, dentistry, and pharmacy. In the colleges of Letters and Science, Commerce, Agriculture, Mechanics, Mining, Civil Engineering, and Chemistry these privileges are offered without charge for tuition to all residents of California who are qualified for admission. Non-residents of California are charged a tuition fee of ten dollars each half-year. In the professional colleges, except that of law, tuition fees are charged. The instruction in all the colleges is open to all qualified persons, without distinction of sex. The Constitution of the State provides for the perpetuation of the University, with all its departments.

**ADMINISTRATION**

The government of the University of California is entrusted to a corporation styled **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**, consisting of the Governor, the Lieutenant-Governor, the Speaker of the Assembly, the State Superintendent of Public Instruction, the President

of the State Board of Agriculture, the President of the Mechanics' Institute of San Francisco, the President of the Alumni Association, and the President of the University, as members *ex officio*, and sixteen other regents appointed by the Governor and approved by the Senate. To this corporation the State has committed the administration of the University, including management of the finances, care of the property, appointment of teachers, and determination of the internal organization in all particulars not fixed by law.

## UNDERGRADUATE CURRICULA

The courses of instruction offered at the Southern Branch for the year 1920-21 are of two general types, as indicated below:

### I. Curricula leading to teachers' certificates:

- (a) Two-year courses leading to the Elementary Teacher's Certificate or the Kindergarten-Primary Certificate.
- (b) Three-year courses leading to the Special Elementary Certificate in Commerce, Household Arts, Manual and Fine Arts, Music, or Physical Education.
- (c) Four-year courses, leading to the Special Secondary Certificate in Commerce, Household Arts, Manual and Fine Arts, Music, or Physical Education.

### II. Junior College Curricula:

Instruction covering the work of the first two years only, of the following seven colleges at Berkeley, in each of which there is an undergraduate curriculum of four years, leading directly, under conditions hereinafter stated, to a bachelor's degree, as follows:

The College of Letters and Science: to the degree of Bachelor of Arts.

The Colleges of Applied Science	}	<p>to the degree of Bachelor of Science:</p> <p>in the College of Commerce;</p> <p>in the College of Agriculture—in any one of the following: agricultural science, agronomy, animal industries, forestry, horticulture, landscape gardening;</p> <p>in the College of Mechanics—(1) in mechanical engineering, or (2) in electrical engineering, or (3) in marine engineering and naval architecture, or (4) in aerodynamics;</p> <p>in the College of Mining—(1) in mining, or (2) in metallurgy, or (3) in economic geology, or (4) in petroleum engineering;</p> <p>in the College of Civil Engineering—(1) in railroad engineering, or (2) in sanitary engineering, or (3) in irrigation engineering;</p> <p>in the College of Chemistry—(1) in chemistry, or (2) in chemical engineering.</p>
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There are permitted, in addition, courses at large and partial courses, not leading directly to any degree, but through each of which, by compliance with the conditions upon which it is conferred, credit toward a degree may be acquired.

The University has no preparatory department.

## PROFESSIONAL CURRICULA

At Berkeley also are the Schools of  
Architecture, leading to the degree of Graduate in Architecture;  
Education, leading to the degree of Graduate in Education and to  
the high school teacher's recommendation;  
Jurisprudence, leading to the degree of Juris Doctor;  
Medicine, first year and part of the second year of the five-year  
curriculum leading to M.D. (the remainder of the work is given  
in San Francisco);  
and the curricula in

Public Health—three curricula, each leading to the degree of  
Graduate in Public Health; two of these are given wholly at  
Berkeley and the third (for candidates for M.D. and Gr.P.H.)  
is in part at Berkeley and in part in San Francisco;

Home Economics, leading to the degree of Bachelor of Arts in  
the College of Letters and Science, with a major subject in  
Household Art or in Household Science.

The work of the Medical School (except that of the first year and  
part of the second year, as above), of the California College of Pharmacy,  
of the Hastings College of the Law, and of the College of Dentistry is  
conducted in San Francisco. The first year of work in the Schools of  
Education and Medicine, the first year of the three-year curriculum in  
the School of Jurisprudence, the first and second years in the School of  
Architecture, and the first and second years of the four-year curriculum  
in Jurisprudence, may be credited towards the degree of Bachelor of Arts  
in the College of Letters and Science. The work so credited is regarded  
as academic, rather than as purely professional in character, and the  
student pursuing this work is enrolled not only in the appropriate school  
or curriculum but also in the College of Letters and Science, and is subject  
to all the regulations of that college.

In like manner, students in the several curricula in Public Health  
may be simultaneously candidates for the professional degree of Gr.P.H.  
and also for the degree A.B. (College of Letters and Science), B.S.  
(College of Civil Engineering), or M.D. (Medical School).

ADMISSION TO THE UNIVERSITY

ADMISSION FROM ACCREDITED SCHOOLS IN CALIFORNIA

A graduate of a California high school may enter the University of California without examination provided the following requirements be satisfied:

1. The school must have been accredited by the University of California.
2. The applicant must have completed a four-year high school course, aggregating at least 15 standard units of preparatory work (the equivalent of 45 units by the scale heretofore used), and he must be duly certified as a graduate of the school.
3. The candidate must be recommended for admission to the University of California according to the following form:

I certify that ..... was graduated from the ..... School, ....., 19....., after an attendance at said school of not less than one school-year\* immediately preceding graduation. I believe that the candidate is fitted to undertake college work, with reasonable prospect of success, for the following reasons: (1) that he (or she) possesses, in my judgment, the needful ability, character, and seriousness of purpose; and (2) that he (or she) has completed with a satisfactory scholarship record the preparatory subjects listed below (list of subjects follows).

(Signed) .....

Principal of High School.

In recommending graduates for admission to the University the principals of accredited schools should use Recommendation Form A, with application for admission attached. Copies of this form are supplied by the University to the principals of all accredited schools in California.

The accrediting of secondary schools is regulated by an order of the Regents of the University passed March 4, 1884, and amended September 10, 1895, and January 10, 1905. Principals' applications for the accrediting of their schools must be in the hands of the Recorder of the Faculties at Berkeley on or before the first day of December of each school year.

The list of accredited schools is published by the University annually, in the month of June or July. Blank forms of application for accrediting, and lists of accredited schools, may be obtained from the Recorder of the Faculties at Berkeley.

\* If, however, candidate has completed all of his high school work in accredited institutions, and if the principals of these several schools unite in recommending him, the usual requirement that the candidate must have spent his senior year in the school from which he is graduated may be set aside.



**Caution.**—Candidates recommended in accordance with the foregoing provisions are admitted to the University and enrolled in the curricula of their choice. It will be seen, however, that some of these curricula cannot be completed in the University in the normal period (four years for the degree A.B. or B.S.) unless the candidate during his high school course has completed such specific prerequisites as may underlie the University work. A list of the curricula, with a statement of the preparatory work required and recommended, is given hereunder.

#### ADMISSION FROM CALIFORNIA SCHOOLS NOT ACCREDITED

A graduate of a California secondary school not accredited by the University who is strongly recommended by the principal of his school will be admitted upon passing the following examinations:

English (2 units); U. S. History (1 unit); laboratory science (1 unit); and two of the following groups:

- (a) Advanced English and History (in addition to U. S. History), any 2 units.
- (b) Mathematics (intermediate algebra and trigonometry),  $1\frac{1}{2}$  units.
- (c) Foreign languages, 3 units in one, or 2 units in each of two.
- (d) Additional advanced science, 2 units.

#### ADMISSION FROM APPROVED HIGH SCHOOLS IN OTHER STATES

Applicants from secondary schools outside of California are required to meet the same standards as applicants who enter from secondary schools in California. The committee in charge of admissions must have evidence of the following facts: that the school has an approved standing at universities or colleges of acknowledged rank; that the applicant has been graduated from a four-year course of not less than fifteen standard secondary units; that the high school programme shall have included the subjects prescribed by the California State Board of Education (see Preparatory Work Required and Recommended); and that the applicant has maintained an average scholarship standing well above the mark required by the school for promotion or graduation. The candidate may be certified by his principal upon the Principal's Recommendation, Form B. Copies of this form will be sent by the Recorder either to high school principals or to candidates for admission.

**Caution.**—Candidates recommended in accordance with the foregoing provisions are admitted to the University and enrolled in the curricula of their choice. It will be seen, however, that some of these curricula cannot be completed in the University in the normal period (four years

for the degree A.B. or B.S.) unless the candidate during his high school course has completed such specific prerequisites as may underlie the University work. A list of the curricula, with a statement of the preparatory work required and recommended, is given hereunder.

#### ADMISSION BY EXAMINATION

Candidates who are unable to present satisfactory school certificates may be admitted to the University by passing examinations in the preparatory subjects constituting a standard high school course. The subjects to be presented must be arranged in advance with the University. The subjects to be required by the University will depend upon the applicant's high school training, his age, and his proposed course of study in the University. The applicant must pass examinations in at least fifteen standard high school units.

#### MATRICULATION EXAMINATIONS AT BERKELEY

Matriculation examinations are held in Berkeley in August and in January of each year; but the examinations in January are primarily for the purpose of enabling students in the University to remove matriculation deficiencies. Applicants for admission who present certificates from their teachers that they are prepared in the subjects they offer will be admitted to the January examinations. Such certificates must be filed with the Recorder of the Faculties in Berkeley before the examinations.

No person save a registered student of the University will be allowed to take any matriculation examination without having first filed an application for admission.

A circular concerning the matriculation examinations may be obtained by addressing the Recorder of the Faculties, University of California, Berkeley, California.

#### MATRICULATION EXAMINATIONS AT LOS ANGELES

Applicants desiring to take matriculation examinations in Los Angeles may pass those conducted by the College Entrance Examination Board, described elsewhere.

## List of Preparatory Subjects

A list of preparatory subjects, with the amount of matriculation credit assigned to each, is given below. This list is not exhaustive, but it represents most of the fields of instruction in the secondary schools of California. With exceptions noted below, the University holds entrance examinations in these subjects:

New No.		Old No.	Units of Credit	New No.		Old No.	Units of Credit
1a	English, elem.....	(1)	2	†5b <sup>4</sup>	Latin, adv., 4th yr.....	(7b, 7c <sup>2</sup> )	1
1b	English, adv. I.....	(14a)	1	†5c <sup>1</sup>	French, elem., 1 yr. of 5c <sup>2</sup> .....	(15a <sup>1</sup> )*	[1
1c	English, adv. II.....	(14b)	1	†5c <sup>2</sup>	French, elem.....	(15a <sup>2</sup> )	2
2a	Algebra, elem.....	(3)	1	†5c <sup>3</sup>	French, intermed.....	(15a <sup>3</sup> )	1
2b <sup>1</sup>	Algebraic Theory, I.....	(4a <sup>1</sup> )	‡	†5c <sup>4</sup>	French, adv.....	(15a <sup>4</sup> )	1
2b <sup>2</sup>	Algebraic Theory, II.....	(4a <sup>2</sup> )	‡	†5d <sup>1</sup>	German, elem., 1 yr. of 5d <sup>2</sup> .....	(15b <sup>1</sup> )*	[1
2c	Plane Geometry.....	(2)	1	†5d <sup>2</sup>	German, elem.....	(15b <sup>2</sup> )	2
†2d	Solid Geometry.....	(4b)	‡	†5d <sup>3</sup>	German, intermed.....	(15b <sup>3</sup> )	1
†2e	Plane Trigonometry.....	(12a <sup>2</sup> )	‡	†5d <sup>4</sup>	German, adv.....	(15b <sup>4</sup> )	1
†2f	Plane Analytic Geometry.....	(12a <sup>3</sup> )	‡	†5e <sup>1</sup>	Spanish, elem., 1 yr. of 5e <sup>2</sup> .....	(15c <sup>1</sup> )*	[1
3a	Physics.....	(11)	1	†5e <sup>2</sup>	Spanish, elem.....	(15c <sup>2</sup> )	2
3b	Chemistry.....	(12b)	1	†5e <sup>3</sup>	Spanish, intermed.....	(15c <sup>3</sup> )	1
3c	Physiology and Hygiene.....	(12f)	1	†5e <sup>4</sup>	Spanish, adv.....	(15c <sup>4</sup> )	1
3d	Botany.....	(12c)	1	†6a	Freehand Drawing.....	(16)	1
3e	Zoology.....	(12d)	1	†6b	Geometrical Drawing.....	(17)	1
3f	Biology.....	(12h)*	1	7	Mechanic Arts.....	(18a)	‡-3
3g	Physical Geography.....	(12e)	1	8	Agriculture.....	(19)*	‡-3
3h	Elem. Physical Science.....	(12g)*	1	9abc	Home Economics.....	(18cd)*	‡-3
4a	History and Gov. of the U.S. (5)	(5)	1	10a	Music, Sight Singing and Dictation.....	(21a)	1
4b	History, Ancient.....	(10)	1	10b	Music, Elements of Composition.....	(21b)	1
4c	History, Med. and Mod.....	(13a)	1	10c	Music, Instrumental and Vocal Technique.....	(21c)	1
4d	History, English.....	(13b)	1	10d	Music, History of Modern European Music.....	(21d)	1
†5a <sup>1</sup>	Greek, elem.....	(8a)	[1	11	Bookkeeping.....	(20c)	1
†5a <sup>2</sup>	Attic Prose.....	(8b)	2	12	Stenography and Typewriting.....	(20d)	1-2
†5a <sup>3</sup>	Attic Prose, adv.....	(9a)	‡				
†5a <sup>4</sup>	Homer.....	(9b)	‡				
†5b <sup>1</sup>	Latin, elem., 1st yr.....	(6ab <sup>1</sup> )*	[1				
†5b <sup>2</sup>	Latin, elem., 2d yr.....	(6a <sup>2</sup> , 6b <sup>2</sup> )	2				
†5b <sup>3</sup>	Latin, adv., 3d. yr.....	(7a, 7c <sup>1</sup> )	1				

## College Entrance Examination Board

Certificates of successful examinations before the College Entrance Examination Board will be accepted in lieu of matriculation examinations conducted by the University of California.

The examinations of the College Entrance Examination Board are usually held during the third week in June.

\* No examination.

† The dagger indicates subjects for which equivalent courses are offered in the University. For further description of these courses reference should be made to the Announcement of Courses of Instruction.

All applications for examination must be addressed to the College Entrance Examination Board, 431 West 117th street, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application. The separate form for the certificate of recommendation (also to be obtained from the Secretary of the Board) should be addressed to the Chairman of the Committee on Admission of the university, college, or scientific school that the candidate wishes to enter.

If the application is received sufficiently early the examination fee will be \$6 for candidates examined in the United States or Canada and \$20 for candidates examined outside of the United States or Canada. The fee should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board, and should accompany the application.

The applications and fees of candidates who wish to be examined outside of the United States or Canada must reach the Secretary of the Board at least six weeks in advance of the first day of the examinations. The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River or in Canada must be received at least four weeks in advance of the examinations. The applications and fees of candidates who wish to be examined in the United States at points east of the Mississippi River or on the Mississippi River must be received at least three weeks in advance of the first day of the examinations.

When the candidate has failed to obtain the required blank form of application for examination, the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination center at which he wishes to present himself, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted only upon payment of \$6 in addition to the usual fee.

A list of the places at which examinations are to be held by the Board in June, 1921, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

Points on the Pacific Coast at which examinations are usually held are as follows: Los Angeles, Berkeley, Nordhoff, Stanford University, Portland, Seattle, Spokane, Tacoma.

## ADMISSION ON TEACHERS' DIPLOMAS

Holders of Teachers' Life Diplomas or of State Educational Diplomas of this state, or holders of similar diplomas recognized by the State Board of Education of California, may be admitted provisionally to the University in the academic departments, with the privilege of satisfying matriculation requirements by examination or by work in the University.

## PREPARATORY WORK REQUIRED AND RECOMMENDED

## THE HIGH SCHOOL PROGRAM

Aside from the specific prerequisites for certain curricula, as set forth below, no prescription of high school work is made by the University. It is assumed that the authorities in responsible control of secondary education will make reasonable provision for solidity and breadth in the high school course. The choice of electives during the high school period must be made by the pupil, under the direction of the school faculty, and the decision as to subjects chosen will be based not solely upon "recommendations" made by universities and colleges but also upon other considerations best known to the school authorities, such as the aptitude of the individual pupil and the extent to which proper facilities for work of high quality in the various subjects is supplied by the school. A resolution of the California State Board of Education directs that all public high school curricula in California require, for graduation after July 1, 1920, the following: English, 2 units; United States history and civics, 1 unit; laboratory science, 1 unit; and all such curricula must be so organized as to include two majors of at least 3 units each—a major consisting of three years of study in one of the following groups: (1) English (in vocational courses 1 unit of citizenship may be included with 2 units of English to make one major); (2) mathematics, including mechanical drawing; (3) history and social science; (4) physical and biological sciences; (5) foreign language—3 or more units in one language, or 2 units in each of two languages. Special attention is invited to the importance of high school instruction in the following subjects:

*Subject A: English Composition.*—All undergraduate intrants are, immediately following their admission, required to take a written examination in Subject A: English Composition. Students who fail to make a satisfactory showing in this test are required to continue class work in English composition in the University until such time as they reach a satisfactory standard of expression. A leaflet containing further information concerning Subject A may be obtained from the Recorder of the Faculties.

**Foreign Language.**—In practically all colleges and departments of the University a reading knowledge of a modern foreign language will be helpful. In many departments such reading knowledge is indispensable for advanced work. Though the University gives instruction in the elements of modern foreign languages, high school pupils who are intending to enter the University should not neglect the study of foreign language in the high school if facilities for such study be offered there. This work can, as a rule, be more profitably undertaken by pupils of high school age than by older persons. If it becomes necessary to limit the number of students receiving instruction in the elements of foreign languages in the University, preference will be given to those who enter with two years or more of high school credit in a foreign language.

**Mathematics.**—If possible, provision should be made in the high school program for two years of work in mathematics, namely, elementary algebra and plane geometry. Instruction in these subjects—credit for both of which is required for any degree in the University of California—will, however, until further notice, be provided in the University.

#### PREPARATION FOR THE VARIOUS CURRICULA

The requirements and recommendations for the various curricula are stated below.

A "curriculum" is understood to be either a technical or specialized program of studies, as in the Colleges of Engineering, Agriculture, and Commerce; or a more general program (as in the College of Letters and Science) with a designated major subject, such as history, mathematics, or philosophy.

With reference to major subjects in the College of Letters and Science, the subjoined statement of "requirements and recommendations" is addressed rather to the student who desires to be well prepared to complete a full undergraduate major—possibly as a candidate for honors—than to the student who wishes merely to satisfy minimum graduation requirements. In some subjects it will be possible for students to satisfy minimum graduation requirements in the major without complying in all respects with the prerequisites herein listed.

In the subjoined statement, the terms "required" and "recommended" are to be interpreted as follows:

**Required:** Subjects without which the student will not be able to enter the regular curriculum. The omission of required subjects at matriculation will usually result in delaying graduation. The University gives no instruction in elementary Latin; none in elementary algebra or plane geometry except in the Extension Division, though, until further notice, resident instruction in plane

geometry and elementary algebra will be provided for students who have not had this work in the high school. The equivalent of the high school courses in physics and chemistry is given in the summer session, not during the fall or spring session.

*Recommended:* Subjects which will usually give more effective preparation, and thus allow greater freedom of election at the University. The omission of these subjects at matriculation will usually not delay graduation if the student's work at the University is properly planned.

**NOTE.**—The numerals in parentheses represent units of high school work. A standard secondary unit is the measure of a subject pursued throughout the school year of from thirty-six to forty weeks and constituting approximately one-quarter of a full year's work.

**Agriculture:** leading to the degree of Bachelor of Science in the COLLEGE OF AGRICULTURE.

*Required:* plane geometry (1); elementary algebra (1); chemistry (1);

*Recommended:* advanced mathematics, including trigonometry (2); physics (1); geometrical drawing (1); advanced English (2); a reading knowledge of a foreign language.

**Anthropology:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

**Architecture:** leading to the degree of Bachelor of Arts in the COLLEGE OF LETTERS AND SCIENCE, at the end of four years, and to the degree of Graduate in Architecture in the SCHOOL OF ARCHITECTURE at the end of six years.

*Required:* same as for ENGINEERING.

*Recommended:* Latin (2); French (2).

**Chemistry:** leading to the degree of Bachelor of Science in the COLLEGE OF CHEMISTRY.

*Required:* same as for ENGINEERING, with French or German. See also SCIENCES, below.

**Commerce:** leading to the degree of Bachelor of Science in the COLLEGE OF COMMERCE.

*Required:* algebra (1); plane geometry (1).

*Recommended:* additional mathematics; modern foreign language.

**Dentistry:** leading to the degree of Doctor of Dental Surgery in the COLLEGE OF DENTISTRY at the end of four years.

*Recommended:* physics (1); chemistry (1); zoology (1); manual training.

**Drawing and Art:** leading to the degree of Bachelor of Arts.

**Engineering Drawing.**

*Required:* plane geometry (1); elementary algebra (1).

*Recommended:* solid geometry ( $\frac{1}{2}$ ); plane trigonometry ( $\frac{1}{2}$ ); geometrical drawing (1); freehand drawing (1).

**Graphic Art.**

*Recommended:* freehand drawing (1).

**Economics:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

**Education:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

**Engineering:** leading to the degree of Bachelor of Science in one of the colleges of engineering. These colleges are: COLLEGE OF MECHANICS—curricula in mechanical and electrical engineering, aerodynamics, marine engineering and naval architecture; COLLEGE OF MINING—curricula in petroleum engineering, metallurgy, and economic geology; COLLEGE OF CIVIL ENGINEERING—curricula in railroad, sanitary, municipal, and irrigation engineering; COLLEGE OF CHEMISTRY—curriculum in chemical engineering.

*Required:* plane geometry (1); elementary algebra (1); algebraic theory ( $\frac{1}{2}$ ); trigonometry ( $\frac{1}{2}$ ); physics (1); chemistry (1); geometrical drawing (1).

*Recommended:* advanced algebraic theory, including quadratics ( $\frac{1}{2}$ ); solid geometry ( $\frac{1}{2}$ ); freehand drawing (1); foreign language (2).

**English:** leading to the degree of Bachelor of Arts.

*Recommended:* Latin (4); Greek (3).

**Forest Utilization:** leading to the degree of Bachelor of Science in the COLLEGE OF AGRICULTURE.

*Required:* same as for ENGINEERING.

*Recommended:* same as for ENGINEERING.

**History:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

**Home Economics:** leading to the degree of Bachelor of Arts with a major in Household Art or in Household Science.

**Household Art:**

*Required:* chemistry (1).

*Recommended:* freehand drawing (1); botany (1); domestic science (2).

**Household Science:**

*Required:* chemistry (1); domestic science (cooking) (1).

*Recommended:* physics (1); French or German (2).



**Languages—Classics, Latin, Greek:** leading to the degree of Bachelor of Arts.

*Required:* Latin (2).

*Recommended:* advanced Latin (2); Greek (3); ancient history (1).

To delay advanced Latin until the university is reached will make it exceedingly difficult, though not impossible, to do any considerable amount of advanced work in Latin.

**Other languages** (Celtic, French, German, Italian, Oriental, Sanskrit, Semitic, Slavic, Spanish): leading to the degree of Bachelor of Arts.

*Recommended:* Latin (4) or Greek (3); French (2) or German (2).

**Law:** (A) leading to the degree of Bachelor of Arts in the COLLEGE OF LETTERS AND SCIENCE at the end of four years, and to the degree of J.D. in the School of Jurisprudence at the end of six years.

*Recommended:* physics (1) or chemistry (1); Latin (2); U. S. history (1) and English history (1).

(B) leading to the degree LL.B. in HASTINGS' COLLEGE OF THE LAW (San Francisco) at the end of five years (two years in the COLLEGE OF LETTERS AND SCIENCE at Berkeley followed by three years in HASTINGS COLLEGE OF THE LAW).

For further information see the annual announcements of the HASTINGS COLLEGE OF THE LAW and of the SCHOOL OF JURISPRUDENCE.

**Library Science:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

**Mathematics:** leading to the degree of Bachelor of Arts.

*Required:* plane geometry (1); elementary algebra (1).

*Recommended:* advanced algebraic theory, including quadratics (1); solid geometry ( $\frac{1}{2}$ ); trigonometry ( $\frac{1}{2}$ ).

**Medicine:** leading to the degree of Doctor of Medicine in seven years; or to the degree of Bachelor of Arts in the COLLEGE OF LETTERS AND SCIENCE and Doctor of Medicine in the MEDICAL SCHOOL in a combined course of eight years.

*Required:* English (3); elementary algebra (1); plane geometry (1); physics (1); chemistry (1); French (2) or German (2); history (1).

*Recommended:* advanced mathematics; freehand drawing (1).

A full statement of the prerequisites for the course in Medicine will be found in the Announcement of the MEDICAL SCHOOL.

**Military Science and Tactics:** leading to the degree of Bachelor of Arts.

*Recommended:* see ENGINEERING.

**Music:** leading to the degree of Bachelor of Arts.

*Recommended:* harmony (1); history of music (1); vocal or instrumental technique or choral practice (1).

**Nursing:** leading to the degree of Bachelor of Science at the end of a five-year course, including two years' training in the University of California School of Nursing in San Francisco.

*Required:* elementary algebra (1); plane geometry (1); chemistry (1);

*Recommended:* foreign language.

**Pharmacy:** (A) leading to the degree of Ph.G. (Graduate in Pharmacy) at the end of a course of two years in the California College of Pharmacy.

*Required:* two years of approved high school work or its equivalent. Beginning with the academic year 1922-23, the minimum entrance requirement will be graduation from an accredited high school or its educational equivalent.

(B) leading to the degree of Ph.C. (Pharmaceutical Chemist) at the end of a course of three years in the California College of Pharmacy.

*Required:* graduation from an approved high school course of four years or an equivalent preparation.

(C) leading to the degree of Phar.B. (Bachelor of Pharmacy) at the end of a course of four years in the California College of Pharmacy.

*Required:* graduation from an approved high school course of four years or an equivalent preparation.

**Philosophy:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language; mathematics; physics or chemistry.

**Physical Education:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language, chemistry.

**Political Science:** leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

**Public Health:** (A) leading to the degree of Bachelor of Arts in the COLLEGE OF LETTERS AND SCIENCE at the end of four years and to the degree of Graduate in Public Health (Gr.P.H.) in the GRADUATE DIVISION at the end of six years.

*Required:* elementary algebra (1); plane geometry (1); physics (1); chemistry (1).

**Recommended:** advanced mathematics (2); German (2) or French (2); freehand drawing (1).

(B) leading to the degree of Bachelor of Science in the COLLEGE OF CIVIL ENGINEERING (curriculum in sanitary engineering) at the end of four years and to the degree of Graduate in Public Health (Gr.P.H.) in the GRADUATE DIVISION at the end of six years.

**Required:** same as for ENGINEERING; see above.

**Recommended:** same as for ENGINEERING; see above.

(C) leading to the degrees of Doctor of Medicine and Graduate in Public Health in seven years; or to the degrees of Bachelor of Arts and Graduate in Public Health in the COLLEGE OF LETTERS AND SCIENCE and Doctor of Medicine in the MEDICAL SCHOOL in a combined course of eight years.

**Required:** elementary algebra (1); plane geometry (1); physics (1); chemistry (1).

**Recommended:** advanced mathematics (2); German (2) or French (2); freehand drawing (1).

**Public Speaking:** leading to the degree of Bachelor of Arts.

**Recommended:** foreign language.

**Sciences** (Anatomy, Astronomy, Biochemistry, Botany, Chemistry, Geography, Geology and Mineralogy, Hygiene, Palaeontology, Pathology and Bacteriology, Physics, Physiology, Psychology, Zoology): leading to the degree of Bachelor of Arts.

**Required:** elementary algebra (1); plane geometry (1); chemistry (1); physics (1).

**Recommended:** advanced mathematics (2); German (2) or French (2). Physics (1) is recommended but not required for students who intend to specialize in zoology. Geometrical drawing (1) is recommended for students who intend to specialize in chemistry.

## ADMISSION WITH ADVANCED STANDING

### ADMISSION FROM OTHER COLLEGES AND UNIVERSITIES

Applicants may be given advanced standing in the University of California on the basis of certificates from other colleges and universities, upon the approval of the certificates by the proper committee. A form of statement of university work, which may be used for such certificates, will be furnished on application to the Recorder of the Faculties, University of California, Berkeley. It may be filled out by the applicant

himself, but should be duly certified by the proper officer of the institution in which the work was done. There should also be submitted some credential showing *in detail* the basis upon which the applicant was matriculated in the institution from which he comes; and the preparatory subjects for which matriculation credit was given. These documents should be filed with the Recorder of the Faculties, in order that they may be placed before the Committee on Credentials, for an estimate of their value in terms of the requirements of the University of California. The Committee, acting on behalf of the faculties, is empowered to reject the certificates in whole or in part, and to require examination in any or all of the subjects offered.

Credit for Subject A (English expression) is not given upon certificate. An examination at the University is required in all cases.

#### ADMISSION FROM NORMAL SCHOOLS

A recommended graduate of the two-year course of a California State Normal School or of the two-year teachers' course of the Southern Branch of the University of California, if also a graduate (with University recommendation) of an accredited high school, receives in the University one and one-half years of advanced standing in the undergraduate course. In the University such a student must, however, satisfy the Junior Certificate and degree requirements established in his college. After receiving his bachelor's degree such a student receives an additional half-year of credit if he continues his training for the high school teacher's recommendation, reducing the post-graduate course required for such recommendation from one year to one-half year. In this way the recommended high school graduate may receive the elementary teacher's certificate at the end of two years, his bachelor's degree at the end of four and one-half years, and his recommendation for the high school teacher's certificate at the end of five years. Exceptions: The two-year curriculum of the San Francisco State Normal School ordinarily entitles the applicant to one year of advanced standing in the University. Graduates of the State Normal School at Chico will, as a rule, find it necessary to devote to the completion of the undergraduate course in the University at least two years and a half plus one summer session.

The foregoing allowance of credit is conditioned upon the presentation by the applicant of satisfactory recommendations both from his high school and from the normal school. The applicant is expected to present recommendations for the maximum allowance of credit as above.

Credentials from high schools and normal schools of states other than California are evaluated in accordance with this general plan. The applicant must in every such case submit the detailed record of his high

school and later studies, in order that the Committee on Admissions may be satisfied that the applicant has met the California requirements both as to selection of his studies and as to scholarship standing. Blank forms for statement of the applicant's studies are supplied by the University, on request.

Those who complete one of the two-year curricula for recommendation for the special elementary teacher's certificate may not receive the maximum of advanced standing as above.

In technical or highly specialized fields of study the normal school graduate may not be able to take the maximum of advanced standing as above. He does not receive a year and a half of advanced standing in the colleges of engineering or in the pre-medical curriculum, since these curricula include a number of prescribed university subjects which are not paralleled in the normal school curriculum. Normal school graduates who have had little or no training in foreign language will ordinarily find it impossible to take major work in foreign languages in the University in a program of study leading to the bachelor's degree in two and one-half years.

#### ADMISSION FROM SCHOOLS AND COLLEGES IN THE ORIENT

Graduates of approved schools and colleges in China, Japan, India and other Oriental countries may be admitted only if their command of English is sufficient to permit them to profit by university instruction. This will be tested by an oral and written examination set by the Board of Admissions. A brief circular concerning the rules of the Board of Admissions in the matter of assignment of credit in languages to foreign students may be obtained from the Recorder of the Faculties, University of California, Berkeley, California.

#### SURPLUS MATRICULATION CREDIT

With the adoption of the revised plan of admission to the University there is no longer provision for advanced standing in the University on the basis of surplus high school credit. Such credit may, by special action of the Board of Admissions, be given under the old rules to students who matriculate in the University before August, 1920.

## II. THE SOUTHERN BRANCH

### INTRODUCTION

The following brief statements regarding the Southern Branch of the University are of interest to all who are in any way connected with it or with the parent institution.

### HISTORY

In March, 1881, the Los Angeles State Normal School was established by legislative act. A five-acre site at the corner of Fifth and Grand avenue was secured and the corner stone of the first building was laid December 17, 1881. The school opened in August, 1882, with a faculty of three members and an enrollment of sixty-one students.

The original site and buildings having become inadequate for the growing needs of the institution, in 1907 the Legislature authorized the sale of the property, and in 1911 made an appropriation for the purchase of a more suitable location. In the following year the present site, a campus of twenty-four acres (later increased to twenty-five) was purchased, and on November 18, 1913, the corner stone of the principal building, Millspaugh Hall, was laid. In September, 1914, the school occupied the new group of buildings.

By an act of the Legislature which became effective July 24, 1919, the Los Angeles State Normal School became the Southern Branch of the University of California. The Regents of the University assumed control of the grounds, buildings and equipment and Dr Ernest C. Moore was appointed Director of the Southern Branch of the University of California.

This act provided for continuance of teacher training courses then being given and for the institution of freshman and sophomore work of the University.

### SITE AND BUILDINGS

The campus of the Southern Branch of the University of California is bounded by Vermont avenue, Monroe street, Heliotrope drive, and Willowbrook avenue. The ten buildings which form the group are in a style of architecture reminiscent of the Lombardy style found in northern Italy. The Southern California Chapter of the American Institute of Architects awarded the group its first annual medal.

## CLIMATE

The climate of Los Angeles is essentially maritime and is therefore well suited to college work at all seasons of the year. The mean annual temperature is 62 degrees F. August, the warmest month, has a mean temperature of 71 degrees F. The coldest month is January, the mean temperature of which is 54 degrees F. The high percentage of sunshine and the invigorating sea breezes, are conducive to both physical and mental vigor.

## ADMINISTRATIVE OFFICERS

DAVID P. ESCOTT BARROWS, Ph.D., LL.D., President of the University.

- ERNEST CARROLL MOORE, Ph.D., LL.D., Professor of Education and Director of the Southern Branch of the University of California.

ADVISORY ADMINISTRATIVE BOARD, SOUTHERN BRANCH, UNIVERSITY OF CALIFORNIA:

ERNEST C. MOORE, Ph.D., LL.D., Chairman,

MONROE E. DEUTSCH, Ph.D.,

BALDWIN M. WOODS, Ph.D.,

THE COMPTROLLER OF THE UNIVERSITY.

- CLOYD HECK MARVIN, Ph.D., Assistant Director.

- HELEN MATTHEWSON LAUGHLIN, Counselor of Women.

- MABEL NETTLETON, Registrar.

- MARIE CRAIG, Recorder.

- 2 | LILLIAN RAY TITCOMB, M.D., Physician for Women.

- ELIZABETH H. FARGO, Librarian.

- M. BURNEY PORTER, Appointment Secretary.

- ELIZABETH P. STUETEVAULT, Assistant Librarian.

- BEATRICE HOLLOWAY, Library Assistant.

- ESTELLA D. LAKE, Library Assistant.

## FACULTY

- 2 | JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.

- 2 | EVA M. ALLEN, Instructor in Commercial Practice.

- 2 | HERBERT F. ALLEN, Ph.D., Assistant Professor of English.

- 2 | SARAH ATSAIT, M.S., Instructor in Biology.

- 2 | MABEL BARNEHART, Instructor in Music.

- \* KATHLEEN S. BECK, B.S., Instructor in Geography.

- 2 | FREDERICK E. BECKMAN, Ph.D., Assistant Professor of French.

- 2 | FREDERIC T. BLANCHARD, M.A., Associate Professor of English.

\* Absent on leave, 1920-21.

- 2 | FOSS R. BROOKWAY, Instructor in Mechanic Arts.
- ANNA P. BROOKS, A.B., B.S., Instructor in Fine Arts.
- 2 | MARGARET M. CAMPBELL, B.S., Training School Teacher in charge of the Ninth Grade.
- 2 | MARGARET CARHART, M.A., Associate in English.
- 2 | FORD ASHMAN CARPENTER, LL.D., Lecturer in Meteorology.
- 2 | A. G. W. CERF, M.A., Litt.D., Lecturer in French.
- 2 | HELEN C. CHANDLER, Instructor in Fine Arts.
- 2 | ORABEL CHILTON, B.S., Associate in Home Economics.
- 2 | KATHERINE CLOSE, M.D., Lecturer in Physical Education.
- \*MYRTIE COLLIER, B.S., Assistant Professor of Mathematics.
- 2 | F. EDERICK W. COZENS, M.A., Assistant Professor of Physical Education.
- 2 | W. R. CROWELL, Ph.D., Assistant Professor of Chemistry.
- S. H. DADISMAN, Assistant Professor of Agricultural Education and Supervisor of Classes for Teachers in Agricultural Subjects. *re-habilitator*
- 1 | MARVIN L. DARSIE, M.A., Assistant Professor of Education.
- 2 | PIRIE DAVIDSON, M.A., Instructor in Zoology.
- 2 | ANNITA DELANO, Instructor in Fine Arts.
- 2 | MARY E. DOUGLASS, A.B., Assistant Teacher in the Kindergarten.
- 2 | HAZEL DRAKE, <sup>Teacher</sup> Associate in Industrial Arts.
- 2 | FRED M. ESSIG, Ph.D., Instructor in Botany and Bacteriology.
- 2 | MAUD EVANS, Associate in Home Economics.
- 2 | GRACE M. FERNALD, Ph.D., Assistant Professor of Psychology.
- 2 | S. CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.
- 2 | LUCY M. GAINES, M.A., Instructor in History.
- GEORGE W. GALBRAITH, Supervisor of Classes for Teachers of Trade and Industrial Subjects. *Yoc. Educ.*
- 2 | NELLIE H. GERE, Assistant Professor of Fine Arts.
- 2 | HARRIET GLAZIER, M.A., Assistant Professor of Mathematics.
- 2 | NORMA GOULD, Assistant in Gymnasium. *v. 7, 12*
- 2 | A. K. GRAY, M.A., Assistant Professor of English.
- 2 | BARBARA GREENWOOD, Teacher in charge of the Kindergarten.
- 2 | LUCILE R. GRUNEWALD, Instructor in Physical Education.
- 2 | FLORENCE M. HALLAM, A.B., Instructor in Chemistry.
- 2 | BESSIE E. HAZEN, A.B., Instructor in Fine Arts.
- 2 | KATHERINE <sup>F.</sup> HULSEY, B.S., Instructor in Physical Education.
- \*FRED A. HOWE, LL.B., Ph.D., Assistant Professor of English.
- 2 | ALICE O. HUNNEWELL, Instructor in English.
- 2 | MABEL C. JACKSON, A.B., Training School Teacher in charge of the Seventh Grade.
- G. L. JACOBS, Associate Professor of Industrial Education and Supervisor of Classes for the Teaching of Trade and Industrial Subjects. *re-habilitator*

\* Absent on leave, 1920-21.



- 2 | KATHERINE KAHLEY, A.B., Training School Teacher in charge of the Eighth Grade.
- 2 | BLANCHE KELLS, Training School Teacher in charge of Physical Training.
- 2 | HELEN B. KELLER, Supervisor of Adjustment Room.
- 2 | FRANK J. KLINGBERG, Ph.D., Associate Professor of History.
- 2 | ANNA KRAUSE, A.B., Associate in Spanish.
- 2 | MELVA LATHAM, A.B., Assistant Professor of History.
- 2 | ELIZABETH LATHROP, Associate in Home Economics.
- 2 | C. A. LEDEUC, M.B.A., Ph.D., Assistant Professor of Accounting.
- 2 | PAULINE LYNCH, Assistant in Home Economics.
- 2 | MYRTA L. MCCLELLAN, B.S., Instructor in Geography.
- 2 | ARTHUR P. MCKINLAY, Ph.D., Assistant Professor of Latin.
- 2 | KATHERINE L. McLAUGHLIN, M.A., Associate Professor of Primary Education.
- 2 | AGNES MACPHERSON, Associate in Home Economics.
- 2 | HAROLD W. MANSFIELD, Assistant Professor of Mechanic Arts.
- 2 | J. W. MARSH, Instructor in Mechanic Arts.
- 2 | C. E. MARTIN, Ph.D., Assistant Professor of Government.
- 2 | C. H. MARVIN, Ph.D., Assistant Professor of Commerce.
- 2 | LOYE H. MILLER, Ph.D., Associate Professor of Biology.
- 2 | ERNEST CARROLL MOORE, Ph.D., LL.D., Professor of Education.
- 2 | WILLIAM CONGER MORGAN, Ph.D., Professor of Chemistry.
- 2 | FRANK E. OLDER, B.S., Assistant Professor of the Teaching of Agriculture.
- KATE F. OSGOOD, Assistant Supervisor of Practice Teaching.
- 2 | GLADYS PALMER, A.B., Instructor in Physical Education.
- ALMA M. PATTERSON, M.A., Instructor in Education.
- W. A. PAXTON, Teacher of Manual Arts in the Training School.
- 2 | J. B. PHILLIPS, Instructor in Mechanic Arts.
- 2 | CARLYLE F. PIERSON, Instructor in Mechanic Arts.
- 2 | ESTELLA B. PLOUGH, Instructor in Commercial Practice.
- W. R. RHODES, Instructor in Industrial Practice. *see Rehabilitation*
- ~~RACHEL RICHARDSON, Instructor in Industrial Art. Died 5-28-20.~~
- 2 | EDITH H. RINGER, Training School Teacher in charge of Third Grade.
- 2 | EMMA J. ROBINSON, Training School Teacher in charge of Sixth Grade.
- 2 | C. H. ROBISON, Ph.D., Instructor in Geography.
- 2 | ADELAIDE ADAMS SAMUELS, Assistant to the Superintendent of Primary Training.
- 2 | JOSEPHINE E. SEAMAN, Instructor in English.
- 2 | G. E. F. SHERWOOD, M.A., Associate Professor of Mathematics.
- 2 | H. M. SHOWMAN, E.M., M.A., Assistant Professor of Mathematics.
- 2 | Mrs. B. K. SMITH, Associate in Industrial Arts.
- 2 | LOUISE P. SOOY, Instructor in Fine Arts.
- 2 | KATHERINE SPIERS, B.L., Training School Teacher in charge of Fourth Grade.

- 2 | LULU M. STEDMAN, Training School Teacher in charge of Fifth Grade.
- 2 | BENJAMIN F. STELTER, Ph.D., Assistant Professor of English.
- 2 | NELLIE B. SULLIVAN, A.B., Instructor in Psychology.
- 2 | FLORENCE SUTTON, Assistant in Tennis.
- 2 | EVALYN THOMAS, A.B., Instructor in English.
- 2 | CHARLES W. WADDLE, Ph.D., Associate Professor of Education, in charge of Training.
- 2 | MARION H. WALLACE, Assistant Professor of Physical Education.
- 2 | EDITH WALLOP, Training School Teacher in charge of Second Grade.
- 2 | ETHEL B. WARING, M.A., Associate in Primary Education, and Superintendent of Primary Training.
- 2 | BERTHA E. WELLS, Assistant Supervisor of Practice Teaching.
- 2 | BELLE H. WHITICE, Instructor in Industrial Arts.
- 2 | FLORENCE WILSON, A.B., B.S., Associate in Home Economics.
- 2 | FRANCES A. WRIGHT, Assistant Professor of Music.

The following people taught classes at the Univ. during 1920-21 - but were not included in the above list:

- 2 | Abel, David D. Mechanic Arts. .. Rehabilitation.
- 2 | Bailey, A. G. Mechanic Arts ... Rehabilitation.
- 2 | Collins, Katherine E., M.A., Associate in English.
- 2 | Crosby, Spurgeon - Assistant in Mechanic Arts. -- Rehab.
- 2 | Crowell, Madeline (Mrs. W.R.) Train. Sch. Tchr. in charge of H.E.
- 2 | Delsasso, Leo P. .. Assistant in Physics.
- Einsig, Ben. Assistant in P.E.
- Fishbaugh, Ernest Clyde, M.D. Physician for Men.
- 2 | Glantz, Birdie M. Art.
- 2 | Goddard, Florence M. Art.
- 2 | Greif, S. Joseph Dr., Music.
- 2 | Hancock, Winfield S. Mechanic Arts...Rehabilitation
- 2 | Hunt, Guy H., C.E., Instructor in Surveying
- McClanahan, Harold. Assistant in Economics.
- 2 | McComb, Marshall Francis, A.B., LLB. Lecturer in Bus. Law
- 2 | McLean, Ruby I., R.N. - Nurse
- 2 | Masak, William J. .. Mechanic Arts.
- 1 | Masfer, A., Spanish .. Rehabilitation
- 2 | Palmer, Guy G., Colonel, U.S.A. Retire. Assoc. Prof. M.S.V.T.
- 2 | Phillips, C. Dorothea . Industrial Arts.
- 2 | Smith, William A. Ph.D. Assistant Prof. of Education.
- 2 | Spencer, Vernon. Assistant Prof. of Music.
- Trotter, Harry Assistant in Physical Educa
- 2 | Vaughn, Bertha Winlow, Teacher of Voice
- 2 | Wambold, Hiram J. Commerce
- 2 | Wardell, Bertha A., Associate in Physical Education

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**COURSES OF INSTRUCTION FOR THE YEAR 1920-1921****JUNIOR COLLEGE****THE REGULAR JUNIOR COLLEGE COURSE OF TWO YEARS**

In accordance with the authorization of the State Legislature the Regents of the University of California have placed a limit of 250 for admission to the sophomore year and 500 to the freshman year of the junior college courses for the academic year 1920-1921.

In order to avoid possible failure to secure admission applicants should register with the Registrar as early as possible. Credentials should be filed as soon as they are obtainable from the school authorities, in order that they may be passed upon not later than September 10. A fee of two dollars is charged for late registration, i.e., registration after September 13.

The courses offered include all which are essential to the completion of the first two years' work of any of the colleges of the University located at Berkeley.

**TEACHERS' CURRICULA**

In accordance with the authorization of the State Legislature the Regents of the University of California have placed a limit of 1000 for admission to the teachers' courses.

In order to avoid possible failure to secure admission, applicants should register with the Registrar as early as possible. Complete credentials should be filed as soon as they are obtainable from school authorities, in order that they may be passed upon not later than September 2. A fee of two dollars is charged for late registration, i.e., registration after September 14.

The following courses will be offered:

1. A two-year course for the training of elementary teachers, which leads to recommendation for the elementary teachers' certificate.

2. A two-year course in preparation of candidates for the kindergarten-primary certificate.

3. Three-year curricula which meet the requirements of the State Board of Education for the elementary teachers' certificate and those of a special certificate in one of the following departments, viz: Fine Arts, Home Economics, Music, Mechanic Arts or Physical Education.

4. Four-year curricula leading to recommendation for special certification of secondary grade in Commerce, Household Arts, Music, Manual and Fine Arts, Physical Education.

**ADVANCED WORK**

Students who complete the regular two-year course for the elementary teachers' certificate have the opportunity to qualify for the intermediate school certificate (grades 7-9) by an additional year of resident work during which, in accordance with the rules of the State Board of Education, they must complete the following requirements:

Thirty semester hours of work, at least ten semester hours of which must be taken in each of two of the following subjects: English, mathematics, French, Spanish, Latin, social sciences, physical sciences, or biological sciences.

Opportunity will be afforded such students to do practice teaching in the University Intermediate School in the subjects of their choice. In a limited number of cases practice in supervision and administration may be afforded.

**ADMISSION WITH ADVANCED STANDING**

Applicants presenting credit earned in normal schools, colleges or universities, as well as those presenting evidence of successful experience in teaching covering a period of one or more years, will be given such advanced standing as individual cases merit.

Applicants for advanced standing should file credentials with the Committee on Advanced Standing.

**TEACHING CREDENTIALS**

Teachers' certificates are issued by county and city and county boards of education in accordance with the provisions of the Political Code of California, Section 1519a; Section 1771, Subdivision 3; Section 1775, Subdivision 1; and Section 1792. The Southern Branch of the University of California is empowered, under the provisions of Section 1507, Subsection 3 of the Political Code, and in accordance with rules laid down by the State Board of Education to grant recommendations for teachers' certificates, valid in this state, in each of the following grades: (1) Kindergarten-Primary, (2) Elementary, (3) Intermediate, (4) Special Elementary, (5) Special Secondary. Preliminary certificates, entitling the holder to do cadet teaching without salary, are also issued to student teachers upon recommendation of the Southern Branch. These certificates are granted under the following conditions:

1. Temporary Preliminary Certificates. (Valid for practice teaching without salary in such public school grades and subjects as may be indicated by the grade of certificate or definitely specified therein.)

No student teacher is permitted to teach in any public school without one of the following types of preliminary certificate. These may be arranged for by the Department of Practice Teaching:

- (a) Preliminary Certificate, Kindergarten.
- (b) Preliminary Certificate, Elementary.
- (c) Special Certificate, Elementary.
- (d) Special Certificate, Secondary.

2. The Kindergarten-Primary Certificate. (Valid in any public kindergarten or in the first grade of any elementary school of the state.)

- (a) The completion of the two-year kindergarten-primary curriculum.

3. The Elementary Teachers' Certificate. (Valid in the eight grades of the elementary schools.)

- (a) The completion of the two-year teachers' course.

4. The Intermediate School Teachers' Certificate. (Valid in grades seven, eight and nine when organized as intermediate schools.)

(a) The recommendation of the University to the County Board of Education upon the completion of the two-year elementary teachers' curriculum and thereafter of thirty additional semester hours of college or teachers' course work at least twenty-two semester hours of which must be in two of the following subjects: English, mathematics, French, Spanish, Latin, social sciences, physical sciences, biological sciences.

5. Elementary Special Certificate. (Valid for special subjects only, in the eight grades of the elementary schools.)

(a) The completion of the three-year teachers' curriculum in preparation of elementary teachers in one of the following special fields: Household Arts, Manual and Fine Arts, Music, Physical Education.

6. Secondary Special Certificate. (Valid for the special subjects in high schools.)

(a) The completion of the four-year teachers' curriculum in preparation of secondary teachers of one of the following special types: commerce, household arts, manual and fine arts, music, physical education.

## THE JUNIOR COLLEGE CURRICULA

As a guide to junior college students in the arrangement of their study lists the following requirements for junior standing in the various colleges of the University are presented:

**NOTE.**—For further information concerning the courses referred to in the following curricula reference should be made to the Announcement of Courses beginning on page 94 of this bulletin or (for courses not herein described) to the Circular of Information concerning the Academic Departments with Announcements for 1920-21, published July, 1920; for sale by the Associated Students' Store, Berkeley. Price, 15 cents.

## COLLEGE OF LETTERS AND SCIENCE

### LOWER DIVISION

The work of the lower division comprises the studies of the freshman and sophomore years. The junior certificate marks the transition from the lower division to the upper division (junior-senior years).

The junior certificate in the College of Letters and Science will be required for admission to the upper division in and after August, 1921, of all candidates for the bachelor's degree except those who in August, 1920, shall have completed more than 30 units in the lower division. Students who shall have completed from 13 to 30 units in August, 1920, will be released from requirements *b*, *c*, and *d* given below, but not from requirements *a* and *e*. Those having more than 30 units in August, 1920, may proceed to the A.B. degree without the junior certificate, on the completion of 124 units, distributed as required for this degree by the Circular of Information issued July, 1919; or they may be granted the junior certificate if they fulfill all the requirements except *b*, *c*, and *d*, and in that case may graduate with the 120-unit minimum instead of the 124-unit minimum.

In the lower division of the College of Letters and Science it is expected that the student, in addition to fulfilling the prerequisites for the major work upon which he will concentrate in the upper division, will make an effort to establish a basis for that breadth of culture which will give him a realization of the methods and results of some of the more important types of intellectual endeavor, and a mental perspective that will aid him in reaching sound judgments. The junior certificate requirements were designed to provide in some degree for the accomplishment of this purpose, without unduly limiting the student's opportunity to satisfy his special tastes and preferences.

Certain courses taken in the high school are accepted as fulfilling in part or in whole some of these junior certificate requirements. It is

desirable that the student should so arrange his high school program as to reduce the required work in the fields of foreign language, mathematics, and natural science. This makes his program more flexible, gives him a greater freedom of choice, and prepares him to pass more quickly into advanced work or into new fields of study. In no case however, does the satisfaction of junior certificate requirements in the high school reduce the minimum amount of work required in the University for the junior certificate (60) or for the degree (120).

The junior certificate will be granted on the completion of not less than 60 units of college work and the fulfillment of the following specific requirements:

(a) *General University Requirements.*

Subject A\*.

Military, 6 units (men).

Hygiene, 1 unit (men) or 2 units (women).

Physical Education, 2 units.

(b) *Foreign Language.* At least 15 units in not more than two languages. Each year of high school work in a foreign language will be counted in satisfaction of 3 units of this requirement. Courses given in English by a foreign language department will not be accepted in fulfillment of this requirement.

(c) *Mathematics.* Elementary Algebra and Geometry. These subjects are not regularly given in the University except in the Extension Division, but for the academic year 1920-21, a course covering these subjects may be organized for students who have not completed this requirement in the high school.

(d) *Natural Science.* At least 12 units chosen from the following list:

High School Physics (3A), 3 units (1 high school credit).

High School Chemistry (3B), 3 units (1 high school credit).

Astronomy 1, 1-2, 2A-2E, 5, 11.

Botany 1, 2A-2B.

Chemistry 1A-1B, 5, 6A-6B, 8, 9.

Geography 1C, 2C.

Geology 1A, 1B, 6.

Mineralogy 1A-1B, 2AB.

Palaeontology 1, 2.

Pathology 1 (Bacteriology).

Physics 1A-1B, 2A-2B, 3A-3B, 3C-3D, 4A-4B.

Physiology 1, 2.

Zoology 1A-1B, 4, 10.

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\* An examination in Subject A: English Composition is required of all intants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m.

(e) *Additional.* At least 9 units from one of the following groups, and at least a year-course in each of two others:

- (1) English, Public Speaking.
- (2) Foreign Language (additional to b). This may be satisfied in whole or in part in the high school, provided the language be Latin.
- (3) Mathematics: Plane Trigonometry, Plane Analytic Geometry, Introduction to Calculus. This may be satisfied partly in the high school.
- (4) History, Economics, Political Science.
- (5) Philosophy.

The work offered in satisfaction of requirement (e) must consist of subjects of college grade, except as otherwise provided, as shown in detail in the following list:

COURSES ACCEPTABLE IN FULFILLMENT OF REQUIREMENT (e) FOR THE  
JUNIOR CERTIFICATE

*Group 1.—English and Public Speaking*

*Year Course:* English 1A-1B; 1X-1B; or any upper division year-sequence. Public Speaking 1A-1B.

*9-unit option:* Any 9 units chosen from the following:

English 1X, 1A (except that 1X and 1A cannot both be counted), 1B, 3A, 3B, 4C, 4D, or any upper division course.

Public Speaking must include 1A-1B, to which may be added at least 3 units of 2A, 2B, 4A, 4B, 5A, 5B, 10A, 10B.

*Group 2.—Foreign Language*

*Year Course:* Celtic 1A-1B; 101A-101B; or 104A-104B.

French: Any two consecutive courses of A, B, C, D, 5 or any upper division year-sequence.

German: Any two consecutive courses of A, B, C, D; or RC-RD; SC-SD; or any upper division year-sequence.

Greek: 1A-1B; 2A-2B; or 1AB-2AB; or a year's work chosen from 101, 102, 103, 104, 110, 114.

Italian: Any two consecutive courses of A, B, C, D, or any upper division year-sequence.

Latin: Any year-sequence from the following: C-D; LA-LB; 1, 5, 2, 6.

Oriental Languages: 2A-2B; 3A-3B; 3C-3D; 8A-8B; 9A-9B; or 9C-9D.

Sanskrit: 101A-101B.

Semitic Languages: 3A-3B.

Slavic Languages: 1A-1B; 6A-6B; 10A-10B or 14A-14B.

Spanish: Any two consecutive courses of A, B, C, D, or any upper division year-sequence.



**9-unit Option:** 9 units selected from the courses offered in any department, except that courses given in English, or courses not requiring a study of the language or literature in the original will not be accepted. High School Latin may be used to satisfy this requirement in part or in whole, each year of High School Latin counting as 3 units.

*Group 3.—Mathematics*

**Year Course:** Any two consecutive courses of C, 5, 9, 3A-3B.

**9-unit Option:** Any 9 units selected from C, 5, 9, 3A, 3B. High School plane trigonometry (2e) and plane analytic geometry (2f) will each count for 2 units.

*Group 4.—History, Economics, Political Science*

**Year Course:** History 4A-4B; 8A-8B; or 17A-17B.

Economics 1A-1B; or 10-11.

Political Science 1A-1B or any upper division year-sequence.

**9-unit Option:** Any 9 units chosen from:

History 4A, 4B, 8A, 8B, 17A, 17B.

Economics 1A, 1B, 3A, 10, 11.

Political Science 1A-1B and any upper division course.

*Group 5.—Philosophy.*

**Year Course:** Philosophy 1A-1B; 3A-3B; or 4A-4B.

**9-unit Option:** Any 9 units selected from:

Philosophy 1A, 1B, 2A, 3A, 3B, 4A, 4B, 36A, 36B.

**Credit by examination.** Provision will be made for the satisfaction of requirements (b) to (e) inclusive by examination in lieu of the completion of the usual course requirements. Applicants for such examination must give notice of their intention to the Recorder of the Faculties and secure the authorization of the Executive Committee of the College of Letters and Science by written petition. Such authorization will not be given if the preparation for the examination be based on course instruction received at the University of California.

**Honorable mention with the junior certificate.** Honorable mention will be granted with the junior certificate to students who attain at least second grade in 45 units. A student who gains honorable mention is thereby considered eligible for the honors-status in the upper division.

## UPPER DIVISION

In and after August 1921 except as noted above under Lower Division, only those students who have been granted the junior certificate, signifying their completion of lower division requirements, will be registered in the upper division.

The degree of Bachelor of Arts will be granted upon the following conditions:

(1) At least 54 units of college work must be completed after the receipt of the junior certificate.

(2) At least 36 units of work done in the upper division must be in upper division or graduate courses in the following departments:

Agriculture	Jurisprudence
Anatomy	Latin
Anthropology	Library Science
Architecture	Mathematics
Astronomy	Mechanical and Electrical Engineering
Biochemistry and Pharmacology	Military Science
Botany	Mining and Metallurgy
Celtic	Music
Chemistry	Oriental Languages
Civil Engineering	Palaeontology
Drawing and Art	Pathology and Bacteriology
Economics	Philosophy
Education	Physical Education for Men
English	Physical Education for Women
French	Physics
Geology and Mineralogy	Physiology
Geography	Political Science
German	Public Speaking
Greek	Sanskrit
History	Semitic Languages
Home Economics	Slavic Languages
Hygiene	Spanish
Irrigation	Zoology
Italian	

(3) At least 12 of the upper division units required must be taken in a single department exclusive of courses in Library Science, Agriculture, Mechanical and Electrical Engineering, Mining, Civil Engineering, and Irrigation. (However, candidates for A.B. to be conferred not later than May 1921, may present 12 units of work in Library Science in satisfaction of this requirement.)

(4) The total number of units of college courses in the lower and upper divisions offered for the degree must be at least 120.

*Study-list limits* in the upper division are 12 to 16 units per half-year, including credit for work taken to make up deficiencies.

*Undergraduate Majors.* A student who desires to devote special attention to the work of a particular department during his undergraduate period, or to prepare himself for effective graduate work in such department is advised to elect a major in that department. A major consists of a substantial group of co-ordinated upper division courses taken under the advice of the department of the student's choice. Such department is known as the student's major department. Honors at graduation are given only to students who have given evidence of superior scholarship in the work of their major subject.

Candidates for honors at graduation may be required by their major department to take as much as 24 units, instead of 12, in upper division courses of that department.

*Preparation for Master's Degree.* Students who intend to proceed to the master's degree may find that the 12-unit minimum of upper division courses is not sufficient to enable them to secure the master's degree in one year.

#### CANDIDACY FOR HONORS

The attention of juniors and seniors is called to the fact that the only requirement for registration as honors students is the formal approval of the department of their choice. Serious students who have done reasonably well in the lower division are strongly recommended to avail themselves of the advantages which they can derive as honors students from the personal guidance and supervision of the members of the department in which they choose to do their major work. In the College of Letters and Science, juniors and seniors who wish to register as honors students use a special form of study-list which may be obtained at the time of registration.

Any student who is approved by his major department as a member of the honors group will, so long as he remains in the honors group, report at the beginning of each half-year to the department of his major work. The department will advise him in the choice of his studies and will specifically approve all courses taken in the department of the student's major.

After the first half of the junior year the Committee on Candidates for Honors, will, upon the recommendation of the several departments, decide what students shall remain in the honors group, and what students shall be promoted to the honors group. In determining these matters,

the committee will consider not only the student's work in the department of his major but his entire record.

The several departments have full freedom in determining the most efficacious methods for the training of candidates for honors; but no student will be required to take more than 24 units of upper division work in the department of his major. Departments may offer special honors courses in reading and research, with credit to be determined by the instructors in charge, according to the performance of the individual student, subject to such general restrictions as may be imposed by the department and by the Committee on Courses of Instruction. The work of the student in such an honors course may consist of additional work in connection with regular courses of instruction, or may be independent of such courses.

It will be quite possible, though perhaps not often desirable, for a student who is enrolled as a candidate for honors in one department to be transferred to another. In order to make such a change, it will be necessary for him to secure the consent of the department to which he desires to be transferred. If, therefore, at the beginning of his junior year, a student who is eligible for candidacy has not yet finally determined upon his major subject, he should enroll with the department to which he is most inclined at the time, understanding that at the beginning of any subsequent term he may make a change in accordance with the conditions just stated.

Before Commencement, a department satisfies itself by means of a general final examination, or in such other manner as it may deem best, of the fitness of each candidate for honors at graduation. Candidates who, in the judgment of their departments, display marked superiority in their major subject, receive the special distinction of highest honors. The list of students upon whom honors and highest honors are conferred, with mention of their major department, appears in the Annual Commencement Programme.

Honors candidates may be granted not more than two units per half-year on their record, on recommendation of the department. The program of an honors candidate need not be restricted to the departments mentioned above if the department of his major subject approve.

## COLLEGE OF COMMERCE

### UNDERGRADUATE CURRICULUM

The course leads to the degree of Bachelor of Science and is mainly devoted to elementary and technical studies as a broad preparation for business life. While some specialization is provided for in the senior

year, those who wish to prepare for some particular commercial career are advised to extend their course beyond the usual four years. Courses covering five years have been outlined as a preparation for the work of the Certified Public Accountant, of the Actuary, for the consular service, and for railroading. Graduation from this college requires the completion of 124 units of college credit, of which 64 units constitutes the amount required in the University for the junior certificate.

The requirements for the junior certificate are as follows:

Subject A: English Composition. Examination required of all.\*

Foreign Languages—

Students must pass an examination designed to test their ability to read one of the following languages:  
Greek, Latin, German, French, Spanish, or Italian.

History or Political Science—

History 4A-4B, or History 8A-8B, or Political Science  
1A-1B ..... 6 units

Geography—

Geography 1A (Physical Geography) and Economics 3A  
(Commercial Geography) ..... 7

Other sciences ..... 9

Mathematics—

Mathematics A (Algebra, see below) and ..... 3  
Mathematics 2 (Mathematical Theory of Investment) 5

Economics—

Economics 1A-1B ..... 8

Military Science, Physical Education, Hygiene ..... 9

Electives ..... 17

Total ..... 64 units

The courses in science and the course in algebra may be taken in high school. (After the half-year August-December, 1920, Mathematics A will not be offered in the University except during the summer sessions.) The specified work in history, political science, geography, economics and in the mathematical theory of investment must be taken in college. Students are warned that the college courses are advanced in character, and they are earnestly advised to lay a solid foundation in high school for their college work.

\* Date of next examination: Saturday, September 11, 1920, 2 p.m. For regulations governing this requirement see General Regulations of the Faculties.

## COLLEGE OF AGRICULTURE

The prospective student should consult the requirements and recommendations for matriculation. *Failure to take the proper subjects in high school may delay graduation from the College of Agriculture.*

More detailed information regarding instruction in the College of Agriculture than is given below is contained in the Prospectus of the College of Agriculture. This may be obtained by applying to the Dean of the College of Agriculture, Berkeley, California.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE

(1) Four years of residence.

(2) One hundred and thirty semester units of university work, in addition to matriculation, and in addition to Subject A\*. These 130 units must be chosen in accordance with the provisions set forth hereinafter.

(3) Including work presented for matriculation,† all students must have completed—ordinarily before the end of the sophomore year—English, 12 units; mathematics, including trigonometry, 12 units; physics, 3 units; history or economics, 9 units. Students without credit for matriculation physics may take the equivalent course in the summer session; or they may take Physics 2A in the first half-year provided they have credit in trigonometry or are taking it concurrently. If the student has entered with two years each of English and mathematics and one year of history he must complete in the University six units each of English, mathematics, and history or economics.

(4) A summer course in special work connected with the proposed major subject. This course is taken immediately before or immediately following the junior year as may be arranged by the adviser in the major subject concerned. The course is six weeks in length; credit, 6 units. Information concerning the summer practice work may be obtained from the adviser. Students in certain major subjects may offer practical experience in lieu of the summer practice course, but no credit in units will be granted for the practice course in such cases. Such substitution must be approved by the major subject adviser.

\* An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

† One year of high school work in a given subject is here counted as the equivalent of three units of university work.

(5) The following courses must be completed before graduation:

Botany 3 .....	½ year
Chemistry 1A-1B .....	1 year
*Drawing C .....	½ year
Geology 1A .....	½ year
Hygiene .....	½ year
*Mathematics C .....	½ year
Military Science .....	2 years
Physical Education .....	2 years
Zoology 1A .....	½ year

and two or more of the following four subjects, according to the requirements of the major subject chosen by the student:

Agricultural Chemistry 1 and 2 .....	½ year
Bacteriology 1 .....	½ year
Genetics 1 .....	½ year
Soil Technology 1 .....	½ year

(6) Among the sixty units of work normally taken in the junior and senior years there must be 36 units in upper division courses (i.e., those numbered 100 to 199), at least 26 units of which must be in the Department of Agriculture.

(7) Each student must select a major subject not later than the middle of the sophomore year. There are six major subjects in the College of Agriculture: agricultural science, agronomy, animal industries, forestry, horticulture, and landscape gardening. In each major subject certain work will be required in addition to the general college requirements (Nos. 1-6) listed above, and the student should consult the major adviser regarding these requirements. Details regarding the various major subjects will be published in a supplement to the Prospectus of the College of Agriculture.

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\* Students with matriculation credit in these subjects are not required to complete these courses.

## FRESHMAN YEAR

During the freshman year the following schedule will normally be followed; but for those who upon entrance to the University have definitely selected their major subject this program may be modified with the approval of the major subject adviser. It is not necessary for students to choose the major subject in the freshman year, but they may do so.

## EXAMPLE OF PROGRAMME

<i>First Half-year</i>	Units	<i>Second Half-year</i>	Units
Military Science 1A .....	1½	Military Science 1B .....	1½
Physical Education .....	½	Physical Education .....	½
Hygiene .....	1	Chemistry 1B .....	5
Chemistry 1A .....	5	Botany 8 .....	4
Zoology 1A .....	4	*Pomology 1 (Horticulture) .....	3
*Agronomy 1 or Animal Husbandry 1 .....	3	Optional .....	4
Optional .....	3		<hr/>
	<hr/>		18
	18		

## SOPHOMORE, JUNIOR, AND SENIOR YEARS

A supplement to the Prospectus of the College of Agriculture will state the details of the work of the last three years in each of the six major subjects.

If thesis work is taken it will be arranged with an instructor in the major subject. The student will submit his plan of thesis work to the Director of Resident Instruction at the beginning of the senior year, and upon approval by the Director will file his thesis card with the secretary of the college. For further procedure follow the rules governing theses as stated in later pages of this circular.

## AMOUNT OF WORK

Regular students who are free from deficiencies in their university work may register for not to exceed 18 units of new work. Regular students with deficiencies will be limited to 16 units, including repeated work.

\* Recommended, but not required for graduation.



## CURRICULUM IN FOREST UTILIZATION

Matriculation requirements are the same as for the curricula in engineering. See Admission to the University: Requirements and Recommendations for the various curricula.

Full details regarding the work in forestry are given in the Announcement of Courses in Forestry, which may be obtained from the Division of Forestry, University of California, Berkeley, California.

<i>Freshman Year</i>		<i>Sophomore Year</i>	
*Subject A.....	.....	Math. 4A-4B, Int. Calculus.....	3 3
Math. 3A-3B, Diff. Calculus.....	3 3	Phys. 4A-4B, General.....	3 3
Phys. 1A-1B, General.....	3 3	Draw. 3D, Descript. Geom.....	3 .....
C. E. 1A-1B, Surveying.....	3 3	Mech. 8A, Shop work (wood).....	2 .....
Chem. 1A-1B.....	5 5	Mech. 1, Steam Eng.....	3 .....
Military 1A-1B.....	1½ 1½	Elec. Eng. 1.....	3
Hygiene 1.....	1 .....	Forestry 10, Mensuration.....	3
Phys. Educ. 1A-1B, Gym.....	½ ½	Military 2A-2B.....	1½ 1½
C. E. 3 (S. S.), Surveying.....	(3) ½	Phys. Ed. 1C-1D, Gymnasium.....	½ ½
	(3)	Elective.....	2 3
	17 16		18 17

Summer following sophomore year: Forestry 99, Practice in Mensuration, Management, Grazing, Logging, and Sawmilling; 13 weeks, 6 units.

## COLLEGE OF MECHANICS

## UNDERGRADUATE CURRICULA

For matriculation requirements see Admission to the University; Requirements and Recommendations for the various curricula.

<i>FRESHMAN YEAR</i>		<i>SOPHOMORE YEAR</i>	
*Subject A.....	.....	Math. 4A-4B.....	3 3
Math. 3A-3B.....	3 3	Mech. Eng. 2 or.....	3 .....
Chem. 1A-1B.....	5 5	Draw. 3D.....	3 .....
Phys. 1A-1B.....	3 3	Mech. 6A.....	3
C. E. 1A-1B.....	3 3	Mech. Eng.....	1 3
Phys. Educ. 1A-1B.....	½ ½	Elec. Eng. 1.....	3
Hygiene 1.....	1 .....	Phys. 4A-4B.....	3 3
Mil. 1A-1B.....	1½ 1½	Phys. Educ.....	½ ½
M. E. 18 (S.S.).....	(3) ½	Mil. 2A-2B.....	1½ 1½
Elective.....	1 2	Mech. 8A-9B.....	2 2½
	18 18	Elective.....	2 2
			18 18

\* An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

† Three units of the shop work requirement must be taken in Summer Session. (Six weeks, 4 days of 6 hours each; 144 hours.) Credit, 3 units.

‡ May be any two of 8A, 8B, 9A, 9B.

## COLLEGE OF MINING

NOTE.—Students in the College of Mining may elect one of four curricula: (1) Mining Engineering; (2) Metallurgy; (3) Economic Geology; and (4) Petroleum Engineering. Each is a four-year curriculum and leads to the degree of Bachelor of Science in mining with the completion of 147 units of work.

These four curricula have a common requirement for the first year, after which the student is expected to elect the one in which he wishes to specialize. In the second, third and fourth years, the courses listed at the beginning of the column are common requirements for all students in the College of Mining. In addition to these, each student is required to take the courses listed under his particular option.

## FRESHMAN YEAR

†Subject A.....	.....	.....
Math. 3A-3B.....	3	3
Phys. 1A-1B.....	3	3
Chem. 1A-1B.....	5	5
C. E. 1A-1B.....	3	3
Phys. Educ. 1A-1B.....	½	½
Mining 5.....	.....	2
Hygiene 1.....	1	.....
Mil. 1A-1B.....	1½	1½
C. E. 3A (s.s.).....	(3)	.....
	17	18

## SOPHOMORE YEAR

Math. 4A-4B.....	3	3
Phys. 4A-4B.....	3	3
Mineral. 1A, 1B.....	2	2
Mineral. 2A, 2B.....	.....	3
Drawing 3D or Mech. 2.....	.....	3
Geol. 1A.....	3	.....
Phys. Educ. 1C-1D.....	½	½
Mil. 2A-2B.....	1½	1½

## Mining

Metall. 2.....	.....	3
Mining 1A.....	.....	3
Mech. 1.....	.....	3
	19	19

## Metallurgy

Chem. 6A, Met. 2.....	.....	3
Mech. 1.....	.....	3
	19	19

## Economic Geology

Chem. 6A-6B.....	.....	3
Palaeon 1, 2.....	.....	3
	19	19

## Petroleum Engineering

Chemistry 5.....	.....	3
Chemistry 8.....	.....	3
Chemistry 9.....	.....	3
	19	19

† An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

## COLLEGE OF CIVIL ENGINEERING

## UNDERGRADUATE CURRICULA

For matriculation requirements see Admission to the University: Requirements and Recommendations for the various curricula.

## FRESHMAN

†Subject A.....	-	-
Math. 3A-3B.....	3	3
Physics 1A-1B.....	3	3
Chem. 1A-1B.....	5	5
C. E. 1A-1B.....	3	3
Phys. Educ. 1A-1B.....	1	1
Hygiene 1.....	1	.....
Mil. 1A-1B.....	1½	1½
C. E. 3 (s.s.).....	(3)	
Elective.....	.....	2
	<hr/>	
	17	18

## SOPHOMORE

Math. 4A-4B.....	3	3
Physics 4A-4B.....	3	3
Draw. 3D or		
Mech. 2.....	3	.....
Astron. 3.....	.....	1
C. E. 8.....	.....	2
Phys. Educ. 1C-1D.....	1	1
Mil. 2A-2B.....	1½	1½
Geol. 1A.....	3	.....

*Railroad and Irrigation*

Mech. 1.....	3	.....
Min'l. 1A-1B, or.....	1	
Mech. 8A-8B, or.....	2	2
Mech. 9A-9B.....		
Mech. 6A.....		
Elective.....	.....	5
	<hr/>	
	19	18

*Sanitary and Municipal*

Chem. 8.....	3	.....
C. E. 25.....	2	.....
Bacteriology 1.....	.....	4
Elective.....	.....	3
	<hr/>	
	19	18

† An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

‡ Any 4 units in this group may be elected.

## COLLEGE OF CHEMISTRY

**Preparation.**—Students who propose to enter the College of Chemistry should include in their high school programs physics (one year), chemistry (one year), mathematics, including trigonometry (three years), German or French (two years) and geometrical drawing (one year). Without this preparation it will be difficult or impossible to complete the required curriculum within four years. It should be noted that the equivalents of high school physics and chemistry are given in the University during the summer session only, not during the fall or spring sessions.

**Electives.**—The total number of units required for graduation is 136. Of the elective units, 35 must be approved electives in chemistry or allied subjects; the remainder are free electives, but may not include the preparatory subjects listed above.

**Foreign Language Requirement.**—A satisfactory reading knowledge of scientific German before the junior year is essential. The student is urged also to acquire a reading knowledge of French.

**Honors Students.**—Students who in the first two years of their college work have received the grade of 1 or 2 in 48 units of accepted courses will receive honorable mention with junior standing. These students are entitled and urged to enter as candidates for honors. The Committee on Candidates for Honors of the College of Chemistry will determine what students shall remain in the honors-group and what students shall be promoted thereto. Candidates who, in the judgment of the Faculty, display marked superiority in scholarships receive the special distinction of highest honors. The list of students upon whom honors, and highest honors, are conferred, with mention of their major department, appears in the annual Commencement program. Further information for honors students will be found in the Announcement of Courses.

FRESHMAN	SOPHOMORE
*Subject A.....	Math. 4A-4B..... 3 3
Math. 3A-3B..... 3 3	Phys. 4A-4B..... 3 3
Phys. 1A-1B..... 3 3	Chem. 6A-6B..... 3 3
Chem. 1A-1B..... 5 5	Chem. 8..... 3 .....
German A <sup>1</sup> -B <sup>2</sup> ..... 3 3	Chem. 9, 100..... 3 3
Mil. 1A-1B..... 1½ 1½	Chem. 110..... 3 3
Phys. Educ. 1A-1B..... ½ ½	Mil. 2A-2B..... 1½ 1½
Hygiene 1..... 1 .....	Phys. Educ. 1c-1d..... ½ ½
Elective..... 1	Elective..... 1
17 17	17 18

\* An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

Course in Chemical Engineering: Students in the College of Chemistry who wish to specialize in Chemical Engineering must take all the prescribed courses in the College of Chemistry and will be expected to choose their electives in substantial accordance with the following schedule:

FRESHMAN		SOPHOMORE	
*Subject A.....	....	Math. 4A-4B.....	3 3
Math. 3A-3B.....	3 3	Physics 4A-4B.....	3 3
Phys. 1A-1B.....	3 3	Chem. 6A-6B.....	3 3
Chem. 1A-1B.....	5 5	Chem. 110.....	.... 3
German A <sup>2</sup> -B <sup>3</sup> .....	3 3	Mil. 2A-2B.....	1½ 1½
Mil. 1A-1B.....	1½ 1½	Phys. Educ. 1C, 1D.....	½ ½
Phys. Educ. 1A-1B.....	½ ½		
Hygiene 1.....	1 ....	<i>Elective Courses</i>	
		Drawing 3D.....	3 ....
<i>Elective Courses</i>		Mech. 6A.....	.... 3
Mech. 8s.....	.... 2	Mech. 1.....	3 ....
		Electives.....	.... 2
	17 18		17 19

### CURRICULUM FOR NURSES

In November, 1917, the Academic Senate established a curriculum for the training of nurses and appointed a committee to administer the curriculum. This committee has issued the following:

The University of California has arranged through its academic departments and the University Hospital School of Nursing a five-year course for the training of nurses. The course is designed to meet the very great need for scientifically trained women to fill administrative and teaching positions in schools of nursing and to go into the many branches of public health work.

#### A. FIVE-YEAR COURSE

This course leads to the B.S. degree and a diploma in nursing. The first two and a half years† are spent in the departments at Berkeley, then two years at the University Hospital School of Nursing in San Francisco, and the final half-year again in the departments at Berkeley.

The course as prescribed by the University of California follows:

\* An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

† Students entering this curriculum may find it necessary to remain for three years in the departments at Berkeley in order to complete the special requirements as well as the requirements for the Junior Certificate. Such students will complete a minimum programme of 90 units in the departments at Berkeley and will receive the bachelor's degree after completing the additional two years at the School of Nursing.

## COURSE FOR THE FIRST TWO AND ONE-HALF YEARS AT THE UNIVERSITY

Required: matriculation in the College of Letters and Science, including high school chemistry and either trigonometry or physics.

A minimum programme of 75 units must be completed which conforms to the requirements of the first two and a half years in the College of Letters and Science and includes the following subjects:

	Units
College Chemistry (1A-1B) .....	10
Anatomy (102) .....	4
Bacteriology (1) .....	4
Dietetics (Household Science 102) .....	4
Hygiene (2 and 3) .....	5
Physiology 1 .....	4
Zoology (1A) .....	4
Economics (1A-1B; 180-181) .....	14
Psychology (Philosophy 2A) .....	3

Students taking this course should plan to spend ten weeks of their preparatory period at the University Hospital during the summer vacation following their first year at the University. This will not only afford the student an opportunity to learn whether she cares to continue the study of nursing and for what particular branch of nursing she wishes to prepare but it will enable the faculty to judge as to her ability to develop the qualities necessary in a nurse.

The last six months of training at the School of Nursing is so arranged that the student who has completed all required work satisfactorily may elect further training in any branch of nursing. She may spend this time in several departments if she wishes to do general private nursing; she may spend it in one department if her wish is to specialize; or she may prepare for teaching or administrative work.

**B. COURSE LEADING TO B.S. DEGREE, CERTIFICATE IN NURSING AND  
CERTIFICATE IN PUBLIC HEALTH NURSING**

The first two and one-half years in the departments at Berkeley and the class work at the University Hospital School of Nursing will be arranged as in "A". The details of the practical work are given in the Announcement of the School of Nursing, copies of which may be obtained from the Director of Nursing and Social Service, University of California Hospital, Fourth and Parnassus avenues, San Francisco.

## SCHOOL OF ARCHITECTURE

The requirements for admission to the technical course in architecture are junior standing (60 units) in the College of Letters and Science and the following specific courses at the University. The matriculation requirements are identical with those of the colleges of engineering as set forth in earlier pages of this circular. If the course is to be completed in six years these courses must be completed in the lower division: Mathematics 3A-3B, 4A-4B; Graphic Art 14; Drawing 3A, 3B, 3C; Physics 1A-1B; Civil Engineering 8; Architecture 5A-5B, 11, 12A-12B, 13A-13B.

NOTE.—Students who do not wish to follow the technical curriculum in architecture may choose architecture as a major subject in the College of Letters and Science.

<i>Third Year</i>			<i>First Graduate Year</i>		
	1st half-year Units	2nd half-year Units		1st half-year Units	2nd half-year Units
Architecture 101A-101B..	3	3	Architecture 203A-203B...	8	8
Architecture 5C-5D.....	1	1	Architecture 206B-206F...	1	1
Architecture 105C-105D...	1	1	Architecture 209A-209B...	1	4
Architecture 106A-106B...	1	1	Architecture 209A-209B...	3	2
Architecture 12A-12B.....	1	1	Civil Engineering 1A.....	3	..
Architecture 13A.....	1	..	Civil Engineering 116.....	..	1
Architecture 14A-14B.....	1	1		<hr/>	<hr/>
Drawing 110.....	2	..		16	16
Civil Engineering 117.....	..	3			
Civil Engineering 118A- 118B.....	3	3			
Graphic Art 128A-128B...	2	2			
	<hr/>	<hr/>			
	16	16			
<i>Fourth Year</i>			<i>Second Graduate Year</i>		
Architecture 102A-102B...	5	4	Architecture 204.....	15	....
Architecture 5E-5F.....	1	1	Architecture 216.....	....	15
Architecture 105B-105F...	1	1		<hr/>	<hr/>
Architecture 106C-106D...	1	1		15	15
Architecture 12A-12B.....	1	1			
Architecture 14A-14B.....	1	1			
Architecture 108A-108B...	3	3			
Civil Engineering 107B- 107F.....	3	3			
Civil Engineering 108F....	..	1			
	<hr/>	<hr/>			
	16	16			

The foregoing curriculum leads to the Degree Bachelor of Arts at the end of the fourth year of undergraduate work, and to the degree of Graduate in Architecture at the end of the second graduate year.

The requirement for entrance to the School of Architecture (as distinguished from the Department of Architecture) is the A.B. degree with a major in Architecture or the equivalent of this. The degree of Graduate in Architecture is conferred upon students in the School of Architecture who shall have remained in residence at least one year after

obtaining the A.B. degree and who shall have satisfactorily completed the following courses of study:

Architecture 5ABCDEF, 11, 12AB (six half-years), 13AB (three half-years), 14AB (four half-years), 101AB, 102AB, 105CDEF, 106ABCD, 108AB, 203AB, 206EF, 299AB, 209AB, 204, 216.

Civil Engineering 1A, 8, 107EF, 108F, 116, 117, 118AB.

Drawing 3ABC, 110; Graphic Art 14, 128AB.

To obtain the degree of Graduate in Architecture in the shortest possible time, students will find it necessary to anticipate the required studies as much as possible before obtaining the A.B. degree.

The division of the classes in architectural design is based upon a system of progressive values, instead of half-years, as follows:

Stage I—(Architecture 101A, Elementary Design) 3 projets during the half-year:

First Grade .....	12 values
Second Grade .....	8
Third Grade .....	4
Fourth Grade .....	0

Esquisse-Esquisse (3 required each half-year out of 8 programmes):

First Grade .....	4 values
Second Grade .....	2
24 values required.	

Stage II—(Architecture 101B, Elementary Design) 3 projets during the half-year:

First Grade .....	12 values
Second Grade .....	8
Third Grade .....	4
Fourth Grade .....	0

Esquisse-Esquisse (3 required each half-year out of 8 programmes):

First Grade .....	4 values
Second Grade .....	2
24 values required.	

Stage III—(Architecture 102A-102B) 3 projets each half-year:

First Grade .....	12 values
Second Grade .....	8
Third Grade .....	4
Fourth Grade .....	0



Esquisse-Esquisse (3 required each half-year out of 8 programmes):

First Grade .....	4 values
Second Grade .....	3
48 values required.	

Stage IV—(Architecture 203A-203B, Planning and Composition) 3 projets each half-year:

First Grade .....	12 values
Second Grade .....	8
Third Grade .....	4
Fourth Grade .....	0

Esquisse-Esquisse (3 required each half-year out of 8 programmes):

First Grade .....	4 values
Second Grade .....	2
48 values required.	

Stage V—(Architecture 204, Advanced Design) 3 projets during the half-year:

First Grade .....	12 values
Second Grade .....	8
Third Grade .....	4
Fourth Grade .....	0

Esquisse-Esquisse (3 required each half-year out of 8 programmes):

First Grade .....	4 values
Second Grade .....	2
24 values required.	

Total, 168 values required.

No student may count toward his total values, more than 4 values on Esquisse-Esquisse each half-year. No excess values in a given stage may be applied to credit in a higher stage. In stages IV and V a medal may be granted for a specially fine projet, but no additional value is attached thereto. Projets which are handed in late receive the grade next below their rank.

Students who have fulfilled all other requirements of the curriculum of the School of Architecture are eligible to begin the thesis for the degree of Graduate in Architecture on, and only on, the completion of one hundred and sixty-eight values, regardless of the time covered, provided that the minimum time is two and one-half years after having completed the requisite preparatory work for Architecture 101.

Students may begin the thesis and seminar required for the degree of Graduate in Architecture upon the completion of one hundred and sixty-eight values (with above minimum proviso), whether it be at the end of a half-year or not, and present the work at the end of a time equal to a regular half-year.

### SCHOOL OF EDUCATION

The term "School of Education" designates the professional courses intended:

1. For students preparing to become teachers in secondary schools and colleges;
2. For graduates of normal schools, who are making further preparation for teaching in elementary schools;
3. For students preparing to engage in school administration or to teach in normal schools or in university departments of education or to carry on research in the field of education.

While many of the courses offered are open to college juniors, the prerequisite for formal admission to the School of Education is the completion of at least three full years of undergraduate work.

For further information concerning the School of Education see the annual announcement of the school, to be obtained from the Recorder of the Faculties.

### SCHOOL OF JURISPRUDENCE

The following persons will be admitted without examination; as candidates for the degree of Juris Doctor: (1) graduates of any college of the University of California, and of other colleges and universities of approved grade; (2) students of the University of California who have attained junior standing in the College of Letters and Science or in the College of Commerce.

For further information see the annual announcement of the school, to be obtained from the Recorder of the Faculties.

### MEDICAL SCHOOL

*Matriculation.*—For matriculation in the Medical School—the five years' course leading to M.D.—in and after 1922 the student must have attained senior standing in the College of Letters and Science\*.

\* NOTE.—Students who enter the Medical School in August, 1922, will be matriculated with the above requirements or may present at least 94 units of work in the College of Letters and Science, including normally 18 units of upper division work taken in the third year, according to the plan outlined in the 1919-20 Circular of Information, pp. 54-56 under caption *Premedical Curricula*. On completion of the first year's work in the Medical School the degree of A.B., College of Letters and Science, will be granted.

Students entering the Medical School in August, 1921, may follow the 94-unit plan, receiving the A.B. on the completion of the first year's work in the Medical School, or the 64-unit plan (see 1919-20 Circular of Information, pp. 52-56), omitting the bachelor's degree.

For those who enter the Medical School in or after August, 1923, senior standing in the College of Letters and Science requires the attainment of the Junior Certificate (see this Circular, under College of Letters and Science), and the subsequent completion of at least 27 units of work of which 18 shall normally be in upper division courses. The total number of college units presented must be at least 90. On the completion of the first year's work in the Medical School, the degree of A.B., College of Letters and Science, will be granted.

In addition to the above general requirements, the student must give evidence of sufficient training in physics, chemistry, biology, English literature and composition to enable him to pursue with profit the curriculum of the school and must possess a reading knowledge of French or German. The following courses now offered represent the minimum of satisfactory preparation in the subjects named (numbers refer to the Announcement of Courses for 1920-21): English 1A-1B (6 units); Chemistry 1A-1B, 8, 9; Physics 2A-2B and 3A-3B; Zoology 1A-1B. Ten units credit in French or German will be accepted as fulfilling the requirement of a reading knowledge in these subjects.

By a resolution of the Academic Senate the faculty of the Medical School is authorized to refuse admission to applicants with a low record in the required academic subjects.

*The State law governing the practice of medicine* in California prescribes that every person before practicing medicine or surgery must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school, the requirements of which shall have been at the time of granting such diploma in no particular less than those prescribed by the laws of the State, and which shall have received the approval of the Board of Medical Examiners that year. The requirements for matriculation in the University of California Medical School as above stated cover also the requirements of the Association of American Medical Colleges, provided that the high school programme includes the subjects listed in the following paragraphs.

#### PREMEDICAL CURRICULUM—THREE YEARS

The following tabulated curriculum represents the most satisfactory arrangement of work to meet the medical prerequisite courses, as prescribed for those entering the Medical School in or after August 1923. The student should however, make certain that his course is so arranged as to satisfy the junior certificate and other requirements of the College of Letters and Science so that his entrance to the Medical School and the attainment of his A.B. and M.D. may not be delayed. Certain varia-

tions in the chronological arrangement may be necessitated if the high school course include the minimum of foreign language work.

This curriculum assumes the completion of the following subjects in the high school: English, 3 years; history, one year; mathematics, two years, (algebra and plane geometry); chemistry, one year; physics, one year; foreign language (French or German), 2 years. The junior certificate requirements will be more easily met if foreign language study has been pursued four years in the high school.

### MEDICAL SCHOOL—PREMEDICAL CURRICULUM

<i>First Year</i>			
	Units first- half	Units second- half	Total units
*Subject A (examination in English expression)....	....	....	....
Military training.....	1½	1½	
Physical Education.....	½	½	
Hygiene lectures.....	2 or 1	....	
General Inorganic Chemistry and Qualitative Analysis, with laboratory (Chemistry 1A-1B)	5	5	
English 1A-1B.....	3	3	
†Electives.....	3 or 4	5	
	15	15	30
 <i>Second Year</i>  			
Military Training.....	1½	1½	
Physical Education.....	½	½	
Elements of Organic Chemistry (8).....	3	....	
Elements of Organic Chemistry laboratory (9)..	3	....	
General Physics 2A-2B.....	3	3	
Physics 3A-3B-physical measurement laboratory	1	1	
†Electives.....	3	9	
	15	15	30
 <i>Third Year</i>  			
General Zoology, including Embryology (1A-1B)	4	5	
Electives.....	11	10	
	15	15	30
			90

\* An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the University. Date of next examination: Saturday, September 11, 1920, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

In order to exhibit the distribution of the time between laboratory and class exercises, the following table will be found useful:

	"Hours" per week (50 minute periods)		Credit in semester units
	Recitation or lecture	Laboratory	
Chemistry 1A.....	3	6	5
Chemistry 1B.....	3	6	5
Chemistry 8.....	3	....	3
Chemistry 9.....	....	8	3
Physics 2A.....	3	....	3
Physics 2B.....	3	....	3
Physics 3A-3B.....	....	6	2
Zoology 1A.....	2	4	4
Zoology 1B.....	3	6	5
Hygiene 2.....	2 (women)	....	2 (women)
Hygiene 1.....	1 (men)	....	1 (men)
Military 1A.....	1	2	1½
Military 1B.....	1	2	1½
Military 2A.....	1	2	1½
Military 2B.....	1	2	1½
Physical Education A.....	....	2	½
Physical Education B.....	....	2	½
Physical Education C.....	....	2	½
Physical Education D.....	....	2	½
English 1A.....	3	....	3
English 1B.....	3	....	3
*Foreign Language.....	10	....	10
Subject A: examination in English expression.....	....	....	0
	....	....	....

#### MEDICAL CURRICULUM—FIVE YEARS

In the fifth or intern year the student is required to act as intern in an approved hospital or as special worker in a department of the Medical School. By arrangement with the department concerned this may be done at any time after the completion of the first year and a half of medical work.

For further information see the annual announcement of the Medical School, to be obtained from the Secretary of the Medical School, Parnassus and Third avenues, San Francisco.

\* See requirements for the Junior Certificate, College of Letters and Science.

### CURRICULA IN PUBLIC HEALTH

There are three curricula in public health, designated by the letters A, B, and C. Curriculum A is intended for general students in public health; curriculum B is intended for students holding the degree of Bachelor of Science from the College of Civil Engineering; curriculum C is intended for students of medicine and may be substituted for the second half of the fourth year, and fifth, or intern, year in the Medical School without affecting candidacy for the degree of Doctor of Medicine.

While enrolled in the Medical School students in the Public Health course are subject to the usual fee of \$75 per half-year.

For completion of any of these curricula the degree of Graduate in Public Health (Gr.P.H.) is conferred.

With the permission of the Committee on Public Health Study-Lists courses may be substituted for those shown in the following curricula to the extent of not more than six units in any half-year.

#### CURRICULUM A

A four-year course, three years in the College of Letters and Science and one year in the Medical School.

*Requirements for Admission to the Course.*—The junior certificate in the College of Letters and Science including a reading knowledge of French or German, Physics 2A-2B, Chemistry 1A-1B, Bacteriology 1, Zoology 1A-1B.

The student is advised to avoid strict specialization in science and to devote his elective units as far as practicable to subjects of general culture. The following courses, however, should be completed: Chemistry 8 and 9, Economics 1A-1B.

#### THE JUNIOR AND SENIOR YEARS

For information concerning the work of the Junior and Senior Years in the various schools and colleges of the University, address the Recorder of the Faculties, University of California, Berkeley, California, indicating the particular school or college in which you are interested.

## TEACHERS' CURRICULA

## GENERAL ELEMENTARY

## TWO-YEAR COURSE LEADING TO ELEMENTARY CERTIFICATE

NOTE.—A term-hour or unit represents one period per week for one semester of eighteen weeks. For obtaining the Elementary Certificate 72 units distributed as follows, are required:

	Units
Biology T10 (Physiology) or T12 (Nature Study) .....	2
Economics C1A .....	3
Education T11 (Principles of Education) .....	3
Education T12 (Elementary Administration and School Law) .....	2
Education T113 (Educational Sociology) .....	3
English T10 or English T10B .....	3
Geography C1A .....	3
History T1A or T1B .....	3
Mathematics T10 .....	2
Commerce T11B .....	1
Physical Education T10 .....	2
Physical Education T11 .....	2
Political Science C1A .....	3
Psychology C2A (Introductory) .....	3
Psychology C2B (Genetic) .....	3
Teaching 10 .....	3
Teaching 11 .....	5
Group Z .....	6
	Units
Art .....	2 (or more)
Agriculture .....	2 (or more)
Industrial Arts .....	2 (or more)
Music .....	2 (or more)
Physical Education .....	2 (or more)
Psychology CX (first term in attendance—16 lectures) .....	1
Assemblies (last term in attendance—5 meetings) .....	½
Recreation (2 hrs. per term, ½ unit credit) .....	2
Special electives .....	6
Free electives .....	8½

TEACHERS' COURSE—TWO-YEAR ELEMENTARY

SUGGESTED SCHEDULE

<i>First Semester</i>	Units	<i>Second Semester</i>	Units
*Biology T12 or T10.....	2	*English T10 or English T10s.....	3
Economics C1A.....	3	†Group Z.....	4
Psychology Cx.....	1	*Mathematics T10.....	1
*Geography C1A.....	3	Physical Education T11.....	2
Commeroe T11B.....	1	Political Science C1A.....	3
Physical Education T10.....	2	Psychology C2B.....	3
Psychology C2A.....	3	Recreation.....	↓
Recreation.....	↓		17½
Group 2.....	2		
	17½		
		<i>Fourth Semester</i>	
		Assemblies.....	↓
		Education T113.....	3
		Education T12.....	2
		Teaching 11.....	5
		Recreation.....	↓
		Elective.....	7½
	18½		18½
<i>Third Semester</i>			
Education T11.....	3		
*History T1A or T1B.....	3		
Teaching 10.....	5		
Recreation.....	↓		
Elective.....	7		
	18½		

KINDERGARTEN-PRIMARY COURSE

TWO-YEAR COURSE LEADING TO THE KINDERGARTEN-PRIMARY CERTIFICATE

NOTE.—For admission to the Kindergarten-Primary Course the applicant must show ability to play simple melodies, songs and marches upon the piano.

	Units
Psychology C2A. Introductory Educational Psychology.....	3
Psychology C2B. Genetic Psychology.....	3
Psychology CX.....	1
Education T11. Principles of Education.....	3
Education T12. Elementary Administration and School Law....	2
Education T21. Introductory Kindergarten-Primary Education	2
Education T22. Kindergarten-Primary Curricula and Methods	5
Education T23. Kindergarten-Primary Practices.....	2
Education T25. Kindergarten-Primary Standards, Goals and Measurements.....	2
Teaching K-P10A and B. Kindergarten-Primary Teaching.....	10
Art and Industrial Arts T10.....	5
English T10A. Primary Reading.....	3
English T15B. Children's Literature.....	3

\* Courses thus prefixed are alternative, due regard being had for prerequisites.

†Group Z—6 units must be taken

Art.....	2	Industrial Arts.....	2
Biology.....	2	Music.....	2
Home Economics.....	2	Physical Education.....	2



	Units
Mathematics T10A. Primary Number.....	2
Biology T12. Nature Study.....	2
Music T10A. Kindergarten-Primary Music.....	2
Commerce T11B.....	1
Physical Education T10.....	2
Physical Education T12A. Kindergarten-Primary Plays and Games.....	2
Recreation.....	2
Assemblies.....	½
Elective.....	12½
<b>Total.....</b>	<b>72</b>

### KINDERGARTEN-PRIMARY ELECTIVES

(Nine units of elective work to be chosen from the following list or from teachers' courses offered in other departments.)

	Units
Education T24. Kindergarten-Primary Supervision.....	2
Education T26. History of Kindergarten-Primary Education..	2
Education T27. Relationships of Kindergarten-Primary and Middle Grade Education.....	3
Physical Education T12B. Kindergarten-Primary Plays and Games.....	2
Music T10B.....	2
Art and Industrial Art T14B.....	2

### SUGGESTED SCHEDULE

<i>First Semester</i>	Units	<i>Third Semester</i>	Units
Psychology C2A.....	3	Education T11.....	3
Psychology Cx.....	1	Education T22.....	5
Education T21.....	2	Elective.....	7
Education T26.....	2	Education T25.....	2
Art and Industrial Arts T10.....	5	Recreation.....	½
Music T10.....	2	Elective.....	1
Physical Education T10.....	2	<b>Total.....</b>	<b>18½</b>
Recreation.....	½		
Elective.....	1		
<b>Total.....</b>	<b>18½</b>		
		<i>Fourth Semester</i>	
<i>Second Semester</i>		Education T12.....	2
Biology T12.....	2	Education T23.....	2
Commerce T11B.....	1	Teaching K-P10 and 11-10.....	...
Psychology 2B.....	3	Recreation.....	½
English T10.....	3	Assemblies.....	½
English.....	3	Elective.....	1½
Mathematics T10A.....	2	<b>Total.....</b>	<b>16½</b>
Physical Education T12.....	2		
Elective.....	2		
Recreation.....	½		
<b>Total.....</b>	<b>18½</b>		

**ART**

Three lines of work in art are offered:

- I. Art Education.
- II. Drawing, Painting, and Illustration.
- III. House Design and Decoration.

The following fundamental courses are required of all who specialize in art: Design C17A, C17B, 11G; Drawing and Painting C22B; Art Application and History C1A, C1B.

**I. ART EDUCATION**

(Six Courses, A, B, C, D, E, and F)

A. Three-Year Course. Elementary Fine Arts Certificate.	
B. Three-Year Course. Elementary Industrial Arts Certificate.	
C. Three-Year Course. Combination Fine and Industrial Arts Certificate.	
Required—	Units
Professional.....	15
Physical Education including recreation.....	6
Theory and Practice of Teaching Art	14
Assembly.....	1
Technical.....	20
Elective—	
Technical (group 1 or 2).....	20
Free.....	28

103½

*Required Technical*

C1A-C1B Art Appreciation and History	2
C22A Constructive Drawing.....	2
C22B Drawing and Painting.....	2
C17A-C17B-C17D Design.....	6
T50A Art Crafts.....	2
C42A Lettering.....	2
T47A Stage Craft.....	2

20

*Elective Technical*

(group 1 Fine Arts)

	Units
T6A Costume Appreciation and History of Costume.....	2
T56A Costume Design.....	2
C22C-C24A Drawing and Painting.....	4
T28B House Furnishing.....	2
T33A-T63A Illustration.....	4
T47B-T67A Stage Craft.....	4
T38A Landscape.....	2

20

*Elective Technical*

(group 2 Industrial Arts)

	Units
T11 Industrial Art.....	2
T55A Basketry.....	2
T62A-T62B Bookbinding.....	4
T68A-T68B Clay Modeling and Pottery	4
C17C Design.....	2
T64A Leather.....	2
T65A Metal.....	2
T57A Weaving.....	2

20

D. Three-Year Course. General Elementary and Fine Arts Certificates.

E. Three-Year Course. General Elementary and Industrial Arts Certificates. Same as Course A or B with the following changes:

Add to required work 20 units.

Add Teaching General 5 units.

Reduce free elective from 28 units to 3 units.

F. One-Year Course for Secondary Art Certificate.

(For Graduates of A, B, C, D, or E.)

Required—	Units
Theory and Practice of Teaching Art 10 Assemblies.....	10
Technical (group 1 or 2).....	18
<b>Elective—</b>	
Free.....	6
	<hr/> 34

## II. DRAWING, PAINTING AND ILLUSTRATION (Commercial Art Certificate)

### Three Years

Required—	Units
C1A-C1B Art Appreciation and History.....	4
T6A Costume Appreciation and History of Costume.....	2
T56A Costume Design.....	2
C17A-C17B Design.....	8
C22A-C22B-C24A { Drawing and	12
T52B-T52C-T52D { Painting.....	
T33A-T53A-T53B Illustration.....	6
T38A-T54A-T54B Landscape.....	6
C42A Lettering.....	2
C42B Lettering and Poster Design....	2
	<hr/> 44
<b>Elective—</b>	
Technical.....	30
Free.....	10
	<hr/> Total..... 84

## Technical Courses (group 1 Fine Arts Certificate)

	Units
C1c Art Appreciation and History.....	2
T50B Art Crafts.....	2
T56B Costume Design.....	2
C17D Design.....	2
T52B-T52C Drawing and Painting.....	4
T53B Illustration.....	2
T58A House Decoration.....	2
T54A Landscape.....	2

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18

## Technical Courses (group 2 Industrial Arts Certificate)

	Units
C1c Art Appreciation and History.....	2
T15A Art Crafts.....	2
T63A Bookbinding.....	2
T69A Clay Modeling and Pottery.....	2
C17B Design.....	2
T64B Leather.....	2
T65B Metal.....	2
T47B Stage Craft.....	2
T57B Weaving.....	2

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18

## III. HOUSE DESIGN AND DECORATION (Certificate)

### Three Years

Required—	Units
C1A-C1B-C1c Art Appreciation and History.....	6
T50A-T50B Art Crafts.....	4
C17A-C17B-C17C-C17D Design.....	8
C22A-C22B-C24A-T122D Drawing and Painting.....	8
T28A House Design.....	2
T28B House Furnishing.....	2
T58B-T58C-T58D House Decoration.....	6
C42A Lettering.....	2
T47A-T47B-T67A Stage Craft.....	6
	<hr/> 44
<b>Elective—</b>	
Technical.....	32
Free.....	8
	<hr/> Total..... 84

SUGGESTED SCHEDULES

I. ART EDUCATION A

FINE ARTS CERTIFICATE

Three Years

Required—	
Professional.....	15 units
Theory and Practice of Teaching Art.....	14 units
Physical Education.....	6 units
Assemblies.....	½ units
Technical.....	40 units
Elective—	
Free.....	28 units
<b>Total.....</b>	<b>103½ units</b>

<i>First Semester</i>	Units
C1A Art Appreciation and History.....	2
C17A Design.....	2
C22A Constructive Drawing.....	2
C42A Lettering.....	2
T47A Stage Craft.....	2
Psychology X.....	1
Psychology C2A.....	3
Recreation.....	½
Elective.....	4
	<hr/>
	18½

<i>Second Semester</i>	Units
C1B Art Appreciation and History.....	2
C17B Design.....	2
C22B Perspective.....	2
T6A Costume Appreciation and History.....	2
T38A Landscape.....	2
Psychology C2B.....	3
Recreation.....	½
Elective.....	4
	<hr/>
	17½

<i>Third Semester</i>	Units
T12A Art Methods.....	2
C22c Drawing and Painting.....	2
T47B Stage Craft.....	2
T50A Art Crafts.....	2
Education T11.....	3
Teaching A10A.....	5
Recreation.....	½
Elective.....	2
	<hr/>
	18½

<i>Fourth Semester</i>	Units
T12B Art Methods.....	2
T28B House Furnishing.....	2
T33A Illustration.....	2
Teaching A10B.....	5
Recreation.....	½
Elective.....	6
	<hr/>
	17½

<i>Fifth Semester</i>	Units
T56A Costume Design.....	2
C17D Design.....	2
C24A Drawing and Painting.....	2
T67A Stage Craft.....	2
Physical Education T10.....	2
Elective.....	6
	<hr/>
	16

<i>Sixth Semester</i>	Units
T53A Illustration.....	2
Education T12.....	2
Education T53.....	3
Physical Education T11.....	2
Assemblies.....	½
Electives.....	6
	<hr/>
	15½

**I. ART EDUCATION B**  
**INDUSTRIAL ARTS CERTIFICATE**

*Three Years*

Required—	
Professional.....	15 units
Theory and Practice of Teaching Art.....	14 units
Physical Education.....	6 units
Assemblies.....	½ units
Technical.....	40 units
Elective—	
Free.....	28 units
Total.....	103½ units

<i>First Semester</i>	Units	<i>Fourth Semester</i>	Units
C1A Art Appreciation and History.....	2	T12B Art Methods.....	2
T11 Industrial Arts.....	2	C17c Design.....	2
C17A Design.....	2	T68B Clay Modeling and Pottery.....	2
C22A Constructive Drawing.....	2	Teaching I10a.....	5
C42A Lettering.....	2	Recreation.....	½
T47A Stage Craft.....	2	Elective.....	6
T62A Bookbinding.....	2		
Education X.....	1		17½
Psychology C3A.....	3		
Recreation.....	½		
	18½		
<i>Second Semester</i>		<i>Fifth Semester</i>	
C1B Art Appreciation and History.....	2	T64A Leather.....	2
C17B Design.....	2	Physical Education T10.....	2
C22B Perspective.....	2	Elective.....	12
T62B Bookbinding.....	2		16
Psychology C2B.....	3		
Recreation.....	½		
Elective.....	6		
	18½		
<i>Third Semester</i>		<i>Sixth Semester</i>	
T12A Art Methods.....	2	T65A Basketry.....	2
T50A Art Crafts.....	2	T65A Metal.....	2
T68A Clay Modeling and Pottery.....	2	T67A Weaving.....	2
Teaching I10a.....	5	Education T12.....	2
Education T11.....	3	Education T53.....	3
Recreation.....	½	Physical Education T11.....	2
Elective.....	4	Assemblies.....	½
	18½	Electives.....	2
			18½

I. ART EDUCATION C

FINE ARTS AND INDUSTRIAL ARTS CERTIFICATES

Three Years

Required—	
Professional.....	15 units
Theory and Practice of Teaching Art.....	14 units
Physical Education.....	6 units
Assemblies.....	1/2 units
Technical.....	60 units
Elective—	
Free.....	8 units
Total.....	103 1/2 units

First Semester	Units	Fourth Semester	Units
C1A Art Appreciation and History.....	2	T12B Art Methods.....	2
C17A Design.....	2	C17C Design.....	2
C22A Constructive Drawing.....	2	T28B House Furnishing.....	2
C42A Lettering.....	2	T38A Illustration.....	2
T47A Stage Craft.....	2	T68B Clay Modeling and Pottery.....	2
T11 Industrial Arts.....	2	Teaching I10A.....	5
T62A Bookbinding.....	2	Recreation.....	1/2
Psychology Cx.....	1	Elective.....	2
Psychology C2A.....	3		
Recreation.....	1/2		17 1/2

Second Semester	Units	Fifth Semester	Units
C1B Art Appreciation and History.....	2	T56A Costume Design.....	2
C17B Design.....	2	C17D Design.....	2
C22B Perspective.....	2	C24A Drawing and Painting.....	2
T6A Costume Appreciation and History	2	T67A Stage Craft.....	2
T38A Landscape.....	2	T64A Leather.....	2
T62B Bookbinding.....	2	Physical Education T10.....	2
Psychology C2B.....	3	Elective.....	4
Recreation.....	1/2		
Elective.....	2		16

Third Semester	Units	Sixth Semester	Units
T12A Art Methods.....	2	T53A Illustration.....	2
C22C Drawing and Painting.....	2	T55A Basketry.....	2
T47B Stage Craft.....	2	T65A Metal.....	2
T80A Art Crafts.....	2	T67A Weaving.....	2
T68A Clay Modeling and Pottery.....	2	Education T12.....	2
Education T11.....	3	Education T53.....	3
Teaching A10A.....	5	Physical Education T11.....	2
Recreation.....	1/2	Assemblies.....	1/2
	18 1/2		18 1/2

## I. ART EDUCATION D

## FINE ARTS AND GENERAL ELEMENTARY CERTIFICATES

## Three Years

## Required—

Professional.....	15 units
Theory and Practice of Teaching Art.....	19 units
Physical Education.....	6 units
Assemblies.....	½ units
Basals.....	20 units
Technical.....	40 units

## Elective—

Free.....	3 units
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Total.....103½ units

First Semester	Units
C1A Art Appreciation and History.....	2
C17A Design.....	2
C22A Constructive Drawing.....	2
C42A Lettering.....	2
T47A Stage Craft.....	2
Psychology Cx.....	1
Psychology C2A.....	3
Recreation.....	½
Commerce T11B.....	2
History T10.....	2

18½

## Second Semester

C1B Art Appreciation and History.....	2
C17B Design.....	2
C22B Perspective.....	2
T38A Landscape.....	2
T6A Costume Appreciation and History	2
Biology T12 or T10.....	2
English T10 or T10B.....	3
Psychology C2B.....	3
Recreation.....	½

18½

## Third Semester

C22c Drawing and Painting.....	2
T47B Stage Craft.....	2
T50A Art Crafts.....	2
T12A Art Methods.....	2
Physical Education T10.....	2
Education T11.....	3
Teaching A10A.....	5

18

Fourth Semester	Units
T28B House Furnishing.....	2
T33A Illustration.....	2
T12B Art Methods.....	2
Physical Education T11.....	2
Geography C1c.....	3
Teaching 10A.....	5

16

## Fifth Semester

T56A Costume Design.....	2
C17D Design.....	2
C24A Drawing and Painting.....	2
T67A Stage Craft.....	2
Economics C1A.....	3
Mathematics T10.....	2
Recreation.....	½
Teaching A10B.....	5

18½

## Sixth Semester

T53A Illustration.....	2
Education T12.....	2
Education T113.....	3
Political Science C1A.....	3
Recreation.....	½
Assemblies.....	½
Electives.....	3

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I. ART EDUCATION E

INDUSTRIAL ARTS AND GENERAL ELEMENTARY CERTIFICATES

Three Years

Required—

Professional.....	15 units
Theory and Practice of Teaching Art.....	19 units
Physical Education.....	6 units
Assemblies.....	1 units
Basals.....	20 units
Technical.....	40 units

Elective—

Free.....	3 units
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Total.....103½ units

First Semester	Units	Fourth Semester	Units
C1A Art Appreciation and History.....	2	T12B Art Methods.....	2
C17A Design.....	2	C17c Design.....	2
C22A Constructive Drawing.....	2	Geography C1c.....	3
C42A Lettering.....	2	Political Science C1A.....	3
T47A Stage Craft.....	2	Physical Education T11.....	2
T11 Industrial Arts.....	2	Teaching 10A.....	5
T62A Bookbinding.....	2		
Psychology CX.....	1		17
Psychology C2A.....	3		
Recreation.....	1		

Fifth Semester

Second Semester	Units	Fifth Semester	Units
C1B Art Appreciation and History.....	2	C17D Design.....	2
C17B Design.....	2	T64A Leather.....	2
C22B Perspective.....	2	Economics C1A.....	3
T62B Bookbinding.....	2	History T10.....	2
T68B Clay Modeling and Pottery.....	2	Mathematics T10.....	2
Biology T12 or T10.....	2	Commerce T11B.....	2
English T10 or T10B.....	3	Teaching I10B.....	5
Psychology C2a.....	3	Recreation.....	1
Recreation.....	1		18½

Sixth Semester

Third Semester	Units	Sixth Semester	Units
T12A Art Methods.....	2	T55A Basketry.....	2
T50A Art Crafts.....	2	T68B Clay Modeling and Pottery.....	2
Education T11.....	3	T65A Metal.....	2
Physical Education T10.....	2	T57A Weaving.....	2
Teaching I10A.....	5	Education T12.....	2
Elective.....	3	Education T63.....	3
		Recreation.....	1
		Assemblies.....	1

17

14



## I. ART EDUCATION F

## SECONDARY CERTIFICATE

## One Year

Required—	
Theory and Practice of Teaching Art.....	10 units
Technical Group (1 Fine Arts or 2 Industrial Arts).....	18 units
Recreation.....	1 units
Assemblies.....	½ units
Elective—	
Free.....	5 units
<b>Total.....</b>	<b>34½ units</b>

*First Semester*  
(Group 1)

	Units
C1c Art Appreciation and History.....	2
T56a Costume Design.....	2
C17b Design.....	2
T52a Drawing and Painting.....	2
T54A Landscape.....	2
Teaching A60a.....	5
Recreation.....	½
Elective.....	2
	<hr/>
	17½

*Second Semester*

T52c Drawing and Painting.....	2
T58A House Decoration.....	2
T53a Illustration.....	2
T50a Art Crafts.....	2
Teaching A60a.....	5
Recreation.....	½
Elective.....	3
Assemblies.....	½
	<hr/>
	17

*First Semester*  
(Group 2)

	Units
C1c Art Appreciation and History.....	2
C17a Design.....	2
T47a Stage Craft.....	2
T63A Bookbinding.....	2
T65a Metal.....	2
T57a Weaving.....	2
Teaching A60a.....	5
Recreation.....	½
	<hr/>
	17½

*Second Semester*

T50a Art Crafts.....	2
T68a Clay Modeling and Pottery.....	2
T64a Leather.....	2
Teaching A60a.....	5
Recreation.....	½
Electives.....	5
Assemblies.....	½
	<hr/>
	17

II. DRAWING AND PAINTING AND DESIGN

CERTIFICATE

Three Years

Required—	
Technical.....	44 units
Elective—	
Technical.....	30 units
Free.....	10 units
Total.....	84 units

<i>First Semester</i>	Units
C1A Art Appreciation and History.....	2
C17A Design.....	2
C22c Drawing and Painting.....	2
C42A Lettering.....	2
Electives.....	6
	<hr/>
	14

<i>Second Semester</i>	Units
C1B Art Appreciation and History.....	2
C17B Design.....	2
C22B Perspective.....	2
T33A Illustration.....	2
T38A Landscape.....	2
T6A Costume Appreciation and History	2
Elective.....	2
	<hr/>
	14

<i>Third Semester</i>	Units
C24A Drawing and Painting.....	2
T52B Drawing and Painting.....	2
T56A Costume Design.....	2
T54A Landscape.....	2
Electives.....	6
	<hr/>
	14

<i>Fourth Semester</i>	Units
T53A Illustration.....	2
Electives.....	12
	<hr/>
	14

<i>Fifth Semester</i>	Units
C17D Design.....	2
C17E Design.....	2
C42B Lettering and Poster Design.....	2
Electives.....	8
	<hr/>
	14

<i>Sixth Semester</i>	Units
T54B Landscape.....	2
T53B Illustration.....	2
T52C Drawing and Painting.....	2
Electives.....	8
	<hr/>
	14

## III. HOUSE DESIGN AND DECORATION

## CERTIFICATE

*Three Years*

Required—	
Technical.....	44 units
Elective—	
Technical.....	32 units
Free.....	8 units
<b>Total.....</b>	<b>84 units</b>

<i>First Semester</i>	Units
C1A Art Appreciation and History.....	2
C17A Design.....	2
C22A Constructive Drawing.....	2
C42A Lettering.....	2
T47A Stage Craft.....	2
Elective.....	4
	<hr/>
	14

<i>Second Semester</i>	Units
C1B Art Appreciation and History.....	2
C17B Design.....	2
C22B Perspective.....	2
T28A House Design.....	2
Elective.....	6
	<hr/>
	14

<i>Third Semester</i>	Units
T50A Art Crafts.....	2
T47B Stage Craft.....	2
Elective.....	10
	<hr/>
	14

<i>Fourth Semester</i>	Units
C17c Design.....	2
T28B House Furnishing.....	2
T52c Drawing and Painting.....	2
T58B House Decoration.....	2
T1D History of Furniture and Period Furnishing.....	2
Elective.....	4
	<hr/>
	14

<i>Fifth Semester</i>	Units
C17D Design.....	2
C17E Design.....	2
T67A Stage Craft.....	2
Elective.....	8
	<hr/>
	14

<i>Sixth Semester</i>	Units
T58c House Decoration.....	2
T58D House Decoration.....	2
T50B Art Crafts.....	2
Elective.....	8
	<hr/>
	14

**COMMERCE**  
**SECONDARY CERTIFICATE**  
**SUGGESTED SCHEDULES**

<i>First Semester</i>	Units	<i>Fifth Semester</i>	Units
Psychology Cx.....	1	Political Science C1A.....	3
Psychology C2A.....	3	Business Law C5A.....	2
Geography C1c.....	3	Teaching C11A.....	5
English C1A.....	3	Accounting Principles C14A.....	3
Typing T4A.....	2	Accounting Practice C15A or.....	2
Mathematics for Business and Statistics T12.....	2	Financial Organisation T65.....	3
Commerce T11A.....	1	Electives.....	3
Electives.....	2		
		Total units.....	16 or 18

Total units..... 17

<i>Second Semester</i>	
Education T11.....	3
Commerce T11b.....	1
Psychology C2b.....	3
English C1b.....	3
Typing T4b.....	2
Economic Geography C3A.....	3
Electives.....	2

Total units..... 17

<i>Third Semester</i>	
Economics C1A.....	3
Business English C10.....	2
Bookkeeping Principles T6A.....	2
Bookkeeping Practice T7A.....	1
Shorthand T3A.....	3
Industrial History C11.....	3
Electives.....	5

Total units..... 16

<i>Fourth Semester</i>	
Economics C1b.....	3
Office Organisation, Administration and Procedure T52.....	2
Bookkeeping Principles T6b.....	2
Bookkeeping Practice T7b.....	1
Shorthand T3b or.....	3
Financial Organisation T65.....	3
Electives.....	5

Total units..... 16

<i>Sixth Semester</i>	
Political Science C1b.....	3
Business Law C5b.....	2
Teaching Co60A.....	5
Business Organisation and Administration T50 A or.....	3
Industrial History C11 or.....	3
Accounting Principles C14b.....	3
Accounting Practice C15b.....	2
Electives.....	3

Total units..... 16 or 18

<i>Seventh Semester</i>	
Education T12.....	2
Teaching Co60b.....	5
Organisation and Administration of Commercial Education T75.....	3
Public Speaking C1A.....	3
Mathematics.....	3
Electives.....	3

Total units..... 16

<i>Eighth Semester</i>	
Curricula and Methods in Commercial Education T76.....	3
Public Speaking C1b.....	3
Vocational Guidance T60.....	2
Part Time or	
Intensive Training.....	5
Electives.....	3

Total units..... 16

## HOME ECONOMICS

The Home Economics Department offers the following courses:

1. A three-year course leading to a certificate which entitles the holder to teach home economics in the elementary schools.

2. A four-year course leading to a certificate which entitles the holder to teach home economics in the elementary and the secondary schools.

3. A two-year vocational teachers' training course in home economics for experienced home-makers, leading to a secondary certificate. The course for the training of such teachers will be open only to women who have had at least four years of schooling beyond a complete elementary school course, or its equivalent in private instruction, and at least four years of experience after the age of eighteen in managing a home and in performing all the duties of a housekeeper. It conforms to the requirements of the State Board of Education, as specified in Bulletin No. 10. For further particulars consult the chairman of the Department of Home Economics.

## HOME ECONOMICS ELEMENTARY THREE-YEAR COURSE

## SUGGESTED SCHEDULES

<i>First Semester</i>		Units	<i>Fourth Semester</i>		Units
Psychology C2A.....	3		Chemistry (Food T10b).....	3	
Chemistry C1A.....	3		Physiology (Biology T10).....	3	
Food T5A.....	3		Marketing, Commerce T124.....	2	
Clothing T1A.....	3		Food (Family) Household Science T66..	3	
Design C17A.....	2		Clothing Demonstr. Household Arts		
Psychology Cx.....	1		T1A.....	3	
Home Management Home Economics			Hygiene C9.....	1	
T10.....	2		Teaching H. E. 10A.....	2	
Recreation.....	1		Recreation.....	1	
<b>Total units.....</b>	<b>17½</b>		<b>Total units.....</b>	<b>17½</b>	
<i>Second Semester</i>			<i>Fifth Semester</i>		
Psychology C2B.....	3		Economics C1A.....	3	
English and Oral Expression.....	3		Education T22.....	2	
Food T5B.....	3		Chemistry T11A.....	3	
Clothing T1B.....	3		Home Economics T67.....	1	
Costume Appreciation and Design T6B.	2		Food Demonstr. Household Science T65	1	
Biology T11.....	2		Home Economics T11.....	1	
Biology T12.....	2		Teaching H. E. 10b.....	2	
Recreation.....	1		Recreation.....	1	
<b>Total units.....</b>	<b>16½</b>		Home Economics T58.....	4	
<i>Third Semester</i>			<b>Total units..... 17½</b>		
Chemistry T11B.....	3		<i>Sixth Semester</i>		
Teaching H. E. 20.....	3		Education T53.....	3	
Education T11.....	3		Education T12.....	2	
Home Economics T68.....	4		Biology T11.....	3	
Home Economics T3A.....	2		Bacteriology 1.....	4	
House Design and House Furnishing			Food, Large Quant., Home Economics		
Arts T28c.....	2		T65.....	1	
Recreation.....	1		Assemblies.....	1	
<b>Total units.....</b>	<b>17½</b>		Teaching H. E. 11A.....	2	
			Recreation.....	1	
			<b>Total units.....</b>	<b>18</b>	

HOME ECONOMICS SECONDARY, FOURTH YEAR

<i>First Semester</i>	Units	<i>Second Semester</i>	Units
Education Elective.....	2	Political Science C1A.....	3
Millinery T53a.....	2	Home Economics T62.....	3
Home Economics T69.....	4	Home Economics T69.....	3
Elective.....	4	Elective.....	3
Teaching HE60A.....	5	Teaching HE60B.....	5
Recreation.....	‡	Assemblies.....	‡
Total units.....		Total units.....	
17‡		17‡	

NOTE.—Students must elect those required subjects in elementary course for which they cannot show credit.

TEACHER-TRAINING COURSE IN HOME ECONOMICS, FOR EXPERIENCED HOME-MAKERS, TWO YEARS

<i>First Semester</i>	Units	<i>Third Semester</i>	Units
Psychology Cx.....	1	Teaching HE20.....	3
Biology T10.....	3	Home Economics T5B.....	1
Chemistry C1A.....	3	Chemistry 10A.....	3
Art (C. D.).....	2	Home Economics T10.....	2
Home Economics T5A.....	3	Home Economics T65.....	1
Home Economics T1A.....	3	Home Economics T3A.....	2
Home Economics T5B.....	1	Biology T11.....	2
English and Oral Expression.....	2	Home Economics T67.....	4
Total units.....		Total units.....	
18		18	

<i>Second Semester</i>	Units	<i>Fourth Semester</i>	Units
Psychology C3A.....	3	Bacteriology 1.....	4
Economics C1A.....	3	Political Science C1A.....	3
Arts T28C.....	2	Hygiene 9.....	1
Home Economics T66.....	3	Home Economics T60.....	1
Home Economics T11.....	3	Biology T12.....	2
Teaching HE10A.....	4	Education T21.....	2
Total units.....		Teaching HE60A.....	5
18		Assemblies.....	‡
18		Total units.....	
18		18‡	

## MECHANIC ARTS COURSES

The Department of Mechanic Arts offers three courses:

## A. A Four-Year Mechanic Arts Course.

This prepares the graduate to teach industrial work in the elementary and secondary school. At the completion of the course a secondary special teachers' certificate is granted. At least two years' work is required in the special subjects selected for certification.

## B. A Three-Year General Elementary and Mechanic Arts Course. This prepares the graduate to teach prevocational mechanic arts and general subjects in the elementary school. Upon the satisfactory completion of the work two certificates are granted; the general elementary and the elementary mechanic arts.

## C. Vocational. A student may enter the department and select a course in one particular trade in which he will be given intensive training. Credentials will be issued for the work completed.

## THE FOUR-YEAR MECHANIC ARTS COURSE

*Suggested Schedules*

FIRST SEMESTER	Units	FOURTH SEMESTER	Units
Mechanical Drawing T10A.....	3	Mech. or Arch. Drawing C6A or T67....	3
Physics C1A.....	3	Chemistry C1B.....	5
Mathematics.....	3	Shop.....	5
Shop.....	5		
Psychology CX.....	1	<i>Teaching</i>	
Physical Education.....	2	Psychology C2A.....	3
	17	Elective.....	1
<b>SECOND SEMESTER</b>			17
Mechanical Drawing T10B.....	3	<i>Industry</i>	
Physics C1B.....	3	Elective.....	4
Mathematics.....	3		17
Shop.....	5		
Physical Education.....	2	<b>FIFTH SEMESTER</b>	
Elective.....	1	Electricity T16A.....	3
	17	Shop.....	5
<b>THIRD SEMESTER</b>			
Drawing C3D.....	3	<i>Teaching</i>	
Chemistry C1A.....	5	Education T10.....	3
Shop.....	5	Teaching MA10A.....	5
<i>Teaching</i>		Elective.....	1
Education T11.....	2		17
Elective.....	2	<i>Industry</i>	
	17	Bookkeeping.....	3
<i>Industry</i>		Commerce T10B.....	3
Elective.....	4	Commercial Law.....	3
	17		17

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SIXTH SEMESTER	Units
Applied Mechanics T19.....	2
Shop.....	5
<i>Teaching</i>	
Psychology C2B.....	2
Teaching M. S. 11A.....	5
Elective.....	3
	17
<i>Industry</i>	
Bookkeeping.....	3
Commercial Law.....	3
Elective.....	4
	17
SEVENTH SEMESTER	
Economics C1A.....	3
Applied Mechanics.....	2
Shop.....	5
<i>Teaching</i>	
Education T53.....	3
Organisation.....	1
Elective.....	3
	17

<i>Industry</i>	Units
Business Org. and Adm.....	3
Factory Management.....	3
Elective.....	1
	17
EIGHTH SEMESTER	
Economics C1B.....	3
Shop.....	5
<i>Teaching</i>	
Education T12.....	2
Teaching MA60A.....	5
Elective.....	2
	17
<i>Industry</i>	
Business Org. and Adm.....	3
Factory Management.....	3
Elective.....	3
	17

## GENERAL ELEMENTARY AND ELEMENTARY MECHANIC ARTS COURSE

FIRST SEMESTER	Units
Commerce T10B.....	1
Woodwork T19.....	5
Mech. Drawing T10A.....	3
Physical Education T10.....	2
English C1A.....	3
Psychology C2A.....	3
	17
SECOND SEMESTER	
Psychology CX.....	1
Music T10.....	2
Woodwork T19.....	5
Mech. Drawing T10B.....	3
Physical Education T11.....	2
Art T10.....	2
Psychology C2B.....	3
	18
THIRD SEMESTER	
Education T11.....	3
Shop.....	5
Biology T10 or T12.....	2
Political Science C1A.....	3
Applied Electricity T16A.....	3
	16

FOURTH SEMESTER	Units
Education T12.....	2
Teaching 10.....	5
Shop.....	5
Industrial Arts.....	2
Drawing C3D.....	2
	16
FIFTH SEMESTER	
Teaching MA10A.....	5
Shop.....	5
Geography C1A.....	3
Assemblies.....	1
Mathematics T10.....	2
	16
SIXTH SEMESTER	
Education T113.....	3
Teaching MA11A.....	5
Organization M. A.....	1
History.....	2
Shop.....	5
	16



## MUSIC

**Admission Requirements:** Candidates for elementary and secondary music certification and General Teacher Training students who expect to major in music, must show ability (1) to read music of the grades of Books II and III, State Music Text; (2) to take dictation music of the difficulty of Book I; and (3) to play the piano sufficiently well to accompany a high school chorus (Laurel Song Book). An entrance examination will be given to include these tests.

**Courses:** Three courses are offered for the training of directors, supervisors and departmental teachers of music: (1) General Elementary and Elementary Music Course requiring three years for completion, (104½ units); (2) the Elementary Music Course, requiring three years (102 units); (3) a Secondary Music Course requiring one year in addition to either of the above courses (84 units).

## GENERAL ELEMENTARY AND ELEMENTARY MUSIC COURSE

Technical.....	55 units
Professional.....	49½ units
<b>Total.....</b>	<b>104½ units</b>

## SUGGESTED SCHEDULES

<i>First Semester</i>	Units	<i>Third Semester</i>	Units
Biology T12 or T10.....	2	Music Education T8A.....	3
Psychology CX.....	1	Music Observation 9A 2 hrs.....	1
Commerce T10b.....	1	Harmony C4A.....	3
Voice T11A.....	2	Conducting T59A.....	2
Melodic Dictation C12A 5 hrs.....	3	Geography 1A.....	3
Economics C1A.....	3	Education T11.....	3
Psychology C2A.....	3	Recreation.....	½
Orchestral Instruments T13A.....	1	<b>Total.....</b>	<b>15½</b>
Recreation.....	½		
<b>Total.....</b>	<b>16½</b>		
<i>Second Semester</i>		<i>Fourth Semester</i>	
English C1A or English T10b.....	3	Music Education T8B.....	3
Mathematics T10.....	2	Music Observation 9A.....	2
Psychology C2b.....	3	Harmony C4b.....	3
Physical Education T10.....	2	Teaching 10A.....	5
Melodic Dictation C12b 5 hrs.....	3	Conducting T59b.....	2
Voice T11b.....	2	Piano Ensemble C2c.....	2
Recreation.....	½	Recreation.....	½
History T1A-T1B.....	3	<b>Total.....</b>	<b>17½</b>
<b>Total.....</b>	<b>18½</b>		

SUGGESTED SCHEDULES—(Continued)

<i>Fifth Semester</i>	Units	<i>Sixth Semester</i>	Units
Teaching M10a.....	7	Assemblies.....	4
Music Literature C3a.....	3	Teaching M10b.....	7
Political Science C1a.....	3	Music Literature C3b.....	3
Orchestral Instruments T13b.....	1	Education T53.....	3
Education T12.....	2	Piano Ensemble C2d.....	2
		Physical Education T11.....	2
<b>Total.....</b>	<b>16</b>	<b>Total.....</b>	<b>17½</b>

ELEMENTARY MUSIC COURSE

Technical.....	87 units
Professional.....	15 units
<b>Total.....</b>	<b>102 units</b>

<i>First Semester</i>	Units	<i>Fourth Semester</i>	Units
Psychology C2a.....	3	Education T11.....	3
Psychology CX.....	1	Harmony C4b (weak) or Elective.....	3
Elective.....	5	Harmony C4b (strong) or Elective.....	3
Melodic Dictation AC12d 5 hours.....	3	Conducting T59a.....	2
Voice T11a.....	2	Observation 9A 3 hrs.....	2
Orchestral Instruments T13b.....	1	Music Education T8b.....	3
Piano Ensemble C2c.....	2	Elective.....	1
<b>Total.....</b>	<b>17</b>	<b>Total.....</b>	<b>17</b>

*Second Semester*

Psychology C2b.....	3
Elective.....	3
Orchestral Instruments T13b.....	1
Orch. Inst. T13a.....	1
Piano Ensemble C2d.....	2
Melodic Dictation C12b 5 hrs.....	3
Voice T11b.....	2
Elective.....	3
<b>Total.....</b>	<b>17</b>

*Fifth Semester*

Education T12.....	2
Music Literature C3a.....	3
Teaching M10a.....	7
Elective.....	5
<b>Total.....</b>	<b>17</b>

*Third Semester*

Harmony C4a (weak) or Elective.....	3
Conducting T59a.....	2
Observation 9A 2 hrs.....	1
Music Education T8a.....	3
Elective.....	5
Harmony C4a (strong) or Elective.....	3
Piano Ensemble.....	2
Elective.....	1
<b>Total.....</b>	<b>17</b>

*Sixth Semester*

Education T53.....	3
Piano Ensemble.....	2
Music Literature C3b.....	3
Elective.....	2
Teaching M10b.....	7
<b>Total.....</b>	<b>17</b>

## SECONDARY MUSIC COURSE

Technical .....		34 units	
<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Teaching M60A.....	5	Music Teaching M60B.....	5
Music Observation T91A.....	3	Harmony T55B.....	3
Form and Analysis (Elective) T64A....	2	Music Literature T63B.....	3
Music Literature T63A.....	2	Piano.....	4
Harmony T55A.....	2	Form and Analysis (Elective) T64B.....	2
Psychology T76A.....	3		
<b>Total.....</b>	<b>17</b>	<b>Total.....</b>	<b>17</b>

## PHYSICAL EDUCATION FOR WOMEN

## PROFESSIONAL COURSES

Professional courses are open to men who desire to make physical education their major subject.

Courses are planned to meet the needs of seven classes of students.

## COURSE A

1. For students desiring to take in the Southern Branch of the University the first two years of the Five-Year Course offered by the Department of Education, University of California.

## COURSE B

1. For students desiring to become directors or responsible instructors of physical education in high schools.

2. For students desiring to combine leadership of physical training activities with the teaching of some academic subject in high school.

## COURSE C

1. For students desiring to become supervisors or responsible instructors of physical education in the elementary and intermediate grades.

2. For students desiring to become supervisors or responsible instructors of physical education in the elementary and intermediate grades.

3. For students desiring academic courses in physical education as a part of a liberal education.

## EXPENSE

Regulation suit and shoes are required. The cost is about \$13.

## WOMEN'S ATHLETIC ASSOCIATION

The Women's Athletic Association coöperates with the Department of Physical Education in promoting a high physical efficiency among the women of the University, by encouraging many forms of physical activities. The association supplements the work of the department by organizing school teams and arranging for contests in the following sports:

Fall Season.—Field hockey, swimming, tennis, golf.

Winter Season.—Basketball, indoor baseball.

Spring Season.—Outdoor baseball, field and track, swimming, archery. Dancing is offered throughout the year.

## COURSE A

The First two years of the five-year course offered by the Department of Education at Berkeley, leading to a degree of A.B. and a state certificate in Secondary General Physical Education.

## SUGGESTED ORDER OF COURSES FOR THE FIRST TWO YEARS

FRESHMAN YEAR		SOPHOMORE YEAR	
<i>First Semester</i>	Units	<i>First Semester</i>	Units
Chemistry C1A.....	5	Hygiene C3.....	3
Hygiene C2.....	2	Physiology T10 (Biology).....	4
Biology C35A.....	4	Practice C52c.....	½
Practice C52A.....	½	Electives.....	8
Electives.....	4		15½
	15½		
<i>Second Semester</i>		<i>Second Semester</i>	
Chemistry C1B.....	5	Hygiene C5.....	2
Practice C52c.....	½	Physiology T7 (Physical Education)....	4
Electives.....	10	Practice C52d.....	½
	15½	Electives.....	9
			15½

## COURSE B-1

A four-year course leading to the Physical Education diploma and state certification in Secondary General Physical Education.

## Requirement—

Foundation Sciences.....	47 units
Theory and Scientific Procedure.....	52 units
General.....	21½ units
Physical Training Activities.....	20 units
	140½ units

## COURSE B-2

A four-year course leading to state certification in Secondary Physical Training Activities.

Requirements: Same as for B-1 except that only 20 units in foundation sciences and 30 units in theory and scientific procedure are required.

## SUGGESTED SCHEDULES

<i>First Semester</i>	Units	<i>Second Semester</i>	Units
Economics C1A.....	3	Psychology C2A.....	3
Chemistry C1A.....	5	English T10.....	3
Hygiene C2.....	2	Chemistry C1B.....	5
Anatomy.....	4	Anatomy C35A.....	4
Psychology Cx.....	1	Practice.....	2½
Practice.....	2½		17½
	17½	<i>Fourth Semester</i>	
<i>Third Semester</i>		Education T53.....	3
Education T11.....	3	Nature and Function of Play.....	3
Psychology C2a.....	3	History of Physical Education.....	2
Child Development.....	2	Biology C35a.....	4
Physiology T10.....	4	Organic and Physiological Chemistry... 3	
Kinesiology.....	2	Practice.....	2½
Elective.....	1		17½
Practice.....	2½	<i>Sixth Semester</i>	
	17½	Administration of Physical Education... 3	
<i>Fifth Semester</i>		Therapeutic Gymnastics.....	2
Education T12.....	2	Hygiene C5.....	3
Principles of Physical Education.....	3	Physiology T7.....	4
Physical Examination.....	2	Special Methods.....	2
Therapeutic Gymnastics.....	3	Teaching P. E. 11A.....	2
Special Methods.....	2	Practice.....	2½
Teaching P. E. 10A.....	2		17½
Electives.....	1	<i>Eighth Semester</i>	
Practice.....	2½	Administration of Secondary Physical	
	17½	Education.....	3
<i>Seventh Semester</i>		Physical Diagnosis.....	3
Education T13a.....	3	Physiology of Exercise.....	3
Clinical Pathology.....	3	Special Methods.....	2
Special Methods.....	2	Teaching PE60s.....	2
Teaching PE60a.....	2	Assemblies.....	½
Electives.....	5	Electives.....	2
Practice.....	2½	Practice.....	2½
	17½		

Electives; Hygiene 3, Bacteriology 3. Teaching

## COURSE C-1

A three-year course leading to the Physical Education Elementary and the General Elementary diplomas and state certification in Elementary General Physical Education.

## Requirement—

Foundation Sciences.....	30 units
Theory and Scientific Procedure.....	40 units
General.....	32½ units
Physical Training Activities.....	15 units

Total.....117½ units

## COURSE C-2

A three-year course leading to the Physical Education Elementary diploma and state certification in Elementary General Physical Education.

Requirement: Same as for C-1, except that only 105½ units are required for graduation and electives may be substituted for courses marked with \*.

## COURSE C-3

A three-year course leading to state certification in Elementary Physical Training Activities.

Requirements: Same as for C-2 except that only 20 units in foundation sciences and 20 units in theory and scientific procedure are required.

## SUGGESTED SCHEDULES

<i>First Semester</i>	Units	<i>Fourth Semester</i>	Units
Economics.....	3	Education T53.....	3
Psychology Cx.....	1	*Teaching 10.....	5
*Penmanship.....	2	Physiology T7.....	4
*Geography C1A.....	3	Nature and Function of Play.....	3
*History T10.....	2	Special Methods.....	2
Anatomy C35A.....	4	Practice.....	2½
Hygiene C2.....	2		19½
Practice.....	2½		
	19½		
<i>Second Semester</i>		<i>Fifth Semester</i>	
Psychology C2A.....	3	Education T12.....	2
English T10.....	3	Principles of Physical Education.....	3
*Mathematics T10.....	2	Physical Examinations.....	2
Anatomy C35B.....	4	Therapeutic Gymnastics.....	3
History of Physical Education.....	2	Clinical Pathology.....	3
Organic and Physiological Chemistry.....	3	Special Methods.....	2
Practice.....	2½	Teaching P. E. 10A.....	2
	19½	Practice.....	2½
			19½
<i>Third Semester</i>		<i>Sixth Semester</i>	
Education T11.....	3	Admin. of Sec. Phy. Ed.....	3
Psychology C2B.....	3	Physical Diagnosis.....	3
Child Development.....	2	Therapeutic Gymnastics.....	2
*Political Science.....	3	Physiology of Exercise.....	3
Physiology T10.....	4	Hygiene C5.....	2
Kinesiology.....	2	Special Methods.....	2
Practice.....	2½	Teaching P. E. 11A.....	2
	19½	Assembles.....	½
		Practice.....	2½
			20

## ELECTION IN PHYSICAL EDUCATION

Suggested selection of courses for electives in physical education.

## 19 UNITS—

Physiology T10.....	4
Hygiene C2.....	2
Nature and Function of Play.....	3
Child Development.....	2
Special Methods.....	6
Practice Teaching } .....	
Practice C52A-B .....	1
Practice C52c-D .....	1

19

## 14 UNITS—

Hygiene C2.....	2
Nature and Function of Play.....	3
Child Development.....	2
Special Methods.....	5
Practice Teaching or	
Practice C52A-B .....	1
Practice C53c-D .....	1

14

## 13 UNITS—

Hygiene C2.....	2
Nature and Function of Play.....	3
Child Development.....	2
Special Methods.....	4
Practice C52A-B .....	1
Practice C52c-D .....	1

13

## 8 UNITS—

Hygiene C2.....	2
Nature and Function of Play.....	3
Special Methods.....	2
Practice C52A-B .....	1

8

## 6 UNITS—

Hygiene C2.....	2
Special Methods.....	3
Practice C52A-B .....	1

6

**GENERAL REGULATIONS OF THE FACULTIES CONCERNING  
STUDENTS IN THE ACADEMIC DEPARTMENTS**

Following are certain general regulations governing the academic departments.

**MILITARY SCIENCE, PHYSICAL EDUCATION AND HYGIENE**

All undergraduate students shall, upon admission to the University, report immediately to the proper officers for enrollment in military science, physical education, and hygiene, following the Freshman Circular or the announcements which may be posted on the University bulletin boards. A deposit (about thirty-three dollars) must be paid at once to the Comptroller of the University to cover the cost of the uniform and text book to be used in military courses. Students shall list these courses upon their study-cards with other University courses.

Petitions from students for excuse from, or deferment of, military science, physical education, or hygiene, filed by the petitioner after the expiration of two weeks following the date of the student's registration, will not be received except for illness or physical disability occurring after such date. Students who petition to be excused from these subjects or from any of them should nevertheless present themselves to the proper instructors for enrollment during the pendency of petitions.

In case a student subject to these requirements shall list the prescribed course or courses on his study-card and thereafter without authority shall fail to appear for work in such course or courses, after a reasonable time, the neglect shall be reported to the Recorder, who, with the approval of the President, shall forthwith withdraw the study-card of the student. When a student's study-card is withdrawn he is thereby suspended from participation in all university exercises. Of such suspension it shall be the duty of the Recorder to inform immediately the Study-Lists Committee in charge of the student's programme. With the approval of the professor in charge of the work, the Recorder is authorized to reinstate the student, and shall notify the Study-Lists Committee of such reinstatement.

[A circular containing information concerning the requirements in military science, physical education, and hygiene, including a statement of the grounds upon which students may be excused from this work, may be obtained from the Recorder of the Faculties.]



## GRADES OF SCHOLARSHIP

The results of examinations, together with term work when a record of the latter is kept, will for all undergraduate students be ranked and reported to the Recorder in five grades. The *1st grade* denotes marked excellence. The *2nd grade* indicates that the student's work has been thoroughly satisfactory. The *3rd grade* denotes a pass. Courses in which students have obtained a *4th grade* will not be credited to them, except upon the condition of passing a reëxamination. The *5th grade* indicates failure and the necessity of repeating not only the examination of a course but also the regular work. The report in case of absence from a require dexamination, or of failure to perform any of the allotted tasks in a given course, is *incomplete*.

The reports in December, as in May, are final reports, not provisional reports, with the following exception: if the organization of the work permits and if the deficient student retains his status in the University, a *grade 4* or an *incomplete* in the first half of a year course (a "double-number" course) may, at the discretion of the instructor in charge, be removed upon the basis of the regular work and examinations of the second half-year. In every such case the student should apply promptly to his instructor for advice. It is not to be assumed that a passing grade in the work of the second half-year removes a deficiency in the first half-year.

The entrance examinations are ranked and reported to the Recorder in five grades, corresponding with the five grades used for reporting upon university courses. In the case of entrance examinations, either a fourth grade (condition) or a fifth grade (failure) may be removed by passing a second examination.

## CONDITIONS AND FAILURES

For the removal of conditions, the student has the privilege of taking the regular midyear or annual examinations in the subjects in which he is conditioned. Examinations may be held at other times only by the special permission of the Academic Senate and on payment of a fee of five dollars.

Every undergraduate student is required each half-year either (1) to pass in at least ten (10) units of duly registered work, or (2) to pass with *first* or *second* grade in courses aggregating at least eight (8) units of duly registered work; or—if registered for less than eight units—to pass with *first* or *second* grade in all of the courses taken. Any student who fails to satisfy this requirement will be dropped from the roll.

Independently of this rule, any student who neglects any part of the work for which he is registered (regardless of the number of units passed) may be dropped from the roll by faculty action. Any student dropped from the roll may be reinstated, after an interval of at least one half-year, for reasons satisfactory to the Committee on Disqualified Students. It is therefore absolutely necessary for any disqualified student who proposes to return to the University to communicate without delay with this committee, through the Recorder of the Faculties, in order that the question of reinstatement may be considered by the committee and in order that the student may have ample opportunity to prepare for examinations or other tests which the committee may impose.

Any student who is reported as having failed in an examination, or who, after being conditioned, does not pass the reëxamination for the removal of the condition, will be required to repeat every such deficient subject with the class that next takes it; unless, on recommendation of the officer of instruction in charge, the Faculty shall permit him to review a subject in which he is thus deficient with the assistance of an acceptable private tutor; in which case he will be excused from attending the recitations, but will be required to take the regular examinations at the end of the year or half-year.

Deficiencies in military science and physical education have the same effect as deficiencies in other subjects.

A matriculation deficiency in a subject continued in the University, in which the deficient student attains a rank of second grade, may be removed by the proper faculty on the recommendation of the officer of instruction in charge of the subject, with the approval of the chairman of the department. Students, however, are cautioned not to assume in advance that this will be done. In some departments no matriculation credit is given except upon matriculation examination.

#### EXTRA HOURS

Students in the junior college are permitted to carry a programme aggregating 19 units in any term, provided they have no conditions; otherwise they must limit their work to 16 units, including repeated work.

#### SPECIAL STUDENTS

Special students have free election, subject to the requirements that they confine their attention to some special study and its related branches.

## LEAVE OF ABSENCE AND HONORABLE DISMISSAL

*Prolonged leave of absence* must be sought by written petition to the proper Faculty.

*Brief leave of absence.* A student must apply for leave to be absent or excuse for having been absent from any college exercise other than an examination to the officer of instruction in charge of such exercise; unless, for unavoidable cause, the student is obliged to absent himself from all college exercises for one day or for several days, in which case the proper dean has authority to excuse. No excuse for absence will relieve the student from completing all the work of each course to the satisfaction of the instructor in charge.

*Discontinuance without notice.* Students who discontinue their work without formal leave of absence do so at the risk of having their registration privileges curtailed or entirely withdrawn.

*Honorable dismissal,* indicating that the student, while in good standing, has voluntarily severed his connection with the University, should be sought by written petition to the proper Faculty. Without such petition no record of honorable dismissal will be made.

## GENERAL INFORMATION

## LIVING ACCOMMODATIONS

*The cost of board and lodging* (1) in boarding houses in Los Angeles is \$35 to \$50 a month. (2) For students living in housekeeping rooms and "boarding themselves" the expenses may be reduced as low as \$20 to \$25 a month, but this plan of living is not generally recommended. (3) Families or groups of mature students who wish to rent furnished houses or apartments should apply to the local real estate agents. Rents near the campus for housing eight or more persons range from \$65 up, unfurnished. A two-room furnished apartment, with bath and kitchenette, janitor service, heat and house laundry rents from \$50 up.

The University has no dormitories. Lists of boarding places approved by the University authorities are published at the opening of every session. No freshman woman is permitted to complete her registration unless her boarding place is first approved by the Counselor of Women.

Lists of approved boarding places and further advice concerning living accommodations may be obtained at the office of the Counselor of Women, Millspaugh Hall.

**EMPLOYMENT**

Women students desiring employment should apply at the office of the Counselor of Women, Millspaugh Hall. Board and lodging can often be obtained in exchange for three or four hours of household work daily.

**EXPENSES OF STUDENTS**

Tuition in Academic Colleges at Berkeley and Los Angeles is free to residents of the state. Non-residents of California are charged a tuition fee of \$10 each half-year.

The following incidental expenses are to be met:

**Gymnasium and Health Test Fees.**—The gymnasium fee is \$2.50 per half-year, and the health test fee is \$3.00 per year: both are payable by every student before his study card is filed. These fees entitle students to gymnasium and first aid privileges, and are not remitted in whole or in part for those who may not desire to make use of these privileges. Gymnasium privilege comprises use of gymnasium, tennis courts, lockers, baths, washrooms, etc. The health fee entitles students to yearly physical examinations, consultation and advice, and first aid treatment.

One half of the amount of these fees is returned to students who leave the University before October 1 in the first semester or February 7 in the second semester.

**Physical examinations.**—Students are required to report for physical examinations at the beginning of each year. All students must satisfy the medical examiner concerning vaccination before entering.

Students who fail to meet their appointments with the medical examiner are subject to a fee of one dollar for a second appointment.

**Laboratory and Departmental Fees.**—In the laboratories a charge is made for materials actually used. This charge, for students in the elementary laboratories, amounts to from \$5 to \$30 per annum.

The military uniform deposit is \$30, and the military text book deposit is \$3; both deposits are payable by every student subject to military training before his study-card is filed. Military training is prescribed for all first- and second-year undergraduate male students who are citizens of the United States, able-bodied, and under twenty-four years of age at admission to the University. The United States furnishes uniforms and some text books for the use of students receiving military training. The University being responsible for uniforms and text books furnished by the United States requires the student to deposit with the Comptroller an amount necessary to cover the cost of the articles issued him. The deposit is refunded at the close of the academic year, or upon the student's withdrawal from the University, provided the student then returns in good condition all articles issued him. The amount necessary to replace

articles not returned by the student will be retained by the Comptroller. The text books are loaned the student through the University Library.

**Other expenses are:** Gymnasium outfit for men, about \$5; for women, about \$8; books and stationery, from \$18 to \$25 per annum. All students are eligible to membership in the Associated Students of the University of California. The cost of a membership card is about \$5 per year. The card entitles the holder to participation in the affairs of the Associated Students; a free subscription to the *Cub Californian*; free admission to all athletic contests held on the campus under the jurisdiction of the Associated Students with the exception of final intercollegiate contests.

The ordinary yearly expenses of a student in the academic departments, including personal expenses, would probably be at least \$650.

#### THE LIBRARY AT LOS ANGELES

The Library is located in a separate building with a capacity of 50,000 volumes. The reading rooms will accommodate about 400 students.

Students in all departments are entitled to the free use of the library, which is open daily, save Sundays. From Monday to Friday, inclusive, the hours are from 7:45 a.m. to 5 p.m.; Saturday, from 9 a.m. to 1 p.m. The Library contains about 31,000 volumes and 8,000 pamphlets. About 2,500 books are added annually. The Library subscribes for many of the leading periodicals, professional and general. In addition there are about 6,500 bound volumes of the literary and educational magazines.

A course of instruction in the use of books and the library is offered as an elective. Talks on the general use of the library are given each term to entering students; and a Library Handbook, containing rules and regulations and general information regarding the library, has been issued for general distribution.

#### THE APPOINTMENT SECRETARY

Upon the request of school officials the Appointment Secretary recommends teachers who, in the opinion of the faculty, are able to fill satisfactorily the positions for which teachers are being sought. To do this intelligently, it is necessary that the Appointment Secretary have detailed information concerning the vacancies to be filled.

The Secretary makes every endeavor to assist graduates to secure positions of the kind for which they are best fitted. Students are urged to make occasional calls at the office of the Appointment Secretary throughout their entire course.

There is no expense to the school officials or to students for the service rendered by this office.

SUMMER SESSION

The Summer Session of six weeks is designed for teachers and other persons who are unable to attend the University during the fall and spring sessions. There are at present no formal entrance requirements, except that applicants must be persons of good moral character and must be considered by the faculty to be of sufficient maturity and intelligence to profit by attendance upon the exercises of the session. The courses of instruction are mainly of university grade, and credit toward university degrees may be given to attendants who comply with such conditions of work and examinations as may be imposed by the instructors in charge.

The tuition fee is \$20, regardless of the number of courses taken.

An Announcement of the Summer Session is issued in April of each year and may be obtained by addressing the Dean of the Summer Sessions, Berkeley, California.

In addition to the session at the University in Berkeley the Summer Session in Los Angeles has been established and will be conducted at the Southern Branch of the University.

### III. ANNOUNCEMENT OF COURSES

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#### EXPLANATORY NOTE

#### CLASSIFICATION OF COURSES

##### UNDERGRADUATE COURSES.

- a. Junior College Courses.
- b. Teachers' Courses.

#### NUMBERING OF COURSES

All strictly teachers' courses are preceded by T.

Only the courses marked with the letter "C" will be given college credit at par in the University.

*Year Courses; Double Numbers.* A course designated by a double number (for example, History C4A-C4B) is continued through two successive half-years, that is, from September to June or from January to January. The student will use the first number in registering for the course during its first half-year, and the second number during its second half-year. A final report will be made by the instructor at the end of each half-year; "provisional mid-year reports" in year courses have been discontinued. The student may discontinue the course at the end of the first half-year, with final credit for the first half of the course.

#### ABBREVIATIONS

The credit value of each course in semester units is indicated for each semester by a numeral in parentheses following the title. A semester unit is one hour of the student's time at the University, weekly, during one half-year, in lecture or recitation, together with the time necessary in preparation therefor; or a longer time in laboratory or other exercises not requiring preparation. The session during which the course is given is shown as follows: I, first half-year; II, second half-year; "Yr.", throughout the year. When no hours are stated it is understood that these are to be arranged later. Further information concerning class hours will be found in the SCHEDULE.

ART

- NELLIE GERE, Assistant Professor of Fine Arts.
- ANNA P. BROOKS, A.B., B.S., Instructor in Fine Arts.
- HELEN C. CHANDLER, Instructor in Fine Arts.
- ANNITA DELANO, Instructor in Fine Arts.
- BESSIE E. HAZEN, Instructor in Fine Arts.
- LOUISE P. SOOY, Instructor in Fine Arts.
- BELLE H. WHITICE, Instructor in Industrial Arts.
- \_\_\_\_\_, Instructor in Industrial Arts.
- Mrs. B. K. SMITH, Associate in Industrial Arts.
- HAZEL DRAKE, <sup>Jackson</sup> Associate in Industrial Arts.

*Flora Goddard*

*Dorothy Phillips*  
*Birdie Glantz*

PREPARATION FOR THE MAJOR

Required: C1A-C1B (2-2), C17A-C17B (2-2), C22B-C22C (2-2), C24A (2), C17D (2), C42A (2), C42D (2).

The purpose of the Department of Art is to develop appreciation and self-expression; to prepare the student (a) to teach the space arts in a sequential way, and (b) to do commercial art work.

- C1A-C1B. Art Appreciation and History. (2-2) Yr. <sup>C1A I-II</sup> <sup>C1B II</sup> GERE  
Lectures, reports, and required reading. Appreciative study of the space-arts in historical sequence.
- C1C-~~C1D~~ Art Appreciation and History. (2) Yr. I GERE  
(A) Lectures, reports, and required reading. Oriental art; American and present day arts.  
(B) History of furniture.
- T50A. Art Crafts. (2) II DELANO  
Elementary processes. Stick printing, stencilling, block printing, dyeing, etc.
- T50B. Art Crafts (2) II. DELANO  
Craft problems relating largely to textiles.
- T12A-T12B. Art Methods. (2-2) Yr. BROOKS - Smith  
Theory of art teaching. Aims, problems, and materials related to art in the grades.
- T10. Art Structure (Teachers' Course). ~~Sec 1~~ (2) Either half-year. I-II  
Elements and principles of art. *Jackson-Smith-HAZEN*
- T14A. Art and Industrial Art (Kindergarten-Primary Course) (2-2) I  
Elements and principles of art in their relation to the projects of the primary grades. *Smith, Greenwood, Phillips*
- ~~T14B. Art and Industrial Art (Elective). (2)~~

\* Not offered in 1920-21.

- C12A Architecture (2) II *Chandler*



~~C162. Basketry. (2) II.~~

Practical work in woven and sewed basketry.

~~T62A-T62B. Bookbinding. (2-2) Yr. I-II - I-II~~

WHITICE

Construction of boxes, pads, portfolios of various kinds; binding of stabbed and sewed books.

~~C63. Bookbinding. (2) I.~~

WHITICE

Special binding and finishing.

~~T63A-T63B. Clay Modeling and Pottery. (2-2) Yr. I-II - II~~ *Goddard*

Modeling figures; hand-built pottery and casting; use of the wheel and firing.

~~C64. Clay Modeling and Pottery. (2-2).~~

Advanced work.

~~T64. Costume Appreciation and History of Costume. (2) II~~

*Smith, Jackson, Sooy*

~~T6B. Costume Appreciation and Design. (2) (Home Economics) II~~ *Jackson*

~~T56A-T56B. Costume Design. (2-2) I - I~~

SOOY

~~C17A. Design. (2) Either half-year. I - II~~

Art structure and study of foundations. *Glantz, Delano, Phillips, Sooy*

~~C17B. Design. (2) I - II~~

*Glantz - DELANO*

~~C17C. Design. (2) I.~~

*DELANO*

~~Design for application to the industrial arts.~~

~~C17D. Design. (2) I - II~~

*DELANO*

Advanced design.

~~C17E. Design. (2) II.~~

More advanced.

~~C22A-C22B. Drawing and Painting. (2-2) Yr. 2-2 I~~

*Chandler, Glantz, Goddard*

(A) Constructive drawing.

(B) Freehand drawing.

~~C22C. Drawing and Painting. (2) Either half-year. I - II~~ *CHANDLER, BROOKS*

Drawing from flowers, trees, animals and figures in line and mass.

~~C24A. Drawing and Painting. (2) I~~

*CHANDLER*

Drawing from the model.

~~T52B. Drawing and Painting. (2) I~~

*CHANDLER*

Advanced drawing from the model.

~~T52C. Drawing and Painting. (2) Yr. (2) II~~

*CHANDLER*

Water-color, pen and ink, pencil.

\* Not offered in 1920-21.

*C17F Design (2) I* *Jackson*

*T6A & Hist of Costume (1) II Sooy*

*T6A = Costume Appreciation (1) II Smith, Jackson, Sooy*

- ~~T52a. Drawing and Painting.~~ CHANDLER  
Advanced work for commercial uses.
- T28A. House Design. (2) II. HAZEN  
Designs for house plans, elevations, and details.
- ~~T28a. House Design and House Furnishing (Home Economics).~~ —
- T28c. House Furnishing. (2) H. ~~I-II~~ HAZEN
- T58A. House Decoration. (2). II Home Economics.) SOOY
- T58B. House Decoration. (2) II. SOOY  
Color harmony, furniture arrangement, etc.
- ~~T58c. House Decoration. (2) II.~~ SOOY  
Designs for details of the home.
- ~~T58d. House Decoration. (2) II.~~ SOOY  
Emphasis on professional technique.
- T33A. Illustration. (2) II. CHANDLER  
Free painting, illustrating children's stories for the grades; book composition.
- ~~T52. Illustration. (2) II.~~ CHANDLER  
Book illustration.
- T53B. Illustration. (2) II. SOOY  
Commercial illustration.
- T11. Industrial Arts. (2). Secs. 1, 2. I-II whitie  
A study of industrial materials and processes from primitive to modern industrial methods.
- T38A. Landscape. (2) II. HAZEN  
Sketching in ink, brush, pencil, water-color, and charcoal.
- ~~T138A. Landscape. (2) I.~~ HAZEN  
Sketching, dark and light composition.
- ~~T54a. Landscape. (2) I.~~ HAZEN  
Painting in water-color and oil.
- ~~T54b. Landscape. 2 II.~~ CHANDLER  
Decoration.
- T64A. Leather Craft. (2) II. WHITICE  
Construction of portfolios, boxes, desk sets, purses, handbags, etc.
- T64B. Leather Craft. (2) II. WHITICE  
Spacing, grouping, and the study of separate forms.

242A Lettering (2) I-II

sooy, Hazen

- T64B - (2) II

Hazen

- C42B. Lettering and Poster Design. (2) ~~4-2~~ **I** SOOY  
Poster designing for commercial purposes.
- ~~T65A-T65B. Metal Craft. (2-2) Fr.~~ WHITICE  
~~Work in copper and brass.~~
- T47A. Stage Craft. (2) ~~Fr.~~ **I** Phillip HAZEN  
Designing and construction of stage properties.
- T47B. Stage Craft. (2) ~~Fr.~~ **I** DELANO  
Designing, constructing and decorating settings.
- T67A. Stage Craft. (2) ~~Fr.~~ **I** ~~WHITICE~~  
Play production; training in stage management.
- T57A-~~57B~~. Weaving. (2) ~~Fr.~~ **I** WHITICE  
Simple pattern weaving, and designing of patterns.

### BIOLOGY

- LOYE HOLMES MILLER, M.S., Ph.D., Associate Professor of Biology.  
- FRANK E. OLDER, B.S., Assistant Professor of the Teaching of Agriculture.  
- SARAH ROGERS ATSATT, A.B., M.S., Instructor in Biology.  
- PIRIE DAVIDSON, M.A., Instructor in Zoology.  
- FRED M. ESSIG, A.B., Instructor in Botany and Bacteriology.

\*1. ~~Introductory Physiology. (4).~~

\*2. ~~Introductory Biology. (4).~~

→ T10. Advanced Physiology and Hygiene. (2) **I - II** ATSATT ✓  
Prerequisite: Biology 1 or its equivalent.

→ T11. Elements of Agriculture. (2) **I - II** OLDER, ESSIG

\* → T12. Nature Study. (2-3) **I - II** MILLER, ATSATT

~~T13A-T13B. Applied Anatomy. (3-3) Yr.~~ ATSATT

→ T21. Advanced Agriculture and School Gardening. (2) **I** OLDER

→ †C35A-C35B. A Study of Mammalian and Human Anatomy. (4-4) Yr. ATSATT ✓

→ Botany C2A-C2B. General Botany. (3-3) Yr. ESSIG  
Required for students in the College of Agriculture and of the natural sciences.

\* Not offered in 1920-21.

† For Pre-Nursing and Physical Education majors.

\* 2 or 3 cr credit v note Dr Miller in course rept book 1/25/21/22

- Bacteriology 1. Elementary Bacteriology. (4) (2) II ESSIG ✓
- Agriculture C5. General Horticulture. (3) II. OLDER ✓
- Zoology C1A-C1B. General Zoology. (4-5) Yr. MILLER, DAVIDSON  
Required for work in medicine and the natural sciences.
- Zoology C14. Zoology of the Higher Vertebrates. (1) I. MILLER
- Zoology C15. Organic Evolution. (2) II. MILLER  
A discussion of underlying principles.
- Zoology C17 B (2) II Davidson ✓

CHEMISTRY

- WILLIAM CONGER MORGAN, Ph.D., Professor of Chemistry.
- W. R. CROWELL, Ph.D., Assistant Professor of Chemistry.
- FLORENCE M. HALLAM, A.B., Instructor in Chemistry.
- \_\_\_\_\_, Assistant in Chemistry.
- \_\_\_\_\_, Assistant in Chemistry.
- \_\_\_\_\_, Assistant in Chemistry.

PREPARATION FOR THE MAJOR

Required: Chemistry C1A-C1B (10); calculus; Physics C1A-C1B or C2A-C2B (6); German; French.

- C1A-C1B. General Chemistry. (5-5) Yr. MORGAN, CROWELL  
Inorganic and qualitative analysis.
- C5. Quantitative Analysis. (3) I- II CROWELL  
A short course in gravimetric and volumetric analysis.
- C6A-C6B. Quantitative Analysis. (3-3) Yr. CROWELL  
Gravimetric and volumetric analysis.
- C8. <sup>A-C8B</sup> Elementary Organic Chemistry (3-3) I- II ✓ MORGAN, CROWELL
- C9. Elementary Organic Chemistry. (3) II MORGAN, CROWELL
- T10A-~~T10B~~. Food Chemistry. (2) I HALLAM ✓
- ~~T11A~~-T11B. Advanced Food and Household Chemistry. (2) II HALLAM ✓

## CLASSICAL LANGUAGES

-ARTHUR PATCH MCKINLAY, Ph.D., Assistant Professor of Latin.

## GREEK

- C1AB-C2AB. Beginning Greek, Attic Prose and Homer. (5-5) Yr. ✓  
MCKINLAY ✓
- ~~C40A-C40B. Prose Composition. (1) Yr. ✓~~  
MCKINLAY ✓
- C41. Introduction to Plato. (3) I. ✓  
MCKINLAY ✓
- C42 (2) II ✓  
MCKINLAY ✓

## LATIN

## PREPARATION FOR THE MAJOR

Required: 18 units of Latin, which may be distributed as either 6, 9, or 12 units in high school and 12, 9, or 6 in college.

Recommended: as much work as may be possible in Greek, Ancient History, French, and German.

- CC. Third-Year Latin: Ciceronian Prose. (3) I. ✓  
MCKINLAY ✓  
Open to those who have had two years of high school Latin.
- CD. Fourth-Year Latin: Augustan Poetry. (3) II. ✓  
MCKINLAY ✓
- C1. Cicero, De Senectute and Pliny's Letters. (3) I. ✓  
MCKINLAY ✓  
Open to those who have had four years of high school Latin.
- C5. Horace, Odes and Epodes. (3) II. ✓  
MCKINLAY ✓  
This course follows Latin 1.
- C3A-C3B. Latin. Prose Composition. (1-1) Yr. ✓  
MCKINLAY ✓
- C2. Catullus and Livy. (3) I. ✓  
MCKINLAY ✓  
Prerequisite: course 5.
- ~~-C6. Tacitus and Plautus. (3) II. ✓~~  
~~MCKINLAY ✓~~  
Prerequisite: course 2.
- C6. Tacitus + Plautus (3) II ✓  
MCKINLAY ✓

## COMMERCE

- CLOYD H. MARVIN, Ph.D., Assistant Professor of Commerce.
- C. A. LE DEUC, Ph.D., M.B.A., Assistant Professor of Economics.
- EVA M. ALLEN, Instructor in Commercial Practice.
- ESTELLA B. PLOUGH, Instructor in Commercial Practice.
- WALTER R. RHODES, Instructor in Commercial Practice.
- MARSHALL FRANCIS MCCOMB, LL.B., Lecturer in Business Law.
- F. M. COUCH, Lecturer in Credits and Collections.
- HAROLD MCCLANAHAN, Assistant in Economics.

## GENERAL STATEMENT

The Department of Commerce offers three types of professional courses: a Teacher Training Course to afford a knowledge of fundamental business facts and principles in addition to training in educational methods; a University Course preparing for the regular Junior Certificate of the University of California; a Technical Commercial Training Course intended to provide a knowledge of the principles of business and such practical training in business methods as part-time work will furnish.

## PREPARATION FOR THE MAJOR

Required: Economics C1; C1A-C1B; History C2A-C2B; C3A-C3B; Political Science C1A-C1B.

- C1A-C1B. Principles of Economics. (3-3) Yr. MARVIN and Assistants  
A survey of economic institutions. This course is prerequisite to all later work in economics.
- T3A-T3B. Shorthand. (3-3) Yr. ALLEN  
Elementary sounds expressed in shorthand characters; fundamental principles of Gregg's shorthand.
- T4A-T4B. Typing. (2-2) Yr. T4A (1) II - T4B (2) II ALLEN  
Instruction in the mechanism of the typewriter.
- C5A-C5B. Business Law. (2-2) Yr. McComb
- ~~T6A-T6B. Bookkeeping Principles. (2-2) Yr. LE DEUC, BRODS~~  
~~Double entry bookkeeping; fundamental books and time-saving devices.~~
- T7A-T7B. Bookkeeping Practice. (1-1) Yr. RHODES LeDe  
Intended to parallel course C6A-C6B. It offers the practice which illustrates the function and use of several bookkeeping operations.
- C10. English in Business Practice. (2) I-II. RHODES Wamb  
Practice in writing various types of business letters.
- T11A-T11B. Penmanship. (2-1) Yr. (2+3) I-II. PLOUGH  
Course in the principles of business handwriting.
- ~~T12. Mathematics for Business and Statistics. (2-1) Yr. LE DEUC~~  
~~The fundamental mathematical operations of business practice; rapid calculation; graphs, use of slide rule, etc.~~
- ~~(C9. Mathematics.) Mathematical Theory of Investment. (5) I. SHERWOOD, SHOWMAN~~
- C14A-C14B. Accounting Principles. (3-3) Yr. LE DEUC  
The fundamental principles which accountants must use in their work and the application of these principles in business organization and control.
- C15A-C15B. Accounting Practice. (3-3) Yr. LE DEUC  
This course parallels Commerce C14A-C14B and deals with the application of accounting principles to specific problems.
- ~~C11. Industrial History of the United States. (2) I. (See History)~~  
~~A discussion of economic conditions from 1789 to 1917.~~

- T50A-T50B. Business Organization and Management. (3-3) Yr. MARVIN  
A survey of the problems which arise in the production, sale, and distribution of products.
- T52. Office Organization, Administration, and Procedure. (2) II. MARVIN & De  
A study of the problems which arise in the organization, administration and procedure of the business office.
- \*T54. Marketing. (2) II.  
The elements of marketing; forms of buying and selling organizations.
- T55. Psychology of Salesmanship. (3) I - (2) II Wansbold  
A survey of the psychological principles, which include marketing methods and policies.
- ~~T56. Advertising Practice. (2) II.  
The relation of advertising to marketing; advertising methods, etc.~~
- T58. Salesmanship Practice. (2) I.  
The principles underlying salesmanship; selling problems of manufacturers and jobbers; the practice of individual salesmanship.
- ~~T59A-T59B. Employment Management. (3-3) Yr. MARVIN  
A survey of personnel problems, hiring, promotion, job analysis, labor turnover and efficiency methods.~~
- C3A-C3B. Economic Geography. (3-3) Yr. II (See Geography.) - McCallan  
A survey of the physical bases of economic development.
- ~~T65. Financial Organization. (3-0) Yr. MARVIN  
A study of the various types of financial institutions in the business world.~~
- ~~T66. Transportation. (3-3). MARVIN  
A study of fundamental principles.~~
- ~~T67. Credits and Collections. COUCH  
A study of credit and collection systems.~~
- T70. Elementary Statistics. (2) I I LE DEUC  
An introduction to statistical method.
- ~~T75. Organization and Administration of Commercial Education. MARVIN  
(3-3) Yr.  
The needs of commerce; training for commerce; aims of commercial education; types of commercial schools; place of commercial education in the general high school; vocational guidance; part-time work.~~
- ~~T76. Curricula and Methods in Commercial Education. (3-3) Yr. MARVIN and Staff  
Deals with the current practices in commercial education.~~
- ~~T79. Store Organization and Service. (2-2) Yr. MARVIN and Assistants.  
A survey of the plant, equipment, and personnel of retail business. A study of the merchandise to be handled.~~
- ~~T53. Part-Time Work.  
Special work in business in accordance with the field undertaken. Hours to be arranged.~~

## EDUCATION, PSYCHOLOGY, AND PHILOSOPHY

- ERNEST C. MOORE, Ph.D., LL.D., Professor of Education.
- CHARLES W. WADDLE, M.A., Ph.D., Associate Professor of Education.
- KATHERINE McLAUGHLIN, M.A., Associate Professor of Primary Education.
- GRACE M. FERNALD, Ph.D., Assistant Professor of Psychology.  
———, Assistant Professor of Education.
- MARVIN L. DARSIE, B.S., M.A., Assistant Professor of Education.
- CAROLYN S. FISHER, Ph.D., Assistant Professor of Psychology.
- ALMA M. PATTERSON, M.A., Instructor in Education.
- NELLIE B. SULLIVAN, A.B., Instructor in Psychology.

1. COURSES REQUIRED FOR THE ELEMENTARY CERTIFICATE  
AND KINDERGARTEN-PRIMARY CERTIFICATE

## A. EDUCATION

- T11. Principles of Education (5-3) I + II M. Stand Robinson  
The meaning and aim of education. Prerequisite: Psychology 2B.
- T12. Elementary Administration and California School Law. (2) I + II Smith  
The California school system is studied with particular reference to the law and the needs of the elementary teacher. Prerequisite: teaching 10.
- T53. Educational Sociology. (3) I + II Robinson  
Education and social progress; sociological principles applied to education. Prerequisite: Education T11. (Not required of students taking the kindergarten-primary course.)
- T21. Introductory Kindergarten-Primary Education. (2) I. McLAUGHLIN  
A discussion of the child in his plays, games, constructive and self-expressive activities. The child's part in his own education.
- T22. Kindergarten-Primary Curricula and Methods. (5) I. McLAUGHLIN  
The materials and subject matter suited to the needs of the kindergarten-primary child.
- T23. Kindergarten-Primary Practices (2-2) I - II WARING  
This course is intended to accompany practice teaching. It involves a discussion of observations, records and problems in teaching.
- T25. Kindergarten-Primary Standards, Goals and Measurements. (2) I. WARING  
The means of developing and standardizing schools and measures of accomplishment.



## B. PSYCHOLOGY

- Psychology CX. (1). **I** MOORE and Assistants  
How to study. Required during the first term of attendance, of all students except those of advanced standing.
- C2A. Introductory Psychology. (3) **I-II** EITHER half-year. FISHER, SULLIVAN  
The facts of consciousness and behavior. Prerequisite to all other courses in psychology.
- C2B. Genetic Psychology. (3) EITHER half-year. **I-II** FERNALD, FISHER  
A study of the development of consciousness and behavior. Prerequisite: Psychology 2A.

## 2. ELECTIVE COURSES

## A. EDUCATION

- T51. History of Education. (3) II.  
A study of the origin and evolution of modern educational tendencies. Prerequisite: Education T11.
- T13. Primary Education. (3) EITHER half-year. PATTERSON  
A practical course for the discussion of the problems of the primary school. Prerequisite: Education T11.
- T57. Educational Measurement and Diagnosis. (3) II. DARSIE  
To familiarize students with the use of standard tests, scales, in class measurements and individual diagnosis. Prerequisite: Teaching 10 or its equivalent.
- \*T24. Kindergarten-Primary Supervision. (2) II. McLAUGHLIN
- T61. Secondary Education. (3) **II** Smith DARSIE  
The problem of adolescent education. The high school and junior high school as institutions evolved to meet this problem. The secondary curriculum. Prerequisite: Education T11.
- T26. History of Kindergarten-Primary Education. (2) II. McLAUGHLIN  
A study of the development and the literature of a primary education.
- T27. (3) I. McLAUGHLIN  
The relation of kindergarten-primary work to that of the middle grades.
- \*T63. The Elementary Curriculum. (3) II. DARSIE  
The psychological and social significance of the elementary school studies. Prerequisite: Education T53.

\* Not offered in 1920-21.

- T62 Junior H.S. Admin. (2) **II**

Smith

## \*T65. The Administration of a School. (3) II.

The organization and administration of courses of study; the supervision of instruction, etc. Prerequisite: Education T55.

## - T66. Rural Education. (3) II

A survey of social and economic conditions of the rural community; the organization and management of the rural school, etc. Prerequisite: Education T11.

## - T60. Vocational Guidance. (2) II (1) II

A survey of the vocational guidance movement with especial attention to developing methods adapted to the upper grades. Prerequisite: Education T53.

## B. PSYCHOLOGY

*Elective Courses*

## - T70. Psychology of Elementary School Subjects. (3) I.

The psychology of learning as applied to common school branches. Prerequisite: Psychology C2B.

## - T77. Clinical Psychology. (3) II.

Mental diagnosis; the mental and physical characteristics of the superior, abnormal, retarded, and defective child; methods of instruction adapted to the several types of exceptional children. Prerequisite: Psychology C2B. (This course alternates with Psychology T70, thus giving a year's course in advanced psychology.)

## - T76A-T76B. Introductory Experimental Psychology. (3-3) Yr.

A laboratory course designed to familiarize the student with the methods and the use of the more common apparatus of experimental psychology. Prerequisite: Psychology C2A.

## C. PHILOSOPHY

## - C1A. Deductive Logic. (3) I.

DARSIE

## - C1B. Inductive Logic. (3) II.

DARSIE Moor

## - C4A. Introduction to Philosophy. (2) II.

MOORE

~~\*Not offered in 1920-21.~~

## ENGLISH

- FREDERIC T. BLANCHARD, M.A., Associate Professor of English.
- \*FRED ALLISON HOWE, LL.B., Ph.D., Assistant Professor of English.
- BENJAMIN F. STELTER, Ph.D., Assistant Professor of English.
- HERBERT F. ALLEN, Ph.D., Assistant Professor of English.
- AUSTIN K. GRAY, M.A., Assistant Professor of English.
- ALICE O. HUNNEWELL, Instructor in English.
- JOSEPHINE SEAMAN, Instructor in English.
- EVALYN THOMAS, A.B., Instructor in English.
- MARGARET CARHART, M.A., Associate in English.
- \_\_\_\_\_, Associate in English.

## PREPARATION FOR THE MAJOR

Required: English C1A-C1B (6 units).

## First-year English:

The requirements in English in the junior college are determined for each student by the examination in Subject A, which is required of all entrants to the colleges of the University. Students who pass this subject with a grade of 1 or 2 are not required, but are advised, to elect English C1A-C1B.

Students who pass Subject A with a grade of 3 are required to take English 1X before obtaining junior standing. Students who receive a grade lower than 3 in Subject A are required to take work in English composition (English A) until they have passed the examination. No student who has not passed Subject A will be admitted to any course in English composition except English A. The dates of the examinations are indicated in the Calendar. A fee of two dollars for the examination is required of those who do not present themselves at the appointed time.

A. Elementary English Composition (no credit).

SEAMAN

Required of students who have failed in Subject A.

- C1X. Oral and Written Composition. (3). **I-II** GRAY, SEAMAN, CARHART  
Either half-year. Required of students receiving grade 3 in Subject A.
- C1A-C1B. Oral and Written Composition. (3-3) **I-II**  
BLANCHARD, STELTER, ALLEN, GRAY, CARHART  
Theme writing and oral composition based upon selections from good literature. Open to Junior College students and teachers' course students receiving grade 1 or grade 2 in Subject A.

\* Absent on leave, 1920-21.

The foregoing courses are for Junior College and teachers' course students alike. Those following are open to second and third year students who have completed one year of freshman English.

- C2A-C2B. History of English Literature. (3-3) Yr. ALLEN  
The historical growth of English literature from the beginning down to the year 1800.
  - T10. Teaching of English. (3) I-II SEAMAN  
Methods and materials of English teaching in the upper grades. Elective for teachers' course students. Not open to first semester students.
  - C6B. Frequent Writing. (3) II. Allen - Stetter  
For at least six weeks daily one-page themes; appointments for individual criticisms. Limited to fifteen students in a section.
  - C6N. Narration. (3) I. BLANCHARD  
Descriptive and narrative writing. For at least six weeks daily one-page themes; appointments for individual criticism. Limited to fifteen students.
  - C11E. Chaucer. (3) II. GRAY  
Lectures, reports, discussions.
  - C17A. Shakespeare. (3) II. BLANCHARD  
The reading and interpretation of the plays in the following series: Hamlet, Twelfth Night, The Tempest.
  - C21A-C21B. Nineteenth Century Poetry. (3-3) Yr. STELTER  
First semester, The Romantic Movement; second semester, Victorian Poetry. Either semester may be taken separately.
  - C21C-C21H. Nineteenth Century Prose. (3) I. GRAY  
Study of selected essays. Lectures, reports, discussions. Either semester may be taken separately.
  - C25F. The Nineteenth Century Novel. (3) I. BLANCHARD  
Lectures, reports, discussions.
  - C31A-C31H. American Literature. (3-3) Yr II Blanchard  
HOWE
  - Journalism I-II no univ. credit.  
ORAL ENGLISH
- Requirement for the major: English C1A-C1B (6) and Public Speaking C2A-C2B (6).
- C2A-C2B. Public Speaking. (3-3) Yr (C2A(3)I-II · C2B(3)II THOMAS  
Elements of expression and interpretation.
  - C4A-C4H. Public Speaking. (2-2) Yr I HUNNEWELL  
Vocal expression, principles of gestures, and phonetics.

- C10A-C10B. Public Speaking. (3-3) Yr. THOMAS  
Analysis and dramatic representation of two plays. Stage technique and principles of criticism. A Greek play is presented at the close.
- T10A. Reading. (3). **I-II** HUNNEWELL  
Primary reading, literature, and language. Required for kindergarten-primary certificate. One semester. Prerequisite: Psychology 10, 11.
- T10B. Reading (3). **I** HUNNEWELL  
Methods of teaching literature in grades 1-6. This course is recommended to prospective teachers of the primary and lower middle grades.
- T15A. Reading. Story Telling. (2). **I** HUNNEWELL  
Choice and organization of material; practice in story telling and dramatization; bibliography.
- T15B. Reading. Children's Literature. (3). **II** GREENWOOD  
This course will consider the literature needs of the child and lead out into the fairy, folk and hero tales of the different countries.

### GEOGRAPHY AND GEOLOGY

\_\_\_\_\_, Assistant Professor of Geography.

- MYRTA LISLE MCCLELLAN, B.S., Instructor in Geography.  
- C. H. ROBISON, Ph.D., Instructor in Geography.  
- FORD ASHMAN CARPENTER, LL.D., Lecturer in Meteorology.  
- \*KATHLEEN S. BECK, B.S., Instructor in Geography.

#### PREPARATION FOR THE MAJOR

Required: Geography C1A (3); C1c-C2c (4).

Recommended: Matriculation Physics and Chemistry; Economics C3A or History C4 or C8 or Geology C1.

- C1A. Fundamentals of Geography. (3) Either half-year. **I-II** MCCLELLAN

~~\*1c. Elementary Meteorology. (3).~~

- C2B. Meteorology and Aeronautics. (1) Either half-year. **I-II** CARPENTER

A lecture course presenting atmospherics as applied to engineering, medicine, business, agriculture, and horticulture, and to the several branches of aeronautics. Prerequisite: Geography C1c.

- ~~\* C1c. Elementary Physiography. (3) Either half-year.~~

~~Evolution and influence of topographic forms.~~

\* Absent on leave, 1920-21.

- C2c. Map and Field Study of Physiography. (1) Either half-half. ROBISON
- T29. The Teaching of Geography. (3) Either half-year. McCLELLAN  
The fundamental purpose of geography as an instrument of education.
- C15. California. (3) II. \_\_\_\_\_  
Prerequisite: Geography C1c and C1A.
- C16A. North America. (3) II. \_\_\_\_\_  
Prerequisite: Geography C1c.
- C16B. South America. (3) I. McCLELLAN  
Prerequisite: Geography C1c.
- C16c. Europe. (3) II. ROBISON  
Prerequisite: Geography C1c.
- T57. Geographic Factors in American History. (3) I. ROBISON  
Prerequisites: Geography C1c and C1A. Primarily for third year students.
- T58. Geographic Factors in European History. (3) II. ROBISON  
Prerequisites: Geography C1c and C1A. Primarily for third year students.
- \*T59. Geography of the World's Great Cities. (3) I. \_\_\_\_\_  
Prerequisites: Geography C1c and C1A.
- \*T60. Conservation of Natural Resources. (3) II. \_\_\_\_\_  
Prerequisites: Geography C1c and C1A.

**ECONOMIC GEOGRAPHY**

(See Commerce)

**GEOLOGY**

- C1A. Elements of Geology. (3) I. + II. ROBISON  
Prerequisites: Elementary Physics and Chemistry.

**MINERALOGY**

- \*1A-1B. Determinative Laboratory. (4) Either half-year. \_\_\_\_\_  
Prerequisite: Chemistry.
- \*2A-2B. Crystallography. (3). \_\_\_\_\_  
Prerequisite: Chemistry.

\* Not offered in 1920-21.

## HISTORY

- FRANK J. KLINGBERG, Ph.D., Associate Professor of History.  
 -MELVA LATHAM, A.B., Assistant Professor of History.  
 -LUCY M. GAINES, M.A., Instructor in History.

## PREPARATION FOR THE MAJOR

Required: Any 3-unit year course in history.

Recommended: French, or German, or Latin, or Spanish, or Italian.

Of all students taking regular teachers' courses T1A or T1B is required. For junior standing take courses 2 and 4. Those who have completed work similar to the above may enter more advanced courses after consulting with the instructors in charge. A reading knowledge of some modern foreign language is an aid in the more advanced work.

- T1A-T1B. History of the United States. (3-3) Yr. (One semester required.)  
 \* GAINES, KLINGBERG, ~~KATHLET~~, LATHAM
- C2A-C2B. History of England and Great Britain. (2-2) Yr. KLINGBERG
- C4A-C4B. Social and Political History of Modern Europe. (3-3) Yr.  
 KLINGBERG
- T11. The Teaching of History. (2) Each semester. **I-II** LATHAM
- T13. The Economic and Social History of the United States. (2) Each semester. **I-II** LATHAM
- T59A. Pacific Coast History. (2) Each semester. **I-II** GAINES
- T75. Contemporary History. (1) Each semester. **I-II** GAINES
- C31. The Renaissance. (3) I. KLINGBERG
- C42. The French Revolution. (3) II. KLINGBERG
- ~~C83A-C83B. The Expansion of Europe Since the Fifteenth Century. (2-2) Yr. KLINGBERG~~
- ~~T51A-T51B. The Peace and Reconstruction. (2-2) Yr. KLINGBERG~~

HOME ECONOMICS

\_\_\_\_\_, Professor of Home Economics.

- ORABELLE CHILTON, B.S., Associate in Home Economics.
- MAUD EVANS, Associate in Home Economics.
- ELIZABETH LATHROP, Associate in Home Economics.
- EGNES E. MACPHERSON, Associate in Home Economics.
- FLORENCE A. WILSON, A.B., B.S., Associate in Home Economics.
- PAULINE LYNCH, Assistant in Home Economics.

- T10. Care of the Home. Household Management. (2) *Evans*

- T50. Teachers' Course in Elementary Methods. (3) *I-II Evans*

\*T55. Care of Children.

- T1A-T1B. Elementary Clothing. (3-3) *(I-II T1A) II T1B* WILSON

*II* - T60. Clothing. Advanced Course. (3) *II* LATHROP  
*I* Prerequisite: T1A-T1B.

- T58. Clothing. A Study of Textiles. (3) *II* I WILSON

- T11. Laundry. (2) *I* MACPHERSON  
 Prerequisite: Elementary Chemistry.

- T3A. Elementary Millinery. (2) *I - II* WILSON *Evans*

- T53B. Advanced Millinery. (2) *II* I WILSON

- T62. Clothing; Special Problems. (3) *II* LATHROP

- T5A-T5B. The Food Problem. (3-3) *TEA I-II T5B II* *(Evans, Lynch)* CHILTON

- T65. Large Quantity Cooking. (1) *I* ~~Evans~~ HALLAM *Evans*

- T66. Family Cooking. (3) *II* CHILTON *Evans*

- T67. Elementary Dietetics. (4) *I* Chilton

- T68. Advanced Dietetics. (4) *II* I Chilton

- T69. Experimental Cooking (Secondary). (3) *II* CHILTON

\* Not offered in 1920-21.

~~T64~~  
 T64 Large Quantity Cooking (1) *II* Lynch.



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### MATHEMATICS

- G. E. F. SHERWOOD, M.A., Associate Professor of Mathematics.
- H. M. SHOWMAN, E.M., M.A., Assistant Professor of Mathematics.
- †MYRTLE COLLIER, M.A., Assistant Professor of Mathematics.
- HARRIET GLAZIER, M.A., Assistant Professor of Mathematics.

*Heleen B Keller. Card under 941.0 made - 45*

*G. H. Hunt*

#### PREPARATION FOR THE MAJOR

Required: Mathematics C3A (3 units), C6 (3), C8 (3), C3B (3), A-CC (6).

Recommended: Physics; Astronomy; French; Italian; German; Latin.

- T10. *(2) 2* **I-II** GLAZIER *Keller*  
Required of all students taking the regular teachers' courses. Prerequisite: Psychology C2A.
- **CC**. Plane and Spherical Trigonometry. (3) **II** GLAZIER *Hunt*
- **C2**. Mathematical Theory of Investment. (5) **I** SHERWOOD, SHOWMAN  
Prerequisite: Algebra and Plane Trigonometry.
- **C3A-C3B**. Plane Analytic Geometry and Differential Calculus. (3-3) Yr **C3A II**  
Prerequisites: Plane trigonometry and algebra. *Harriet* SHOWMAN **C3B II**
- ~~C4A-C4B~~ **C4A-C4B**. Differential Calculus, Space Geometry, and Integral Calculus. *(4-4) II*  
Prerequisites: Course C3A-C3B. *Shoeman* SHERWOOD
- **C6**. Introduction to Projective Geometry. (3) **II** *Glazier*
- **C8**. College Algebra. (3) **I-II**
- **C10**. Advanced Calculus. (2) **I** SHERWOOD
- **C11**. Determinants and Theory of Equations. (3) **I** SHERWOOD

*111* **Math. Def. (3) II**

#### CIVIL ENGINEERING

- **C1A-C1B**. Plane Surveying. (3-3) Yr. SHOWMAN  
Prerequisites: Plane Trigonometry and Geometrical Drawing. Fee, \$5.00 each half-year.
- **C2**. Computation and Mapping. (1) **I** SHOWMAN  
Required in the Engineering Colleges. Prerequisite: Plane Surveying.
- **C8**. The Materials of Engineering Construction. (2) **II** SHOWMAN

*3 Summer Surveying (3) SP.*

#### ASTRONOMY

- **1**. Elements of Astronomy. (3) **I** SHERWOOD
- ~~**C2**. Surveyor's Course in Spherical Trigonometry and Astronomy. (2) **II** SHERWOOD~~

† Absent on leave.

CF Math.

(4) I

showman

-C3B.4A

(5) I

-CB Math.

2 II

Hunt.

Announcement of the Southern Branch

MECHANIC ARTS

- HAROLD W. MANSFIELD, Assistant Professor of Mechanic Arts.
- JOHN B. PHILLIPS, Instructor in Mechanic Arts.
- JAMES W. MARSH, Instructor in Mechanic Arts.
- CARLYLE F. PIERSON, Instructor in Mechanic Arts.
- FOSS R. BROCKWAY, Instructor in Mechanic Arts.
- SPURGEON CROSBY, Assistant in Mechanic Arts.
- ~~CC1~~ Heat + Power Engr. (2) II
- T1A. Organization. (2). I  
Manual training and industrial movement. MANSFIELD
- ~~T10A~~ T10B. Mechanical Drawing. (3-3) Yr. II  
Elements of mechanical drawing, orthographic projection, lettering, tracing, blue-printing, etc.
- CC. Instrumental Drawing. (3). I
- C3D. Drawing. (3). Descriptive Geometry. II
- O6A. Machine Design. (3). I MANSFIELD
- T67. Architectural Drawing. (3-5) II - I MANSFIELD
- T19. Woodwork. (1-5) I PIERSON
- T12 - T13. Pattern Making. (3-5) I - I PIERSON
- C8A - C8B. Shop Work. (2-2) Yr. I - II PIERSON
- C18. Shop Work. (3). In Summer Session. PIERSON
- ~~T10A - T10B. Foundry Practice. (3-3) Yr.~~ BROCKWAY
- T11A - T11C. Forge Practice. (5-5) Yr. (3) II CROSBY
- T12. Machine Shop Practice. (5). I - II PHILLIPS
- ~~T13. Machine Shop Practice. (5). I (5) set~~ PHILLIPS
- ~~T14A - T14B. Machine Shop Practice. (3-3) Yr.~~ PHILLIPS
- C9A - C9B. Shop Work. (2-2) Yr. (3-5) I - II PHILLIPS
- T15A - T15B. Auto Mechanics. (5-5) Yr. BROCKWAY
- T16A - T16B. Applied Electricity. (5-5) Yr. (I - II) MARSH
- T16C. Applied Electricity. (5). I - II MARSH
- T17. Automotive Laboratory. (2) I - II (1) II MARSH
- ~~T18. Automotive Laboratory. (3). MARSH~~
- T19 - T20. Applied Mechanics. (5-2) Yr. I MANSFIELD
- ~~T21 - T22. Current Mechanics. (1-1) Yr. MANSFIELD, PHILLIPS~~

*wing masek  
 a s. pointer  
 sword abal*

*masek  
 MANSFIELD*

*Bulley  
 masek*

*Bulley*

*masek*

(Architecture courses no univ. credit, Not listed here)

- Auto Ignition (3) I
- Applied Electricity (5) I
- Bldg Const. (3) II
- Auto Theory (6) II
- Storage Battery (2) II

**MILITARY SCIENCE AND TACTICS**

———, Professor of Military Science and Tactics.

The courses in military training are those prescribed by the War Department for infantry units of the senior division of the Reserve Officers' Training Corps. The United States furnishes arms, equipment, uniforms, and some text books for the use of students belonging to such units. The University being responsible for text books and uniforms furnished by the United States, requires the student to deposit with the Comptroller \$33 to cover the cost of the text books and uniform issued him. This deposit must be made before the student files his study-list; the deposit is refunded at the close of the academic year or upon the student's withdrawal, provided the student then returns in good condition all articles issued him. An amount necessary to replace articles not returned by the student will be retained by the Comptroller.

Students who are members of the National Guard or of the U. S. Naval Reserve Force are authorized to wear their Guard or Naval uniform in their military training at the University, and, upon application to the Supply Officer at the Military Science Building, may be excused from paying the deposit for uniform. Such students will pay a deposit of \$3 to cover cost of text books issued them.

**LOWER DIVISION COURSES**

The lower division or basic courses are prescribed for all first-year and second-year undergraduate male students who are citizens of the United States, able-bodied and under twenty-four years of age at the time of admission to the University. A first-year or second-year student claiming exemption because of non-citizenship, physical disability or age will present to the Department of Military Science and Tactics a petition, on the prescribed form, for such exemption. Pending action on his petition the student will enroll in the courses prescribed for his year and enter upon the work of such courses.

- 1A-1B. Basic Military Training (first year). (1½-1½) ~~Fr.~~ **II** —
- ~~2A-2B. Basic Military Training (second year). (1½-1½) Yr. —~~

- ROTC Camp S.S. 1921 (3 un)

MUSIC

*- Vernon Spencer - 2nd year*

- Greif, Professor of Music.
- FRANCES WRIGHT, Assistant Professor of Music.
- MABLE O. BARNHART, Instructor in Music.
- BERTHA WINSLOW VAUGHN, Teacher of Voice.
- ~~WILHELMINA RECTOR, Teacher of Piano.~~
- ~~T10K - (2) I (probably Kuehni - music)~~
- T10A. A Teacher's Course in Music. (2) I. - II Wright
- ~~T10B. Hindergast's Primary Music. (2) II. - III. Wright~~
- C2A-C2B. Orchestral Practice. (2-3) Yr. ~~I-II~~ Yr. (1+2) BARNHART
- C3A-C3B. Music Literature. (3-3) Yr. BARNHART
- C4A-C4B. Harmony. (3-3) Yr. *Spencer & Greif*
- T8A-T8B. Music Education. (3-3) Yr. I WRIGHT
- T9A. Music Observation. (1) II. - WRIGHT
- ~~T10A-T10B. Music Teaching. WRIGHT~~
- (See Department of Practice Teaching.)
- T11A-T11B. Voice. (4) II. (2) I-II VAUGHN  
Class lessons—a fee of \$15 each semester. Individual lessons by special arrangement with the instructor.
- C12A-C12B. Melodic Dictation. (3-3) Yr. WRIGHT
- T13A-T13B. Orchestral Instruments. (2). (1-1) Yr. BARNHART
- T15A-T15C. Piano. (2) Either half-year. I-II *Wright Greif*  
Class lessons—a fee of \$15 each semester. Individual lessons by special arrangement with the instructor.
- ~~T55B Harmony (2) II Spencer~~
- ~~T55A-T55B. Composition. (1-1) Yr. Spencer~~
- T65A. Course in Experimental Psychology. (3) II. FISHER  
The use of apparatus to test the factors of musical talent. Required of all secondary music students.
- T59A-T59B. Conducting. (2-2) Yr. ~~I-II~~ Piano Literature (2-2) Yr
- T63A-T63B. Music Literature. (2-2) Yr. (2-3) Yr. BARNHART
- ~~T64A-T64B. Form and Analysis. (2-2) Yr. (2-2) II BARNHART~~
- ~~T80A-T80B. Secondary Music Teaching. (5-5) Yr. WRIGHT~~
- T91A. Music Observation. (1) I. WRIGHT
- C1A-C1B. Choral Practice. (1-1) ~~I-II~~ *Wright & Greif*  
All students in the University who sing are eligible.
- C2C-C2D. Piano Ensemble. (2-2) Yr. I-II BARNHART

*Music T9A & T91A units changed from course reports.*

*Prints Voice (1/2 - 1) I-II*

### PHYSICAL EDUCATION FOR MEN

- FREDERICK W. COZENS, M.A., Assistant Professor of Physical Education.
- HARRY TROTTER, Assistant in Physical Education.
- BEN EINSIG, Assistant in Physical Education.
- E. C. FISHBAUGH, M.D., Physician for Men.

#### PREPARATION FOR THE MAJOR

Required: Physical Education C1AB (1), C7AB (1), C8AB (1), C10BD (1); Chemistry C1A (5); Zoology C1A (4).

#### PRELIMINARY STATEMENT

*Gymnasium Suit Fee.*—All male students unless excused from physical education by formal petition are required to pay a gymnasium suit fee of \$5.00 at the time of registration. This fee entitles the student to the use of a regulation gymnasium costume during his University course. Tennis shoes must be furnished by the individual and may be obtained at club prices by applying to the Book Store. The University provides for the laundry of suits.

*Medical Examination.*—All students entering the University or returning are required to pass a medical examination. Men showing abnormality of bodily conformation or physical defects of any sort are classed as "special" and are given individual work and advice based upon the data of the medical and physical examinations.

*Physical Tests.*—Male students in the Junior College taking required physical education must pass a series of practical physical tests (see announcement on Bulletin Board in the Men's Gymnasium). Intrants are classified for their prescribed work on the basis of physical efficiency, determined through tests of health, strength, endurance, agility, ability to swim and skill in self-defense. Men qualified for the athletic division may take regular work in any type of sport offered. Men failing so to qualify, but not found defective in any essentials of health or bodily conformation will be assigned to work adapted to their special needs. The aim of the department is to promote men as quickly as possible into the athletic division.

*Requirements.*—Junior College men are required to take two hours per week for four semesters ( $\frac{1}{2}$  unit credit per semester). Teachers' course men take two hours per week of practice work, two hours per week of recreation, and one hour per week of theory, all for two semesters (see courses T21A, B and T22A, B). Men wishing to major in physical education should consult with the chairman of the department immediately after registration.

Notices concerning all phases of the work of the department will be posted on the bulletin board of the Men's Gymnasium and must be read carefully by all. Men will be held strictly accountable for all regulations—so posted.

Note concerning courses offered: The letters A and B after course numbers denote the work of the first and second semesters of the freshman year. The same holds true for the letters C and D in the sophomore year.

Announcement of the Southern Branch

*C1* Hygiene (2) I-II *subbranch*

- ✓ C1A, B, C, and D. Gymnastics and Class Games. (½). I COZENS
- C2A, B, C, and D. Special Exercise. (½). COZENS
- C3A, B, C, and D. Track. (½). TROTTER
- C4B and D. Baseball. (½). COZENS
- C5B and D. Basket Ball. (½). COZENS
- C6A, B, C, and D. Tennis. (½). —
- Physical tests must be passed before men will be allowed to enroll in tennis.
- C7A, B, C, and D. Boxing. (½). COZENS, EINSIG
- C8A, B, C, and D. Wrestling. (½). —
- C10B and D. Swimming. (½) II. —
- Offered to men wishing to try out for the swimming team.
- C13A and C. American Football. (½). TROTTER
- C14A, B, C, and D. Games. (½). COZENS, EINSIG
- C15A, B, C, and D. Handball. (½). —
- ✓ T21A-221a. The History and Theory of Physical Education. (2). COZENS  
Required of all men in teachers' courses during their first or second year.
- ✓ T22B. Practice in Physical Training Activities. (2) II COZENS  
Includes formal work, athletics, indoor and outdoor games and all activities for elementary school boys. Required of all men in teachers' courses.

PHYSICAL EDUCATION FOR WOMEN

- MARION H. WALLACE, Assistant Professor of Physical Education.
- LUCILE R. GRUNEWALD, B.S., Instructor in Physical Education.
- GLADYS E. PALMER, A.B., Instructor in Physical Education.
- KATHERINE HERSEY, B.S., Instructor in Physical Education.
- — — — —, Instructor in Physical Education.
- FLORENCE SUTTON, Assistant in Tennis.
- NORMA GOULD, Assistant in Gymnastics.
- KATHERINE CLOSE, M.D., Lecturer in Physical Education.
- LILLIAN RAY, M.D., Medical Examiner. *Titcomb.*
- RUBY I. MCLEAN, R.N., Nurse.

✓ C2. Hygiene. (2) I. II  
Essentials of personal and public hygiene. *Titcomb*

\*C3. Hygiene. (3) I.  
Elementary Epidemiology. —

\* Not to be offered, 1920-21.

McLEAN

\* C5. Hygiene. (2) II.  
First aid.

\* C9. Hygiene. (1) ~~Either half-year.~~ II  
Home care of the sick.

~~McLean~~ McLean

\* C52A-C52B. Prescribed Course for Freshmen. (1/2-1/2) Yr. *staff*

\* ~~C52C-C52D~~ Prescribed Course for Sophomores. (1/2-1/2) Yr. *staff*

Prerequisite: course C52A-C52B.

\* C53A-C53B. Corrective Gymnastics. (1/2-1/2) Yr.

GRUNEWALD

~~C53C-C53D~~ Corrective Gymnastics. (1/2-1/2) Yr.

GRUNEWALD

Prerequisite: course C53A-C53B.

\* C60A-C60B. Folk Dancing. (1/2-1/2) Yr.

Prerequisite: C52A-C52D.

Wardell  
Wardell

\* ~~C60C-C60D~~ Folk Dancing (1/2-1/2) Yr. # I

\* C61A-C61B. Aesthetic Dancing. (1/2-1/2) Yr.

Prerequisite: C52A-C52D.

Wardell

\* C61C-C61D. Aesthetic Dancing. (1/2-1/2) Yr. I

Prerequisite: course C61A-C61B.

Wardell

~~T62A-T62B. Aesthetic Dancing. (1/2-1/2) Yr.~~

~~T62C-T62D. Aesthetic Dancing. (1/2-1/2) Yr.~~

Prerequisite: course C62A-C62B.

\* C65A-C65B. Gymnastics. (1/2-1/2) Yr. I

Prerequisite: C52A-C52D.

Palmer

~~C65C-C65D. Gymnastics. (1/2-1/2) Yr.~~

~~Prerequisite: course C65A-C65B.~~

~~C66A-C66B. Gymnastics. (1/2-1/2) Yr.~~

~~Prerequisite: courses C65A-C65B, C65C-C65D.~~

~~T70A-T70B. Plays and Games. (1/2-1/2) Yr.~~

\* T71A-T71B. Athletics. (1) I. (1-1) Yr. (1-1-1)

Palmer

~~T71C-T71D. Athletics. (1) II.~~

\* T72A-T72B. Athletics. (1) II

T72C-T72D. Athletics. (1) II.

T73A-T73B. Athletics. (1) I.

T73C-T73D. Athletics. (1) II.

T74A-T74B. Athletics. (1) I.

T74C-T74D. Athletics. (1) II.

+ C52AB (1) I Grunewald

\* T75A-T75B. Recreation. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. ~~Autten~~  
PALMER  
 This course may be taken under the direction of the Women's Athletic Association. Points toward Association honors may be earned.  
 Fall season: field hockey, swimming, tennis, golf.  
 Winter season: basketball, indoor baseball, apparatus.  
 Spring season: outdoor baseball, field and track, swimming, archery.  
 All seasons: dancing.

~~T75C-T75D. Recreation. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr.~~ ~~PALMER~~  
 Continuation of course T75A-T75B.

~~T76. History of Physical Education. (9) II.~~

† T77. Principles of Physical Education. (3) I. PALMER

† T78. The Nature and Functions of Play. (3) II. PALMER

† T79. Child Development. (2) I. ~~GRUNEWALD~~ HERSBY  
 To be taken in conjunction with Psychology C2B.

~~C91. Kinesiology. (3) I.~~ WALLACE

\*55. Bacteriology. (3) —  
 The mode of transmission of disease; disinfection, and the methods of disposal of infective material.  
 Lectures, 2 hours; laboratory, 2 hours.

† T56. Clinical Pathology. (3) II. CLOSE

\*57. Physical Diagnosis. (3) II. —  
 The methods of diagnosis in physical examination.  
 Lectures, 2 hours; laboratory, 2 hours.

\*58. Physiology of Exercise. (3). —

\* T59A-T59B. Therapeutic Gymnastics. (2) Yr. GRUNEWALD  
 The theory and practice of corrective gymnastics and massage.

T50. Theory and Practice of Physical Examination. (2) I. GRUNEWALD

T51A. Special Methods in Leadership of Elementary Activities. (2) I. WALLACE, PALMER, HERSBY

T51B. Continuation. (2) II.

T51C. Continuation. (2) I.

† T67A-T67B. Special Methods in Leadership of Secondary Activities. WALLACE, PALMER  
 (4) Yr. I

† T68. Administration of Elementary Physical Education. (2) II. WALLACE

T69. Administration of Secondary Physical Education. (3) II. WALLACE

T10A. Practice Teaching. (2) Either half-year. HERSBY

\* Not to be given, 1920-21.



- T11A. Practice Teaching. (2) Either half-year. HERSEY  
 T63A. Secondary Practice Teaching. (2) Either half-year. —  
 T64A. Secondary Practice Teaching. (2) Either half-year. —

## TEACHERS' COURSES

- + T10. Physical Education. (2) Either half-year. I-II - Hersey Wallace GRUNEWALD  
 Lecture, 1 hour; practice, 2 hours.  
 + T11. Physical Education. (2) Either half-year. I-II Wallace GRUNEWALD Hersey  
 Lecture, 1 hour; practice, 2 hours.  
 + T7. Physiology. (3) II. CLOSE  
 A course designed to meet the needs of students of public health.  
 Lectures, 2 hours; laboratory, 6 hours. Waring  
 + T12 B (2) II — Douglas  
 + T13 (2) II — Douglas

## PHYSICS

- JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.  
 - LEO DELSASSO, Assistant in Physics.  
 — — — — —, Assistant in Physics.  
 — — — — —, Assistant in Physics.

## PREPARATION FOR THE MAJOR

Required: Physics C1A-C1B, C4A-C4B (12), or C2A-C2B, C3C-C3D (10);  
 Mathematics C3A-C3B (6); Chemistry C1A-C1B (10).

Recommended: French or German.

The laboratory fee is \$4.00 per semester. This fee is charged for every course consisting wholly or in part of laboratory work.

- C1A-C1B. General Physics. (3-3) Yr. ADAMS  
 Mechanics, sound, and heat. Prescribed for students in engineering and chemistry.  
 - C2A-C2B. General Physics. (3-3) Yr. Adams  
 Mechanics, sound, light, heat, and electricity. Prescribed for premedical and agricultural students and open to other students who are taking course C3A-C3B.  
 - C3A-C3B. Physical Measurements. (1-1) Yr. I + II Adams  
 Prescribed for premedical students, and open to other students who are taking course C2A-C2B. Equivalent to one-half of C3C-C3D.  
~~C3C-C3D. (2-2) Yr. Adams~~  
 - C4A-C4B. General Physics. (3-3) Yr. Adams  
 Light and electricity. Prescribed for students in engineering and chemistry.  
 - C5. Magnetism and Electromagnetism. (3). II ADAMS  
 Prescribed for students in the College of Mechanics, as the equivalent of Electrical Engineering 1.

**POLITICAL SCIENCE**

-CHARLES E. MARTIN, Ph.D., Assistant Professor of Government.

-C1A-C1B. Government. (3-3) Yr. MARTIN  
 A course in comparative government; the forms and functions of governments in Europe and America.

-C5A-C5B. Foreign Relations of the United States. (3-3) Yr. MARTIN  
 American Relations with Europe, Latin America, and the Far East.

-C3A-C3B. International Law. (2-2) Yr. MARTIN  
 An examination of the general principles of international law, including the laws of peace, war and neutrality, and special situations growing out of the Great War.

-C2 B Politics (3) II Martin

**PRACTICE TEACHING**

-CHARLES W. WADDLE, Ph.D., Associate Professor of Education, in charge of Training.

-KATE F. OSGOOD, Assistant Supervisor of Practice Teaching.

-ETHEL B. WARING, M.A., Associate in Primary Education and Supervisor of Primary Training.

-BERTHA E. WELLS, Assistant Supervisor of Practice Teaching.

-HELEN B. KELLER, Supervisor of Adjustment Room.

———, Training Teacher in charge of Home Economics.

-BLANCHE KELLS, Teacher of Physical Training.

-BARBARA GREENWOOD, Teacher in charge of the Kindergarten.

-MARY E. DOUGLASS, A.B., Assistant Teacher in the Kindergarten.

-ADELA ADAMS SAMUELS, Assistant to the Superintendent of Primary Training.

-EDITH WALLOP, Teacher in charge of Second Grade.

-EDITH HOPE RINGER, Teacher in charge of Third Grade.

-KATHERINE SPIERS, B.L., Teacher in charge of Fourth Grade.

-LULU M. STEDMAN, Teacher in charge of Fifth Grade.

-EMMA J. ROBINSON, Teacher in charge of Sixth Grade.

-MABEL C. JACKSON, A.B., Teacher in charge of Seventh Grade.

-KATHERINE KAHLEY, A.B., Teacher in charge of Eighth Grade.

-MARGARET M. CAMPBELL, B.S., Teacher in charge of Ninth Grade.

## THE TRAINING SCHOOL\*

The University Training School comprises a kindergarten, the six elementary grades, and the three years (7-9) of the junior high school. Pupils are admitted upon the same terms as to Los Angeles city schools. The school furnishes a thorough elementary and junior high school education.

An opportunity room affords to children of superior ability a chance to complete the work of the middle grades in less than the usual time with a fuller and richer curriculum than that of the ordinary grades. An adjustment room is also maintained in which children of the middle grades, who from one cause or another, are in need of special individual help in certain subjects receive such individual assistance as may be found necessary to put them on their feet educationally so that they may complete the work of a grade in which they might otherwise fail.

## PRACTICE TEACHING

Ten semester hours of practice teaching are required of all candidates for the Elementary Teachers' Certificate except those who may be partially credited on account of teaching experience. No student is recommended for this certificate without having satisfactorily completed at least five semester hours of practice teaching in one of the training schools.

All students, except those who enter with second year standing, must have had a required course in the subject or subjects they are to teach before receiving the first assignment and must have reached full second year standing. Teaching 10A (five hours) is regularly taken in the first semester of the second year; teaching 10B (five hours) in the last semester of the course. Elective teaching (teaching 20 hours by individual arrangement) is offered to those who desire or who need additional training.

Secondary practice teaching is provided for in the high schools of Los Angeles city, under the supervision of the special departments of the Southern Branch of the University of California.

In addition to regular grade work opportunities for elective teaching are afforded in the adjustment room, in Americanization classes in Los Angeles day and evening schools, in playground work, garden classes, etc.

Weekly conferences under the direction of training teachers and supervisors are required in connection with each teaching assignment in the training schools.

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\* In addition to the University Training School, portions of two Los Angeles city schools are utilized as supplemental training schools. In 1919-20 the Grand Avenue School and the Thirty-sixth Street School were so used. Some students are given the opportunity to do cadet teaching in other city schools under the supervision of the regular teachers and that of an Assistant Supervisor of Training from the University.

A high standard of work is required of students in teaching. Those who are unable to attain a reasonably high standard may be denied recommendation for certification. Students who do not possess the qualifications necessary for a high quality of service are advised as soon as this can be discovered to turn their attention to some other line of work.

#### ASSEMBLIES

All candidates for teachers' certificates are required to attend a series of assemblies during the last semester preceding the completion of any teachers' course. These assemblies have to do with the student's relationship to the institution, to the Appointment Secretary, to public school officials by whom they are to be employed, and with other matters of importance to prospective teachers. These assemblies are in charge of the Supervisor of Training.

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#### PRACTICE TEACHING COURSES

##### 1. GENERAL ELEMENTARY GRADE TEACHING

Teaching 10A. (5). General Elementary Grade Teaching.

Teaching 10B. (5). General Elementary Grade Teaching.

Teaching 11A. (5). General Junior High School Teaching.

Teaching 20. (Hours by individual arrangement.) Elective General Grade Teaching.

Teaching 21. (Hours by individual arrangement.) Elective Junior High School Teaching.

##### 2. KINDERGARTEN-PRIMARY TEACHING

Teaching K-P10A. Kindergarten-Primary Teaching.

Teaching K-P10B. Kindergarten-Primary Teaching.

Teaching K-P20. (Hours by individual arrangement.) Elective Kindergarten-Primary Teaching.

## 3. SPECIAL ELEMENTARY, JUNIOR HIGH, AND SECONDARY TEACHING

*a. Fine Arts Teaching*

- Teaching A10A. Elementary Fine Arts Teaching.  
Teaching A10B. Elementary Fine Arts Teaching.  
Teaching A60A. Secondary Fine Arts Teaching.  
Teaching A60B. Secondary Fine Arts Teaching.  
Teaching A20. Elective Fine Arts, and A70, Elective Secondary Fine Arts Teaching.

*b. Industrial Arts Teaching*

- Teaching I10A. Elementary Industrial Arts Teaching.  
Teaching I10B. Elementary Industrial Arts Teaching.  
Teaching. 70. Elective Elementary Industrial Arts Teaching.

*c. Commercial Teaching*

- Teaching Co11A. Junior High School Teaching in Commerce.  
Teaching Co11B. Junior High School Teaching in Commerce.  
Teaching Co60A. Secondary Teaching in Commerce.  
Teaching Co60B. Secondary Teaching in Commerce.  
Teaching Co21. Elective Junior High School, and Co70, Elective Secondary Teaching in Commerce.

*d. Household Arts and Science Teaching*

- Teaching HE10A. Elementary Home Economics Teaching.  
Teaching HE10B. Elementary Home Economics Teaching.  
Teaching HE11A. Junior High School Teaching in Home Economics.  
Teaching HE60A. Secondary Teaching in Home Economics.  
Teaching HE60B. Secondary Teaching in Home Economics.  
Teaching HE20. Elective Elementary, and HE70, Elective Secondary Teaching in Home Economics.

*e. Mechanic Arts Teaching*

- Teaching MA10A. Elementary Manual Arts Teaching.  
Teaching MA10B. Elementary Manual Arts Teaching.  
Teaching MA11A. Junior High School Teaching in Mechanic Arts.  
Teaching MA60A. Secondary Mechanic Arts Teaching.  
Teaching MA60B. Secondary Mechanic Arts Teaching.  
Teaching MA20. Elective Elementary Mechanic Arts, and MA70, Elective Secondary Mechanic Arts Teaching.

*f. Music Teaching*

- Teaching M10A. Elementary Music Teaching.  
Teaching M10B. Elementary Music Teaching.  
Teaching M11A. Junior High School Music Teaching.  
Teaching M60A. Secondary Music Teaching.  
Teaching M60B. Secondary Music Teaching.  
Teaching M20. Elective Elementary Music, and M70, Elective Secondary Music Teaching.

*g. Physical Education Teaching*

- Teaching PE10A. Elementary Physical Education Teaching.  
Teaching PE10B. Elementary Physical Education Teaching.  
Teaching PE11A. Junior High School Physical Education Teaching.  
Teaching PE60A. Secondary Physical Education Teaching.  
Teaching PE60B. Secondary Physical Education Teaching.  
Teaching PE20. Elementary Physical Education, and PE70, Elective Secondary Physical Education Teaching.

**ROMANIC LANGUAGES**

- A. G. W. CERF, M.A., Litt.D., Lecturer in French.
- FREDERICK S. BECKMAN, Ph.D., Assistant Professor of French and Spanish.
- ANNA KRAUSE, A.B., Associate in Spanish.

**FRENCH**

## PREPARATION FOR THE MAJOR

Required: 16 to 19 units in lower division courses in French.

Recommended: Latin, Greek, English, Philosophy 4A.

- CACB. Elementary French. (5-5) Yr. CERF, BECKMAN
- C-CD. Intermediate French. (3-3) Yr. CERF, —
- C20A-C20B. Advanced French. (3-3) Yr. Beckman CERF

**SPANISH**

## PREPARATION FOR THE MAJOR

Required: 16 to 19 units of lower division courses in Spanish; 6 units of some other Romanic language.

Recommended: Latin; History of Spain and Spanish Colonies; English; a modern language.

- CACB. Elementary Spanish. (5-5) Yr. BECKMAN, KRAUSE
- C-CD. Intermediate Spanish. (3-3) Yr. BECKMAN
- C5A-C5B. Advanced Spanish. (3-3) Yr. KRAUSE  
Open only to students of Commerce.
- C10A-C10B. Commercial Spanish. (3-3) Yr. BECKMAN

**CIRCULARS OF INFORMATION—(Continued)**

For the following, apply to the proper Dean or Registrar:

The Circular of the California School of Fine Arts, in San Francisco.

The Annual Announcements of the Hastings College of the Law, the Medical School, the College of Dentistry, and the California College of Pharmacy, in San Francisco; the Los Angeles Medical Department, in Los Angeles.

For the following, apply to the *Dean of the College of Agriculture*, Berkeley, California.

The Prospectus of the College of Agriculture.

The Announcement of Courses in Forestry.

The Annual Announcement of Farmers' Short Courses.

The Annual Report of the College of Agriculture and the Agricultural Experiment Station.

The Bulletins and Circulars of the Agricultural Experiment Station.

A circular containing detailed information concerning the scientific publications of the University, with prices, will be sent on application to the Manager of the University of California Press. The separate numbers of the several series appear at irregular intervals, making, however, uniform volumes.



**UNIVERSITY OF CALIFORNIA BULLETIN**  
**Southern Branch**

**A SERIES IN THE ADMINISTRATIVE BULLETINS**  
**OF THE UNIVERSITY OF CALIFORNIA**

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**Issued quarterly in July, October, January, and April**

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**(Application for entry as second class mail now pending.)**