

# University of California Bulletin

THIRD SERIES. Vol. XX, No. 4

**ANNOUNCEMENT**  
OF THE  
**UNIVERSITY OF CALIFORNIA**  
**SOUTHERN BRANCH**  
FOR THE  
**ACADEMIC YEAR, 1926-27**

**OCTOBER, 1926**

**UNIVERSITY OF CALIFORNIA PRESS**  
**BERKELEY, CALIFORNIA**

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# Administrative Bulletins of the University of California

1926-27. No. 6

## CIRCULARS OF INFORMATION

For copies of this Announcement address the *Recorder, University of California, Southern Branch, Los Angeles*. Price, 20 cents; postpaid, 25 cents (listed as No. 3, below).

For the Catalogue of Officers and Students, Section II, Southern Branch, published in October of each year, address the *Recorder, University of California, Southern Branch, Los Angeles*. Price, 15 cents; postpaid, 20 cents (No. 19, below).

For the Announcement of the University of California Summer Session in Los Angeles apply to the Summer Session Office, 815 Hillstreet Building, Los Angeles (No. 25, below).

The circulars of information concerning the colleges, schools, and departments of the University are as follows. Letters of inquiry should be addressed as indicated below. The circulars are sent free except those for which a price (which includes postage) is given.

1. 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, requirements for admission to undergraduate status, requirements for degrees, and expenses. Sent free by mail by the University Press on request. A charge of 5 cents is made for copies distributed on the University Campus.
2. The Annual Announcement of Courses of Instruction in the Departments at Berkeley. Price, 30 cents.
3. The Annual Announcement of the University of California, Southern Branch, Los Angeles. Price, 25 cents.
4. The prospectus of the College of Agriculture. General information concerning the College of Agriculture at Berkeley, Davis, Riverside, and elsewhere; its organization, requirements for admission, degrees, etc.
5. The Announcement of Courses in Forestry.
6. The Annual Announcement of the Farmers' Short Courses.
7. The Annual Report of the College of Agriculture and the Agricultural Experiment Station.
8. The Bulletins and Circulars of the Agricultural Experiment Station.
9. The Circular of the California School of Fine Arts, San Francisco.
10. The Annual Commencement Programme containing the list of degrees conferred, scholarships, prizes, and other honors.
11. The Annual Announcement of the College of Dentistry, San Francisco.

(Continued on third page of cover)

UNIVERSITY OF CALIFORNIA

ANNOUNCEMENT

OF THE

UNIVERSITY OF CALIFORNIA

SOUTHERN BRANCH

FOR THE

ACADEMIC YEAR, 1926-27

SEPTEMBER, 1926

UNIVERSITY OF CALIFORNIA PRESS

BERKELEY, CALIFORNIA

1926

Letters of inquiry concerning the Southern Branch should be addressed to the *Recorder, University of California, Southern Branch, Los Angeles.*

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

For the list of bulletins of information concerning the several colleges and departments see pages 2 and 3 of the cover.

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

### **HOW TO REACH THE UNIVERSITY**

The University is reached by three yellow-car lines, one red-car line, and a motor bus line.

1. Heliotrope Drive Line ("H" yellow car). Leave car at Melrose avenue and Heliotrope drive.
2. Santa Monica Boulevard Line (red car). Leave car at either Vermont avenue or Heliotrope drive.
3. Crown Hill Line ("C" yellow car). Leave car at Monroe street.
4. Vermont Avenue Line ("V" yellow car). Leave car at Monroe street.
5. Vermont and Sunset Bus Line. Leave bus at the University.

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# CALENDAR, 1926-27†

1926

- Aug. 3, Tuesday } Matriculation examinations at Berkeley only.‡
- Aug. 7, Saturday }
- Aug. 30, Monday } Application for admission in September, 1926, with complete credentials, should be filed with the Examiner on or before this date. Late filing fee, \$2.00.\*
- Sept. 10, Friday } Examination in Subject A, English Composition, 8:30 a.m. Required of all undergraduate intrants (see regulations, page 39).
- Sept. 10, Friday } General Intelligence Test, 1:30 p.m. (required of new entrants in the Teachers College).
- Sept. 11, Saturday } Registration of new students.
- Sept. 13, Monday } Registration of old students, including re-intrants.
- Sept. 14, Tuesday } Instruction in all classes begins at 8:00 a.m.
- Nov. 25, Thursday } Thanksgiving Recess.
- Nov. 27, Saturday }
- Dec. 23, Thursday } Christmas Recess.
- Jan. 1, Saturday }

1927

- Dec. 29, Wednesday }
- Dec. 31, Friday } Matriculation examinations, at Berkeley only.‡
- Jan. 3, Monday }
- Jan. 4, Tuesday }
- Jan. 22, Saturday } Mid-year examinations (subject to change).
- Jan. 29, Saturday }
- Jan. 28, Friday } Applications for admission in February to be filed.\*
- Feb. 5, Saturday } Registration of students for the second half-year.
- Feb. 7, Monday }
- Feb. 8, Tuesday } Instruction begins at 8:00 a.m.
- Feb. 22, Tuesday } Washington's Birthday, a holiday.
- Mar. 15, Tuesday } Last day for applications for undergraduate scholarships for 1927-28.
- Mar. 23, Wednesday } Charter Day.
- May 9, Monday }
- June 18, Saturday } Intersession at Berkeley.
- May 30, Monday } Memorial Day, a holiday.
- June 1, Wednesday } Half-year examinations (subject to change).
- June 8, Wednesday }
- June 10, Friday } The Eighth Southern Branch Commencement.
- June 13, Monday }
- July 9, Friday } Summer School of Surveying
- June 20, Monday } Summer Session at Berkeley.
- July 30, Saturday }
- June 25, Saturday } Summer Session at Los Angeles.
- Aug. 6, Saturday }
- July 4, Monday } Independence Day, a holiday.
- Aug. 29, Saturday } Applications for admission in September, 1927, with complete credentials should be filed with Recorder on or before this date. Late filing fee, \$2.00.\*
- Sept. 10, Saturday } Registration of new students.
- Sept. 12, Monday } Registration of old students and re-intrants.
- Sept. 13, Tuesday } Instruction in all classes begins at 8:00 a.m.

† For the calendar of the University at Berkeley address the Recorder of the Faculties, University of California, Berkeley, California. In 1926-27 the fall semester at Berkeley opens August 17; the spring semester January 11. Note that applications for admission should be filed before August 2 and before January 1.

Students who expect to transfer to Berkeley should do so in August, since the difference in the two calendars makes transfer in January very difficult.

\* *Importance of early application:* To give time for necessary correspondence applications and credentials should be forwarded to the Recorder as soon as obtainable from the school authorities.

‡ To be discontinued after January, 1927.

## 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 Governor's Office, State Building, San Francisco. The Los Angeles office of the Regents is in the Hillstreet Building, 816 Hill street, Los Angeles.

## REGENTS EX OFFICIO

**HIS EXCELLENCY FRIEND W. RICHARDSON**  
Governor of California and President of  
the Regents  
Sacramento

**CLEMENT CALHOUN YOUNG, B.L.**  
Lieutenant-Governor of California  
2820 Regent st, Berkeley

**FRANK F. MERRIAM**  
Speaker of the Assembly  
Long Beach

**WILL C. WOOD**  
State Superintendent of Public Instruction  
Sacramento

**ROBERT A. CONDER**  
President of the State Agricultural  
Society  
Orino

**BYRON MAURY**  
President of the Mechanics' Institute  
418 Phelan bldg, San Francisco

**JULIUS WANGENHEIM, B.S.**  
President of the Alumni Association  
San Diego

**WILLIAM WALLACE CAMPBELL, ScD., LL.D.**  
President of the University  
219 California Hall, Berkeley

## APPOINTED REGENTS

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

**ARTHUR WILLIAM FOSTER (1932)**  
244 California st, San Francisco

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

**GUY CHAFFEE EARL, A.B. (1934)**  
408 Standard Oil bldg, San Francisco

**WILLIAM HENRY CROCKER, Ph.B. (1940)**  
Crocker First National Bank  
San Francisco

**JAMES KENNEDY MOFFITT, B.S. (1940)**  
41 First st, San Francisco

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

**EDWARD AUGUSTUS DICKSON, B.L. (1942)**  
510 Lucerne Blvd, Los Angeles

**JAMES MILLS (1942)**  
Hamilton City

**CHRISTIE HARVEY ROWELL, Ph.B. (1936)**  
1204 Tamalpais rd, Berkeley

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

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

**MRS. MARGARET RISHEL SARTORI (1938)**  
725 West Twenty-eighth st, Los Angeles

**JOHN RANDOLPH HAYNES, Ph.D., M.D.  
(1938)**  
429 Consolidated Realty bldg,  
Los Angeles

**ALDEN ANDERSON (1932)**  
Capital National Bank, Sacramento

**JAY ORLEY HAYES, LL.B. (1928)**  
808 First National Bank bldg, San Jose

**RALPH PALMER MERRITT, B.S., LL.D.  
(1930)**  
1102 Balfour bldg, San Francisco  
700 Pacific Southwest bldg, Fresno



**OFFICERS OF THE REGENTS**

His Excellency Friend William Richardson  
President  
Sacramento

Arthur William Foster, Chairman  
244 California st, San Francisco

Robert Gordon Sproul, B.S., LL.D.  
Secretary and Comptroller  
220 California Hall, Berkeley

Mortimer Fleishhacker  
Treasurer  
Anglo-California Trust Company, San  
Francisco

Jno. U. Calkins, Jr., B.L., J.D.  
Attorney  
901 Crocker bldg, San Francisco

**STANDING COMMITTEES OF THE BOARD OF REGENTS  
FOR THE YEAR 1926-27\***

*Agriculture:*

Regents Foster, Condee, Dickson, Mills,  
Cochran, Earl, and Hayes.

*Educational Relations:*

Regents Wood, Dickson, Rowell, Ramm,  
and Earl.

*Endowments:*

Regents Merritt, Mrs. Sartori, Cochran,  
McEnerney, Fleishhacker, Haynes and  
Anderson.

*Engineering:*

Regents Ramm, Merrill, and Hayes.

*Executive Committee:*

This committee consists of the chairmen  
of all standing committees and the  
President of the Alumni Association.

*Finance:*

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Fleishhacker, Crocker, and Merritt.

*Grounds and Buildings:*

Regents Fleishhacker, Young, Dickson,  
Ramm, Mauzy, Merritt, and Hayes.

*Jurisprudence:*

Regents McEnerney, Cochran, Mills,  
Young, and Moffitt.

*Letters and Science:*

Regents Rowell, Ramm, Wood, Merrill,  
and Mills.

*Library, Research and Publications:*

Regents Cochran, Moffit, Merrill, Wood,  
Mauzy, and Rowell.

*Lick Observatory:*

Regents Hayes, Fleishhacker, Young,  
Crocker, Mauzy, and Anderson.

*Medical School:*

Regents Crocker, Earl, Moffitt, Ramm,  
Mrs. Sartori, and Haynes.

*San Francisco War Memorial*

Regents Moffitt, Fleishhacker, and Ander-  
son.

*Southern Branch of the University of  
California and Scripps Institution of  
Oceanography:*

Regents Dickson, Cochran, Merrill, Mrs.  
Sartori, Wood, Rowell, Merriam, and  
Haynes.

*Wamerding School:*

Regents Mauzy, Moffitt, and Earl.

\* 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 Emeritus of the University:*

Benjamin Ide Wheeler  
126 Library

*President of the University:*

William Wallace Campbell  
219 California Hall

*Vice-President and Dean of the University:*

Walter M. Hart  
219 California Hall

*Associate Dean of the University:*

Baldwin M. Woods  
219 California Hall

*Vice-President of the University, Comptroller, Secretary of the Regents, and Land Agent:*

Robert Gordon Sproul  
220 California Hall

*Recorder of the Faculties:*

James Sutton  
204 California Hall

**IN LOS ANGELES***Director of the Southern Branch:*

Ernest Carroll Moore  
108 Millsbaugh Hall

*\*Los Angeles Medical Department*

Dean: George H. Kress  
245 Bradbury Building

*Assistant Comptroller and Assistant Secretary of the Regents:*

Robert M. Underhill  
106 Millsbaugh Hall

*Extension Division—*

*Associate Director:*  
H. S. Noble  
817 Hillstreet Building

*Dean of the Summer Session in Los Angeles:*

Thomas M. Putnam  
815 Hillstreet Building

---

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

## I. HISTORY

### THE UNIVERSITY

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 the 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," but soon changed the name to that 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 five miles to the north was obtained, and the college buildings were begun. 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 contributed 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 legislative act creating the University of California was signed by the Governor on March 23, 1868, and the new institution opened its doors for instruction in September, 1869.

The first appointee to the Presidency was Henry Durant (1869-72). He was 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), David Prescott Barrows (1919-23), William Wallace Campbell (1923-).

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

In March, 1881, the Los Angeles State Normal School was established by legislative act. A five-acre site at the corner of Fifth street and Grand avenue was obtained, and the cornerstone of the first building was laid December 17 of that year. The school opened in August, 1882, with a faculty of three members and an enrollment of sixty-one students. Under the presidency of Jesse F. Millspaugh (1904-17) the school developed. His connection with the school is commemorated in the name of the main building. He was succeeded in the presidency by Ernest Carroll Moore.

The original site and buildings having become inadequate, 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 cornerstone 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 school became the Southern Branch of the University of California. The Regents of the University assumed control of the grounds, buildings and equipment, and Ernest Carroll Moore was appointed Director.

This act provided for continuance of the teacher-training courses then being given and for the institution of freshman and sophomore work of the University. On February 13, 1923, the Regents authorized the extension of instruction to include third-year students, and on December 3, 1923, a College of Letters and Science was created at the Southern Branch. Provision was made for instruction to fourth-year students beginning September, 1924.

The campus of the Southern Branch 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 in August, 1921.

## II. ORGANIZATION AND GOVERNMENT

The University of California is an integral part of the public educational system of the State. Through aid from the State and the United States, and by private gifts, it furnishes instruction in literature and in science, and in the professions of engineering, art, law, medicine, dentistry, and pharmacy. 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.

The government of the University 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 State Senate. The internal management of the University is in the hands of the President and the Academic Senate, which is composed of the faculties of the University.

The Southern Branch is administered by the Director, who is the administrative head, appointed by the Regents on the recommendation of the President of the University. The staff of instruction of the Southern Branch is organized into a Council, which is a standing committee of the Academic Senate of the University.

### III. THE UNIVERSITY

The University comprises the following colleges and 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 Deciduous Fruit Station at Mountain View, the Forestry Station at Chico, 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 (including the Surveying Camp at Fairfax, Marin County),

Chemistry.

The Schools of

Architecture,

Education,

Jurisprudence,

Librarianship,

Medicine (first year and first half of second year).

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 instructions).

The Summer Sessions.

The California Museum of Vertebrate Zoology.

The Museum of Paleontology.

#### II. AT MOUNT HAMILTON

The Lick Astronomical Department (Lick Observatory).

III. AT SANTIAGO, CHILE

The Lick Observatory, Chile Station, a branch of the Lick Observatory.

IV. IN SAN FRANCISCO

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

V. IN LOS ANGELES

The Southern Branch of the University:  
The College of Letters and Science,  
The Lower Division in Agriculture, Chemistry, Civil Engineering,  
Commerce, Mechanics, and Mining,  
The Teachers College,  
The Summer Course in Surveying,  
The Los Angeles Medical Department (graduate instruction only),  
The Summer Session in Los Angeles,  
The University Extension Division.

VI. AT DAVIS

The Branch of the College of Agriculture.

VII. AT RIVERSIDE

The Citrus Experiment Station and Graduate School of Tropical Agriculture.

VIII. AT LA JOLLA

The Scripps Institution of Oceanography.

## IV. OFFICERS AND FACULTY OF THE SOUTHERN BRANCH

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### ADMINISTRATIVE OFFICERS

- WILLIAM WALLACE CAMPBELL, Sc.D., LL.D., President of the University.  
 WALTER MORRIS HART, Ph.D., Vice-President and Dean of the University.  
 ROBERT G. SPROUL, B.S., Vice-President, Comptroller, Secretary of the Regents, and Land Agent.  
 BALDWIN MUNGER WOODS, Ph.D., Associate Dean of the University.  
 ERNEST CARROLL MOORE, Ph.D., LL.D., Director of the Southern Branch and Professor of Education.  
 ROBERT M. UNDERHILL, B.S., Assistant Comptroller, and Assistant Secretary of the Regents.  
 CHARLES H. RIEBER, Ph.D., Dean of the College of Letters and Science and Professor of Philosophy.  
 MARVIN L. DARSIE, Ph.D., Dean of the Teachers College and Associate Professor of Education.  
 HELEN MATTHEWSON LAUGHLIN, Dean of Women.  
 EARL J. MILLER, Ph.D., Dean of Men and Assistant Professor of Economics.  
 LEWIS A. MAVERICK, Ed.D., Recorder, and Lecturer in Education.  
 C. H. ROBISON, Ph.D., University Examiner and Assistant Professor of Education.  
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 WILLIAM J. NORRIS, M.D., Physician for Men.  
 LILLIAN RAY TITCOMB, M.D., Physician for Women.  
 E. R. WARE, M.D., Assistant Physician for Men.  
 M. BURNEY PORTER, Appointment Secretary and Supervisor of Teacher Training.
- 

### *Advisory Administrative Board*

- ERNEST CARROLL MOORE, Chairman; BALDWIN M. WOODS, THOMAS M. PUTNAM, ROBERT G. SPROUL.



## OFFICERS AND FACULTY

*Faculty*

- WILLIAM C. ACKERMAN, Ed.B., Assistant in Physical Education for Men.  
\* JOHN ADAMS, B.Sc., LL.D., F.C.P., Lecturer in Education (Professor Emeritus of Education, University of London).  
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BENNETT MILLS ALLEN, Ph.D., Professor of Zoology.  
BERNICE ALLEN, M.A., Associate in Home Economics.  
EVA M. ALLEN, Associate in Commercial Practice.  
HERBERT F. ALLEN, Ph.D., Assistant Professor of English.  
RUTH ANDERSON, Associate in Botany.  
RUTH V. ATKINSON, B.S., Assistant Professor of Physical Education for Women and Director of Women's Gymnasium.  
SARAH ROGERS ATSAIT, M.S., Instructor in Biology.  
LAURENCE D. BAILIFF, Ph.D., Assistant Professor of Spanish.  
GORDON H. BALL, Ph.D., Instructor in Zoology.  
CÉSAR BAEJA, Doctor in Derecho, Lecturer in Spanish.  
SAMUEL J. BARNETT, Ph.D., Professor of Physics.  
CLIFFORD L. BARRETT, M.A., Instructor in Philosophy.  
MIGUEL A. BASOCO, M.A., Associate in Mathematics.  
\* LESLEY BATES, M.A., Associate in English.  
RUTH E. BAUGH, M.A., Associate in Geography.  
CLIFFORD BELL, Ph.D., Instructor in Mathematics.  
A. W. BELLAMY, Ph.D., Assistant Professor of Zoology.  
M. BIENCOURT, Licencie-es-Lettres, Associate in French.  
B. H. BISSELL, Ph.D., Assistant Professor of English.  
FREDERIC T. BLANCHARD, Ph.D., Professor of English.  
DAVID K. BJORK, Ph.D., Assistant Professor of History.  
LOUIS F. D. BRIOIS, A.B., Associate in French.  
FOSS R. BROCKWAY, Associate in Mechanic Arts.  
\* ANNA P. BROOKS, A.B., B.S., Assistant Professor of Fine Arts.  
ETHEL SUTTON BRUCE, Associate in Physical Education for Women.  
HENRY RAYMOND BRUSH, Ph.D., Professor of French.  
LEWELLYN M. BUELL, Ph.D., Assistant Professor of English.  
LILY B. CAMPBELL, Ph.D., Assistant Professor of English.  
CAROLYN CANBY, M.S., Associate in Biology.  
FREDERICK MASON CAREY, Ph.D., Assistant Professor of Latin and Greek.  
MARGARET S. CARHART, Ph.D., Assistant Professor of English.  
FORD ASHMAN CARPENTER, LL.D., D.Sc., Lecturer in Meteorology.  
HELEN CLARK CHANDLER, Assistant Professor of Fine Arts.

---

<sup>1</sup> First half-year only.    <sup>2</sup> Second half-year only.

\* Absent on leave, 1926-27.

ADELINE CHAPMAN, Assistant in Physical Education for Women.

ORABEL CHILTON, B.S., Associate in Home Economics.

ROBERT L. CHRISTIAN, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

HELEN M. CHRISTIANSON, M.A., Associate in Primary Education.

NEMOURS HONORE CLEMENT, Ph.D., Assistant Professor of French.

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SQUIRE COOP, Lecturer in Music.

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ALFRED K. DOLCH, Ph.D., Instructor in German.

CARL S. DOWNES, Ph.D., Assistant Professor of English.

MAX S. DUNN, Ph.D., Assistant Professor of Biochemistry.

CLARENCE A. DYKSTRA, A.B., Lecturer in Municipal Government.

HARVEY L. EBY, Ph.D., Associate Professor of Rural Education.

HIRAM W. EDWARDS, Ph.D., Associate Professor of Physics.

JOSEPH W. ELLIS, Ph.D., Assistant Professor of Physics.

CARL EPLING, Ph.D., Instructor in Botany.

MAUD D. EVANS, Ed.B., Associate in Home Economics.

GRACE M. FERNALD, Ph.D., Associate Professor of Psychology.

S. CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.

ALEXANDER GREEN FITE, Ph.D., Associate Professor of French.

MARJORIE FORCHEMER, B.S., Associate in Physical Education for Women.

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**PAUL FRAMPTON, Ed.B.,** Assistant Supervisor of Physical Education for Men.

**SHEPHERD IVORY FRANZ, Ph.D., M.D., LL.D.,** Professor of Psychology.

**IRA N. FRISBEE, M.B.A., C.P.A.,** Assistant Professor of Accounting.

**LUCY M. GAINES, M.A.,** Instructor in History.

**A. J. GANTVOORT, Lecturer in Music.**

\***NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts.**

**HORTENSE GERVISS, Associate in Physical Education for Women.**

**HARRIET E. GLAZIER, M.A.,** Assistant Professor of Mathematics.

**MANUEL PEDRO GONZÁLES, Ph.D.,** Assistant Professor of Spanish.

**J. E. GOODWIN, B.L., B.L.S.,** Librarian.

**KATE GORDON, Ph.D.,** Associate Professor of Psychology.

**MALBONE W. GRAHAM, Jr., Ph.D.,** Assistant Professor of Political Science.

**WILLIAM GRAY, Associate in Botany.**

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**BERTHA HALL, Associate in Physical Education for Women.**

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**HELEN I. HOWELL, Associate in Industrial Arts.**

**ALICE HUBARD, M.A.,** Associate in French.

**ALICE O. HUNNEWELL, Instructor in English.**

**GUY H. HUNT, C.E.,** Assistant Professor of Applied Mathematics.

**EDITH HYDE, A.B.,** Associate in Physical Education.

**SIGURD BERNHARD HUSTVEDT, Ph.D.,** Associate Professor of English.

**GLENN JAMES, Ph.D.,** Associate Professor of Mathematics.

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**ADRIAN B. KELLER, B.S. in E.E.,** Associate in Mechanic Arts.

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\* Absent on leave, 1926-27.

- HARRY A. KIRKPATRICK, A.B., Associate in Physics.
- <sup>2</sup> FRANK J. KLINGBERG, Ph.D., Professor of History.
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- LOUIS K. KOONTZ, Ph.D., Assistant Professor of History.
- WILLIAM J. KRAFT, Mus. Bac., F.A.G.O., Lecturer in Music.
- MELVA LATHAM, A.B., Assistant Professor of History.
- HELEN MATTHEWSON LAUGHLIN, Dean of Women.
- FREDERICK C. LEONARD, Ph.D., Instructor in Astronomy.
- MADELEINE L. LETESSIER, M.A., Associate in French.
- WESLEY LEWIS, M.A., Associate in Public Speaking.
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- DONALD S. MACKAY, Ph.D., Assistant Professor of Philosophy.
- HARRIET MACKENZIE, M.A., Instructor in English.
- GERTRUDE MALONEY, Associate in Art.
- HAROLD WILLIAM MANSFIELD, Assistant Professor of Mechanic Arts and Director of Shops.
- CHARLES A. MARSH, B.S., Assistant Professor of Argumentation.
- JAMES WILLARD MARSH, Associate in Mechanic Arts.
- WILLIAM F. MARSHALL, Ed.B., Associate in Geography.
- WENDELL E. MASON, M.S., Instructor in Applied Mathematics.
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- LOYE HOLMES MILLER, Ph.D., Professor of Biology.
- WILLIAM J. MILLER, Ph.D., Professor of Geology.
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MARION SHEPARD, A.B., Associate in Physical Education for Women.  
GEORGE E. F. SHERWOOD, Ph.D., Professor of Mathematics.  
HARRY M. SHOWMAN, E.M., M.A., Assistant Professor of Mathematics.  
DECALVUS W. SIMONSON, M.A., Associate in English.

- JOHN T. SLY, Ph.D., Assistant Professor of Political Science.  
 BIRDIE KIRK SMITH, Associate in Fine Arts.  
 HELEN BELL SMITH, Ph.D., Instructor in French.  
 WILLIAM A. SMITH, Ph.D., Assistant Professor of Education.  
 WILLIAM F. SMITH, Ph.D., Assistant Professor of Latin and Greek.  
 LOUISE P. SOOY, Assistant Professor of Fine Arts.  
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 HARRY TROTTER, Assistant in Physical Education for Men.  
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 LOUIS C. VALENTINE, A.B., Associate in English.  
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 GORDON S. WATKINS, Ph.D., Professor of Economics.  
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 EUPHEMIA R. WORTHINGTON, Ph.D., Assistant Professor of Mathematics.  
 FRANCES A. WRIGHT, Associate Professor of Music.  
 CLIFFORD M. ZIERER, Ph.D., Assistant Professor of Geography.

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<sup>1</sup> In residence first half-year only

STAFF OF TRAINING INSTRUCTION

*University Training School*

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CORINNE A. SEEDS, M.A., Principal of the Training School and Assistant Supervisor of Training.
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FRANCES GIDDINGS, M.A., Assistant Supervisor of Training.  
HELEN B. KELLER, Ed.B., Assistant Supervisor of Training.  
FLORENCE M. HALLAM, A.B., Assistant Supervisor of Training.  
HELEN CHUTE DILL, Assistant Supervisor of Training, Music.  
LULU STEDMAN, Ed.B., Assistant Supervisor of Special Education.  
EDITH HOPE RINGER, Training Teacher, Adjustment Room.  
ELIZABETH BRUENE, M.A., School Counselor.  
EMMA J. ROBINSON, Training Teacher, Sixth Grade.  
HELEN F. BOUTON, Ed.B., Training Teacher, Fifth Grade.  
BESSIE WINSTON HOYT, Ph.B., Training Teacher, Fourth Grade.  
PEARL H. MIDDLEBROOK, B.S., Training Teacher, Third Grade.  
EDITH WALLOP SWARTS, Training Teacher, Second Grade.  
SALLIE GARRETT, Training Teacher, First Grade.  
ETHEL BRITTO, A.B., Training Teacher, Nursery School.  
BARBARA GREENWOOD, Training Teacher, Kindergarten.  
GERTRUDE P. RICHARDSON, Assistant Training Teacher, Nursery School.

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<sup>1</sup> In residence first half-year only.

<sup>2</sup> In residence second half-year only.

## V. ADMISSION TO THE UNIVERSITY

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### ACCREDITING OF SCHOOLS IN CALIFORNIA

The accrediting of secondary schools in California is regulated by an order of the Regents of the University originally enacted March 4, 1884. 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. For blank forms of application for accrediting and for other information, school principals may communicate with the Recorder of the Faculties, University of California, Berkeley.

### ADMISSION TO FRESHMAN STANDING

#### PLAN I—ADMISSION OF A RECOMMENDED GRADUATE OF AN ACCREDITED SCHOOL IN CALIFORNIA

A graduate of a high school or other secondary school in California may enter the University in freshman standing, without examination, upon the following terms:

1. The school must have been accredited by the University of California in the year of the applicant's graduation.
2. The applicant must be duly certified as having graduated from a four-year course, aggregating at least fifteen (15) standard units, a unit being the measure of a subject pursued throughout the school year of from 36 to 40 weeks, and constituting approximately a quarter of a full year's work.
3. The applicant must (normally) have attended the school at least one school year\* immediately preceding graduation.
4. The applicant must be certified by the principal of the school as fitted, in the judgment of the principal, to undertake college work, with reasonable prospect of success.

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\* 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.



In recommending a graduate for admission to the University by this plan, the principal should use Recommendation Form A, with application for admission attached. Copies of this form are supplied by the Recorder of the Faculties, Berkeley, to the principals of accredited schools in California.

*The High School Program.*—For the graduate of an accredited school in California, recommended in accordance with the foregoing provisions, no prescription of high school work is made by the University.\* An applicant so recommended is admitted to the University and is permitted to enroll in the curriculum of his choice.

However, to ensure adequate preparation for the work of the University, the prospective student is advised to arrange his high school program in accordance with the schedule required of candidates entering under Plan II as given on page 27.

#### *Electives in the High School Program*

Electives in the high school should be so chosen as to enable the student to enter without difficulty the work of the college, and if possible, of the particular curriculum to which he seeks admission. Unless this precaution be observed, the student, although admitted to the University, may find himself unable to proceed to the bachelor's degree in the normal period of four years.

The high school subjects which are prerequisite to certain colleges or curricula and for which no equivalent courses are offered by the University during regular sessions, are: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory,  $\frac{1}{2}$  unit; geometrical drawing, 1 unit; freehand drawing, 1 unit; and the first two years of Latin, 2 units. Instruction in these subjects, Latin excepted, may from time to time be provided by the University in the Extension Division or in the Summer Session.

*College of Letters and Science.*—The inclusion of physics or chemistry, and at least two years of a foreign language, ancient or modern, in the high school program, will release the student from requirements which otherwise will be prescribed for him in the University, and the student's opportunity for elective study will be thereby enlarged. Matriculation

\* A resolution of the California State Board of Education directs that all public high school curricula in California require, for graduation, the following: English, 3 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.

credit for plane geometry and elementary algebra must be obtained before the student can receive his Junior Certificate in this college. In the pre-medical and pre-dental curricula, and in other curricula in which the student's major interest is in the field of the biological sciences, both chemistry and physics, as well as French or German, are strongly recommended. For a major in mathematics or in physical science, the high school program should include, in addition to chemistry and physics, and French or German, three years of work in mathematics, including algebra, plane geometry and algebraic theory. Preparation for the curriculum in architecture should include the high school subjects prerequisite for the colleges of engineering as given below, together with freehand drawing, 1 unit, and Latin or French, at least two units. The importance of the study of Latin in the high school in preparation for major work in English, in other languages, and in the social sciences, is emphasized. The modern foreign languages which are most likely to be helpful are French and German. A University course of basic importance in many curricula is Chemistry 1A-1B, taken normally during the freshman year; the high school prerequisite for admission to this course is credit for any two of the three subjects: chemistry, physics, trigonometry.

*Teachers College.*—The inclusion of physics or chemistry, and at least two years of a foreign language, ancient or modern, in the high school program, will release the student from requirements which otherwise will be prescribed for him in the University, and the student's opportunity for elective study will be thereby enlarged. Matriculation credit for plane geometry and elementary algebra must be obtained before the student can receive the bachelor's degree in this college. In the curricula leading to the special secondary credentials the opportunity for electives is either lacking entirely or is so limited that failure to present credit for two matriculation units in one foreign language will make it impossible to complete the requirements for the degree within the minimum of 128 units. The inclusion of a laboratory science in the third or fourth year of high school does not diminish the number of units required in the natural science group but does release the student from the necessity of taking additional laboratory courses.

*College of Commerce.*—Matriculants who fail to present algebraic theory,  $\frac{1}{2}$  unit, in addition to elementary algebra and plane geometry, will be at a disadvantage; and in no case is the Junior Certificate granted until the student has credit in all three subjects. A University course in the mathematical theory of investment must be completed not later than the sophomore year.

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\* Only two years of Commerce, Engineering, Chemistry, and Agriculture are offered at the Southern Branch.

*\*Colleges of Engineering (Mechanics, Mining, Civil Engineering); College of Chemistry.*—Matriculants will be seriously handicapped if they fail to present, in addition to plane geometry and elementary algebra, the following: algebraic theory,  $\frac{1}{2}$  unit; trigonometry,  $\frac{1}{2}$  unit; physics, 1 unit; chemistry, 1 unit; geometrical drawing, 1 unit. For the college of chemistry there should be presented, also, French or German, at least two units.

*\*College of Agriculture.*—In addition to plane geometry and elementary algebra, matriculants should present algebraic theory,  $\frac{1}{2}$  unit; trigonometry,  $\frac{1}{2}$  unit; and chemistry, 1 unit. For the curriculum in forestry or in landscape design, add geometrical drawing, 1 unit.

*Professional Curricula.*—For a list of circulars containing information concerning professional curricula, refer to pages 2 and 3 of the cover.

**PLAN II—ADMISSION TO FRESHMAN STANDING OF AN APPLICANT WHO IS NOT A RECOMMENDED GRADUATE OF AN ACCREDITED SCHOOL IN CALIFORNIA**

*A. Admission of a Recommended Graduate of a California School not Accredited*

*Not later than February, 1927*, a graduate of a California secondary school not accredited by the University who has been in attendance at the school for at least one school-year immediately preceding his graduation, and who is strongly recommended by the principal, may be admitted upon passing the following examinations:

English (2 units); United States History (1 unit); laboratory science (1 unit); and two of the following groups:

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

*Beginning September, 1927*, the applicant will be required to present in lieu of the above schedule, the program of high school subjects required in and after September, 1927, for applicants entering by PLAN II, as set forth in detail below.

*B. Admission of a Graduate of an Approved High School Outside of California*

A graduate of a high school or other secondary school outside of California may be admitted to freshman standing, without examination, upon the following conditions:

*\* Only two years of Commerce, Engineering, Chemistry, and Agriculture are offered at the Southern Branch.*

The Committee on Admissions must have evidence of the fact that the school has an approved standing at a university or other accrediting agency of acknowledged rank; that the applicant has been graduated from a four-year course of not less than fifteen standard secondary units; and that he has maintained an average scholarship standing well above the mark required by the school for promotion or for 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.

*Not later than February, 1927*, the Committee on Admissions will in each case determine in its discretion whether the content of the high school program presented by an applicant in this group is such as is likely to constitute a satisfactory foundation for successful work in the University.

*Beginning September, 1927*, the list of high school subjects presented by an applicant in this group must conform to the program to be required in and after September, 1927, for applicants entering by PLAN II, as set forth in detail below.

### *C. Admission by Examination*

An applicant from an accredited California school who has not been graduated from the school; or an applicant from such school who, though graduated, has not received the Principal's recommendation; or any other applicant whose school work in California or elsewhere has not been such as entitles him, in the opinion of the Committee on Admissions, to admission on his credentials, may be admitted to the University solely by examination.

The subjects in which examinations will be required must amount to at least twelve units, taken from the list of subjects in which the University holds entrance examinations. This list is given below. For the remaining three units, or for any part thereof, the University may accept, in lieu of examination, a properly certified high school record showing the attainment of grade "A" or "B" (excellent, or good) in any standard high school subject or subjects in equivalent amount, whether among the subjects in which the University holds entrance examination or otherwise. The credit to be given, if any, will be determined by the Committee on Admissions upon inspection of the applicant's credentials.

*Beginning September, 1927*, the list of high school subjects presented by an applicant in this group must conform to the program to be required in and after September, 1927, for applicants by PLAN II, as set forth in detail below.

Program of High School Subjects to be Required in and after September,  
1927, of an Applicant Entering by Admission Plan II

Beginning September, 1927, an applicant for admission to Freshman standing who does not qualify by ADMISSION PLAN I, that is, as a recommended graduate of an accredited high school in California, will be required to obtain credit for at least fifteen (15) units in high school subjects, distributed as in the schedule following:

	Units
(a) English .....	2
(b) History .....	1
(c) Mathematics (elementary algebra and plane geometry) .....	2
(d) Physics, chemistry, biology, zoology, or botany (if a third-year or fourth-year subject, with laboratory) .....	1
(e) Foreign language (in one language).....	2
(f) Additional mathematics, or additional foreign language in the language offered under (e) (if in another foreign language, two units will be required) .....	1 (or 2)
(g) Electives from the following list: history; mathematics; foreign language; English; natural science; drawing .....	3 (or 2)
(h) Unrestricted electives .....	3

— 15 units

The "unrestricted" electives, in an amount not to exceed three (3) units, may consist of any standard high school subjects whether among the subjects in which the University holds university examinations or otherwise. However, the candidate for admission under Plan II should read carefully the section on *Electives in the High School Program*, beginning on page 23, and should make sure that he completes in full the high school subjects prerequisite to the particular curriculum in which he plans to pursue college studies. For these "unrestricted" electives credit may

\* After January, 1927, the University will discontinue the holding of entrance examinations at Berkeley, except that examinations in Physiology and Hygiene, Mechanic Arts, Music, and Bookkeeping, will be provided in August, 1927, in January and August, 1928, and in January, 1929.

be given upon the basis of official school or college records evidencing the attainment of a grade distinctly higher than the minimum passing grade in the school. The credit to be given, if any, will be determined by the Committee on Admissions upon inspection of the applicant's credentials.

Credit for the remaining twelve (12) units will be given only upon formal examination, excepting from this requirement, however, the graduates of approved high schools outside of California who submit credentials which, under the regulations pertaining to this group of applicants, as above stated, may be accepted by the Committee on Admissions in lieu of formal examination.

#### LIST OF PREPARATORY SUBJECTS

The list of the high school subjects which, under the regulations elsewhere stated, may be presented for admission, with the amount of credit in units assigned to each subject, is given below. In August, 1926, and January, 1927, entrance examinations in the subjects not marked by an asterisk will be offered by the University of California in Berkeley. Note that the only entrance examinations offered in Los Angeles are those of the College Entrance Examination Board.

	Units		Units
1a English, elem.....	2	*†5c <sup>1</sup> French, elem., 1 yr. of 5c <sup>1</sup> .....	1
1b English, adv. I.....	1	†5c <sup>2</sup> French, elem.....	2
1c English, adv. II.....	1	†5c <sup>3</sup> French, intermed.....	1
2a Algebra, elem.....	1	†5c <sup>4</sup> French, adv.....	1
2b <sup>1</sup> Algebraic Theory I.....	½	†*5d <sup>1</sup> German, elem., 1 yr. of 5d <sup>1</sup> ..	1
2b <sup>2</sup> Algebraic Theory, II.....	½	†5d <sup>2</sup> German, elem.....	2
2c Plane Geometry.....	½	†5d <sup>3</sup> German, intermed.....	1
2d Solid Geometry.....	½	†5d <sup>4</sup> German, adv.....	1
†2e Plane Trigonometry.....	½	*5e <sup>1</sup> Spanish, elem., 1 yr. of 5e <sup>1</sup> ....	1
†2f Plane Analytic Geometry ..	½	†5e <sup>2</sup> Spanish, elem.....	2
3a Physica.....	1	†5e <sup>3</sup> Spanish, intermed.....	1
3b Chemistry.....	1	†5e <sup>4</sup> Spanish, adv.....	1
3c Physiology and Hygiene.....	1	6a Freehand Drawing.....	1
3d Botany.....	1	6b Geometrical Drawing.....	1
3e Zoology.....	1	7 Mechanic Arts.....	½-3
*3f Biology.....	1	*8 Agriculture.....	½-3
*3g Physical Geography.....	1	*9abc Home Economics.....	½-3
*3h Elem. Physical Science.....	1	10a Music, Sight Singing and Dictation.....	1
4a History and Gov. of the U.S.	1	10b Music, Elements of Composition.....	1
4b History, Ancient.....	1	10c Music, Instrumental and Vocal Technique.....	1
4c History, Med. and Mod.....	1	10d Music, History of Modern European Music.....	1
4d History, English.....	1	11 Bookkeeping.....	1
†5a <sup>1</sup> Greek, elem., 1 yr. of 5a <sup>1</sup> ....	1	*12 Stenography and Typewriting.....	1-2
†5a <sup>2</sup> Attic Prose.....	2	*†13 Military Science and Tactics	½
†5a <sup>3</sup> Attic Prose, adv.....	½		
†5a <sup>4</sup> Homer.....	½		
*5b <sup>1</sup> Latin, elem., 1st yr.....	1		
5b <sup>2</sup> Latin, elem., 2d yr.....	2		
†5b <sup>3</sup> Latin, adv., 3d yr.....	1		
†5b <sup>4</sup> Latin, adv., 4th yr.....	1		

\* No examination is held by the University of California in this subject.

† 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.

‡ Credit in this subject does not imply exemption from any part of the prescribed work in military science and tactics in the University.

## EXAMINATIONS AT THE UNIVERSITY OF CALIFORNIA\*

Matriculation examinations will be held at Berkeley in August and January of each year in all subjects in the list given above with exceptions indicated by the asterisk. In English, foreign languages, history, mathematics, the sciences, and drawing, the examinations held by the University will be prepared in accordance with the definitions of the College Entrance Examination Board.

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.

## EXAMINATIONS AT THE SOUTHERN BRANCH

The entrance examinations given at the Southern Branch are those of the College Entrance Examination Board held annually during the third week of June.

(By special arrangement, which will end after 1926, the Southern Branch also gives College Entrance Board Examinations in September. These will be held in Los Angeles, September 20-24, 1926.)

## COLLEGE ENTRANCE EXAMINATION BOARD

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

The examinations of the College Entrance Examination Board are usually held during the third week in June; in 1927, June 20-24.

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 request.

If the application is received sufficiently early, the examination fee will be \$10 for each candidate, whether examined in the United States, Canada, or elsewhere. The fee, which must accompany the application, should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

\* After January, 1927, the University will discontinue the holding of entrance examinations at Berkeley, except that examinations in Physiology and Hygiene, Mechanic Arts, Music, and Bookkeeping, will be provided in August, 1927, in January and August, 1928, and in January, 1929.

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 first day 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 specific date accompanied by a memorandum containing the name and address of the candidate, the exact examination center selected, and a list of all the subjects in which he may have occasion to take the board examinations. The required application must be filed later.

Applications received later than the dates named will be accepted when it is possible to arrange for the examination of the candidates concerned, but only upon payment of an additional fee of \$5.

A list of the places at which examinations are to be held by the Board in June, 1927, 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. The designation of the center to which the candidate will go for examination is regarded as an indispensable part of the candidate's application for examination.

Detailed definitions of the requirements in all examination subjects are given in a circular of information published annually by the College Entrance Examination Board. The edition published December 1, 1924, was designated as Document No. 114. A new edition, designated as Document 117, was published December 1, 1925. Upon request a single copy of this document will be sent to any teacher without charge. In general a charge of twenty cents, which may be remitted in postage, will be made.

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



## ADMISSION TO ADVANCED STANDING

## ADMISSION FROM OTHER COLLEGES AND UNIVERSITIES

An applicant for admission may receive advanced standing in the University on the basis of certificates from other colleges and universities, upon the approval of the certificates by the Committee on Admissions. A form of statement of university work, which may be used for such certificates, will be furnished on application to the Recorder of the Southern Branch. There should also be submitted some credentials 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 Southern Branch, in order that they may be placed before the Committee on Admissions, 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.

*Beginning February, 1926*, an applicant for admission to advanced standing who is a graduate of a high school in California, and whose collegiate credentials, upon appraisal by the Committee on Admissions of the University of California, Southern Branch, yield less than sixty semester units of advanced standing, must satisfy the Committee that, at the time of graduation from high school, he received or was then entitled to receive, the University Recommendation in accordance with Admission PLAN I; otherwise the examinations required by PLAN II for admission to freshman standing at the date of the applicant's proposed transfer to this University must be passed. A statement of these requirements is given on pages 27-28. In each such case the examinations to be required will be assigned by the Committee on Admissions, in accordance with the provisions of PLAN II, following an inspection by the Committee of the record of the applicant's high school and collegiate studies.

Credit for Subject A (English Composition) may be given upon certificate. See page 39.

## ADMISSION FROM NORMAL SCHOOLS AND STATE TEACHERS COLLEGES

A student admitted to the University from a normal school or a state teachers college in California, who is also a graduate (with University recommendation) of an accredited high school in this state, may receive advanced standing in the University to the extent of not more than three

years in the four-year undergraduate curriculum, whenever it appears from the credentials submitted that the work which has been done is substantially the equivalent in kind and in amount, of the work required by the University of California in the college or curriculum selected.

In the College of Letters and Science and in the College of Commerce the junior certificate requirements consist largely of courses specially prescribed, in the fields of foreign languages, laboratory sciences, etc. The premedical curriculum and the curricula of the Colleges of Engineering and Agriculture include a number of prescribed subjects in which instruction is not always provided in institutions maintained primarily for the training of teachers.

Credentials from normal schools or state teachers colleges of states other than California are evaluated in accordance with this general plan.

The applicant must, in every case, submit an officially certified record of his high school and later studies in order that the Committee on Admissions may determine whether the California requirements as to subjects and as to scholarship standing have been satisfied. Blank forms for such certified statements may be obtained from the Recorder of the Southern Branch upon request.

Credit for Subject A (English Composition) may be given upon certificate. See page 39.

#### ADMISSION FROM SCHOOLS AND COLLEGES IN FOREIGN COUNTRIES

An applicant for admission from a school or college in a foreign country must present credentials which can be accepted as the equivalent of the admission requirements of the University of California. An applicant whose education has been in a language other than English, must also satisfy the Committee on Admissions that his command of English is sufficient to permit him to profit by university instruction. This will be tested by an oral and written examination. The admission of an applicant who fails to pass this examination will be deferred until such time as he has acquired the necessary proficiency in the use of English.

#### LANGUAGE CREDIT FOR A FOREIGN STUDENT

College credit for the mother tongue of a foreigner and for its literature is allowed only for courses taken in native institutions of college grade, or for upper division and graduate courses actually taken at the University of California or at another English-speaking institution of approved standing.

**SURPLUS MATRICULATION CREDIT**

There is no longer provision for advanced standing in the University on the basis of surplus high school credit.

**CREDIT FOR TEACHING EXPERIENCE (TEACHERS COLLEGE)**

1. No consideration will be given for teaching experience at the time the candidate with advanced standing registers.

2. After the candidate has engaged in practice teaching long enough to satisfy the Supervisor of Practice Teaching of his ability, he may apply for advanced standing on the basis of his teaching experience. Upon such application and the recommendation of the Supervisor of Practice Teaching, either:

(a) The candidate may receive five units' credit in lieu of the second practice teaching assignment, or

(b) The candidate may substitute for the second teaching assignment such other courses as the adviser may sanction.

**ADMISSION OF SPECIAL STUDENTS**

Special students are students of mature years who have not had the opportunity to complete a satisfactory high school course but who, by reason of special attainments, may be prepared to undertake certain courses, though not as candidates for degrees.

No person under the age of twenty-one years will be admitted to the status of special student, but it is specifically emphasized that mere attainment of any given age does not constitute adequate qualification for admission to this status.

Applicants will not be admitted directly from secondary schools to the status of special student.

The graduates of accredited high schools are not admitted as special students, but are expected to qualify for regular undergraduate standing in accordance with the usual rules.

The University has no "special courses"; all courses are organized for regular students—that is, students who have had the equivalent of a good high school education and have been fully matriculated. Special students are admitted to those regular courses for which, in the judgment of the instructors, they have satisfactory preparation.

Entrance examinations in the subjects of fundamental importance for the work proposed will be required of practically every applicant, especially of those under the age of twenty-five years. Special students will seldom be able to undertake the work of the engineering and professional schools until they have had all or nearly all of the prerequisite subjects.

Applicants for admission to special status may be required to take a psychological test, which will be given at the time scheduled for matriculation examinations. A circular giving the dates of these examinations may be obtained from the Recorder of the Southern Branch.

Instruction is not offered in such essential preparatory subjects as elementary English, elementary algebra, plane geometry, United States history, elementary Latin, and Caesar, and, save from time to time in the summer sessions, geometrical drawing, algebraic theory, elementary chemistry, and elementary physics.

Upon petition, special students, not candidates for any University degree, may be excused from the exercises in physical education; such students, however, in case they become candidates for degrees, must meet this requirement in full. Students over twenty-four years of age at the time of admission are excused from military science.

A special student may at any time attain the status of regular student by satisfying all the requirements imposed upon the regular members of the class he desires to enter.

The administration of special students is in the hands of the Committee on Admissions. Prospective applicants should communicate with this Committee through the University Examiner, who will furnish forms for application for admission and for transcripts of high school record.

Applications should be made at least six months in advance in order to allow time to prepare for the entrance examinations assigned for admission.

In general, admission to the University in special status can be completed only by personal conference with the University Examiner, and when necessary, with the department or college concerned.

## GRADUATE INSTRUCTION

No graduate instruction is offered at the Southern Branch. This statement applies not only to work leading toward higher degrees but also to work beyond the bachelor's degree leading toward the general secondary teaching credential. Applicants are referred to the Graduate Division of the University at Berkeley and to the professional schools and colleges of the University. The list of bulletins of these departments will be found on pages 2 and 3 of cover.

## VI. GENERAL INFORMATION

### REGULATIONS CONCERNING STUDENTS

#### REGISTRATION

Each student registers in the Southern Branch on days appointed for this purpose, at the beginning of each half-year. Registration covers the following steps: (1) Filling out application, paying fees, and receiving in exchange a card entitling applicant to status as a student; (2) enrolling in courses according to instructions which will be posted.

#### MEDICAL EXAMINATION

Applicants must also appear before the University medical examiners, and pass a medical examination, to the end that the health of the University community as well as that of the individual may be safeguarded. Evidence, satisfactory to the examiners, of successful immunization against smallpox is required.

#### LATE ADMISSION AND REGISTRATION

The student or applicant for admission should consult the calendar of the Southern Branch (which differs from the calendar of the departments at Berkeley) and acquaint himself with the dates upon which students are expected to register and begin their work at the opening of the session. Failure to register upon the stated registration day is certain to cause difficulty in the making of a satisfactory program and to retard the progress both of the student himself and of each class to which he may be admitted.

The student who registers after the opening of the session and who later is found to be deficient in his work may not plead late admission in extenuation of such deficiency.

A fee of \$2.00 is charged for late registration. This fee applies both to old students and to new. Should the student withdraw early, he should note that any refund of fees is calculated, not from the date of his registration, but from the date of the beginning of classes for the half-year.

A qualified student or applicant who fails to register upon the stated registration day on the opening of the session, but who, nevertheless, appears *during the first two weeks* of instruction, will in general be permitted to register. After the first week, however, he may be required to obtain the written approval of all the instructors in charge of his proposed courses, as well as the dean of his proposed college, before his registration may be completed. Owing to the pressure of enrollment at the Southern Branch, the student may expect that such approvals for late admission will be difficult to secure. The qualifications of an applicant for admission to the University after the first two weeks of instruction will be given special scrutiny by the Committee on Admissions and the dean of the college to which admission is sought.

*Transfer to Southern Branch in February.*—It is of special importance that a student in another institution who is desirous of transferring to the Southern Branch after the stated registration day of the second half-year should communicate in advance with the Recorder of the Southern Branch, and should await assurance that late admission will be permitted before discontinuing studies in progress elsewhere. Such early inquiry should cover details as to college to which the applicant wishes admission, and the advanced standing which the applicant expects to offer at the time of transfer.

### CLASSIFICATION AND STATUS OF STUDENTS

*Regular students* are those undergraduates who have complied with the requirements for matriculation, and who pursue, or are entitled to pursue, the established curriculum of a college.

Students who have attained junior standing are in the "upper division," which includes the third and fourth years of the course.

*Special students* are those who, though they do not meet the University matriculation requirements, are nevertheless allowed to register for restricted programs because of maturity and fitness to carry the special work elected. Their fitness to carry the work may be attested to by official transcripts of preparatory studies and will normally be tested by formal examination covering their familiarity with the field prerequisite to the elected work.

Special students by virtue of their status are not candidates for any degree. The privileges of the University are normally extended to special students for a period of not more than one year. This period, however, may be extended from time to time at the discretion of the appropriate committee (petitions for renewal of such privileges should be filed with the Recorder).

A special student may attain regular status by meeting the requirements for matriculation. The Committee on Admissions will determine what will be required of each special student desiring to qualify for regular status.

### STUDENT'S RESPONSIBILITY

The presentation of a study-list by a student and its acceptance by the college evidence an obligation on the part of the student to perform the designated work faithfully and to the best of his ability.

Any student who discontinues, without formal notice, University exercises in which he is a regularly enrolled attendant, does so at the risk of having his registration privileges curtailed or entirely withdrawn.

Application for leave to be absent, or excuse for having been absent from not more than one University exercise consecutively, must be made 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 several days, in which case the dean has authority to excuse. No excuse to be absent will relieve the student from completing all the work of each course to the satisfaction of the instructor in charge.

Ample provision is made for students who desire to withdraw from courses in which they are regularly enrolled, and who have the approval of adviser or dean to make changes in programs. Application for such change should be made to the office of the Recorder through Petition for Change in Study-List. Attendance upon all exercises is obligatory pending receipt of formal permission to discontinue.

For regulations concerning withdrawal from University exercises see page 47 of this Announcement.

### UNITS OF WORK AND CREDIT: STUDY LIST LIMITS

Both matriculation and university work are measured in "units." In the high school a *standard secondary unit* is the measure of a subject pursued throughout the school year of thirty-six to forty weeks and constitutes approximately one-fourth of a full year's work. In the University a *unit of registration* is one hour of a 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. Credit for 124 or more units, distributed according to the requirements of the college in which the student is enrolled, is necessary for a degree.

In the College of Letters and Science students may present study-lists aggregating 12 to 16 units per half-year without special permission.\* During his first half-year in residence at the University no student may receive credit in more than 16 units of work. After one half-year in regular residence (i.e., with a study list of at least 12 units) a student may receive permission from the Committee on Scholarship to take not more than 18 units in a half-year, providing he has attained an average of at least grade B for the preceding half-year. A student whose record during the preceding half-year was free of all deficiencies, and who is not on probation, may submit, without special permission, a program  $\frac{1}{2}$  unit in excess of the limits announced above, providing the  $\frac{1}{2}$  unit be in required physical education and with the understanding that, though the  $\frac{1}{2}$  unit course will be recorded in regular fashion and will meet in full the physical education requirement, nevertheless the student may not count toward the degree more than the allowable maximum of his college. Prescribed courses in military science and physical education and repeated courses are to be counted in reckoning study list totals. Any work undertaken in the University or elsewhere with a view to credit toward a degree must be included in the above maxima.

Students in the Teachers College may present study lists aggregating from 12 to 17 units each half-year without special permission.\* During the first half-year in residence at the University no student may receive credit in more than 17 units of work. After one half-year of regular residence (i.e., with a study-list of at least 12 units) permission may be granted to take not more than 18 units each half-year, providing the student has attained an average of at least grade B for the preceding half-year. A student whose record during the preceding half-year was free from all deficiency and who is not on probation may submit, as under the provisions above for the College of Letters and Science, a program of half a unit in excess of the limit announced, providing the half unit be in required physical education, and with the understanding as above, that only the allowable maximum for the college may be counted. A student whose record during the preceding half-year included one or more deficient grades (who did not pass in the entire program undertaken, or who is on probation), will be restricted to a total program of 16 units, within which must be included all prescribed subjects such as physical education. Prescribed courses in military science and physical education are to be counted in reckoning study list totals.

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\* Certain courses which do not give units of credit toward the degree, nevertheless displace units from a student's allowable program, as follows:

Com. A (Typing) by 1 unit.

Com. B (Shorthand) by 2 units.

Course in Subject A by 2 units.

Art A by 2 units.

Music 5A by 1 unit.



In the pre-engineering curricula, regular students who are free from deficiencies in the work of the preceding half-year may register for not more than 19 units of new work.\* In the pre-commerce, the limit is 19 units.\* Freshmen and sophomores who are taking the prescribed courses in military science and physical education may, with the express approval of the chairman of the department, add these courses to the maxima as stated. Students whose record for the preceding half-year shows deficiencies (who are not passing in their entire program) will be limited to 16 units, including repeated work.

Special students have free election of subjects within the fields specified at the time of their admission. They may not exceed a program of 16 units per half-year.

### SUBJECT A: ENGLISH COMPOSITION

1. With the exceptions noted below, all undergraduate intrants must at the time of their first registration at the Southern Branch take an examination known as the *examination in Subject A* designed to test their ability to write English without gross errors in spelling, grammar, diction, sentence-structure, and punctuation.

2. The examination in Subject A will be given at the opening of each half-year and at the opening of the Summer Session (see Registration Circular to be obtained from the Recorder of the Southern Branch). A second examination for late intrants will be given two weeks after the first examination in each half-year; for this examination a fee of \$2.00 will be charged. The results of each examination will be made known the day following the examination. Papers submitted in the examination will be rated as either "passed" or "failed." Any student who is not present at the examination in Subject A which he is required to take will be treated as one who has failed in the examination.

3. All students who do not pass in the examination in Subject A will be required to take, immediately after their failure, a course of instruction known as the *course in Subject A*, which gives no units of credit toward graduation, but which reduces the maximum program allowed the student by two (2) units. Should any student fail in the *course in Subject A* he will be required to repeat the course in the next succeeding semester of his residence in the University. The course in Subject A will be given each half-year, three hours a week.

\*Certain courses which do not give units of credit toward the degree, nevertheless displace units from a student's allowable program, as follows:

Com. A (Typing) by 1 unit.

Com. B (Shorthand) by 2 units.

Course in Subject A by 2 units.

Art A by 2 units.

Music 5A by 1 unit.

4. If in the judgment of the instructor in the class in Subject A a student shows excellence in English composition through a period of at least two weeks, the instructor is authorized to give him a final grade of passing in Subject A, to permit him to withdraw from further attendance, and to drop the subject from his study-list (thereby making it possible for the student to add two units of work to his program), and to refund a portion of the \$10.00 fee.

5. No student who has not passed either the examination or course in Subject A will be admitted to any University course in oral or written composition. No student will be granted a Junior Certificate or given junior standing unless he has passed either the examination or course in Subject A. No student will be granted a bachelor's degree until he has passed either the examination or course in Subject A.

6. Students who pass Subject A are not required, but are advised to continue their training in oral or written composition.

7. Failure in the examination does not prevent admission to the University of California.

8. Any student who has received a grade of 60 per cent given by the College Entrance Examination Board on the basis of an examination in English 1 or in English A or in the Comprehensive Examination in English will receive credit for Subject A. Any student who has passed an examination in Subject A given by the University of California at Berkeley or any other seat of the University, or given under the jurisdiction of the University at any junior college or other assigned place, will receive credit for Subject A.

9. Transfer students who enter the University of California, Southern Branch, with 60 or more units of advanced standing, and who have passed an examination similar to the examination in Subject A at the institution from which they came, or have completed a course in English composition at that institution, deemed acceptable by the Committee on Admissions, will be exempt from the requirement in Subject A.

10. A student who has failed in an examination in Subject A may not have the privilege of taking a subsequent examination; he must obtain credit in the subject through passing the course in Subject A. However, should the student receive a condition in the *course in Subject A* he may, with the approval of his instructor, be admitted to the next succeeding examination in Subject A.

11. The examination in Subject A and the course in Subject A will be directed and judged by the Committee on Subject A.

**EXAMINATIONS FOR STUDENTS ENTERING THE  
TEACHERS COLLEGE**

The following examinations for students entering the Teachers College will be administered at the time of matriculation, not to determine whether the student may be admitted but to assist in determining his status after admission:

(1) **General Intelligence Test:** required of all new intrants in the Teachers College. At the opening of the fall semester, 1926, the intelligence test will be held in the Millspaugh Hall Auditorium, September 10, at 1:30 p.m.

(2) **Piano Test:** required of all students entering the Kindergarten-Primary curriculum. Appointments for individual test must be made with the departmental advisers.

Before student may be assigned practice teaching he must show ability to play on the piano music suitable for use with young children.

**MILITARY SCIENCE AND PHYSICAL EDUCATION**

All undergraduate students shall, upon admission to the Southern Branch, report immediately to the proper officers for enrollment in physical education, following the Registration Circular or the announcements which may be posted on the bulletin boards. All able-bodied male students, who are under twenty-four years of age at the time of admission, and who are citizens of the United States, shall report immediately for enrollment in military science. A deposit (\$20.00) must be paid at once to the Comptroller of the University to cover the cost of the uniform and textbook to be used in military courses. A fee of \$5 is charged all men registered in physical education for the use of the standard gymnasium suit. Students shall list these courses upon their study cards with other University courses.

Petitions from students for excuse from, or deferment of, military science or physical education, 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 either of them should nevertheless present themselves to the proper instructors for enrollment during the pendency of petitions.

Students more than twenty-four years of age at the time of admission are, upon petition, excused from military science and physical education.

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

In case a student subject to these requirements shall list the prescribed course or courses on his study-list, and thereafter without authority shall fail to appear for work in such course or courses, the neglect will be reported to the dean of his college. With the approval of the Director of the Southern Branch, the dean will suspend the student from the University for the remainder of the half-year, and will notify the Recorder. On recommendation of the professor in charge of the work, and with the approval of the Director, the dean is authorized to reinstate the student and will notify the Recorder of such reinstatement.

The student is referred to the announcements of the departments of Military Science and Tactics and Physical Education, contained on pages 136 and 143 (men), and 147 (women), respectively.

#### AMERICAN INSTITUTIONS

A course in the Constitution of the United States including the study of American institutions and ideals is required for any university degree or teaching credential. The prescribed course for all students except those majoring in Political Science or History is Political Science 101, American Institutions.

#### AUTHORITY OF INSTRUCTORS

No student will be permitted to enter upon the study of any subject if the officer of instruction in charge of that subject is satisfied that by reason of lack of preparation he is not competent to undertake it.

Every student is required to attend all his class exercises and to satisfy the instructor in each of his courses of study, in such way as the instructor may determine, that he is performing the work of the course in a systematic manner.

Any instructor, with the approval of the Director of the Southern Branch, may at any time exclude from his course any student who, in his judgment, has neglected the work of the course. Any student thus excluded shall be recorded as having failed in the course of study from which he is excluded, unless the faculty shall otherwise determine.

### EXAMINATIONS

Final examinations are mandatory in all undergraduate courses save laboratory courses and such other courses as, in the opinion of the Committee on Courses, because of resemblance to laboratory courses, require special treatment. In laboratory courses final examinations are held at the option of the department in charge. All examinations will, so far as practicable, be conducted in writing, and a maximum time will be assigned beforehand for each, which no candidate will be allowed to exceed. The time for examination sessions shall not be more than three hours.

Any department may examine students, at the end of the half-year immediately preceding their graduation, in the major subject in which such department has given instruction.

No student will be excused from assigned examinations.

Any student tardy at an examination will be debarred from taking it, unless an excuse for such tardiness entirely satisfactory to the examiner be presented.

Reexaminations are permitted only for the purpose of *removing conditions* (grade E). In courses of the Summer Session, however, reexaminations for the removal of deficiencies are not provided by the University. Students who have received grade B, C, or D in any course are not allowed a reexamination therein.

Concerning examinations for the removal of conditions see under *Conditions and Failures*, below.

Application for examination for advanced standing on the basis of work done before entrance to the University should be made to the University Examiner upon entrance to the University.

### GRADES OF SCHOLARSHIP: GRADE POINTS

The final result of the work of the students in every course of instruction will be reported to the Recorder in six grades, four of which are passing, as follows: A, excellent; B, good; C, fair; D, barely passed; E, conditioned; F, failed.

Any student may be reported grade "E" (conditioned) in a course owing to the omission of, or to unsatisfactory work in, any examination or other exercise of the course which, in the judgment of the instructor, may properly be required for a passing grade, without necessitating a repetition of the course.

No student will receive credit in any course in which he may have received grade "F," except upon successful repetition of that course.

The term "incomplete" will no longer be used in reporting the work of students. The instructor is required in every case to assign a definite grade (A, B, C, D, E, or F) based upon the work actually accomplished, regardless of the circumstances which may have contributed to the results achieved.

Except in the pre-engineering curricula, grade points or quality units will be assigned as follows: A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no points per unit; \*E, minus 1 point per unit; \*F, minus 1 point per unit. Removal of grade E or F by reexamination or repetition of the course will entitle the student to as many grade points as may have been lost by the condition or failure, but no more. For exceptions permitted in certain cases in which grade E is assigned, see under Conditions and Failures, below.

To qualify for the bachelor's degree in the College of Letters and Science, in the Teachers College, in the College of Agriculture, in the College of Commerce, or in the College of Chemistry the student must have attained at least as many grade points or quality units as there are time units or quantity units in the credit value of *all courses undertaken* by him in the University of California in and after August, 1921.

The reports in January, as in June, 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 E* 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 may not be assumed that a passing grade in the work of the second half-year removes a deficiency in the first half-year.

### CONDITIONS AND FAILURES

For the removal of a condition a student may, on petition, have the privilege of either a reexamination with the class next repeating the subject or a special examination (not with the class). In courses of the Summer Session, however, reexaminations for the removal of deficiencies are not provided. For every such examination a formal permit, to be obtained in advance, on petition filed with the Recorder, must be shown to the

\* Provision for "negative grade points," in courses graded E or F, effective in and after August, 1923.

instructor in charge of the examination. For every course in which a special examination is undertaken for the removal of a condition, a fee of \$5.00 is charged, save that there is no fee for a reëxamination (final examination taken with a class), provided the final examination be the only task required by the instructor for the removal of the condition. The fee for two or more special examinations undertaken to remove conditions during a single half-year will not exceed \$10.00. A form of petition for a special examination or for admission to an examination with a class, together with instructions for procedure, may be obtained from the Recorder.

In no case may a condition in a course in which a final examination is regularly held be removed, unless the student shall have passed a satisfactory final examination in the course, either at the time when the course was originally taken, or at a later time, as above provided.

Removal of grade "E" (conditioned) by reëxamination or otherwise shall entitle the student to receive grade "D" in the course and to receive as many grade points as have been lost by the condition, but no more. An exception to this rule is permitted, however, when the deficiency consists solely in the *omission* of the final examination or other required exercise, due to illness, or other circumstance over which the student had no control. In such a case the student may present a petition to have such grade assigned as would have been assigned by the instructor if the completion of the work had not been delayed. The petitioner must set forth in detail the circumstances that made it impossible for him to complete the course within the usual limit of time. The petition must be endorsed by the instructor concerned as evidence of the fact that the student's work, so far as presented, was satisfactory, and must finally be submitted for approval to the dean of the college. In the event of such approval the instructor may assign such grade to the student as would have been given if the completion of the work had not been delayed; the student shall then receive the corresponding grade points.

If a student who has incurred a condition in any course fails to make up the condition by the end of the next semester of his residence in which the said course is regularly given, then such condition is removable only by repetition of the course.

Any student who is reported as having failed in any prescribed course in military science or physical education, or the course in Subject A, will be required to repeat such course during his next regular semester of residence in which such course may be given.

A student who fails to attain grade D or a higher grade in any course following examination for the removal of a condition will be recorded as having received grade F (failure) in the course.

**SCHOLARSHIP RULES: DISMISSAL FOR FAILURE TO MEET  
MINIMUM REQUIREMENTS**

*Note.*—A student dismissed for unsatisfactory scholarship will be excluded from the University for an indefinite period, with the presumption that his connection with the University will be ended by such exclusion. For this reason, a student who is in danger of dismissal under the regulations should present his case to the Committee on Disqualified Students at a date sufficiently early so that a possible favorable decision may be reached in time to prevent dismissal.

*A. College of Letters and Science, Teachers College, Pre-Agriculture, Pre-Commerce, Pre-Chemistry.* 1. Any student in these colleges whose scholarship in any half-year falls below an average grade of "D" per unit of work undertaken, will be dismissed.

2. (a) Any student in these colleges whose entire University record, computed to the close of any half-year, shows a cumulative deficit of ten (10) or more grade points (regardless of the number of units passed) will be placed on probation.

(b) If the student fails during any single half-year while on probation to maintain an average grade of at least "C" per unit of work undertaken, dismissal will follow; otherwise, probationary status will be continued until such time as the cumulative grade point deficit be reduced to an amount less than ten (10).

3. By special action of the Committee on Disqualified Students any student who in any single half-year fails to attain grade points in an amount equal to the number of units undertaken, may be placed on probation for one-half year, and be required during the probationary half-year to maintain at least a "C" average under the penalty of dismissal.

*B. Pre-Engineering Curricula.* 1. Any student in the pre-engineering curricula who in any single half-year fails to pass in at least six (6) units, or (if registered for less than six units) in all work undertaken, will be dismissed.

2. (a) Any student in these curricula who in any single half-year passes in six (6) units, but fails to pass in at least ten (10) units, or (if registered for less than ten units) in all work registered, will be placed on probation for one half-year.

(b) If the student fails during the probationary half-year to maintain an average grade of at least "C" per unit of work undertaken, dismissal will follow.



## TIME REQUIRED TO OBTAIN TRANSCRIPTS OF RECORD

Teachers and others who intend filing applications with the State Board of Education, and who desire a transcript of their credits at the close of any regular or summer session, are urged to give notice of their intention in the office of the Recorder some time before the close of the session. Time is required for the preparation of the student's record for transfer, and the University cannot be responsible for the transmission of a transcript to its destination in less than one week.

## LEAVE OF ABSENCE AND HONORABLE DISMISSAL

*Indefinite leave of absence* must be sought by written petition filed with the Recorder.

*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.

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

## DISCIPLINE

The University authorities expect all students to set and observe among themselves a proper standard of conduct. It is therefore taken for granted that, when a student enters the University, he has an earnest purpose and studious and gentlemanly habits; and this presumption in his favor continues until, by neglect of duty or ungentlemanly behavior, he reverses it. But if an offense occurs, whether it be against good behavior or academic duty, the University authorities will take such action as the particular occurrence, judged in the light of the attendant circumstances, may seem to them to require. Students who fail to make proper use of the opportunities freely given to them by the University must expect to have their privileges curtailed or withdrawn.

*Grades of Censure.*—Censure will be expressed in the four grades of probation, suspension, dismissal, and expulsion. Probation indicates that the student is in danger of exclusion from the University. Suspension is exclusion from the University for a definite period. Dismissal is exclusion for an indefinite period, and with the presumption that the student's connection with the University will be ended by it. Expulsion is the highest academic censure, and is final exclusion of the student from the University.

The Director of the Southern Branch is entrusted by the President of the University with the administration of student discipline with full power to act.

*Student Self-Government.*—There exists at the University a system of student self-government, steadily growing in range and in the confidence felt toward it on the part of the student body. There is a University Affairs Committee, composed of ten members, which passes on cases of misconduct among students. To this committee the Director of the Southern Branch customarily refers, for recommendation, cases of student delinquency, ranging in degree from petty offenses to those of a more serious nature. All cases of cheating and dishonesty in examinations or classroom work are referred to this committee. This committee is considered rather as a "household tribunal" than as a court. Its inquiries and findings have not been given legal form, nor are the students summoned before it put under oath.

#### DEGREES: TEACHING CREDENTIALS

Every candidate for a degree or for the completion of a regular University curriculum leading to a teaching credential will fill out a form to be found in the registration book, indicating his candidacy for such degree or teaching credential. The Recorder will then consult with the appropriate dean and committees, and will advise the student whether the program he is undertaking will satisfy the requirements of his curriculum.

It should be noted that the State Board of Education issues teaching credentials of a wider variety than those for which the University has especially designed curricula, and also that the State Board of Education issues credentials on alternative bases other than the approved University curriculum. Certain students, therefore, who are meeting the State Board requirements may need to have their programs approved by the State Board of Education if they are not candidates for the University credential.

*Senior Residence.*—All candidates for the bachelor's degree are required to have been enrolled during the senior or final year of residence in that college of the University in which the degree is to be taken. It is

permissible to offer two summer sessions (or two intersessions, or one summer session and one intersession) as equivalent to one half-year; but in any event the student must complete in resident instruction either the fall or spring semester of his senior year. This regulation applies both to students entering this University from another institution and to students transferring from one college to another of this University.

### FEEs

The incidental fee, \$20.00, which must be paid on date of registration, covers expenses of students other than the cost of their instruction and entitles them to the use of the gymnasium, tennis courts, swimming pool, baths, soap, towels, washrooms, etc.; consultation, medical advice or dispensary treatment in case of illness; and meets in part the expenses in connection with registration and graduation. This fee is not remitted in whole or in part for those who may not desire to make use of any or all of these privileges. In case a student withdraws from the University within the first three weeks of the semester, a portion of this fee will be refunded. Students registering for less than five units of work will have half the incidental fee (\$10.00) refunded within six weeks after the registration date.

*Non-resident tuition fee.*—Non-residents of California\* are charged a tuition fee of \$75.00 each half-year, which shall be paid on the day of registration.

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\* There follows a reprint of the resolution adopted by the Finance Committee of the Regents of the University, June 19, 1923, in accordance with the provisions of Section 1294½, Political Code of California. "No person shall be considered eligible to register in the University as a resident of the State of California unless he has resided in the State for more than one year immediately preceding the semester during which he proposes to attend the University. The residence of each student shall be determined in accordance with the rules for determining residence prescribed by the provisions of Section 52 of the Political Code of California, provided, however, that every alien student who has not made a valid declaration of intention to become a citizen of the United States as provided by the laws thereof, prior to the opening day of the semester during which he proposes to attend the University, shall be deemed to be a non-resident student, and further provided, that every student shall be deemed to be a resident student who is either—

(a) A Citizen of the United States who has attained his majority, according to the laws of the State of California, and who for a period of (1) one year has been entirely self-supporting and actually present in the State of California, with the intention of acquiring a residence therein; or

(b) A minor child, a citizen of the United States, who does not receive, and has not received, for more than one (1) year immediately preceding his entrance into the University, directly or indirectly, any support or financial assistance from his father, provided such minor lives with his mother, who is, and has been, continuously for a period of more than one (1) year, actually present in the State of California, with the intention of making her home therein. Every person who has been, or who shall be hereafter classified as a non-resident student shall be considered to retain that status until such time as he shall have made application, in the form prescribed by the Recorder, for reclassification, and shall have been reclassified as a resident student by the attorney appointed to act for the Regents in non-residence matters."

Every entering student and student returning to the University after an absence of a half-year or longer, is required to fill out a "Statement as to Residence" on the day of registration, and his status as to residence or non-residence will be determined by the Attorney for the University shortly after registration.

Old students are advised that application for reclassification as a resident of California must be filed within ten days after regular registration, or within one week after registration, or, in the case of late registrants, within one week after registration. The Attorney will not consider applications for reclassification filed later than these dates. Application for a change in classification during some preceding semester will not be received under any circumstances.

If the student registers for less than 12 units the tuition fee is as follows: Minimum, \$25.00; \$5.00 per unit for work aggregating six to eleven units or fraction thereof.

Fine for delayed payment of any of the above fees or departmental fees or deposits, \$2.00. Departmental fees and deposits must be paid within one week of the day of registration.

Late application for admission (after August 30, 1926, or January 28, 1927), \$2.00.

Late registration, \$2.00. (After date set as registration day.)

Late filing of registration book, \$2.00. (More than seven days after registration.)

Late examination in Subject A, \$2.00.

For courses added after date set for filing registration book, \$1.00 per course.

For courses dropped after October 2 or February 26, \$1.00 per course.

Medical examination: original appointment, or deferment arranged in advance, *no fee*; fee for a second appointment, \$2.00.

*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 \$5.00 to \$30.00 per year.

*The military uniform and textbook deposit* is \$20.00 for students in the basic course, and \$25.00 for students in the advanced course, payable by every student subject to military training before his registration book 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 when admitted to the University. The United States furnishes uniforms and some textbooks for the use of students receiving military training, and the University requires the student to deposit with the Comptroller an amount necessary to cover the cost of the articles issued to him. The deposit is refunded at the close of the academic year, or upon the student's withdrawal from the Univer-

sity, provided the student then returns in good condition all articles issued to him. The amount necessary to replace articles not returned by the student will be retained by the Comptroller.

**Key deposit:** a deposit of \$1.00 is required on each locker or university key issued to a student, a faculty member or an officer of the University. This deposit is refunded in full upon return of the key.

**Other expenses are:** Gymnasium outfit for men, \$5.00; for women, about \$8.00; books and stationery, from \$18.00 to \$25.00 per year. All students are eligible to membership in the Associated Students of the University of California, Southern Branch. The cost of membership is \$7.50 per year. The membership card entitles the holder to participation in the affairs of the Associated Students; a subscription to the *California Grizzly*; admission to all athletic contests (with the exception of final intercollegiate contests) held on the campus under the jurisdiction of the Associated Students.

#### SCHEDULE OF REFUNDS

Dates are Computed from September 13, 1926, and February 7, 1927.

##### Incidental Fee of \$20.00

To end of first week.....	Refund \$17.50
From first week to end of third week.....	Refund \$10.00
Thereafter, no refund.	

##### Non-Resident Fee of \$75.00

To end of first week .....	Refund \$65.00
From first week to end of the third week .....	Refund 50.00
From third week to the end of the sixth week .....	Refund 35.00
From the seventh week to the end of the twelfth week .....	Refund 15.00
Thereafter, no refund.	

No claim for refund of fees will be considered unless such claim is presented during the fiscal year to which the claim is applicable. No student will be entitled to a refund except after surrender to the Comptroller of his receipt. Students should preserve their receipts.

#### SCHOLARSHIPS

The Committee on Scholarship of the University of California, Southern Branch, is authorized to award a limited number of scholarships annually to students in the Southern Branch. The Committee rates all candidates as to scholarship, need, and character, and bases its recommendation upon relative ratings of all the candidates applying at any one time.

Applications for these scholarships with letters and testimonials relating to them, should be filed with the Recorder on or before the 15th day of March preceding the academic year for which the awards are to be made; if received later they will not ordinarily be considered until the following year. A blank form of application, which gives all the necessary information, may be obtained from the Recorder.

## MISCELLANEOUS

### MAINTENANCE

#### LIVING ACCOMMODATIONS

There are no dormitories maintained by the University.

The cost of board and lodging in boarding houses near the campus is from \$45.00 to \$60.00 a month. For students living in housekeeping rooms and boarding themselves, the expenses may be reduced to as low as from \$30.00 to \$40.00 a month, but this plan is not generally recommended. Student apartments for two rent at from \$35.00 to \$75.00 a month. Women are not, however, permitted to live in apartments unless satisfactory arrangements concerning chaperonage are made in advance with the Dean of Women. The hours of recitation are such that students may commute from many of the towns in the vicinity of Los Angeles. Families, or groups of mature students, who wish to rent furnished houses or apartments should apply to local real estate agents.

*The ordinary yearly expenses* (including personal expenses) of a student would probably be at least \$675.00.

No woman is permitted to complete her registration unless her living accommodations are first approved by the Dean of Women. Lists of approved accommodations may be obtained at the office of the Dean of Women, Millspaugh Hall.

A further list of accommodations for men may be obtained at the office of the Dean of Men, North Hall.

#### EMPLOYMENT

Women students desiring employment should apply at the office of the Dean of Women, Millspaugh Hall. Limited opportunities exist for obtaining employment on an hourly basis in the following fields: stenography, typewriting, general office work, tutoring, housework, care of children, serving as waitress, etc. At the present time students who assist with housework or the care of children give an average of three hours' work a day in exchange for board and room and \$10.00 a month.

The Young Men's Christian Association acts as a bureau of information concerning employment for men students.

With reasonable diligence a student can devote some time to outside work without seriously interfering with University work of from twelve to sixteen units. It should always be borne in mind, however, by students seeking employment that not every kind nor every amount of outside work is entirely compatible with the student's purpose at the University, namely, his education. Only in rare instances can a student be entirely self-supporting.

Little can be done in securing employment for students who are not actually on the ground to negotiate for themselves. It is usually so difficult for a stranger to obtain remunerative employment that, in general, the student should not come to Los Angeles expecting to become self-supporting at once, but he should have on hand sufficient funds to cover the expenses of the first half-year.

Applicants for employment in teaching or tutoring should apply at the office of the Appointment Secretary, Millspaugh Hall. 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 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 obtain 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 graduates for the service rendered by this office.

The Bureau of Occupations, in the offices of the Alumni Association, places graduates in positions other than teaching. The purpose is to aid employers to choose from the graduates of the University workers who will meet their requirements. Data are supplied covering past experience, education, and salary. Confidential reports on character, integrity, and ability of each applicant are obtained. A recommendation from this office will be given only after the facts have been carefully studied.

## LIBRARY, GYMNASIUM, INFIRMARY

### THE LIBRARY

The Library has a capacity exceeding 75,000 volumes, and reading rooms are provided for about 900 students. It regularly receives approximately 650 periodicals and continuations.

The Library is open daily, except Sundays. From Monday to Friday, inclusive, the hours are from 7:45 a.m. to 10 p.m.; Saturday, from 7:45 a.m. to 5 p.m.

## GYMNASIUM AND ATHLETIC FACILITIES

*For Men*

The Men's Gymnasium, though not large, affords opportunity for exercise in boxing, wrestling and gymnastic work and contains accommodations for approximately 1000 men in the locker rooms and 50 men at a time in the shower room. The athletic field measures 300 × 600 feet and contains a quarter-mile running track, three outdoor basketball courts and six handball courts, besides adequate room for football and baseball. There are six tennis courts. The swimming pool, 50 × 100 feet, is at the rear of the Gymnasium.

*For Women*

The Women's Gymnasium is well equipped. Besides a main hall, 60 × 80 feet, there are classrooms, a corrective room, rest rooms, shower and dressing room accommodations. Nearby are two outdoor basketball courts and an athletic field, 200 × 300 feet. Women and men have access to the swimming pool on alternate days.

## THE INFIRMARY

The Southern Branch maintains on the campus, for the care of emergencies, an infirmary, with a physician and a trained nurse in charge. There are no facilities for hospital care. Students are entitled to medical consultation and advice. Every entering student receives a physical examination.

## MUSICAL EVENTS

Four musical events are given during the year. The Christmas Concert consists of a University community program of Christmas carols, given by the University Choral Club. At the Spring Concert an oratorio is performed by the University Choral Club, assisted by local artists as soloists. A series of Senior Piano Recitals is given by the fourth-year students. The Original Composition Program is a public demonstration of the work of the year in music composition.

## THE ASSOCIATED STUDENTS

There is an organization, the Associated Students, that administers and controls all extra-curricular activities. This organization has an executive council composed of a president, two vice-presidents, two



representatives of groups, and the chairmen of five activity boards. The activity boards control the activities in definite fields such as debating, athletics, dramatics or publications; while the council coördinates the work of these boards and administers the general business of the Association.

All financial and athletic interests of the Associated Students are administered by the General Manager of the Associated Student Body.

Subject to the approval of the Director, the University Affairs Committee, composed of fourteen members, passes on all cases of misconduct among the students.

### PUBLICATIONS

The *California Grizzly* and *The Southern Campus* are the official publications of the students of the Southern Branch. The *California Grizzly*, the student paper, is published daily. The *Grizzly* contains news of all campus and college activities, and is in direct charge of an editor and a manager appointed by the council. *The Southern Campus* is the year-book. It contains a complete record of the college life of the year, and is edited, managed, and financed by the students.

### CO-OPERATIVE STORE

The Students' Co-operative Store is owned and operated by the Associated Students.

### 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, as well as for students in the regular session who are desirous of shortening their college courses, or who have been unable to enroll in needed subjects. Any adult of good moral character, considered by the faculty to be of sufficient maturity and intelligence to profit by attendance upon the exercises of the session, may be admitted to the Summer Session. The courses of instruction are of University grade, and credit toward University degrees may be given to students who comply with such conditions of work and examinations as may be imposed by the instructors in charge.

The tuition fee is \$25, regardless of the number of courses taken.

The Announcements of the Summer Sessions are issued in January of each year and may be obtained by addressing the Dean of the Summer

Sessions, Berkeley, or the representative of the Summer Session in Los Angeles, 815 Hillstreet Building, Los Angeles.

Summer Sessions are conducted at the seat of the University in Berkeley, at the Southern Branch in Los Angeles, at Davis, and at Riverside. In addition, the Intersession of six weeks, immediately preceding the Summer Session, is given in Berkeley.

#### UNIVERSITY EXTENSION DIVISION

For those who desire instruction of University grade and can devote to it only the leisure hours after performance of their business or professional duties, the Extension Division offers large opportunity. Classes cover a wide range of subjects and meet at times and places convenient to the student. The Los Angeles office is at 817 Hillstreet Building.

## VII. CURRICULA

There are established at the Southern Branch: (a) The College of Letters and Science, with a curriculum leading to the degree of Bachelor of Arts (b) The Teachers College, with a curriculum leading to the degree of Bachelor of Education.

### A. COLLEGE OF LETTERS AND SCIENCE

The curriculum of the College of Letters and Science includes three elements that may be considered characteristic and essential:

1. *Requirements to secure breadth of culture.* In the present curriculum no specific courses are required, but the student must select courses within certain designated groups, some of the groups being alternatively elective. These groups have been chosen to represent the more important fundamental types of human intellectual endeavor. At present these requirements are limited to the lower division, but the student is given a wide freedom of election in the upper division to continue cultural studies of his own choice.

2. *Requirements to provide for intensive study* in a field of the student's choice, carried through several years and including work of a distinctly advanced character in the "major."

3. *A reasonable freedom of elective time.* Freedom of election gives the student an opportunity to develop his personal power and initiative, but it also makes possible an unwise selection of courses. The College aims to minimize the dangers of an elective system of studies by moderate requirements to ensure proper distribution and concentration; and by the development of the faculty adviser system.

### LOWER DIVISION

The work of the lower division comprises the studies of the freshman and sophomore years. The junior certificate in the College of Letters and Science is required for admission to the upper division.

Students who transfer from other colleges of the University of California or from other institutions will be required to meet the junior certificate requirements, but will not be held strictly to the time distribution of requirements, if the credit allowed them in the University of California amounts to at least sixty units.

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 individual 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 number of units required in the University for the junior certificate (60) or for the degree (124).

The degree requirement of 124 units is calculated on the assumption that the student will normally take 64 units of work in the lower division, including the prescribed work in military science, physical education, and hygiene, and 60 units in the upper division. However, the junior certificate will be granted on the completion of not less than 60 units of college work and the fulfillment of the following general and specific requirements:

(a<sub>1</sub>) *General University requirements.*†

Subject A.‡

Military Science and Tactics, 6 units (men).

Physical Education, 2 units.

(a<sub>2</sub>) *Southern Branch requirement: Psychology X.*

(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. Instruction in these subjects is not given in the fall or spring sessions of the University.

† For information concerning exemption from these requirements apply to the Recorder.

‡ An examination in Subject A (English Composition) is required of all intrants at the time of their first registration in the University. For further regulations concerning Subject A see General Regulations of the Faculties, in later pages of this circular.

- (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, 11.  
 Biology 1.  
 Botany 2A\*-2B\*.  
 Chemistry 1A\*-1B\*, 2A-2B\*, 5\*, 6A\*-6B\*, 8A-8B.  
 Geology 1A, 1B, 1C, 2C, 2D.  
 Paleontology 1.  
 Physics 1A-1B\*, 1C-1D\*, 2A-2B, 3A-3B\*, 4A-4B.  
 Physiology 1.  
 Zoology 1A\*-1B\*.

The student must include in the courses taken in satisfaction of the requirement in natural science at least one course in laboratory science. Any of the courses marked with an asterisk in the above list will be accepted in fulfillment of this requirement. Courses with but one unit of laboratory science are not accepted as fulfilling this requirement and are not marked above, unless they have as prerequisite a course that also requires one unit of laboratory work.

(e) *Additional.* A year-course (of at least six units) in each of three of the following groups:

- (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) Social sciences.
- (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:

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

*Group 1—English and Public Speaking*

English 1A-1B, 56A-56B; Public Speaking 1A-1B.

*Group 2—Foreign Languages*

French: any two consecutive courses of A, B, C, D, 1A, 1B, 5A, 5B, or any upper division year sequence.

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

Greek: 1AB-2AB; or 101.

Latin: any year sequence from the following: C, D; 1, 5, 102, 106.

Two years of high school Latin are accepted as the equivalent of a year course.

Spanish: any two consecutive courses of A, B, C, D, CD, 50A-50B, or any upper division year sequence.

### *Group 3—Mathematics*

Any two of the courses C, 5, 6, 8, 9A-9B, or 3A-3B.

High school plane trigonometry (2e) and plane analytic geometry (2f) will be accepted in partial satisfaction of this requirement, each to count for 2 units.

### *Group 4—Social Sciences*

History 4A-4B.

Economics 1A-1B.

History 5A-5B.

Political Science 1A-1B.

History 8A-8B.

### *Group 5—Philosophy*

Philosophy 1A-1B.

Philosophy 3A-3B.

*Summer Session Courses.*—Students who desire to satisfy the specific subject requirements for the Junior Certificate in the summer session may use only those courses which are the equivalents of courses offered in the fall or spring sessions listed as acceptable in meeting junior certificate requirements and which are designated by the same numbers with the prefix "S."

Requirements (b) and (d) may be met in whole or in part by the completion of acceptable courses in the summer session. For a list of such courses, see the Announcement of the Summer Session. The requirements in units must be met in full. Courses offered in fulfillment of requirement (e) must be taken in the fall and spring sessions.

*University Extension.*—The maximum amount of credit granted toward a degree to a student whose program is confined to courses in the Extension Division (correspondence or class) is 15 units per year.

Certain courses offered in the Extension Division may be accepted in fulfillment of some of the junior certificate requirements. A list of such courses may be obtained from the Director of the Extension Division.

*Honorable mention with the junior certificate.*—Honorable mention will be granted with the junior certificate in accordance with the regulations on Honors, page 63.

## UPPER 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. The total number of units in college courses in the lower and upper divisions offered for the degree must be *at least* 124.

2. The student must attain as many grade points (quality units) as there may be time units (quantity units) in the credit value of all courses in which he may have received a final report on the basis of work undertaken by him in the University in and after August, 1921. See also regulations concerning negative grade points, page 43.

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

4. The course in American Institutions 101 (or its equivalent) must be completed by all candidates for the degree of A.B.

5. At least 36 units of work completed in the upper division (of which 24 units shall constitute the major) must be in upper division courses in the departments or subjects listed under (6) below:

6. A major of 24 upper division units in one of the following subjects which carries the designation "M" must be completed according to the rules given below under the heading "Majors for the A.B. degree."

Art  
Astronomy  
Botany, M  
Chemistry, M  
Economics, M  
Education  
English, M  
French, M  
Geography, M  
Geology, M  
German, M  
Greek  
History, M  
Home Economics

Latin, M  
Mathematics, M  
Mechanic Arts  
Military Science  
Music  
Philosophy, M  
Physical Education for Men  
Physical Education for Women  
Physics, M  
Political Science, M  
Psychology, M  
Spanish, M  
Zoology, M

7. All candidates for the Bachelor of Arts degree are required to have been enrolled during the senior or final year of residence in the College of Letters and Science. At least the final 24 units of work must have been completed in the College of Letters and Science. It is permissible to offer two summer sessions (or two intersessions, or one summer session and one intersession) as equivalent to one half-year; but in any event the student must complete in resident instruction either the fall or spring semester of his senior year. This regulation applies both to students entering this University from another institution and to students transferring from another college of this University.

8. No student is permitted to transfer from one major department to another after the opening of the last semester of his senior year.

9. Students who fail in the lower division to attain an average of at least one grade point for each unit of work taken in any department may at the option of the department be denied the privilege of a major in that department. Any department offering a major in the College of Letters and Science may require from the candidates for the degree a general final examination in the department.

All students are required to take at least six units in their major (either three units each half-year or 2 units one half-year and 4 units the next) during their last or senior year.

The major department may submit to the Dean of the College the name of any student who in the opinion of the department cannot profitably continue in the department, together with a statement of the basis for this opinion, and the probable cause of the lack of success. In such case the Dean may permit a change in the major or may, with the approval of the Director of the Southern Branch, require the student to withdraw from the college.

10. Students who transfer to the University of California, Southern Branch, from other institutions with senior standing at the time of admission must complete at least 18 units of work in upper division courses, including at least 12 units in their major department.

#### MAJORS FOR THE A.B. DEGREE

A major (see item 6 above) consists of a substantial group of coordinated upper division courses. The 24 upper division units required in the major for the A.B. degree may represent courses in one or more departments. If the greater part of the major work is in one department, this is known as the major department. If the major is a curriculum



of courses from two or more departments, no one of which represents the greater part of the work involved, the major may be known as a group major, and its administration be in the hands of an advisor appointed by the Dean.

Majors may be offered for the A.B. degree in any of the subjects or departments listed above with the designation M (see paragraph 6). The general outline of the content of these majors may be found in the respective department announcements in succeeding pages of this announcement. The details of the program must be approved by a representative of the department chosen.

Special attention is called to the courses listed under the departmental announcement as preparation for the major. In most cases it is essential that these courses be completed before upper division major work is undertaken. In any case they are essential requirements for the completion of the major.

Not more than 30 units of upper division courses taken in one department after receiving the Junior Certificate will be counted toward the A.B. degree.

The 24-unit major must, in its entirety, consist of courses taken *in resident instruction* at this or another university (fall, spring, and summer sessions).

Summer session courses numbered in the 300 series or 400 series will not be accepted as part of the major.

See further under Regulations for Study-Lists on page 37.

## HONORS

### *Honorable Mention with the Junior Certificate—*

1. Honorable mention shall be granted with the junior certificate to students who attain at least:
  - (1) An average of 2 grade points per unit undertaken; or
  - (2) B grade in three-fourths of the units counted toward the junior certificate, of which not less than 10 units shall be of grade A.
2. The list of students who receive honorable mention with the junior certificate shall be sent to the chairmen or study-list officers of departments before the beginning of the next semester.
3. A student who gains honorable mention has thereby attained the honors status for his first semester in the upper division.

*Honor Students in the Upper Division—*

1. An honor list shall be prepared in the fall semester, and also in the spring semester if the Committee on Honors so decides; and shall be published in the Catalogue of Officers and Students. The department of the student's major shall be named in this list.
2. The honor list shall include the names of:
  - (1) Students who have received honorable mention with the junior certificate and who are in their first semester of the upper division.
  - (2) Upper division students who have an average of at least 2 grade points per unit undertaken for all undergraduate work at the Southern Branch.
  - (3) Other upper division students specially approved for listing in the honors status by the Committee on Honors, either upon recommendation made to the committee by departments of instruction, or upon such other basis as the committee may determine.

*Honors with the Bachelor's Degree—*

1. Honors shall be granted at graduation only to students who have completed the major with distinction, and who have a general record satisfactory to the Committee on Honors.
2. Before Commencement each department shall determine, by such means as it may deem best (for example, by means of a general final examination), what students it will recommend for honors at graduation, and shall report its recommendations to the Recorder.
3. Students who, in the judgment of their departments, display marked superiority in their major subject, may be recommended for the special distinction of highest honors.
4. The Committee on Honors shall consider departmental recommendations and shall confer with the several departments about doubtful cases. The committee is empowered at its discretion to recommend to the Committee on Graduation Matters that honors be not granted in the case of any student who has failed to attain a B average in the major, or in the upper division, or in all undergraduate work.
5. The list of students to whom honors or highest honors in the various departments have been awarded shall be published in the Commencement program.

## PREPARATION FOR VARIOUS PROFESSIONAL CURRICULA

Certain courses given at the Southern Branch may be used as preparatory to admission to the professional colleges and schools of the University in Berkeley and in San Francisco.

## A. PRE-DENTISTRY CURRICULUM

This curriculum assumes the completion of the following subjects in the high school: English, two years; history, one year; mathematics, two years (elementary algebra and plane geometry); chemistry, one year; physics, one year; foreign language, two years. The junior certificate requirements will be more easily met if foreign language has been pursued in the high school. It is assumed that at least two years of a foreign language have been completed in the high school, and that this language is continued in the University.

	Units first half	Units second half
<i>First Year</i>		
*Subject A (examination in English expression).....	.....	.....
Military Training.....	1½	1½
Physical Education.....	½	½
†Psychology X.....	1	.....
General Inorganic Chemistry and Qualitative Analysis, with laboratory (Chemistry 1A-1B).....	5	5
English 1A.....	.....	3
†Additional year course.....	3	3
†Foreign language.....	5	3
	16	16
<i>Second Year</i>		
Military Training.....	1½	1½
Physical Education.....	½	½
Elements of Organic Chemistry (8A).....	3	.....
Elements of Organic Chemistry laboratory (9).....	.....	3
†General Zoology, including Embryology (1A-1B) or Physics 1A-1B.....	5	5
†Economics, Philosophy, History, Political Science.....	3	3
English 1B.....	.....	3
Foreign language.....	3	.....
Electives.....	0 or 1½	0 or 1½
	16	16

\* An examination in Subject A (English Composition) is required of all undergraduates intrants at the time of their first registration in the University.

† See requirements for the junior certificate, College of Letters and Science.

‡ Southern Branch requirement.

Upon receipt of the junior certificate in the College of Letters and Science, pre-dental curriculum, the student will be eligible to register in the College of Dentistry at San Francisco. Those entering with the junior certificate may receive at the end of the first three years of the four-year dental curriculum, the degree of Bachelor of Science in Dentistry; and upon completion of four years, the degree of D.D.S.

Persons desiring to matriculate in the College of Dentistry should send their credentials to the University Examiner in Berkeley for his approval.

**NOTE.**—The plan of a pre-dental curriculum in the College of Letters and Science does not change the length of the present dental course (four years following admission to undergraduate standing; it offers an alternative plan combining a two-year academic preparation with the professional four-year course. For further information consult the Announcement of the College of Dentistry.

### B. PRE-MEDICINE—THREE YEARS

Requirements for admission to the Medical School are technical and relate not only to content of the pre-medical curriculum but also to the level of scholarship. Owing to the limitation of enrollment in the Medical School, the faculty of the Medical School is authorized to refuse admission to students who have a low academic record. Applications for admission should be filed through the Recorder of the Southern Branch, not later than March 1 of the year in which admission is desired. Applications received after April 1 will not be considered in making up the list of matriculants for the ensuing academic year. Since decision on acceptance must be arrived at by June, courses to be taken in the intersession or the summer session will not be considered. For detailed statement of the required distribution of work in the pre-medical curriculum, student is referred to the Circular of Information, Academic Departments, Berkeley.

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. The student should, however, make sure that his course is so arranged as to satisfy the junior certificate and other requirements of the College of Letters and Science in order that his entrance to the Medical School and the attainment of his A.B. and M.D. may not be delayed. All requirements for matriculation in the Medical School must be completed in full by the end of the spring semester next preceding the date of the applicant's proposed matriculation. Certain variations in the chronological arrangement may be necessitated if the high school course included the minimum of foreign language work. Such variation may be made with the approval of the faculty adviser.

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

There is no opportunity in regular sessions in the Medical School to take the course American Institutions 101 required of all candidates for the bachelor's degree. It will be impossible for applicants admitted to the school in August without credit in this subject, to receive the degree in the month of May following such admission. The degree will not be conferred until after the completion of the course, in summer session or otherwise. Students in the pre-medical curriculum are advised, therefore, to take American Institutions 101 in their junior year if the requirements for the degree A.B. are to be completed in the minimum time.

Candidates for admission to the Medical School are required to pass a physical examination before matriculation. Medical students are examined physically each year.

#### PRE-MEDICAL PROGRAMS<sup>1</sup>

A. For students who have completed two years foreign language in high school.

	First Year	
	Units first semester	Units second semester
Subject A (examination or course in Subject A).....	.....	.....
Military Science.....	1½	1½
Physical Education.....	½	½
†Psychology X.....	1	.....
Chemistry 1A-1B.....	5	5
‡English 1A-1B.....	3	3
Foreign Language.....	5	3 or 5
Electives as necessary to make up units.....	.....	.....
	16	16

<sup>1</sup> Chemistry 5 (Quantitative Analysis, 3 units) is required for admission by a large number of medical schools. Although it is not a requirement for admission to the University of California Medical School, students who can conveniently include this course in their programs are advised to do so.

<sup>2</sup> English 1A-1B. If the student fails to pass the examination in Subject A it will be necessary to postpone English 1A-1B until he has completed the course in Subject A for which no units are allowed. The student is advised to substitute in the interim one of the year courses which are required for the junior certificate under requirement (e) in place of English 1A-1B.

<sup>3</sup> Foreign Language. The Medical School requirement is 10 units of credit in either French or German, and the junior certificate requirement is 15 units of foreign language in not more than two languages. These may be satisfied partly in the high school. The student's program should be made to satisfy these requirements.

† Southern Branch requirement.

	Units first semester	Units second semester
<i>Second Year</i>		
Military Science.....	1½	1½
Physical Education.....	½	½
Zoology 1A-1B.....	5	5
Year course (Requirement "e" for the junior certificate).....	3	3
Year course (Requirement "e" for the junior certificate).....	3	3
Electives (Foreign language if necessary to complete 15 units for J. C.).....	3	3
	16	16
<i>Third Year</i>		
American Institutions 101.....	2	.....
Physics 2A-2B.....	3	3
Physics 3A-3B.....	1	1
Chemistry 8A.....	3	.....
Chemistry 9.....	.....	3
Electives.....	7	9
	16	16

B. For students who have completed *four* years of foreign language in high school.

	Units first semester	Units second semester
<i>First Year</i>		
Subject A (examination or course in Subject A).....	.....	.....
Military Science.....	1½	1½
Physical Education.....	½	½
Psychology X.....	.....	1
Chemistry 1A-1B.....	5	5
English 1A-1B.....	3	3
Year course (Requirement "e" for the junior certificate).....	3	3
Year course (Requirement "e" for the junior certificate).....	3	3
	17	16

*Nota.*—Only 16 units first semester will be counted toward degree.

	Units first semester	Units second semester
<i>Second Year</i>		
Military Science.....	1½	1½
Physical Education.....	½	½
Zoology 1A-1B.....	5	5
Chemistry 8A.....	3	.....
Chemistry 9.....	.....	3
Electives (foreign language if necessary to complete 15 units for J. C.).....	6	6
	16	16

<sup>2</sup> English 1A-1B. If the student fails to pass the examination in Subject A it will be necessary to postpone English 1A-1B until he has completed the course in Subject A for which no units are allowed. The student is advised to substitute in the interim one of the year courses which are required for the junior certificate under requirement (e) in place of English 1A-1B.

Third Year	Units first semester	Units second semester
American Institutions 101.....	2	.....
Physics 2A-2B.....	3	3
Physics 3A-3B.....	1	1
Electives.....	9	11
	15	15

### C. PRE-AGRICULTURE

Detailed information concerning instruction in the College of Agriculture is contained in the Prospectus of the College of Agriculture, which may be obtained from the Dean of the College of Agriculture, Berkeley, California.

Sample programs for the Freshman and Sophomore years in the various curricula may be obtained from the Recorder of the Southern Branch.

### D. PRE-COMMERCE

The requirements for the junior certificate in commerce are as follows:

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

English Composition: Subject A. Examination required of all.\* In addition 6 units of English, chosen from the following courses: English 1A-1B or Public Speaking 1A-1B... 6 units

‡Psychology X ..... 1

History or Political Science:

History 4A-4B, or History 8A-8B, or Political Science 1A-1B, or any combination of the foregoing courses ..... 6

Geography:

Geography 1 (Introduction to Geography: Elements) and Geography 2 (Regions and Distribution of Population and Cultures) ..... 6

Natural Sciences ..... 9

Courses in physics and chemistry taken in high school may be applied toward the satisfaction of the science requirement.

\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University.

‡ Southern Branch requirement.

§ Specific requirements not stated. Major subject advisers should be consulted.

**Mathematics:**

Mathematics 2 (Mathematical Theory of Investment).....	3
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**Economics:**

Economics 1A-1B .....	6
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Military Science, Physical Education .....	8
--------------------------------------------	---

Electives .....	19
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Total .....	64 units
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**Mathematics.**—Elementary Algebra and Plane Geometry. If these subjects were not completed in the high school, they may be taken in the Division of the University Extension or in the summer session, but will not be counted as part of the 64 units.

The prerequisite of Mathematics 2 is Mathematics 8 or two years of high school algebra and trigonometry. For Mathematics 8 elementary algebra is necessary and at least a first course in algebraic theory is strongly recommended.



## E. PRE-CIVIL ENGINEERING

FRESHMAN		Units	SOPHOMORE		Units
*Subject A.....	.....	.....	Mil. 2A-2B.....	1½	1½
Mil. 1A-1B.....	1½	1½	Physical Education.....	½	½
Physical Education.....	½	½	Mathematics 4A-4B.....	3	3
†Psychology X.....	1	.....	Mech. 2.....	.....	3
Mathematics 3A-3B.....	3	3	Astronomy 3.....	.....	1
Physics 1A-1B.....	3	3	Civil Engineering 8.....	.....	2
Chemistry 1A-1B.....	5	5	Physics 1C-1D.....	3	3
Civil Engineering 1A-1B.....	3	3	Geology 1A.....	3	.....
Civil Engineering 3 (s. s.).....	(3)	.....	<b>RAILROAD AND IRRIGATION</b>		
Elective.....	1	2	Mech. 1.....	3	.....
			Year course.....	2	2
	18	18	(To be elected from Min'l. 1A-1B, Mech. 8A-8B, Mech. 9A-9B, Mech. 6.)		
			Elective.....	2	2
				18	18
			<b>SANITARY AND MUNICIPAL</b>		
			Chemistry 8.....	3	.....
			Civil Engineering 25.....	2	.....
			Bacteriology 1.....	.....	4
			Elective.....	2	.....
				18	18

## F. PRE-MECHANICAL, ELECTRICAL AND AGRICULTURAL ENGINEERING

FRESHMAN		Units	SOPHOMORE		Units
*Subject A.....	.....	.....	Mil. 2A-2B.....	1½	1½
Mil. 1A-1B.....	1½	1½	Physical Education.....	½	½
Physical Education.....	½	½	Mathematics 4A-4B.....	3	3
†Psychology X.....	1	.....	Mechanics 2.....	3	.....
Mathematics 3A-3B.....	3	3	Mechanics 6.....	.....	5
Chemistry 1A-1B.....	5	5	Physics 5.....	.....	3
Physics 1A-1B.....	3	3	Physics 1C-1D.....	3	3
C. E. 1A-1B.....	3	3	‡Mechanics 8A-8B-9A-9B.....	2	2
M. E. 18 (Summer).....	(3)	.....	Free Electives.....	5	.....
Electives.....	2	1			
	18	18		18	18

\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University.

† Three units of the shop work requirement must be taken in the summer session (6 weeks, 4 days of 6 hours each; 144 hours), credit 3 units.

‡ Southern Branch requirement.

§ Students intending to major in Agricultural Engineering may omit Mechanics 6, Physics 5 and Mechanics 8A-8B, substituting therefore Economics 1A-1B and other elective units, their deficiencies in required courses in Agricultural Engineering to be made up after their enrollment at Berkeley.

## G. PRE-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 year 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	Units	SOPHOMORE	Units
*Subject A.....		Mil. 2A-2B.....	1½ 1½
Mil. 1A-1B.....	1½ 1½	Physical Education.....	½ ½
Physical Education.....	½ ½	Mathematics 4A-4B.....	3 3
‡Psychology X.....	1	Physics 1C-1D.....	3 3
Mathematics 3A-3B.....	3 3	Mineral. 1A-1B.....	2 2
Chemistry 1A-1B.....	5 5	Mineral. 2A-2B.....	3 3
Civil Engineering 1A-1B.....	3 3	Mechanics 2.....	3 3
Physics 1A-1B.....	3 3	Geology.....	3 .....
§Mining 5.....	2		
Civil Engineering 3 (s. s.).....	(3)	<b>MINING</b>	
	17 18	**Metallurgy 2.....	3 .....
		**Mining 1A, 1B.....	3 .....
		Mechanics 1.....	3 .....
			10 10
		<b>METALLURGY</b>	
		Chemistry 6A-6B.....	3 3
		Mechanics 1.....	3 .....
			10 10
		<b>ECONOMIC GEOLOGY</b>	
		Chemistry 6A-6B.....	3 3
		Paleontology 1.....	3 .....
			10 10
		<b>PETROLEUM ENGINEERING</b>	
		Chemistry 5.....	3 .....
		Chemistry 8A.....	3 .....
		Chemistry 9.....	3 .....
			10 10

‡ Southern Branch requirement.

§ Mechanics D is nearest substitute for Mining 5 offered at the Southern Branch.

\*\* Mining 1A-1B, Metallurgy 2 not offered at the Southern Branch. It is suggested that Chemistry 5 be taken in lieu of Metallurgy 2.

## H. PRE-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 sessions only, not during the fall or spring sessions.

*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.

FRESHMAN		Units	SOPHOMORE		Units
*Subject A.....	.....	.....	Mil. 2A-2B.....	1½	1½
Mil. 1A-1B.....	1½	1½	Phys. Educ.....	½	½
Phys. Educ.....	½	½	Math. 4A-4B.....	3	3
†Psychology X.....	1		Physics 1C-1D.....	3	3
Math. 3A-3B.....	3	3	Chem. 6A-6B.....	3	3
Physics 1C-1D.....	3	3	Chem. 8A.....	3	.....
Chem. 1A-1B.....	5	5	Chem. 9, 100.....	3	3
German 5A-5B.....	3	3	Chem. 110.....	.....	3
Elective.....	.....	2			
		17	18		17
					17

\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University.

† Southern Branch requirement.

## B. THE TEACHERS COLLEGE

The curricula of the Teachers College are organized on the basis of four years of combined academic and professional work. Each leads to the professional degree of Bachelor of Education. Each also leads to one of the following types of teaching credentials:

1. The General Junior High School Credential, valid in grades 7, 8, and 9 when organized as a junior high school.
2. The Secondary Special Credential of the following types: Arts, Commerce, Home Making, Occupations and Home Mechanics, (Pre-Vocational), Music, and Physical Education. These credentials are valid in the high school, junior high school, and elementary school.
3. The Kindergarten-Primary Credential, valid in the kindergarten and grades 1, 2, and 3 of the elementary school.
4. The General Elementary Credential, valid in the eight grades of the elementary school. Opportunity is provided for specialization in one or more of the following fields:
  - a. Elementary school administration and supervision.
  - b. Departmental work in the various elementary school subjects.
  - c. Rural supervision and administration.
  - d. Civic education (Americanization).
  - e. Adjustment and opportunity room work.
  - f. Vocational and part-time education.

In accordance with the provisions of the bill transforming the Los Angeles State Normal school into the Teachers College of the University of California, students may receive either the General Elementary or the Kindergarten-Primary Teaching Credential upon the completion of the first three years of the regular four-year curricula leading to these credentials.\* By special arrangement with the department concerned, it is also possible for students to receive the Elementary and Junior High School Special Teaching Credentials upon the completion of the first three years of the regular four-year curricula. Students wishing to avail themselves of this provision should consult the department concerned at the time of registration in order that their courses may be properly arranged. The curriculum pursued should be plainly stated on the registration form and on the study-list.

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\* Students registering prior to September, 1925, may complete the requirements for these credentials in two and one-half years, as specified in the Announcement for 1924-25.

## REQUIREMENTS FOR GRADUATION FROM THE TEACHERS COLLEGE

Graduation from the Teachers College (with recommendation for certification) is based upon the following conditions and requirements:

- \*I. Admission to regular status in the Teachers College.
- II. Completion of a total of 128 units of credit and grade points as specified on page 44.
- III. Presentation of a certificate of physical health and fitness from the Southern Branch medical examiners.
- IV. Recommendation of the departments in which the principal and secondary sequences of work are taken, and of the responsible authorities as to the student's fitness for teaching.
- V. Satisfactory completion of the following sequences of work:

A. General Sequences .....	43-45 units
1. Subject A.	
2. Psychology X, 1A, 1B .....	7
3. English (including English 1A) .....	6
4. Natural Sciences .....	12
Courses in physical or biological sciences approved by adviser. One course must include laboratory work.†	
5. Social Sciences:	
Economics 1A .....	3
Political Science 101 .....	2
Elective courses in History, Political Science, or Economics, approved by adviser .....	7
6. Military Science 1AB, 2AB (men) .....	6
7. Physical Education (professional courses for women) .....	4
8. Physical Education. (Required courses for men and women. One-half unit each semester during the freshman and sophomore years) .....	2

\* Although students may enter the Teachers College without credit for elementary algebra and plane geometry, it is impossible to proceed to the degree without credit for both these subjects. No residence instruction is provided by the University in these subjects. Similarly, students may enter the Teachers College without credit for two years of one foreign language. Such students will be required to complete as a part of the freshman and sophomore work, one year (10 units) of a foreign language.

† A year course in physics or chemistry completed in the high school will satisfy the laboratory requirement.

**B. Departmental Sequences .....43-53 units**

Courses chosen from the following departments:

(1) Art, (2) Biology, (3) Chemistry, (4) Classical Languages, (5) Commerce, (6) English, (7) Geography, (8) Geology and Meteorology, (9) German, (10) History, (11) Home Economics, (12) Mathematics, (13) Mechanic Arts, (14) Music, (15) Philosophy and Psychology, (16) Physical Education, (17) Physics, (18) Political Science, (19) Romanic Languages.

At least 20 units must consist of upper division courses. Of these, the student must elect not less than 8 units in each of two departments or not less than 5 units in each of three departments. Including upper and lower division courses, at least 12 units must be completed in one department.

**C. Professional Courses .....32-40 units****1. Required of all students:**

Education 11, 21, 130, or 170.....	3
Education 180 .....	2
Education 148 .....	3
Laboratory practice in teaching .....	10

**2. Secondary Sequence (14-22 units).**

Professional courses leading to specialization in various fields of education, to be chosen by the student with the approval of his adviser. At least 3 units of advanced educational psychology must be included.

**NOTE.**—Specific requirements for the Kindergarten-Primary, General Elementary, and General Junior High School Credentials are listed under the Department of Education; for the various special credentials, under the appropriate departments.

The foregoing requirements differ from those published in the 1924-25 Announcement in the following respects: Psychology 1A, 1B supplants Psychology 2, 30. Psychology 30 has been discontinued and Psychology 2 changed as to content. Political Science 50 (8 units) has been replaced by Political Science 101 (2 units) thereby increasing the elective social science requirement from 6 to 7 units. The abolition of Hygiene as a university requirement increases the number of units under caption B, Departmental Sequences, from 43-51 to 43-53.

## VIII. ANNOUNCEMENT OF COURSES

The attention of students is called to the following explanations with regard to the list of courses.\*

1. Courses are classified as follows:

*Lower Division Courses.*

Elementary courses which make up the first and second years of the University curriculum. Numbered from 1-99, inclusive.

*Upper Division Courses.*

Advanced courses which require some preparation in the lower division, or elementary courses in a subject of such difficulty as to require the maturity of upper division students. Numbered from 100-199, inclusive.

2. A course designated by a double number (i.e., Economics 1A-1B) is continued through two successive half-years. In registering for the course the student will use the first number for its first half-year, and the second number for its second half-year. At the end of each half-year a final report will be made by the instructor. The student may discontinue the course at the end of the first half-year with final credit for the portion completed.

3. The credit value of each course in units is indicated by a numeral in parentheses following the title. A unit of registration 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.

4. The period during which a course is given is shown as follows: I, first half-year; II, second half-year; Yr., throughout the year.

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\* The University reserves the right to withdraw or modify these courses, or to change the instructors.

5. Only courses marked "Credit" followed by the capital letter "A" or "B" may be counted toward certification recommendations or degree requirements, as follows:

(A) For the present these courses alone receive full credit toward the degree of Bachelor of Arts or the degree of Bachelor of Science (at Berkeley) and also (in general) toward the teachers' credentials of the several types, subject in every case to the requirements of the curriculum selected.

(B) Courses which may be counted toward the Bachelor of Education degree in the Teachers College and toward appropriate recommendations for teaching.



## ART

- †NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts.  
 HELEN CLARK CHANDLER, Assistant Professor of Fine Arts.  
 LOUISE P. SOOY, Assistant Professor of Fine Arts.  
 †ANNA P. BROOKS, A.B., B.S., Assistant Professor of Fine Arts.  
 BESSIE E. HAZEN, Ed.B., Assistant Professor of Fine Arts.  
 ANNITA DELANO, Associate in Fine Arts.  
 BIRDIE KIRK SMITH, Associate in Fine Arts.  
 ADELAIDE MORRIS, A.M., Associate in Fine Arts.  
 HELEN I. HOWELL, Associate in Industrial Arts.  
 OLIVE NEWCOMB, Associate in Industrial Arts.  
 ———, Associate in Industrial Arts.  
 BELLE H. WHITICE, Associate in Industrial Arts.  
 BARBARA BROOKS MORGAN, Associate in Fine Arts.  
 GERTRUDE MALONEY, Associate in Art.  
 ———, Associate in Fine Arts.

*Requirements for the Secondary Special Teaching Credential in Art.*—  
 Completion of all requirements for the degree of Bachelor of Education\*  
 as listed on pages 77-78, including the following specified courses:

(a) Education 148, 170, 180; Psychology 110 or 112, Teaching, 10  
 units; Art 160A-160B, 180.

(b) Art—Required basic courses totaling 25 units are as follows:  
 Appreciation and History of Art 1A-B, 31A-B, 161A-B (6); Design 2A-B, 12A,  
 32A-B (9); Costume Appreciation 3 (1); Drawing and Painting 4A-B (4);  
 House Design and Decoration 16A (1); Landscape 137A (1); Stage Craft  
 8A-B, 168 (3).

In addition to the above basic courses 25 units of work are required.  
 These courses to be elected under the direction of an art advisor.

*Laboratory Fees.*—The fee required for courses 20A, 29A, 29B, 134A,  
 158A, 158B, is 50 cents; for courses 8A, 8B, 198A, 198B is \$1; for courses  
 19A, 19B, 20B, 39A, 39B is \$2; for courses 154, 164 is \$4.50.

Courses 1A and 2A are prerequisite to all other courses in the depart-  
 ment except 10A, 20A, 20B; 8A, 4A, 12A may be taken concurrently with  
 1A, 2A.

Students who apply for advanced standing or for exemption from  
 required courses in Fine Arts on the basis of previous art study completed  
 at other institutions, must submit sketch-books, designs, drawings or paint-  
 ings and brief outlines of previous work.

† Absent on leave, 1926-27.

\* A major in Art is not offered in the College of Letters and Science in the Southern  
 Branch of the University. Students wishing to satisfy the requirements for a major  
 in Art are referred to the Announcement of Courses in the Departments at Berkeley.

*Appreciation and History of Art*

- 1A-1B. (1-1) Yr. (Credit A, B) Tu 1, Th 1. Associate Professor GERE  
 A. Principles of Aesthetics.  
 B. Prehistoric and Primitive Art. History of Ancient, Early Medi-  
 aeval and Gothic Art.
- 31A-31B. (1-1) Yr. (Credit A, B) Associate Professor GERE  
 A. History of Renaissance Architecture; History of Italian Paint-  
 ing and Sculpture.  
 B. History of Spanish, Flemish, Dutch, German, French and Amer-  
 ican Painting. Modern Painting.
- 161A-161B. (1-1) Yr. (Credit A, B) Associate Professor GERE  
 A. Mohammedan Art. East Indian, Chinese, Korean and Japanese  
 Art.  
 B. American Contributions to Art. European Art Centers.

*Art Education*

- 10A. Fine Arts Education. (2) Either half-year. (Credit B)  
 Miss WHITICE and the STAFF  
 A course in the study of art structure covering problems in design  
 and color theory and harmony with the application to teaching art.
- 20A-20B. Fine and Industrial Art Education for Kindergarten-Primary  
 Teachers. (2-2) Yr. (Credit B) Miss HOWELL, Miss MORRIS  
 A. The development of appreciation of beauty in fine art; the use  
 of the art elements and principles in simple compositions; the applica-  
 tion of art principles to kindergarten-primary activities.  
 B. The place of fine and industrial arts in kindergarten-primary  
 education; the place of art appreciation in constructive activities;  
 individual and group activities in the study of industrial art subject  
 matter.
- 160A-160B. Principles of Art Education. (2-2) Yr. (Credit B)  
 Miss MALONEY
180. Organization and Administration of Art Education. (2) II.  
 (Credit B) Assistant Professor SOOY  
 Prerequisite: senior standing.

*Costume*

3. Costume Appreciation. (1) II. (Credit B) Assistant Professor SOOY  
 Discussion and demonstration to develop appreciation of costume  
 as a means of art expression. Costume is considered from the stand-  
 point of abstract design, becomingness, suitability, and expressiveness.
13. Costume Appreciation and Design. (2) II. (Credit B)  
 Assistant Professor HAZEN  
 For Home Economics students. Appreciation through study of line,  
 color, and texture in costume with practical application to individuals.  
 Original designing of costumes.

103. History of Costume. (1) II. Credit B. Assistant Professor SOOY  
Lantern lectures covering the development of costume from Egyptian, Assyrian, Greek, and Roman periods, through Medieval European, 16th, 17th, 18th, and 19th century dress in England, France, and America.

183A-183B. Costume Design. (2-2) Yr. (Credit B)

Prerequisite: 32A, 134A.

Assistant Professor SOOY

A. For the drama. In addition to the general beauty of design, the special object of the course is the use of costume as a means of psychological expression.

B. Modern costume design. Principles of abstract design applied to dress, subject to technical limitation of material, occasion, changing fashions, etc.

### Crafts

8A-8B. Stage Craft. (1-1) I. (Credit B) Tu, 9, 10, 11.

Miss DELANO, Mrs. SMITH and the STAFF

A. Working drawings and model sets to scale from given designs. Study of the uses of paint and other materials necessary in the building and painting of stage sets.

B. Making costumes for plays, including practice in many decorative processes applied to costume.

9A-9B. Elementary Construction. (2-2) Yr. (Credit B) Miss WHITICE

A. The aim of this course is to give the elementary teacher a knowledge of the technical processes in working with textiles, paper, wood, clay, and metal which will enable her to make art function in the everyday life of the child.

B. The application of principles governing the handling of binding materials and book construction through the making of boxes, pads and portfolios, and "stabbed" and "cased" books.

19A-19B. Pottery. (2-2) Yr. (Credit B)

Miss NEWCOMB

Prerequisite: 2B.

Hand building and glazing—use of potter's wheel, making of molds and casting.

29A-29B. Bookbinding. (2-2) Yr. (Credit B)

Miss WHITICE

Prerequisite: 9B.

A. Technical bookbinding. Study of the historical development of the craft for background. The binding or re-binding of several books in suitable materials, using various types of sewing and forwarding.

B. Advanced bookbinding. This course includes the type of work known as "extra" binding and the "finishing" of books. Books bound in Art 29A may be "finished" in 29B.

\*39A-39B. Weaving. (2-2) Yr. (Credit B)

The course includes a study of the Colonial type of weaving on four harness looms; also tapestry weaving and Egyptian card weaving.

\* Not to be given 1926-27.

49. Basketry. (2) I. (Credit B) Miss WHITICE  
Includes the use of basketry materials in braided, knotted, and woven work; also the designing and making of sewed and woven baskets.
- 69A-69B. Leather. (2-2) Yr. (Credit B) Miss WHITICE  
A. Includes the designing and making of card-cases, purses, bill-folds, magazine and book covers, and similar articles of simple construction, in hand-tooled, hand-dyed calf skin.  
B. Leather craft. Includes the designing and making of bags, brief-cases, vanity-cases and other articles, requiring more difficult types of construction than the work done in Art 69A. Morocco, seal, and other leathers used.
79. Metal. (2) II. (Credit B) Miss WHITICE  
Elementary course. The designing and making of simple articles, using the processes of raising, riveting, soldering, saw-piercing, etching, repousse, stone-setting, and chain-making.
119. Advanced Pottery. (2) II. (Credit B) Miss NEWCOMB  
Study of glazes—stacking kiln and firing.  
Prerequisite: 19B.
- 158A-158B. Textile Decoration. (1-2) Yr. (Credit B) Miss DELANO  
Prerequisite: 8B, 32A.  
A. This course covers the processes of dyeing and of decorating textiles by means of stick printing, wood and linoleum block printing.  
B. Designing and execution of decorative wall hangings, covers and scarfs, using the processes of tie dyeing and batik.
168. Stage Craft. (1) I. (Credit B) Assistant Professor SOOY  
M, 2, 3, 4. Prerequisite: 8B, 32B, 156A.  
Principles of art applied to the stage. Technical knowledge necessary to produce pantomimes, pageants, and plays.
- 198A-198B. Clay Modeling. (1-1) Yr. (Credit B). Miss NEWCOMB  
S, 9, 10, 11. Prerequisite: 134A.

### Design

- 2A-2B. Art Structure. (2-2) Yr. (Credit A, B) —  
A. Fundamental course upon which all other courses are based. Elements and principles of art. Abstract forms. Color theory and harmony.  
B. Course in composition of natural forms.
- 12A-12B. Lettering. (1-2) Yr. (Credit B) Mrs. SMITH  
A. Study of and appreciation for lettering as a part of the subject of design. Includes exercises in the underlying principles of lettering for freedom and originality of expression.  
B. Lettering. Quick and accurate writing for commercial uses.

- 32A-32B. Art Structure. (2-2) Yr. (Credit A, B)** Miss DELANO  
 Prerequisite: Art 1B, 2B, 4B.  
 A. Imaginative design. Originality and power in designing developed through experience with imaginative motifs and fundamental design structure.  
 B. Industrial design. Design for specific crafts, including pottery, metal, leather, and weaving, etc.
- 152A-152B. Art Structure. (2-2) Yr. (Credit B)**  
 Assistant Professor SOOY and the STAFF  
 Prerequisite: 32B.  
 A. Advanced composition.  
 B. Advanced industrial design. Design for ceramics, wrought iron, and jewelry.

*Drawing and Painting*

- 4A-4B. Freehand Drawing. (2-2) Yr. (Credit A, B)**  
 Assistant Professor HAZEN, Mrs. SMITH  
 A. Principles of perspective and the development of feeling for fine quality in line and mass drawing of still-life, buildings, interiors, and furniture.  
 B. A course in representative painting and the study of the technique of water color.
- 134A-134B. Advanced Drawing and Painting. (2-2) Yr. (Credit A, B)**  
 Prerequisite: 4A-4B. Assistant Professor CHANDLER  
 A. Imaginative figure drawing in preparation for illustration and costume design.  
 B. A study of various types of rendering in black and white. Architectural forms, figures, landscape, etc.
- 154. Life Class. (2) II. (Credit B)** Mrs. SMITH  
 Development of feeling for character and action of the figure. Details of hands, feet, shoulder movements, etc., will be studied as necessary facts subordinate to sure and free interpretation.
- 164. Life Class. (2) II. (Credit B)** Mrs. SMITH  
 Advanced drawing and painting from the figure, including the study of anatomy.

*House Design and Decoration*

- 16A-16B. (1-1) Yr. (Credit B)**  
 Associate Professor GERR, Assistant Professor HAZEN  
 A. Appreciative study of the house, its surroundings and the furnishings. Lectures, discussions and demonstrations.  
 B. House furnishing.

## 156A-156B. Interior Decoration. (2-2) Yr. (Credit B)

Prerequisite: 2B, 4B, 16B.

Assistant Professor HAZEN

A. Original designs for furniture. Study of period, peasant, and modern designs with regard to their suitability to the modern home.

B. Interior decorations. Original designs and arrangements of furniture and furnishings in various rooms. Designs carried out in black and white and color suitable for commercial advertising. Emphasis on balanced dark and light compositions.

## 186A-186B. Interior Decoration. (2-2) Yr. (Credit B)

Prerequisite: 156B

Assistant Professor HAZEN

Designing of groups of period furniture, original design for complete rooms, elevations, and perspectives in color.

*Illustration*

## 135A-135B. Book Illustration. (2-2) Yr. (Credit B)

Prerequisite: 32A, 134A.

Assistant Professor CHANDLER

Illustrations of fables, legends, and imaginative tales. Beginning with simple, spontaneous expression and leading to a more carefully planned composition.

## 165A-165B. Commercial Illustration. (2-2) Yr. (Credit B)

Prerequisite: 134A.

Assistant Professor SOOY

Fundamentally a course in composition, plus the technical requirements of advertising, and the psychology of selling.

## 175. Advanced Illustration including Wall Decorations. (2) II (Credit B)

Prerequisite: 135A-135B.

Assistant Professor CHANDLER

*Landscape*

## 137A-137B. Sketching. (1-2) Yr. (Credit B)

Prerequisite: 2B, 4B.

Mrs. MORGAN and the STAFF

A. Sketching. Study of landscape forms and their composition expressed in simple technique suitable for elementary and secondary teaching.

B. Landscape composition. Charcoal and wash drawings.

## 177A-177B. Water-color and Oil Painting. (2-2) Yr. (Credit B)

Prerequisite: 137B.

Assistant Professor CHANDLER

## BIOLOGICAL SCIENCES

- LOYE HOLMES MILLER, Ph.D., Professor of Biology.  
 BENNET MILLS ALLEN, Ph.D., Professor of Zoology.  
 FRANK E. OLDER, B.S., Assistant Professor of Agricultural Teaching.  
 O. L. SPONSLER, Ph.D., Associate Professor of Botany.  
 A. W. BELLAMY, Ph.D., Assistant Professor of Zoology.  
 SARAH ATSATT, M.S., Instructor in Biology.  
 CARL EPLING, Ph.D., Instructor in Botany.  
 ————, Instructor in Botany.  
 GORDON H. BALL, Ph.D., Instructor in Zoology.  
 ————, Instructor in Physiology.  
 A. W. HAUPT, Ph.D., Instructor in Botany.  
 F. MURRAY SCOTT, Ph.D., Instructor in Botany.  
 O. A. PLUNKETT, Ph.D., Instructor in Botany.  
 RUTH G. PERSONS, A.B., Associate in Zoology.  
 MARGARET D. THOMSON, M.A., Associate in Zoology.  
 CAROLYN CANBY, M.S., Associate in Biology.  
 RUTH ANDERSON, Associate in Botany.  
 WILLIAM GRAY, Associate in Botany.

At the Southern Branch of the University a student may take a major in botany or in zoology. Those wishing to major in other phases of the work included in this department are referred to the Announcement of Courses in the departments at Berkeley, or to the departmental adviser for personal conference. Students in the Teachers College looking toward the special teaching of nature study will be advised individually.

*Preparation for the Major in Botany.*—Botany 2A-2B, 6, 7, and elementary chemistry taken previous to or concurrently with Botany 7.

*The Major in Botany.*—Of the 24 units of upper division work required, 15 units should consist of Botany 104A-104B, 105A-105B, and 111, and the remaining 9 units of other courses in botany or of related courses in bacteriology, chemistry, geology, geography, paleontology, physiology, and zoology, to be chosen with the approval of the department.

*Preparation for the Major in Zoology.*—Zoology 1A-1B, and high school chemistry or Chemistry 1A. French and German are recommended.

*The Major in Zoology.*—Eighteen units of upper division work in zoology and six units chosen from zoology or from related courses in bacteriology, biochemistry, botany, entomology, genetics, microscopic anatomy, paleontology, physiology, psychology, or physical chemistry.

*Laboratory Fees.*—The fee for Physiology 1, 10, is \$2.50; for Zoology 1A, 1B, 4, 100, 105, 106, 107C, 111C, 112, is \$3. The student will, in addition, be held responsible for all apparatus lost or broken.

## AGRICULTURE\*

## 1. General Horticulture. (3) II. (Credit A, B)

Assistant Professor OLDER

Lectures, three hours; laboratory, two hours.

A general view of horticulture, with special attention to plant propagation, vegetable gardening, and fruit growing.

## 10. Elements of Agriculture. (3) Either half-year. (Credit B)

Assistant Professor OLDER

Lectures, three hours; laboratory, two hours.

Designed for students preparing to teach in primary and elementary grades.

A study of the fundamental principles of agriculture and practice in garden, lath house, and laboratory.

## BIOLOGY

## 1. General Biology. (3) (Credit A, B)

Assistant Professor BELLAMY, Dr. HAUPT, Dr. PLUNKETT

Lectures, two hours; quiz, one hour; demonstration, one hour; four required field trips.

Chemistry is recommended.

Not open to students who have credit in Botany 2A or Zoology 1A.

Important principles of biology illustrated by studies of structure and activities of living organisms, both plants and animals.

## 12. General Biology. (3) II. (Credit A, B)

Prerequisite: Biology 1.

Professor MILLER, Miss ATSATT

A course in systematic and ecologic biology with emphasis on the local environment.

Lectures, readings, reports on materials and field observations.

Three lectures and one demonstration hour each week with two required field trips.

## BOTANY

## LOWER DIVISION COURSES

## 2A-2B. General Botany. (4-4) Yr. (Credit A, B)

Associate Professor SPONSLEB, Dr. SCOTT Dr. EPLING

Two lectures and six hours laboratory.

A. An introductory course dealing with the structure, functions and life relations of seed plants. Given either half-year.

B. A continuation of 2A dealing with the comparative morphology of all of the great plant groups. Given the second half-year only.

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\* Students looking toward specialized work in Agriculture are referred to the Announcement of Courses in the Departments at Berkeley.



6. **Plant Histology.** (3) I. (Credit A, B) Dr. SCOTT  
 Lecture, one hour; laboratory, six hours.  
 Prerequisite: Botany 2A-2B.  
 The microscopic structure of the higher plants with particular reference to the development and differentiation of vegetative tissues.
7. **Plant Physiology.** (3) II. (Credit A) Associate Professor SPONSLER  
 Lecture, one hour; laboratory, six hours.  
 Prerequisite: Botany 2A-2B, 6, and chemistry.  
 A study of experimental work designed to demonstrate various activities of the plant, including photosynthesis, respiration, growth, and reproduction.

UPPER DIVISION COURSES

*General Prerequisite:* Botany 2A-2B is prerequisite to all upper division courses.

- 104A-104B. **Taxonomy of the Seed Plants.** (3-3) Yr. (Credit A, B) Dr. EPLING  
 Lecture, one hour; laboratory, six hours, and additional field work to be arranged.  
 Prerequisite: Botany 2A-2B.  
 A survey of the chief orders and families of the seed plants involving a study of the principles of phylogenetic classification and geographical distribution. Designed for botany majors, teachers of nature study, and students in the College of Agriculture.
- 105A. **Morphology of Thallophytes.** (3) I. (Credit A, B) Dr. PLUNKETT  
 Lecture, one hour; laboratory, six hours.  
 A study of the structure, development and phylogenetic relationships of the principal orders of fresh water and marine algae, and of fungi.
- 105B. **Morphology of Bryophytes and Pteridophytes.** (3) II. (Credit A) Dr. SCOTT  
 Lecture, one hour; laboratory, six hours.  
 Structure, development and phylogenetic relationships of the principal orders of the liverworts, mosses, ferns, and their allies.
- 105C. **Morphology of Spermatophytes.** (3) I. (Credit A) Dr. HAUPT  
 Lecture, one hour; laboratory, six hours.  
 Prerequisite: Botany 105B.  
 Continuation of 105B dealing with the gymnosperms and angiosperms.
110. **Botanical Microtechnique.** (3) I. (Credit A) —  
 Lecture, one hour; laboratory, six hours.  
 Preparation of plant material for microscopic study involving methods in fixing, embedding, sectioning and staining.
111. **Plant Cytology.** (3) II. (Credit A) Dr. HAUPT  
 Lecture, one hour; laboratory, six hours.  
 Prerequisite: Botany 6, 105A-105B.  
 Anatomy and physiology of the cell.

114. *Advanced Plant Physiology*. (3) I. (Credit A).  
 Conferences and laboratory. Associate Professor SPONSLER  
 Prerequisites: Botany 6 and 7.  
 Experimental work on certain functions of the plant.
120. *Phytopathology*. (3) II. (Credit A, B) Dr. PLUNKETT  
 Lecture, one hour; laboratory, six hours.  
 A study of bacterial and fungous diseases of plants.
152. *Plant Ecology*. (3) II. (Credit A, B) —  
 Lecture, one hour; laboratory, six hours; occasional field trips.  
 Prerequisite: Botany 104A-104B.  
 A study of structure and function as related to environmental conditions; plant associations; regional distribution.

## PALEONTOLOGY\*

1. *General Paleontology*. (2) Either half-year. (Credit A, B)  
 Tu Th, 10. Professor MILLER  
 Lectures, quizzes, and three required Saturdays in the field.  
 A discussion of the general principles of paleontology, the influences that surrounded the ancient life of the earth, and some of the ways in which animals respond to such influences.
104. *Vertebrate Paleontology*. (3) I. (Credit A, B)  
 Lecture, one hour; laboratory, six hours. Professor MILLER  
 Prerequisite: Paleontology 1 and junior standing.  
 A study of the fossil land vertebrates of the western hemisphere with reference to the present faunas and distribution.

## PHYSIOLOGY †

1. *General Human Physiology*. (3) I. (Credit A, B) —  
 Lectures, two hours; laboratory, three hours.  
 Prerequisite: Chemistry 2A-2B or high school chemistry.
- †10. *Physiology and Personal Hygiene*. (3) II. (Credit B) —  
 Lectures, two hours; laboratory, three hours.  
 Designed for those who plan to teach in the grade schools.

\* Courses in Invertebrate Paleontology are offered by the Department of Geology (p. 118.)

† A major in Physiology in the College of Letters and Science is not offered in the Southern Branch of the University. Students wishing to satisfy the requirements for a major in Physiology are referred to the Announcement of Courses in the Departments at Berkeley.

† Not offered in 1926-27.

ZOOLOGY

LOWER DIVISION COURSES

- 1A-1B. General Zoology. (5-5) Yr. (Credit A, B) Dr. BALL  
 Lectures, M W, 8.  
 Lectures, two hours; quiz, one hour; laboratory, six hours; one required field trip.  
 An introduction to the facts and principles of animal biology.
4. Microscopical Technique. (2) II. (Credit A) Miss PERSONS  
 Laboratory, six hours; assigned readings.  
 Prerequisite: Zoology 1A and high school chemistry.  
 The preparation of animal tissues for microscopical examination.
35. General Human Anatomy. (5) II. (Credit A, B) —  
 Lectures, two hours; quiz, one hour; laboratory, six hours.  
 Prerequisite: sophomore standing; Zoology 1A or Biology 1; and Physiology 1.

UPPER DIVISION COURSES

- 100A. Genetics. (4) II. (Credit A, B) Assistant Professor BELLAMY  
 Lectures, two hours; seminar, one hour; laboratory, six hours.  
 Prerequisite: Zoology 1B or Botany 2B or equivalent, and junior standing.  
 The student is given an opportunity to become familiar with the principles of heredity and research methods in genetics.
- 100B. Advanced Genetics. (2) II. (Credit A, B) Assistant Professor BELLAMY  
 Lectures, two hours; seminar, one hour.  
 Prerequisite: Course 100A.  
 A continuation of 100A with special reference to experimental evolution. May be taken without 100C.
- 100C. Advanced Genetics Laboratory. (2) II. (Credit A, B) Assistant Professor BELLAMY  
 Laboratory, six hours. May not be taken without 100B.
103. Experimental Zoology. (2) I. (Credit A, B) Professor ALLEN  
 Lectures, reports on articles in scientific journals and special problems.  
 Prerequisite: Zoology 1A-1B.

105. **Advanced Vertebrate Embryology.** (3) I. (Credit A, B) Professor ALLEN  
 Lectures, one hour; laboratory, six hours.  
 Prerequisite: Zoology 1A and either 1B or 35, and junior standing.  
 A study of mammalian embryology.
106. **Comparative Anatomy of the Higher Vertebrates.** (4) I. Miss ATSATT  
 (Credit A, B)  
 Lectures, two hours; laboratory, six hours.  
 Prerequisite: Zoology 1A-1B and junior standing.  
 A study of the structural relationships of the higher vertebrates.  
 Dissection of the reptile, bird, and mammal.
107. **Cytology.** (2) II. (Credit A) Professor ALLEN  
 Prerequisite: Zoology 1A.  
 Lectures and recitations.  
 The structure and activities of the cell, especially in development,  
 in sex determination, and in heredity.
- 107c. **Cytology Laboratory.** (2) II. (Credit A) Professor ALLEN  
 May be taken only concurrently with course 107.
111. **Parasitology.** (2) I. (Credit A) Dr. BALL  
 Prerequisite: Zoology 1A.  
 General discussion of the biological aspects of parasitism and of  
 the animal parasites of man and the domestic animals.
- 111c. **Parasitology Laboratory.** (2) I. (Credit A) Dr. BALL  
 Prerequisite: Zoology 111, or may be taken concurrently with  
 course 111.
112. **Advanced Invertebrate Zoology.** (4) II. (Credit A, B) Dr. BALL  
 Lectures, two hours; laboratory and field, six hours.  
 Prerequisite: Zoology 1A; Zoology 1B recommended.  
 Morphology, habits, habitats, and life histories of both marine and  
 fresh water invertebrates, with especial reference to local faunas.
113. **Zoology of the Higher Vertebrates.** (4) II. (Credit, A B) Professor MILLER  
 Lectures, 2 hours; laboratory and field, 6 hours.  
 Prerequisite: Zoology 1A-1B.  
 Emphasis will be placed on the habits, distribution, and ecology of the  
 reptile, bird, and mammal faunas of California.
199. **Problems in Zoology.** (3) Either half-year. (Credit A, B) Professor MILLER and the STAFF  
 Prerequisite: Zoology 1A-1B and junior standing with such special  
 preparation as the problem may demand.

## CHEMISTRY

WILLIAM CONGER MORGAN, Ph.D., Professor of Chemistry.

WILLIAM B. CROWELL, Ph.D., Assistant Professor of Chemistry.

G. ROSS ROBERTSON, Ph.D., Assistant Professor of Organic Chemistry.

HOSMER W. STONE, Ph.D., Assistant Professor of Inorganic Chemistry.

MAX S. DUNN, Ph.D., Assistant Professor of Biochemistry.

JAMES B. RAMSEY, Ph.D., Assistant Professor of Chemistry.

—————, Instructor in Chemistry.

*Preparation for the Major.*—Required: Chemistry 1A-1B (10), which must be passed with a grade of C or better before any further work in chemistry is taken; Physics 2A-2B or 1A-1B (6); trigonometry, Mathematics 3A-3B (6), and a reading knowledge of German. Recommended: a second course in chemistry, Physics 4A-4B, Mathematics 4A-4B.

*The Major.*—All units in chemistry in excess of fourteen are counted as upper division units when taken by a student in the upper division. The minimum requirement for the major is: Chemistry 6A-6B (6), 8 and 9 (6), 110 (3), 111 (4), 120 (3). The remainder of the twenty-four required upper division units may be taken in chemistry or allied subjects in accordance with some definite plan approved by the department. A student whose work in the major subject does not average C or better will be required to withdraw from the department.

*Pre-Chemistry.*—The Southern Branch offers only the first two years of the curriculum of the College of Chemistry in the University at Berkeley which leads to the Bachelor of Science degree. Students intending to pursue their studies in this College should consult the chairman of the department before making out their programs.

*Laboratory Fees.*—These fees cover the cost of materials and equipment used by the average careful student. Any excess over this figure will be charged to the individuals responsible. The fees per semester are as follows:

*Courses*

2A-2B, 10, 107A-107B.....	\$10.00
1A-1B, 5, 6A-6B, 120.....	14.00
111.....	22.00
9.....	25.00

## CHEMISTRY

## LOWER DIVISION COURSES

- 1A-1B. General Chemistry. (5-5) Beginning either half-year.  
 (Credit A, B) Professor MORGAN and STAFF  
 Lectures: M W F, 10 (for those beginning in September); Tu Th S, 10 (for those beginning in January); laboratory, six hours.  
 Prerequisite: high school chemistry, or physics and trigonometry.  
 Required for Colleges of Engineering, Chemistry, Agriculture, and of premedical and pre dental students and chemistry majors.
- 2A-2B. General Chemistry. (4-4) Beginning either half-year. (Credit A, B)  
 Assistant Professors STONE, DUNN  
 Lectures: M W F, 11. Laboratory, three hours.  
 Lectures or recitations, three hours.  
 No prerequisite; high school chemistry is recommended.  
 This course (or 1A-1B) is required of all home economics and physical education majors, and should be elected by students desiring chemistry as a part of a liberal education.
5. Quantitative Analysis. (3) Either half-year. (Credit A, B)  
 Assistant Professor CROWELL  
 Lecture: Th, 11. Laboratory, six hours.  
 Prerequisite: Chemistry 1A-1B.  
 A course in gravimetric and volumetric analysis, shorter than 6A-6B. Required of petroleum engineers and of sanitary and municipal engineers.
- 6A-6B. Quantitative Analysis. (3-3) Yr. (Credit A, B)  
 Assistant Professor CROWELL  
 Lecture: Tu, 10. Laboratory, six hours.  
 Prerequisite: Chemistry 1A-1B.  
 Required of economic geologists, chemistry majors, and College of Chemistry students. 6A is required of metallurgy students.
- 8A-8B. Elementary Organic Lectures. (3-3) Yr. (Credit A, B)  
 M W F, 9. Professor MORGAN, Assistant Professor ROBERTSON  
 Prerequisite: Chemistry 1A-1B or 2A-2B.  
 8A is given either half-year; 8B the second half-year only.  
 The first half of this course is required of premedical and pre dental students, sanitary and municipal engineers, petroleum engineers, chemistry majors, and College of Chemistry students.
9. Elementary Organic Laboratory. (3) II. (Credit A, B)  
 Laboratory, nine hours. Assistant Professor ROBERTSON  
 Prerequisite: Chemistry 8A.  
 Required of petroleum engineers, premedical and pre dental students, chemistry majors, and College of Chemistry students.

10. Organic and Food Chemistry. (4) I. (Credit B)  
Assistant Professor ROBERTSON  
Lectures: M W F, 8. Laboratory, three hours.  
Prerequisite: Chemistry 1A-1B or 2A-2B.  
Required of home economics majors.

## UPPER DIVISION COURSES

- 107A-107B. Biological Chemistry. (3-3) Yr. (Credit A, B)  
Assistant Professor DUNN  
Lectures: Tu Th, 8. Laboratory, three hours.  
Prerequisite: Chemistry 8A and 9.
110. Physical Chemistry Lectures. (3) I. (Credit A, B) M W F, 10.  
Assistant Professor RAMSEY  
Prerequisite: Chemistry 5 or 6A; Physics 1A-1B or 2A-2B.  
Required of chemistry majors, College of Chemistry students, and  
for all later work in physical chemistry.  
Lectures and problems.
- 110B. Advanced Physical Chemistry Lectures. (3) II. (Credit A, B)  
M W F, 10. Assistant Professor RAMSEY  
Prerequisite: Chemistry 110.  
Lectures and problems. A continuation of course 110.
111. Physical Chemistry Laboratory. (4) II. (Credit A, B)  
Assistant Professor RAMSEY  
Lecture, one hour; laboratory, nine hours.  
Prerequisite: Chemistry 110 and calculus.  
Required of chemistry majors.  
Physico-chemical problems and measurements.
120. Advanced Inorganic Chemistry. (3) I. (Credit A, B)  
Assistant Professor RAMSEY  
Lecture, one hour; laboratory, six hours.  
Prerequisite: Chemistry 6A-6B and 110.  
Required of chemistry majors.  
Preparation and experimental study of substances, designed primarily to illustrate the factors which influence equilibrium and the speed of chemical reactions. Correlation of material by means of the periodic system.

## CLASSICAL LANGUAGES

ARTHUR PATCH MCKINLAY, Ph.D., Associate Professor of Latin.

WILLIAM F. SMITH, Ph.D., Assistant Professor of Latin and Greek.

FREDERICK MASON CAREY, Ph.D., Assistant Professor of Latin and Greek.

## LATIN

*Preparation for the Major.*—Required: Four years of high school Latin, or two years of high school Latin and Latin C and D; Latin 1 and 5; Latin 3A-3B. Recommended: Greek, German, French.

*The Major.*—The following curriculum, plus 6 units of upper division courses in Greek, English, French, German, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department.

## LOWER DIVISION COURSES

- C. Third Year Latin: Ovid. (3) I. (Credit A, B)  
 M W F, 11. Associate Professor MCKINLAY  
 Prerequisite: two years of high school Latin.
- D. Fourth Year Latin: Vergil. (3) II. (Credit A, B)  
 M W F, 11. Associate Professor MCKINLAY  
 Prerequisite: Latin C, or two years of high school Latin.
1. Cicero: De Senectute; Pliny: Letters. (3) I. (Credit A, B)  
 M W F, 10. Associate Professor MCKINLAY  
 Open to those who have had four years of high school Latin.
- 3A-3B. Latin Prose Composition. (1-1) Yr. (Credit A, B)  
 Tu, 1. Assistant Professor CAREY  
 Prerequisite: Three or four years of high school Latin.
5. Horace: Odes and Epodes. (3) II. (Credit A, B)  
 M W F, 10. Assistant Professor SMITH  
 This course follows Latin 1.



UPPER DIVISION COURSES

Latin 102 and 106 are prerequisite to Latin 117, 120, 125, and 191.

102. Catullus and Livy. (3) I. (Credit A, B)  
 M W F, 10. Assistant Professor SMITH  
 Prerequisite: Latin 5.
- 104c-104d. Latin Composition. (1-1) Yr. (Credit A, B)  
 Th, 1. Assistant Professor CAREY  
 Prerequisite: Latin 3A-3B.
106. Tacitus and Plautus. (3) II. (Credit A, B)  
 M W F, 10. Associate Professor MCKINLAY  
 Prerequisite: Latin 102.
- \*117. Vergil: Georgics. (3) II. (Credit A, B)  
 M W F, 2. Assistant Professor SMITH
- \*120. Martial and Juvenal. (2) I. (Credit A, B)  
 M W, 2. Associate Professor MCKINLEY
125. Lucretius. (2) II. (Credit A, B) Associate Professor CAREY  
 M W, 2.
191. Cicero: Letters. (3) I. (Credit A, B)  
 M W F, 2. Associate Professor MCKINLAY

GREEK‡

LOWER DIVISION COURSES

- 1AB-2AB. Greek for Beginners, Attic Prose and Homer. (5-5) Yr.  
 (Credit A, B) M Tu W Th F, 12. Assistant Professor CAREY
- 3A-3B. Prose Composition. (1-1) Yr. (Credit A, B) Tu, 10.  
 Assistant Professor SMITH

\* Latin 120 and 117 and Latin 125 and 191 are given in alternate years, Latin 125 and 191 being offered in 1926-27.

‡ A major in Greek in the College of Letters and Science is not offered in the Southern Branch of the University. Students wishing to satisfy the requirements for a major in Greek are referred to the Announcement of Courses in the Departments at Berkeley.

## UPPER DIVISION COURSES

101. Introduction to Plato. (3) II. (Credit A, B)  
M W F, 12. Assistant Professor SMITH  
Prerequisite: Greek 102.
102. Greek Poetry. (3) I. (Credit A, B) Assistant Professor SMITH  
M W F, 12.  
Prerequisite: Greek 1AB-2AB.
103. Greek Drama: Euripides and Aristophanes. (3) I. (Credit A, B)  
M W F, 9. Assistant Professor SMITH  
Prerequisite: Greek 101, 102.
- \*104. Historical Prose: Herodotus or Thucydides. (3) I. (Credit A, B)  
M W F, 9. —  
Prerequisite: Greek 101, 102.
105. Greek Drama: Aeschylus and Sophocles. (3) II. (Credit A, B)  
M W F, 9. Assistant Professor SMITH  
Prerequisite: Greek 101, 102.
- \*106. The Greek Pastoral: Theocritus, Bion and Moschus. (3) II.  
(Credit A, B) M W F, 9. —  
Prerequisite: Greek 101, 102.

## ANCIENT CIVILIZATIONS†

- 112A. History of Greece to the Fall of Corinth. (3) I. (Credit A, B)  
M W F, 2. Assistant Professor CAREY
- 112B. History of Rome to the Death of Justinian. (3) II. (Credit A, B)  
M W F, 2. Associate Professor MCKINLAY

\* Greek 103 and Greek 105 will ordinarily be given in alternation with Greek 104 and Greek 106 respectively. Greek 103 and Greek 105 will be offered in 1926-27.

† Knowledge of Greek or Latin not required.

## ECONOMICS

GORDON S. WATKINS, Ph.D., Professor of Economics.

HOWARD S. NOBLE, M.B.A., C.P.A., Associate Professor of Accounting  
(Chairman).

EARL J. MILLER, Ph.D., Assistant Professor of Economics and Dean of  
Men.

IRA N. FRISBEE, M.B.A., C.P.A., Assistant Professor of Accounting.

———, Assistant Professor of Economics.

JOHN B. RIGGLEMAN, M.B.A., Assistant Professor of Economics.

MARVEL G. STOCKWELL, Ph.D., Instructor in Economics.

ARTHUR G. COONS, M.A., Instructor in Economics.

ROY T. CULEY, M.S., Associate in Economics and Accounting.

———, Associate in Economics.

EVA M. ALLEN, Associate in Commercial Practice.

ESTELLA B. PLOUGH, Associate in Commercial Practice.

*Preparation for the Major.*—Required: Economics 1A-1B, and at least one of the following: Political Science 1A-1B, History 4A-4B, History 8A-8B, or Philosophy 1A-1B.

*The Major.*—Twenty-four upper division units in economics including courses 100 and 140; or 18 upper division units in economics including courses 100 and 140, and 6 upper division units in history, political science, philosophy, or geography, the program to be approved by a departmental adviser.

*Requirements for the Secondary Special Teaching Credential in Commerce:*

Completion of all requirements for the degree of Bachelor of Education as listed on pages 75-76, including the following specified courses.

(a) Education 148, 170, 180; Psychology 110; Teaching, 4-10 units; elective courses in Education to total 24 units.

(b) Economics 1A, 1B, 14A, 14B; Commerce 16, 18A-18B; 12 units chosen from the following with the approval of the department: 106, 121A, 121B, 123, 131, 133, 135, 140, 150, 160A, 160B, 198.

(c) Political Science 18A, 18B; Commerce 19.

*Pre-Commerce Curriculum.*—The Southern Branch offers the first two years of the curriculum of the College of Commerce in the University at Berkeley. Students intending to pursue their studies in this College should consult the pre-Commerce adviser before making out their programs.

*Fees.*—Commerce A, \$6; Commerce B, \$5; Commerce 16, \$2.50.

## LOWER DIVISION COURSES

- 1A-1B. Principles of Economics. (3-3) Yr. (Credit A, B)  
 Assistant Professor MILLER and the STAFF  
 Lectures: Tu Th, 9 and 1 hour quiz; Tu Th, 11 and 1 hour quiz.
- 14A-14B. Principles of Accounting. (3-3) Yr. (Credit A, B)  
 Associate Professor NOBLE, Assistant Professor FRISBEE  
 M W, 9 and 2 hours laboratory; Tu Th, 11 and 2 hours laboratory.

## UPPER DIVISION COURSES

Economics 1A-1B is a prerequisite to all upper division courses in economics.

100. Advanced Economic Theory. (2) Either half-year. (Credit A)  
 Professor WATKINS  
 An advanced study of the principles of economics, including an analysis of such fundamental concepts as value, price, cost, rent, interest, wages, and profits. The relation of these to the current problems of production, distribution and exchange.  
 Recommended as a course for seniors.
101. History of Economic Doctrine. (2) Either half-year. (Credit A)  
 Professor WATKINS  
 A general study of the development of economic thought. The forerunners and founders of the science. The contributions of the classical school. The emergence of critical schools. Recent changes in economic theory.
106. Economic Reform. (3) II. (Credit A) Professor WATKINS  
 The concept, criteria, and agencies of economic and social progress. A statement and critical analysis of the theories and programs of modern economic reform movements. The essentials of social readjustment.
- 121A-121B. Business Organization and Administration. (3-3) Yr.  
 (Credit A, B) Associate Professor NOBLE  
 Prerequisite: course 14A-14B.  
 A study of different types of ownership with emphasis on the corporate organization; internal organization, including departmentalization; and correlation of functions and activities of departments of marketing, production, personnel, finance, and accounting.
123. Principles of Marketing. (3) Either half-year. (Credit A, B)  
 Assistant Professor RIGGLEMAN  
 Channels of distribution; functions of middlemen; selling policies; creation of markets; distribution costs; price maintenance.
131. Public Finance. (2) Either half-year. (Credit A) ———  
 Collection and disbursement of revenue by federal, state, and local governments. Taxation problems.

133. Corporation Finance. (3) II. (Credit A) —  
 Prerequisite: course 14A-14B.  
 A study of the instruments and methods of financing a corporation with reference primarily to the effect on the corporation and the stockholders.
135. Money and Banking. (3) Either half-year. (Credit A, B) —  
 Prerequisite: course 14A-14B.  
 Origin and history of money and of credit institutions; commercial banking and banking technique; social aspect of money and credit organization.
140. Elementary Statistics. (4) Either half-year. (Credit A)  
 Assistant Professors FRISBEE, RIGGLEMAN  
 Tu Th, 9 and laboratory periods.  
 Sources of statistical data; construction of tables, charts, and graphs; study of statistical methods: averages, measures of deviation, index numbers, secular trend, seasonal variation, correlation.  
 Recommended in the first half of the junior year.
150. Labor Economics. (3) I. (Credit A) Professor WATKINS  
 An introduction to the problems of industrial relations. The rise of modern industrialism. An examination of the principal problems of industrial relations and the most prominent agencies and methods of improvement. The basis of industrial peace.
- \*160A-160B. Advanced Accounting. (3-3) Yr. (Credit A, B)  
 Associate Professor NOBLE, Assistant Professor FRISBEE  
 Prerequisite: course 14A-14B.
161. Cost Accounting. (3) I. (Credit A, B) Associate Professor NOBLE  
 Prerequisite: course 14A-14B.  
 Accounting in manufacturing enterprises. Cost systems; accounting for material, labor and overhead; distribution of overhead; effective cost reports.
162. Auditing. (3) II. (Credit A, B) Assistant Professor FRISBEE  
 Prerequisite: course 14A-14B.  
 Accounting investigations, balance sheet audits and detailed audits performed by public accountants. Valuations, audit procedure, working papers and audit reports.
173. Economics of Transportation. (3) Either half-year. (Credit A, B)
195. Principles of Foreign Trade. (3) Either half-year. (Credit A, B)  
 Assistant Professor RIGGLEMAN  
 A general introduction to foreign trade methods and practices with an analysis of the principles of international commerce with particular reference to the trade of the United States. Considerable attention is given to trade in products of special interest to California.

\* Not to be given, 1926-27.

**COMMERCE****(Teachers' Courses)**

- |                                               |            |             |
|-----------------------------------------------|------------|-------------|
| A. Typing. (No credit)                        | Tu Th, 10. | Mrs. ALLEN  |
| B. Shorthand. (No credit)                     | M W F, 10. | Mrs. ALLEN  |
| 16. Typing. (2) Either half-year. (Credit B)  | Tu Th, 2.  | Mrs. ALLEN  |
| Prerequisite: course A or its equivalent.     |            |             |
| 17. Shorthand. (3) II. (Credit B)             | M W F, 10. | Mrs. ALLEN  |
| Prerequisite: course B or its equivalent.     |            |             |
| 18A-18B. Penmanship. (2-2) Yr. (Credit B)     |            | Mrs. PLOUGH |
| Tu Th, 10, 1, 2.                              |            |             |
| 19. Business Mathematics. (2) II. (Credit B)  |            | Mrs. ALLEN  |
| 198. Commercial Education. (3) II. (Credit B) |            |             |
| Associate Professor NOBLE and the STAFF       |            |             |

## EDUCATION

- ERNEST CARROLL MOORE, Ph.D., LL.D., Professor of Education and Director of the Southern Branch.
- †CHARLES WILKIN WADDELL, Ph.D. Professor of Education and Director of the Training Schools.
- JUNIUS L. MERIAM, Ph.D., Professor of Education.
- MARVIN L. DARSIE, Ph.D., Associate Professor of Education and Dean of the Teachers College.
- FREDERICK P. WOELLNER, Ph.D., Associate Professor of Education.
- KATHERINE L. McLAUGHLIN, M.A., Associate Professor of Primary Education.
- ETHEL I. SALISBURY, M.A., Associate Professor of Elementary Education.
- HARVEY L. EBY, Ph.D., Associate Professor of Rural Education.
- J. HAROLD WILLIAMS, Ph.D., Associate Professor of Education.
- WILLIAM A. SMITH, Ph.D., Assistant Professor of Education (Chairman of the Department).
- CLARENCE HALL ROBISON, Ph.D., Assistant Professor of Education and University Examiner.
- BENJAMIN W. JOHNSON, Lecturer in Education and Assistant Director of the Division of Vocational Education and Supervisor of Classes for the Training of Trade and Industrial Teachers (Los Angeles).
- HELEN M. CHRISTIANSON, M.A., Associate in Primary Education.
- LEWIS A. MAVERICK, Ed.D., Lecturer in Education and Recorder.
- ‡Sir JOHN ADAMS, LL.D., F.C.P., Lecturer in Education (Professor Emeritus of Education, University of London).

The requirements for the general teaching credentials\* are as follows:

## I. KINDERGARTEN-PRIMARY CREDENTIAL

1. Examination in piano. An examination in piano is required of all entrants upon enrollment in this curriculum. Before assignment to practice teaching is made the student must show ability to play music suitable for use with young children. This includes song accompaniments, such as those in "Songs for the Little Child," by Kohlsaat and Baker, and music for rhythmic interpretation of the type in "Robinson's School Rhythms."

† Absent on leave second half-year.

‡ In residence first half-year only.

\* A major in Education in the College of Letters and Science is not offered in the Southern Branch of the University. Students wishing to satisfy the requirements for a major in Education are referred to the Announcement of Courses in the Departments at Berkeley.

2. Completion of 96 units of university credit (with corresponding grade points) including:

- (a) General sequence requirements listed on page 75.
- (b) Education 21, 124A, 124B, 132, 148, 180; Psychology 119; Teaching, 10 units\*; special teachers' courses approved by advisers, 6 units.
- (c) Electives to total 96 units.

## II. GENERAL ELEMENTARY CREDENTIAL

Completion of 96 units of university credit (with corresponding grade points), including:

- (a) General sequence requirements listed on page 75.
- (b) Mathematics 19, Geography I.
- (c) Education 130, 132, 139, 148, 180; Psychology 110 or 119; Teaching, 10 units\*; special teachers' courses approved by advisers, 6 units.
- (d) Electives to total 96 units.

## III. GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

Completion of all requirements for the degree of Bachelor of Education as listed on pages 75-76. The following courses must be included: Education 170, 172, Psychology 110 or 112, special teachers' courses, 2 units.

Junior standing is a prerequisite to all courses in education except Education 11 and 21.

- 11. Principles of Teaching. (3) Either half-year. (Credit B)  
 Tu Th, 12, and one quiz hour. Professor MERIAM  
 Prerequisite: Psychology 1A.
- 21. Introduction to Kindergarten Primary Education. (3) I. (Credit B)  
 Tu Th S, 8, 9, 11; M W F, 11. Miss CHRISTIANSON  
 Educational needs of early childhood; physical and mental characteristics of varying age levels; work, play, and activities in learning; individual differences.
- 101. History of Education. (3) II. (Credit A, B)  
 M W F, 11. Associate Professor DARSIE  
 The evolution of educational practices and ideals with emphasis on social-economic backgrounds.
- 102. Recent Developments in Educational Practice. (3) I. (Credit A, B)  
 M W F, 4. Dr. ADAMS
- 115. Growth and Development of the Child. (2) I. (Credit B)  
 Prerequisite: Psychology 1A, 1B. Associate Professor WILLIAMS  
 Essential facts of growth. Hygiene of growth, physical and mental.

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\* Applications for teaching assignments should be made during the fourth semester by all students qualifying for a three-year credential, and not later than the end of the third year by students completing the regular four-year course.



120. The Bases of Educational Theory. (3) I. (Credit A, B)  
M W F, 10. Dr. ADAMS
- 124A-124B. Kindergarten-Primary Curricula and Methods. (3-3).  
(Credit B) M W F, 9, 2. Associate Professor McLAUGHLIN  
Prerequisite: Psychology 1A, 1B.  
General principles underlying the teaching of the fundamental skills. Objectives of kindergarten-primary education. Curriculum values. Evolution of modern curricula and methods.
128. Comparative Study of Kindergarten-Primary and Elementary Education. (3) I. (Credit B) Professor MERIAM  
Prerequisite: Education 124AB, 130, or equivalent experience.  
A critical survey of public and private schools with special reference to conservative and progressive practices.
129. Kindergarten-Primary Supervision. (3) II. (Credit B)  
Associate Professor McLAUGHLIN  
The chief objectives of the Kindergarten-Primary Supervisor; principles underlying effective supervision of teaching; administrative responsibilities; unification of kindergarten-primary grades through supervision.  
Designed especially for supervisors and teachers of experience.
130. Principles of Elementary Education. (3) Either half-year. (Credit B) Prerequisite: Psychology 1A-1B. Assistant Professor ROBISON  
A general study of administrative and instructional procedure in the elementary school.
- 131A-131B. School Administration and Supervision. (2-2) Yr. (Credit B)  
W, 4, 5. Professor WADDELL  
Prerequisite: Education 130 or equivalent.  
The general technique of elementary school administration. In the second semester especial attention will be paid to the supervision of teaching. Designed especially for principals and supervisors.
132. Introduction to Educational Measurement. (2) Either half-year. (Credit B) Prerequisite: Psychology 1A-1B. M W, 8; Tu Th, 8.  
Associate Professor WILLIAMS, Assistant Professor ROBISON  
Elementary statistical procedures; central tendencies, measures of variability, rank-difference correlation. The history and scope of mental tests. Typical group tests of mental ability. Educational tests; their origin, use, and limitations. Problems, demonstrations, class exercises, and text assignments.
133. Educational Diagnosis. (2) II. (Credit B)  
Prerequisite: Education 132. Associate Professor WILLIAMS  
The use of standard tests and elementary statistical technique in problems of school, class and individual diagnosis. Intended primarily for teachers of experience.

139. The Elementary Curriculum. (3) II. (Credit B) Professor MERIAM  
Prerequisite: Education 130 or equivalent.  
A study of curricula of representative schools and the methods by which teachers may organize materials for classroom work.
148. Administration of Public Education with Special Reference to California. (3) Either half-year. (Credit A, B) M W F, 8.  
Associate Professor DARSIE  
A general introduction to public education in the United States, followed by a critical study of the California school system—its origin, organization and administration, and legal bases.
155. Rural Society and Education. (3) Either half-year. (Credit A, B)  
Associate Professor EBY  
A study of the social-economic conditions and needs in rural communities as related to rural education.
156. Rural School Organization and Administration. (3) I. (Credit B)  
Prerequisite: Education 155. Associate Professor EBY  
A consideration of the problems and principles involved in the organization and administration of a modern rural school system.
157. Rural School Supervision. (3) II. (Credit B)  
Prerequisite: Education 156. Associate Professor EBY  
The principles and means of supervision in rural schools with case studies of the best practices followed in county school systems.
160. Vocational Education. (3) II. (Credit B) Mr. JOHNSON  
What is vocational training? A survey of its history, scope, aims and purposes. Its significance in the economic and social development of a democracy. The discovery and placing of ability. Present theories of vocational education. Types of schools, day, evening, part-time and coöperative. The vocational training of adults. Federal and State aid for vocational training. The selection and training of teachers.
166. Vocational and Educational Guidance. (3) I Dr. MAVERICK  
(Credit B)  
The history and principles of vocational guidance; vocational psychology as applied in education and industry; sources of vocational information.
167. Problems in Part-time Education. (3) II. Mr. JOHNSON  
(Credit B)
170. Principles of Secondary Education. (3) Either half-year. (Credit A, B) Prerequisite: Education 148. Assistant Professor SMITH  
M W, 9, and one quiz hour.  
A general introduction to secondary education in the United States—historical and comparative background; scope and functions; pupils; program of studies and extra-curricular activities; social control; technique of instruction and supervision; and procedure in organization and administration.

172. The Junior High School. (3) Either half-year. (Credit B)  
M W F, 10. Assistant Professor SMITH  
Prerequisite: Education 170 and senior standing.  
A critical study of the junior high school—its origin; purpose; curricular and extra-curricular practices; and problems in organization and administration.
180. Education for Citizenship. (2) Either half-year. (Credit A, B)  
Tu Th, 11, 2. Associate Professor WOELLNER  
Certain educational problems from the viewpoint of American citizenship. Adult immigration education, civic values in method, subject matter, school organization, etc.; teaching the principles of government, the Constitution; what is good citizenship?
182. Problems of Americanization. (3) Either half-year. (Credit B)  
Associate Professor WOELLNER  
Racial and cultural backgrounds of various immigrant groups, with resulting problems for education.
183. Educational Sociology. (3) I. (Credit A, B).  
M W F, 11. Associate Professor DARSIE  
Education as a factor in social evolution. Analysis of current educational practices in the light of modern social needs.

## ENGLISH

- FREDERIC T. BLANCHARD, Ph.D., Professor of English.  
 SIGURD BERNHARD HUSTVEDT, Ph.D., Associate Professor of English.  
 HERBERT F. ALLEN, Ph.D., Assistant Professor of English.  
 LLEWELLYN M. BUELL, Ph.D., Assistant Professor of English.  
 PERCY H. HOUSTON, Ph.D., Assistant Professor of English.  
 †ALFRED E. LONGUEIL, Ph.D., Assistant Professor of English.  
 LILY B. CAMPBELL, Ph.D., Assistant Professor of English.  
 MARGARET S. CARHART, Ph.D., Assistant Professor of English.  
 CARL S. DOWNES, Ph.D., Assistant Professor of English.  
 B. H. BISSELL, Ph.D., Assistant Professor of English.  
 CHARLES A. MARSH, B.S., Assistant Professor of Argumentation.  
 ALICE O. HUNNEWELL, Instructor in English.  
 EVALYN A. THOMAS, B.L.I., Instructor in English.  
 HARRIET MACKENZIE, M.A., Instructor in English.  
 W. H. VEATCH, A.B., Ph.M., Instructor in Public Speaking.  
 KATHERINE COLLINS, M.A., Associate in English.  
 LAWRENCE C. LOCKLEY, M.A., Associate in English.  
 ————, Associate in English.  
 LOUIS C. VALENTINE, A.B., Associate in English.  
 DECALVUS W. SIMONSON, M.A., Associate in English.  
 †LESLIE B. BATES, M.A., Associate in English.  
 LINCOLN LORENZ, M.A., Associate in English.  
 WESLEY LEWIS, M.A., Associate in Public Speaking.  
 FLOYD KARL RILEY, A.B., Associate in Public Speaking.
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- VERNON P. SQUIRES, M.A., Lecturer in English.

Students must have passed Subject A (either examination or course) before taking any course in English or Public Speaking. Reference to regulations concerning Subject A will be found on page 39 of this bulletin.

*Preparation for the Major.*—English 1A-1B and 56A-56B with an average grade of C.

*The Major.*—1. Students must present, in the first term of the junior year, a program to be examined and approved by the departmental adviser to upper division students. The program may be amended from time to time after consultation with the department representative.

† Absent on leave first half-year.

2. The program must cover 24 units of upper division courses, including the restricted junior course, to be taken in the junior year, and one restricted senior course, to be taken in the senior year.

3. The student must maintain an average grade of C in upper division English courses and, at the end of the senior year, must pass a comprehensive final examination.

### LOWER DIVISION COURSES

#### Freshman Courses

1A-1B. First-Year Reading and Composition. (3) Either half-year.  
(Credit A, B) Professor BLANCHARD and STAFF  
M W F, 8, 9, 10, 11, 12, 2, 3; Tu Th S, 8, 9, 10, 11, 12.  
Open to all students who have received a passing grade in Subject A.

4E-4F. World Literature. (1-1) Yr. (Credit A, B) W, 3.  
Professor BLANCHARD

#### Sophomore Courses

NOTE.—Courses 52 and 56, having material in common, cannot both be taken, in whole or in part, for credit.

51A-51B. Writing Based on Nineteenth Century Masterpieces. (3-3) Yr.  
(Credit A, B). Tu Th S, 11. Assistant Professor DOWNES

52A-52B. Types of English Literature. (3-3) Yr. (Credit A, B)  
M W F, 12. Assistant Professor CAMPBELL

56A-56B. Survey of English Literature. (3-3) Yr. (Credit A, B)  
Assistant Professors ALLEN, BUELL, HOUSTON, LONGUELL,  
CAMPBELL, CARHART, BISSELL

### UPPER DIVISION COURSES

English 1A-1B and 56A-56B are prerequisite to all upper division courses in English.

#### Group I—Unrestricted Courses

106K. Advanced Composition. (3) Either half-year. (Credit A, B)  
Associate Professor HUSTVEDT, Assistant Professors ALLEN,  
HOUSTON, LONGUELL, CAMPBELL, CARHART  
Prerequisite: The consent of the instructor.

110. English Diction and Style. (3) I. (Credit A, B) M W F, 10.  
Associate Professor HUSTVEDT

114A-114B. English Drama from the Beginning to 1900. (3-3) Yr.  
(Credit A, B) Assistant Professors BUELL, CAMPBELL, CARHART

- 121A-121B. Nineteenth Century Poetry. (3-3) Yr. (Credit A, B)  
 Professor BLANCHARD, Assistant Professors ALLEN, LONGUEIL  
 (A) Wordsworth to Tennyson; (B) Tennyson to Swinburne.
- 125C-125D. The English Novel. (3-3) Yr. (Credit A, B) M W F, 2.  
 Professor BLANCHARD
- 125G-125H. Nineteenth Century Prose. (3-3) Yr. (Credit A, B)  
 Tu Th S, 10. Assistant Professors HOUSTON, DOWNES
- 153A. Introduction to the Study of Poetry. (3) Either half-year.  
 (Credit A, B) M W F, 12. Professor BLANCHARD  
 This course is designed to afford an introduction to the principles of criticism. It is offered both for those who desire a general acquaintance with poetry and for those who intend to select a European literature as a major. Lectures, reading of masterpieces in translation, frequent examinations.

### Group II—Restricted Courses

#### A. The Junior Course

(Sections limited to forty students each)

Designed primarily for juniors whose major subject is English. With the consent of the instructor open to other juniors who have had equivalent preparation.

- 117J. Shakespeare. (3) Either half-year. (Credit A B)  
 Professor BLANCHARD, Associate Professor HUSTVEDT,  
 Assistant Professors ALLEN, HOUSTON  
 M W F, 2, 3.

#### B. Senior Courses

(Sections limited to twenty students each)

Designed primarily for seniors whose major subject is English. With the consent of the instructor, open to other seniors who have had equivalent preparation.

- 151H. Tragedy. (3) Either half-year. (Credit A, B)  
 M W F, 10. Assistant Professors ALLEN, HOUSTON
- 151L. Chaucer. (3) Either half-year. (Credit A, B) M W F, 11.  
 Associate Professor HUSTVEDT, Assistant Professor LONGUEIL

### TEACHERS' COURSES

- 12A. Reading, and the Teaching of English (grades one through four).  
 (2) Either half-year. (Credit B) Tu Th, 10. Mrs. HUNNEWELL
- 12B. Literature for the Elementary Grades (four through eight). (2)  
 Either half-year. (Credit B) Tu Th, 10, 11, 3. Miss MACKENZIE
130. American Literature. (3) II. (Credit B)  
 M W F, 3. Assistant Professor DOWNES
161. Junior High School English. (2) I. (Credit B) Miss MACKENZIE  
 Tu Th, 2.

## PUBLIC SPEAKING\*

## LOWER DIVISION COURSES

- 1A-1B. Elements of Public Speaking. (3-3) Yr. (Credit A, B)  
M F, 9, and one additional hour.  
Assistant Professor MARSH, Mr. VEATCH, Mr. LEWIS
- 2A-2B. The Fundamentals of Expression and Interpretation. (3-3) Yr.  
(Credit A, B) M W F, 9. Mrs. HUNNEWELL, Miss THOMAS
- 5A-5B. Principles of Argumentation. (3-3) Yr. (Credit A, B)  
M W F, 10. Assistant Professor MARSH, Mr. VEATCH, Mr. LEWIS  
Prerequisite: Public Speaking 1A-1B and the consent of the  
instructor.
- 10C-10D. Dramatic Interpretation. (3-3) Yr. (Credit A, B)  
M W F, 2. Miss THOMAS
15. The Art of Story Telling. (2) Either half-year. (Credit B)  
Tu Th, 11. Mrs. HUNNEWELL

## UPPER DIVISION COURSES

- 110A-110B. Third-Year Public Speaking. (3-3) Yr. (Credit A, B)  
Prerequisite: course 5A-5B. Assistant Professor MARSH  
First half-year, oral argumentation and debate; preparation of  
briefs; presentation of arguments. Second half-year, practice in extem-  
porary speaking; the preparation of the occasional address: Open to  
students selected from 110A.
- 111A-111B. Literary Interpretation. (3-3) Yr. (Credit A, B)  
Prerequisite: course 2A-2B. Mrs. HUNNEWELL, Miss THOMAS  
The study of typical literary forms such as the ballad, the lyric, the  
essay, and the short story.

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\* A major in Public Speaking in the College of Letters and Science is not offered in the Southern Branch of the University. Students wishing to satisfy the requirements for a major in Public Speaking are referred to the Announcement of Courses in the Departments at Berkeley.

## FRENCH

- PAUL PÉRIGORD, Ph.D., Professor of French Civilization.  
 HENRY RAYMOND BRUSH, Ph.D., Professor of French.  
 ALEXANDER GREEN FITE, Ph.D., Associate Professor of French.  
 NEMOURS HONORE CLEMENT, Ph.D., Assistant Professor of French.  
 HELEN BELL SMITH, Ph.D., Instructor in French.  
 LOUIS F. D. BRIOIS, M.A., Associate in French.  
 MADELEINE L. LETESSIER, A.B., Associate in French.  
 EVELYN STARR LESSLIE LOUGHEAD, M.A., Associate in French.  
 ALICE HUBARD, M.A., Associate in French.  
 MARCEL BIENCOURT, Licencié ès Lettres, Associate in French.

*Preparation for the Major.*—French A, B, 1A-1B, or their equivalents. History 4A-4B, Philosophy 3A-3B, Latin and another modern language are strongly recommended.

*The Major.*—Required: Twenty-four units of French including French 101A-101B, 109A-109B, 112A-112B.

Any of the remaining upper division courses may be applied on the major. With the permission of the department, 4 units of the 24 may be satisfied by appropriate upper division courses in the following departments: English, German, Greek, Latin, Spanish, Italian, or Philosophy.

## LOWER DIVISION COURSES

The ordinary prerequisites for each of the lower division courses are listed under the description of these courses. Students who have had special advantages in preparation may, upon examination, be permitted a more advanced program; or, such students may be transferred to a more advanced course by recommendation of the instructor.

- A. Elementary French. (5) Either half-year. (Credit A, B)  
 M Tu W Th F, 9, 10, 12, 3. Mr. BRIOIS in charge
- A2. Elementary French. (3) I. (Credit A, B) M W F, 2.  
 Mr. BRIOIS in charge  
 Intended for students who have had one year of high school French.
- B. Elementary French. (5) Either half-year. (Credit A, B)  
 M Tu W Th F, 12, 2. Mr. BRIOIS in charge  
 Prerequisite: course A or two years of high school French.



- C. Intermediate French. (3) Either half-year. (Credit A, B)  
 Tu Th S, 9; M W F, 12. Associate Professor FITZ in charge  
 Prerequisite: course B or three years of high school French.
- D. Intermediate French. (3) Either half-year. (Credit A, B)  
 M W F, 9, 11. Associate Professor FITZ in charge  
 Prerequisite: course C or four years of high school French.
- 1A-1B. Intermediate French. (3-3) Yr. (Credit A, B) M W F, 11.  
 Associate Professor FITZ  
 Prerequisite: course B with a grade of A or B.  
 Students having three years of high school French and a satisfactory record may be admitted to this course with the permission of the department. This course is intended for students who make French their major subject. It is conducted in French.
- 5A-5B. Advanced French. (3-3) Yr. (Credit A, B) M W F, 9, 10.  
 Professor PÉRIGORD, Assistant Professor CLEMENT  
 Prerequisite: course D or 1B.
- 5AB. Advanced French. (5) II. (Credit A, B) Professor BRUSH  
 M Tu W Th F, 10.  
 Prerequisite: course D or 1B with grade of A, B, or C.

#### UPPER DIVISION COURSES

The prerequisite to all upper division courses is 16 units in the lower division, including either 1A-1B (or D with a grade of A or B) or 5A-5B (or 5AB).

Courses 101A-101B and 109A-109B are ordinarily prerequisite to other upper division courses, except that 107A-107B may be taken concurrently with either or both of these courses.

All upper division courses, with the exception of 140A-140B, are conducted entirely in French.

- 101A-101B. Composition, Oral and Written. (3-3) Yr. (Credit A, B)  
 M W F, 10. Associate Professor FITZ, Dr. SMITH
- \*107A-107B. Typical Comedies. (2-2) Yr. (Credit A, B)  
 Associate Professor FITZ  
 Prerequisite: an average grade higher than C in French courses.
- 109A-109B. A Survey of French Literature and Culture. (3-3) Yr.  
 (Credit A, B) M W F, 12. Professor PÉRIGORD  
 (A) The Middle Ages, the Renaissance, and the XVII Century.  
 (B) The XVIII, XIX, and XX centuries.

\* Not to be given, 1926-27.

- 112A-112B. The Nineteenth Century. (2-2) Yr. (Credit A, B)  
 Tu Th, 1. Professor BRUSH  
 Prerequisite: courses 101A-101B and 109A-109B.  
 (A) From 1789 to 1850. (B) From 1850 to 1885.
- 114A-114B. Contemporary French Literature from 1885 to the Present  
 (2-2) Yr. (Credit A, B) Tu Th, 9. Associate Professor FITZ
- \*118A-118B. The Sixteenth Century. (2-2) Yr. (Credit A, B)  
 Professor BRUSH
- 120A-120B. The Seventeenth Century. (2-2) Yr. (Credit A, B)  
 Tu Th, 11. Assistant Professor CLEMENT
- 121A-121B. The Eighteenth Century. (2-2) Yr. (Credit A, B)  
 Professor BRUSH
- 130A-130B. Grammar, Composition and Style. (2-2) Yr. (Credit A, B)  
 Tu Th, 10. Assistant Professor CLEMENT  
 Prerequisite: an average grade higher than C in French courses.  
 Practice in oral and written composition based on selected models.  
 This course is required at Berkeley of all candidates for the certificate  
 of completion of the teacher-training curriculum, or for the M.A. degree.
- 140A-140B. French Civilization. (2-2) Yr. (Credit A, B) Tu Th, 2.  
 Professor PÉRIGORD  
 Presentation of the larger cultural elements in European History  
 as caused, influenced, diffused, or interpreted by the French people.  
 Lectures in English, reading in French or English. Intended pri-  
 marily for majors in English and history.
190. The Teaching of French. (2) I. (Credit B) Professor BRUSH  
 Prerequisite: French 101A-101B and 109A-109B, the latter being  
 permitted concurrently.

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\* Not to be given, 1926-27.

## GEOGRAPHY

GEORGE McCUTCHEN McBRIDE, Ph.D., Associate Professor of Geography.  
 MYRTA LISLE McCLELLAN, B.S., Assistant Professor of Geography.  
 CLIFFORD MAYNARD ZIERER, Ph.D., Assistant Professor of Geography.  
 RUTH E. BAUGH, M.A., Associate in Geography.  
 WILLIAM F. MARSHALL, Ed.B., Associate in Geography.

FORD ASHMAN CARPENTER, LL.D., D.Sc., Lecturer in Meteorology.

*Preparation for the Major.*—Required: Geography 1, 2 (or 5); Geology 1c or 1A, and 2C. Recommended: Geography 3, 5 (or 2), 7A, and 7B; Geology 2D; History 4, 5, 7 or 8, and 76; Economics 1A-1B.

*The Major.*—The minimum requirement for the major is 18 or 21 units of upper division work in geography including the following courses: 101, 105, and 121; plus 3 or 6 units selected, with the approval of the department, from some one of the following groups:

Geology Group.—Geology 102A-102B, 105, 106, 107, 108.

History Group.—History 155A-155B, 162A-162B, 171A-171B, 177A-177B, 181A-181B.

Economics-Political Science Group.—Economics 123, 140. Political Science 125, 127.

## LOWER DIVISION COURSES

1. Fundamentals of Modern Geography. (3) Either half-year.

(Credit A, B) M W F, 8, 9, 10, 12, 2, 3; Tu Th S, 8, 9, 11.

Associate Professor McBRIDE and the STAFF

A development of the underlying principles of human geography through a study of the main features of the physical environment in their relationship to man's life and activities, particularly as exemplified in type regions; varied map study.

2. Studies in Regional Geography. (3) Either half-year. (Credit A, B)

Assistant Professor McCLELLAN, Miss BAUGH, Mr. MARSHALL  
 Prerequisite: Geography 1.

A study of selected regions, with wide application of the principles of human geography and systematic map studies.

3. Elements of Meteorology. (2) II. (Credit A, B) Miss BAUGH

A study of the earth's atmosphere and the changes in it which produce our weather; the making and recording of meteorological observations; practical work with meteorological instruments; study of weather maps; lectures, recitations, and laboratory work.

5. Economic Geography. (3) Either half-year. (Credit A, B)  
 M W F, 10. Assistant Professor ZIEBER
- Prerequisite: Geography 1 or the equivalent.  
 The geography of the more important products of farm, range, forest, mine, river, and sea; the development and localization of industries; continental and oceanic trade routes; the character and direction of trade; the interdependence of the great consuming and producing regions of the world.
- 7A. Applied Meteorology: Weather Science in Relation to Aeronautics and Industry. (1) I. (Credit A, B) Tu, 12. Dr. CARPENTER
- 7B. Applied Meteorology; Weather Science in Relation to Agriculture and Engineering. (1) I. (Credit A, B) Tu, 1. Dr. CARPENTER

## UPPER DIVISION COURSES

Geography 1 or equivalent preparation is prerequisite to all upper division courses except 111 and 181. After the year 1926-27, Geography 2 or 5 (or equivalent preparation) will be made an additional prerequisite.

101. Field Course; the Geography of Los Angeles and its Environs. (3) I. (Credit A, B) Assistant Professor ZIEBER  
 Th, 1-5, and occasional Saturdays.  
 An expenditure of \$5 for transportation may be incurred by each student.  
 A survey of the Los Angeles area, including a study of its commerce and industries; its highway and railroad outlets, and the port; the utilization of outlying lands; and its major municipal problems, such as water supply, hydro-electric power, flood control, and sewage disposal. The course is based primarily on field work and affords training in observing geographic facts, accurate field note taking and detailed field mapping.
105. Cartography. (2) II. (Credit A, B) Associate Professor McBRIDE  
 Additional prerequisite: Geology 1c and 2c.  
 The course is concerned with the methods of making maps, the more important projections and their relative merits; representations of relief, features of human culture, and other geographic data; the interpretation of various types of maps.
111. Conservation of Natural Resources. (3) II (Credit A, B) Assistant Professor ZIEBER  
 No prerequisite except junior standing.  
 The significance of abundant and varied natural resources in the development of the United States and the need for conserving the national wealth in soils, minerals, forests, and water.
113. Climatology. (2) I. (Credit A, B) Associate Professor McBRIDE  
 A study of the underlying principles of climatic phenomena, of the features which characterize the climates of various regions, and of the influence of climatic conditions upon the life of plants, animals, and the human race.

121. The Geography of North America. (3) I. (Credit A, B)  
 M W F, 12. Assistant Professor ZIERER  
 A study of the principal economic activities and the life of the people in each of the major geographic regions of North America in their relation to the natural environment.
122. The Geography of Latin America. (3) I. (Credit A, B)  
 Tu Th, 4-5:30. Associate Professor MCBRIDE  
 This course aims to ascertain the physical conditions characterizing the countries of Latin America, particularly in relation to the life of the inhabitants.
123. The Geography of Europe. (3) II. (Credit B) Miss BAUGH  
 A survey of the principal geographic divisions of Europe. The effect of environmental conditions upon the distribution of population, upon the progress of selected countries, and upon the economic activities of peoples.
124. The Geography of Asia. (3) II. (Credit A, B)  
 Assistant Professor MCCLELLAN  
 A study of the geographic problems which determine the social and economic conditions of the leading countries about the western edge of the Pacific Ocean.
131. The Geography of California. (2) Either half-year. (Credit A, B)  
 Tu Th, 1. Assistant Professor MCCLELLAN  
 A comparison and contrast of California's geographic advantages and handicaps; a tracing of the relationships between the natural resources of the state and the activities of the inhabitants.
169. The Teaching of Geography. (3) Either half-year. (Credit B)  
 M W F, 9. Assistant Professor MCCLELLAN  
 The fundamental purposes of geography as an instrument of instruction; changing point of view; the basic principles; the various methods of presentation; the use of materials in the presentation of the subject.
171. The Geographic Setting of American History. (3) II. (Credit A, B)  
 Associate Professor MCBRIDE  
 Additional prerequisite: A university course in American History.  
 The purpose of this course is to study the influence of the physical environment upon the distribution, culture, and historical development of the peoples inhabiting the Americas.
181. Current problems in Political Geography. (2) II. (Credit A, B)  
 Associate Professor MCBRIDE  
 No prerequisite except junior standing.  
 Consideration of the geographical basis of some important problems of domestic and international affairs, with stress upon the geographic principles involved.

## GEOLOGY

WILLIAM J. MILLER, Ph.D., Professor of Geology.

FREDERICK P. VICKERY, Ph.D., Assistant Professor of Geology.

ALFRED R. WHITMAN, Ph.D., Assistant Professor of Geology.

COLIN H. CRICKMAY, Ph.D., Instructor in Geology.

*Preparation for the Major.*—Required: Chemistry 1A-1B; Elementary Physics; Civil Engineering 1A-1B; Geology 1A, 1B; Mineralogy 1A-1B, 2; trigonometry; freehand and geometrical drawing. Certain of these preparatory courses may be postponed to the upper division by permission of the department. Recommended: French or Spanish, and German.

*The Major.*—Geology 102A-102B (4), 103 (4), 112A-112B (4), and 12 units chosen from geology (including mineralogy and paleontology) and allied courses in chemistry, physics, zoology, and geography. The student's program is to be made out in accordance with some definite plan approved by the department.

*Laboratory Fees.*—Mineralogy 1A, 1B, \$5; 2, \$2.50.

## GEOLOGY

- 1A. General Geology: Dynamical and Structural. (3) Either half-year. (Credit A, B) Professor MILLER, Assistant Professor VICKERY  
M W F, 8 (Miller); M W F, 9 (Vickery).  
Prerequisite: Elementary chemistry and physics.  
Several field trips (half-day) required. Sections limited to forty students.  
A study of the materials and structure of the earth, and of the processes and agencies by which the earth has been, and is being changed.  
(NOTE.—Not open to students who have taken or are taking Geology 1C.)
- 1B. General Geology: Historical. (3) Either half-year. (Credit A, B) Professor MILLER, Assistant Professor VICKERY  
M W F, 12 (Vickery, first half-year; Miller, second half-year).  
Several field trips (half-day) required.  
Prerequisite: Geology 1A or 1C.  
A study of the geological history of the earth and its inhabitants, with special reference to North America.
- 1C. Physiography. (3) Either half-year. (Credit A, B) Professor MILLER, Assistant Professor VICKERY, Dr. CRICKMAY  
M W F, 9, 11 (Miller); M W F, 10 (Vickery); Tu Th S, 10 (Crickmay).  
Several field trips (half-day) required.  
An elementary course dealing with the earth's surface features and the geological laws governing their origin and development.  
(NOTE.—Not open to students who have taken or are taking Geology 1A.)

- 2c. Map Study of Physiography. (1) Either half-year. (Credit A, B)  
 W, 2-5. Dr. CRICKMAY  
 May be taken subsequent to or concurrently with Geology 1A or 1c.
- 2d. Field Study of Physiography. (1) II. (Credit A, B)  
 Th, 1-4. Assistant Professor VICKERY  
 May be taken subsequent to or concurrently with Geology 2c or 5.  
 (NOTE.—An expenditure of \$5 for transportation may be incurred by each student.)
5. General Geology: Field Work; Dynamical and Structural. (1) II.  
 (Credit A, B) Tu, 1-4. Assistant Professor VICKERY  
 Field excursions and reports.  
 May be taken concurrently with Geology 1A.  
 (NOTE.—An expenditure of \$5 for transportation may be incurred by each student.)

## UPPER DIVISION COURSES

- 102A-102B. Field Geology. (2-2) Yr. (Credit A, B). S, 9-5.  
Assistant Professor WHITMAN  
 Prerequisite: Geology 1B, 103, and Civil Engineering 11A-11B, 11A-11B. Geology 5 is recommended. Credit in this course is given only to students who take the year's work.  
 Field work with supplementary lectures and exercises in mapping.  
 (NOTE.—An expenditure of \$30 for transportation may be incurred by each student.)
103. Introduction to Petrology. (4) I. (Credit A, B)  
Assistant Professor WHITMAN  
 Lectures, M F, 11; laboratory, M F, 2-5. Two lectures and two laboratory periods each week.  
 Prerequisite: Geology 1A, Mineralogy 1A and 2.  
 The general characteristics, origin, mode of occurrence, and nomenclature of rocks, and description of the more common types, accompanied by determinative laboratory practice.
105. Geology of California. (3) II. (Credit A, B)  
 M W F, 8. Assistant Professor VICKERY  
 Prerequisite: 1B, 102A-102B, and 103.  
 Lectures, discussions, and reports on the geologic provinces, physiography, history, stratigraphy, structure, and deformation of California.
106. Economic Geology: Metalliferous Deposits. (3) II. (Credit A, B)  
 M W F, 11. Assistant Professor WHITMAN  
 Prerequisite: Geology 1A, 1B, Mineralogy 1A-1B, and Geology 103.
107. Physical Geology of North America. (2) II. (Credit A, B)  
 Tu Th, 9. Professor MILLER  
 Prerequisite: Geology 1A or 1C, and 1B.
108. Economic Geology: Non-metalliferous Deposits. (2) I. (Credit A, B)  
 Tu Th, 9. Professor MILLER  
 Prerequisite: Geology 1A or 1C, 1B, and elementary chemistry.

- 112A-112B. Problems in Geology. (2-2) Yr. (Credit A, B)  
 Tu Th, 12. Professor MILLER and the STAFF  
 Open only to seniors who are making geology their major study.  
 Reports and discussions.
116. Tectonic Geology. (3) I. (Credit A, B)  
 Assistant Professor VICKERY  
 Lecture, Tu Th, 8; laboratory, W, 2-5.  
 Prerequisite: Geology 1A; Geology 102A-102B, which may be taken concurrently; and a working knowledge of descriptive geometry.  
 The phenomena of fracture, folding, flow, and the graphic solution of problems with laboratory and field investigations.

## MINERALOGY

- 1A-1B. Determinative Laboratory. (2-2) Yr. (Credit A, B)  
 Tu Th, 1-4. Assistant Professor WEITMAN  
 Prerequisite: elementary chemistry.  
 Practice in determination of minerals (A) by their physical properties and (B) by the use of the blowpipe and chemical reagents.
2. Crystallography. (3) II. (Credit A, B) Assistant Professor WEITMAN  
 Lectures, M F 8; laboratory, W, 2-5.  
 Prerequisite: Mineralogy 1A.  
 Lectures on the morphology of crystals, with practice in the determination of the forms of crystals and in the methods of crystal projections.

## PALEONTOLOGY\*

101. Introduction to Invertebrate Paleontology. (2) II. (Credit A, B)  
 Tu Th, 1-4. Dr. CRICKMAY  
 Prerequisite: Geology 1A, 1B, and Paleontology 1 (see Biology).  
 Designed to stress the biological side of invertebrate paleontology and to give a general knowledge of the more important Tertiary markers of the Pacific Coast.
- 102A. Invertebrate Paleontology. (4) I. (Credit A, B) Dr. CRICKMAY  
 Lectures, Tu Th, 11; laboratory, six hours.  
 Prerequisite: Geology 1A, 1B, Paleontology 1, and Zoology 1A or Paleontology 101.  
 Designed to stress the advanced invertebrate groups, with emphasis upon the hard parts.
- 102B. Invertebrate Paleontology. (4) II. (Credit A, B) Dr. CRICKMAY  
 Lecture, Th, 9; laboratory, nine hours.  
 Prerequisite: Paleontology 102A.  
 An advanced course in historical geology, including lectures, laboratory and field work, with emphasis upon the study of the fossil invertebrate faunas of the Pacific Coast.

\* Courses in Vertebrate Paleontology may be found in the announcement of the Department of Biology (p. 88).



## GERMAN

WILLIAM DIAMOND, Ph.D., Assistant Professor of German.

FRANK HERMAN REINSCH, Ph.D., Assistant Professor of German (Chairman).

BERNHARD ALEXANDER UHLENDORF, Ph.D., Assistant Professor of German.

ALFRED KARL DOLCH, Ph.D., Instructor in German.

*Preparation for the Major.*—Required: German A-B (10) and C-D (6) or their equivalents. Recommended: History 4A-4B, Philosophy 3A-3B, English 1A-1B.

*The Major.*—Twenty-four units in upper division courses, including one full year's course in composition and at least 6 units made up from senior courses 111A-111B, 118A-118B, and 119.

## LOWER DIVISION COURSES

The ordinary prerequisites for each of the lower division courses are listed under the description of these courses. Students who have had special advantages in preparation may, upon examination, be permitted a more advanced program; or, such students may be transferred to a more advanced course by recommendation of the instructor.

A. Elementary German. (5) Either half-year. (Credit A, B)

Assistant Professor REINSCH in charge

This course corresponds to the first two years of high school German. Students who pass in course A after having had one year of German in high school will receive two units of credit in addition to their matriculation credit.

B. Elementary German. (5) Either half-year. (Credit A, B)

Assistant Professor UHLENDORF in charge

Prerequisite: Course A or two years of high-school German or course A in summer session with grade A or B.

\*A3-B3. Elementary German. (3-3) Yr. (Credit A, B)

Assistant Professor REINSCH

This course is primarily for students looking towards work in the colleges of Chemistry and Engineering.

\* Not to be given, 1926-27.

## C-D. Intermediate German. (3-3) Yr. (Credit A, B)

Assistant Professor DIAMOND in charge  
Prerequisite: course B or three years of high school German or course B in summer session with grade A or B.

Selections from prose and poetry, ordinarily including one of Lessing's and one of Schiller's dramas; grammar, composition and conversation. This course is conducted in German and furnishes the regular preparation for the upper division courses.

## CD. Intermediate German. (5) II (Credit A, B)

Assistant Professor DIAMOND in charge  
Prerequisite: course B or three years of high school German or course B in summer session with grade A or B.

## UPPER DIVISION COURSES

The prerequisite for all upper division courses is course C-D (or CD) or four years of German in high school. In cases of special merit admission may be granted on three years of high school German.

## 104A-104B. Introduction to Modern German Literature. (3-3) Yr.

(Credit A, B) Assistant Professor REINSCH  
Selected works of Heinrich von Kleist, Grillparzer, Hebbel, Ludwig, Wildenbruch, Fulda, Hauptmann, Sudermann.

## 105A-105B. German Classics of the Eighteenth Century. (3-3) Yr.

(Credit A, B) Assistant Professor DIAMOND  
Selected works of Lessing, Goethe, Schiller.

## 106A-106B. Grammar, Composition, and Conversation. (2-2) Yr.

(Credit A, B) Dr. DOLCH

## 106C-106D. Grammar, Composition, and Conversation. (2-2) Yr.

(Credit A, B) Assistant Professor UHLENDORF

## 111A-111B. Novelists of the Nineteenth Century. (2-2) Yr. (Credit A, B)

Assistant Professor DIAMOND  
Prerequisite: course 104A-104B, 105A-105B, or 106A-106B.  
Selected novels of Hauff, Freytag, Spielhagen, Ludwig, Keller, Meyer, and others.

## 118A-118B. History of German Literature. (3-3) Yr. (Credit A, B)

Assistant Professor UHLENDORF  
Prerequisite: course 104A-104B or 105A-105B.  
First half-year: The Middle Ages. Second half-year: from the Reformation to the death of Goethe. Lectures and discussions; collateral reading.

## 119. Middle High German. (3) II. (Credit A, B)

Dr. DOLCH  
Prerequisite: course 104A-104B or 105A-105B, and 118A.  
Outlines of grammar. Selections from the Nibelungenlied, the Kudrun, and the Court Epics.

**HISTORY**

†FRANK J. KLINGBERG, Ph.D., Professor of History.

WALDEMAR WESTERGAARD, Ph.D., Professor of History.

JOHN CARL PARISH, Ph.D., Associate Professor of History.

JOSEPH B. LOCKEY, Ph.D., Associate Professor of History.

MELVA LATHAM, A.B., Assistant Professor of History.

LOUIS K. KOONTZ, Ph.D., Assistant Professor of History.

ROWLAND HILL HARVEY, Ph.D., Assistant Professor of History.

DAVID K. BJORK, Ph.D., Assistant Professor of History.

NELSON VANCE RUSSELL, Ph.D., Assistant Professor of History.

LUCY M. GAINES, M.A., Instructor in History.

\_\_\_\_\_, Instructor in History.

*Preparation for the Major.*—Required: History 4A-4B, or 5A-5B, or 8A-8B, and either Political Science 1A-1B, or Political Science 51A-51B, or Economics 1A-1B, or Geography 1 and 2, or Philosophy 3A-3B.

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

*The Major.*—Twenty-four units of upper division work in history. In certain cases 3 to 6 upper division units in either political science or economics approved by the department may be counted on the major.

The major must include a year course in European history (one of the following: 121A-121B, 141A-141B, 143A-143B, 153A-153B) and a year course in American history (one of the following: 162A-162B, 181A-181B).

At least one advanced course must follow a general course in the same field, chosen within one of the following sequences: History 121A-121B, or 141A-141B, or 143A-143B, or 153A-153B, followed by 144A-144B, or 155A-155B; 162A-162B, or 181A-181B, followed by 177A-177B. Only one advanced course need be taken.

*Recommended Courses in other Departments.*—The attention of history majors is called to Classics 112A-112B, Ancient Civilizations, and to French 140A-140B, French Civilization. Although not counted as a part of the history major, these courses are suggested as electives.

**LOWER DIVISION COURSES**

4A-4B. Social and Political History of Modern Europe. (3-3) Yr.

Beginning either half-year. (Credit A, B)

Professor WESTERGAARD, Assistant Professors KOONTZ, HARVEY,  
BJORK, Mrs. GAINES

M W F, 8, 10, 12, 2; Tu Th S, 8, 9, 10.

† Absent on leave first half-year.

- 5A-5B. History of England and Greater Britain. (3-3) Yr. (Credit A, B)  
Professor KLINGBERG, Assistant Professors HARVEY, RUSSELL  
M W F, 8, 9, 3; Tu Th S, 10, 11.
- 7A-7B. History of the United States. (3-3) Yr. (Credit A, B)  
Associate Professor PARISH, Assistant Professors KOONTZ, RUSSELL  
Tu Th S, 8; M W F, 9, 10.  
History 7A-7B may be taken as an elective but does not fulfill the  
history requirement for the junior certificate.
- 8A-8B. History of the Americas. (3-3) Yr. (Credit A, B)  
M W F, 11, 12, 4; Tu Th S, 9, 11.  
Associate Professor LOCKEY, —
11. Social Studies in the Kindergarten-Primary Grades. (2) Either half-  
year. (Credit B) Tu Th, 10, 8. Assistant Professor LATHAM.  
Prerequisite: Psychology 1A.  
Treats of sources of material, curricula now in use, and projects.
- \*38. Contemporary History.. (1) II. (Credit B) Mrs. GAINES
39. Pacific Coast History. (2) Either half-year. (Credit A, B)  
Tu Th, 12, 1. Mrs. GAINES
76. Industrial History of the United States. (3) Either half-year.  
(Credit A, B) M W F, 2; M W, 4-5:30. Assistant Professor LATHAM
77. Social Sciences for Junior High Schools. (2) II. (Credit B)  
Assistant Professor LATHAM

## UPPER DIVISION COURSES

*Prerequisite:* (a) History 4A-4B or History 5A-5B, and History 7A-7B or History 8A-8B or one year of American history in the high school; or (b) History 7A-7B or History 8A-8B and one year of European history in the high school; or (c) one year of European history and one year of American history in the high school.

*General Requirement:* Term papers will be required each half-year of all students in senior history courses (144, 155, 177).

- 121A-121B. The Middle Ages. (3-3) Yr. (Credit A, B)  
M W F, 8. Assistant Professor BJORK
- \*141A-141B. Recent History of Central Europe: 1760-1920. (3-3) Yr.  
(Credit A, B) Professor WESTERGAARD  
History 141 and 143 are given in alternate years.

\* Not to be given, 1926-27.

- 143A-143B. France since 1660. (3-3) Yr. (Credit A, B)  
 Tu Th S, 10. Professor WESTERGAARD  
 A general survey, with special emphasis on political and diplomatic history.
- 144A-144B. History of Northern and Eastern Europe. (2-2) Yr.  
 (Credit A, B) M, 2, 3. Professor WESTERGAARD  
 Prerequisite: German or French or Latin or one of the Scandinavian languages, and two years of college history.  
 (A) Rise and decline of the Swedish Baltic empire and the rise of modern Russia.  
 (B) The Viking Age, Hanseatic League, the struggle for the control of the Baltic.
- 153A-153B. Social and Political History of Modern England: 1603-1926.  
 (3-3) Yr. (Credit A, B)  
 M W F, 11. Professor KLINGBERG, Assistant Professor HARVEY
- 155A-155B. History of the British Empire. (2-2) Yr. (Credit A, B)  
 W, 4, 5. Professor KLINGBERG, Assistant Professor RUSSELL  
 Prerequisite: two years of college history, including History 4 or 5 and one upper division course in history.
- 162A-162B. History of Hispanic America from 1808 to the Present.  
 (3-3) Yr. (Credit A, B) M W F, 2. Associate Professor LOCKEY
- \*164A-164B. History of Mexico and the Caribbean Area. (2-2) Yr.  
 (Credit A, B) Associate Professor LOCKEY  
 Prerequisite: senior standing and two years of college history, including History 8 or 162.
- \*171A-171B. History of the United States. (3-3) Yr. (Credit A, B)  
 Associate Professor PARISH  
 A general course dealing with the English colonies and the political history of the United States. This course satisfies the requirement for instruction in American Institutions.
- 177A-177B. The United States since 1860. (2-2) Yr. (Credit A, B)  
 M F, 12. Associate Professor PARISH  
 Prerequisite: two years of college history, including History 7, 8, 162, or 181.  
 A study of conditions and events in the United States during the period of the Civil War and Reconstruction, and of the development of the nation since 1876.
- 181A-181B. History of the Westward Movement. (3-3) Yr.  
 (Credit A, B) M W F, 10. Associate Professor PARISH  
 A study of expansion in the United States from the Atlantic to the Pacific.

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\* Not to be given, 1926-27.

## HOME ECONOMICS

HELEN B. THOMPSON, Ph.D., Professor of Home Economics.

———, Assistant Professor of Home Economics.

BERNICE ALLEN, A.M., Associate in Home Economics.

ORABEL CHILTON, B.S., Associate in Home Economics.

MAUD D. EVANS, Ed.B., Associate in Home Economics.

MARGARET C. JONES, M.A., Associate in Home Economics and Supervisor of Classes for the Training of Home Economics Teachers (Los Angeles).

PAULINE F. LYNCH, B.S., Associate in Home Economics.

FLORENCE A. WILSON, A.B., B.S., Associate in Home Economics.

*Requirements for the Secondary Special Teaching Credential in Home Making.*—Completion of all requirements for the degree of Bachelor of Education\* listed on pages 75-76, including the following specified courses:

(a) Education 148, 170, 180; Psychology 110 or 112; Teaching, 10 units; elective courses in Education to total 24 units.

(b) Home Economics 1A, 1B, 11A, 11B, 120, 128A, 147A, 147B, 160A, 160B, 198; elective Home Economics, 5 units.

(c) Art 2A, 13, 16A, 16B, 103, 156A.

(d) Chemistry 2A, 2B, 10; Physiology 1.

*Vocational Home Economics.*—A two-year vocational curriculum in Home Economics is maintained under the provisions of the Smith-Hughes Act. This curriculum leads to recommendation for the secondary special teaching credential in vocational home economics. It is open to mature students who are high school graduates and who have had practical experience in the administration of a home. All applicants must be approved by the Department of Home Economics.

*Departmental Sequences.*—For students pursuing Teachers College curricula other than Home Economics it is suggested that courses be chosen from the following groups.

I. Home Economics 1A (2), 66 (2), 175 (3), 179 (3).

II. Home Economics 160A (3), 160B (3), 180 (3).

III. Home Economics 31 (4), 120 (3), 125 (3), 128A-128B (2).

*Laboratory Fees.*—The fee required for courses 1A, 1B, 2, 175, 179 is \$1; for course 66 is \$1.50; for courses 11A, 11B, 31, 33, 120, 125, 159, 198 is \$2.75.

\* A major in Home Economics in the College of Letters and Science is not offered at the Southern Branch of the University. Students wishing to satisfy the requirements for a major in Household Art or Household Science are referred to the Announcement of Courses in the Departments at Berkeley.

- 1A. Clothing (Household Art 1A). (2) Either half-year. (Credit A, B)  
 Prerequisite: Art 2A. Miss EVANS, Miss WILSON  
 The study of kinds and qualities of materials for different uses; typical forms of clothing; artistic appreciation, standards and hygienic characteristics of dress.
- 1B. Clothing Economics (Household Art 1B). (3) Either half-year.  
 (Credit A, B) Miss LYNCH, Miss WILSON  
 Prerequisite: Economics 1A.  
 Clothing industries and clothing standards in relation to the economic and social life of the community; quantity and cost budgets for individuals and for family groups.
- 11A. Elementary Food (Household Science 1A). (3) Either half-year.  
 (Credit A, B) Miss ALLEN, Miss JENKINS  
 Prerequisite: Chemistry 2A.  
 The production, transportation, and marketing of food materials; the principles involved in food preparation and preservation; compilation of recipes; practice in judging food preparations.
- 11B. Food Economics (Household Science 1B). (3) Either half-year.  
 (Credit A, B) Miss ALLEN, Miss JENKINS  
 Prerequisite: Chemistry 10.  
 The classification, occurrence, and general properties of food stuffs; the legal and sanitary aspects of food products handled in commerce; food values in relation to cost; the practical problems involved in the selection and service of food in the home and in school lunch rooms and cafeterias.
120. Dietetics. (3) Either half-year. (Credit A, B)  
 W, 9; M F, 9, 10, 11. Professor THOMPSON, Miss CHILTON  
 Prerequisite: Chemistry 8A or 10, Home Economics 128A.  
 Daily food requirements as indicated by the experimental studies that have established the quantitative basis in dietetics; calculations of standard portions and combinations of foods; computation and scoring of dietaries with special reference to the nutritive requirements for growth in infancy and childhood and to varying conditions in both normal and abnormal metabolism in the adult. Methods for field work and nutrition clinics.
125. Experimental Cookery. (3) II. (Credit B). Miss ALLEN  
 Prerequisite: senior standing.  
 Quantitative methods in food preparation under controlled conditions.
- 128A-128B. Nutrition. (2-2) Yr. (Credit A, B) Professor THOMPSON  
 Tu Th, 1.  
 Prerequisite: Home Economics 11B, Physiology 1; Chemistry 107 recommended.  
 Discussions of metabolism studies and of feeding experiments for testing the biological efficiency of different types of food materials. Attention is given to recent literature bearing upon problems in dietetics, upon growth, and upon normal and subnormal nutrition.

- 147A. Development of Home Economics Education. (3) Either half-year.  
 (Credit B) Tu Th, 8, 11. Professor THOMPSON  
 Prerequisite: Psychology 1A, and ten or more units in home economics.  
 The development of home economics as an educational movement; organization of curricula and present status of courses in different types of schools.
- 147B. Principles of Home Economics Teaching. (3) Either half-year.  
 (Credit B) Tu Th, 9. Miss EVANS  
 Prerequisite: Psychology 1A, and twelve or more units of home economics credit.  
 Study of typical courses and their presentation; critical review of texts and references for elementary and secondary schools.
159. Food Problems. (3) I. (Credit B) Miss ALLEN, Miss CHILTON  
 Prerequisite: senior standing.  
 Special problems in food with a review of the literature of the subject.
- 160A-160B. Household Administration. (3-3) Yr. (Credit B)  
 M W F, 9. Miss JENKINS, Miss LYNCH  
 Prerequisite: Economics 1A, junior standing.  
 Economic organization and administration of the activities of the home; household budgets and accounts; standards of living; household sanitation.
175. Advanced Study of Costume. (3) II. (Credit B) Miss WILSON  
 Prerequisite Home Economics 1B.  
 Practice in the development of designs for individuals and for use in historical plays and pageants.
179. Clothing Problems. (3) I. (Credit B) Miss WILSON  
 Prerequisite: senior standing.  
 Special problems in clothing with review of the literature.
180. Problems in Household Economics. (3) II. (Credit B)  
 Prerequisite: senior standing. Miss LYNCH  
 Library and field work in investigation of an assigned problem in housing, household equipment, family expenditures, standards of living or of community conditions and activities related to the home.
198. Textiles. (2) I. (Credit B) M F, 10-12. Miss WILSON  
 Prerequisite: Economics 1A-1B, Chemistry 10, Art 2A.  
 The economic development of the textile industry; history of weaves and patterns; chemical, physical, and microscopic examination of textile fibers, yarns and fabrics; bleaching and dyeing; stain removal; laundry processes as they affect color, texture, shrinkage, and durability.



## VOCATIONAL COURSES†

2. The Study of Dress. (3) II. (Credit B) Miss LYNCH  
Prerequisite: Home Economics 1A.  
A study of the artistic qualities of dress design; design, pattern, color, and weave of fabrics; hygienic and economical standards in the selection and care of clothing.
31. Food Composition. (4) Either half-year. (Credit B) Miss JENKINS  
Prerequisite: Chemistry 2A.  
Food principles, selection, economic uses, nutritive values as affected by methods of preparation.
32. Elements of Nutrition. (2) Either half-year. (Credit B) Professor THOMPSON  
Prerequisite: six units of natural science.  
The principles of nutrition and their application in normal and sub-normal conditions of growth and physical development.
33. Elementary Dietetics. (3) II. (Credit B) Miss CHILTON  
Prerequisite: Chemistry 10, Home Economics 31, 32.  
Principles of diet applied to individuals, the family, and other groups.
- 43A-43B. Household Administration. (2-2) Yr. (Credit B) Miss JONES, Miss JENKINS  
Prerequisite: Economics 1A, Psychology 1A.  
Household equipment; efficient and sanitary methods of work; business principles and administrative methods applicable to the household; care and training of children.
46. Home Economics Education. (3) I. (Credit B) Miss JONES  
Prerequisite: Psychology 1A.  
The early development and present status of home economics education, methods of teaching, criticism of courses.
66. Millinery. (2) Either half-year. (Credit B) Miss LYNCH  
Tu Th, 1-3.  
Prerequisite: Art 2A and Home Economics 1A or equivalent.  
Study of trade methods and markets for millinery supplies; execution of designs illustrating problems involved in class demonstration in laboratory teaching, and in the direction of club projects.

† These courses are given primarily for students in the vocational curriculum but are open to students in other curricula in the Teachers College.

### MATHEMATICS

- EARLE R. HEDRICK, Ph.D., Professor of Mathematics.  
 GEORGE E. F. SHERWOOD, Ph.D., Professor of Mathematics.  
 GLENN JAMES, Ph.D., Associate Professor of Mathematics.  
 HARRY M. SHOWMAN, E.M., M.A., Assistant Professor of Mathematics.  
 HARRIET E. GLAZIER, M.A., Assistant Professor of Mathematics.  
 \*MYRTIE COLLIER, B.S., Assistant Professor of Mathematics.  
 GUY H. HUNT, C.E., Assistant Professor of Applied Mathematics.  
 PAUL H. DAUS, Ph.D., Assistant Professor of Mathematics.  
 EUPHEMIA R. WORTHINGTON, Ph.D., Assistant Professor of Mathematics.  
 FREDERICK C. LEONARD, Ph.D., Instructor in Astronomy.  
 WENDELL E. MASON, M.S., Instructor in Applied Mathematics.  
 CLIFFORD BELL, Ph.D., Instructor in Mathematics.  
 MIGUEL A. BASOCO, M.A., Associate in Mathematics.

*Preparation for the Major.*—Required: Mathematics C (or the equivalent), 5, 6, 8, and 9A-9B with an average of grade C. Courses 5, 9A, 9B may be replaced, by permission, by the equivalent courses 3A, 3B, 4A. Recommended: physics, astronomy, and a reading knowledge of French and German.

*The Major.*—Mathematics 111, 112, and 119, together with fifteen additional upper division units, must be included in every mathematics major. The student must maintain an average grade of C in upper division courses in mathematics.

Students who are preparing to teach mathematics in high school will probably wish to elect courses 101, 102, 104.

*Pre-Commerce.*—Freshmen in this curriculum are required to take courses 2 and 8, except that students who have completed two years of high school algebra and also plane trigonometry may be excused from course 8.

*Pre-Engineering and Pre-Chemistry.*—The Southern Branch offers the first two years in preparation for admission to the junior year of the Colleges of Engineering (Mechanics, Civil Engineering, Mining) in Berkeley. Students intending to pursue their studies in the engineering colleges at Berkeley should consult the departmental adviser before making out their programs.

The minimum requirements for admission to the courses 3A-3B, 4A-4B or to 3A, 3C-4B are one and one-half years of algebra, plane geometry, and plane trigonometry. Prospective engineering students are urged, however, to add another half-year of algebra and solid geometry to this minimum preparation.

*Fees.*—The fees required for Civil Engineering 1FA-1FB are \$5 per half-year; for Civil Engineering 3 the fee is \$25.

\* Absent on leave, 1926-27.

LOWER DIVISION COURSES

Students who have not had trigonometry in the high school must elect course C before they will be admitted to any further work except course 2.

- C. Trigonometry. (2) Either half-year. (Credit A, B)  
 Tu Th, 9. Assistant Professor WORTHINGTON  
 Prerequisite: elementary algebra and geometry.
- F. Spherical Trigonometry. (1) Either half-year. (Credit A, B)  
 W, 10. Dr. BELL  
 Prerequisite: plane trigonometry and solid geometry.
2. Mathematics of Finance. (3) Either half-year. (Credit A, B)  
 M W F, 11. Assistant Professor DAUS  
 Prerequisite: Mathematics 8.
- 3A. Plane Analytic Geometry. (3) Either half-year. (Credit A, B)  
 M W F, 8. Assistant Professor GLAZIER  
 Prerequisite: Mathematics C and 8 or the equivalents.
- 3B. Differential Calculus. (3) II. (Credit A, B)  
 M W F, 8. Assistant Professor HUNT  
 Prerequisite: Mathematics 3A or its equivalent.
- 3C. Differential and Integral Calculus. (6) I. (Credit A, B)  
 M Tu W Th F S, 10. Assistant Professor SHOWMAN  
 Prerequisite: Mathematics 3A.  
 For students beginning calculus in the second year.  
 This course is equivalent to Mathematics 3B and 4A (or to 9A and 9B, by permission). Engineers must take Mathematics 4B also.
- 4A-4B. Solid Analytic Geometry and Integral Calculus. (3-3) Yr.  
 (Credit A, B) M W F, 12. Professor HEDRICK  
 Prerequisite: solid geometry and Mathematics 3B.
5. Analytic Geometry. (3) Either half-year. (Credit A, B)  
 M W F, 8. Professor SHERWOOD  
 Prerequisite: Mathematics C or the equivalent.
6. Introduction to Projective Geometry. (3) II. (Credit A, B)  
 Tu Th S, 10. Associate Professor JAMES  
 Prerequisite: consent of instructor.
8. College Algebra. (3) Either half-year. (Credit A, B)  
 M Tu W Th F, 9, 11, 12. Professor HEDRICK  
 Prerequisite: one year, one and one-half years, or two years of high school algebra.  
 Within a few weeks the class meetings will be reduced to three a week for all students except the few who require extra review and drill.

- 9A-9B. Differential and Integral Calculus. (3-3) Yr. (Credit A, B)  
Assistant Professor WORTHINGTON  
Prerequisite: Mathematics 5.
19. Foundations of Arithmetic. (2) Either half-year. (Credit A, B)  
Tu Th 8, 10, 11. Assistant Professor GLAZIER  
Within a few weeks the class meetings will be reduced to two a week for all students except the few who require extra review and drill.
- \*74. The Teaching of Junior High School Mathematics. (3) I.  
(Credit B). M W F, 3. Assistant Professor COLLIER

## UPPER DIVISION COURSES

Students may not elect upper division courses unless they have taken or are taking Mathematics 9A-9B, or the equivalent.

101. Elementary Geometry for Advanced Students. (3) I. (Credit A, B)  
M W F, 8. Assistant Professor DAUS  
Prerequisite: courses 5 and 6.  
Selected topics in elementary geometry, with particular emphasis on recent developments.
102. Elementary Algebra for Advanced Students. (3) II. (Credit A, B)  
M W F, 2. Professor SHEERWOOD  
Prerequisite: courses 8 and 9.  
Selected topics in elementary algebra, with particular reference to modern points of view.
- 104A-104B. History of Mathematics. (2-2) Yr. (Credit A, B)  
Tu Th, 1. Assistant Professor GLAZIER  
A non-technical course open to students who have some knowledge of the fundamental ideas of analytic geometry and calculus.
109. Calculus: Third Course. (3) I. (Credit A, B) M W F, 9.  
Prerequisite: course 9. Assistant Professor WORTHINGTON
111. Theory of Algebraic Equations. (3) Either half-year. (Credit A, B)  
Tu Th 8, 10. Associate Professor JAMES  
Prerequisite: courses 8 and 9.
112. Analytic Geometry of Space. (3) Either half-year. (Credit A, B)  
Tu Th 8, 9. Professor SHEERWOOD  
Prerequisite: courses 5 and 6.

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\* Not to be given, 1926-27.

114. Advanced Geometry. (3) II. (Credit A, B) M W F, 10.  
Prerequisite: courses 5, 6, and 9. Assistant Professor DAUS  
Introduction to modern methods in geometry.
- \*115. Theory of Numbers. (3) II. (Credit A, B) M W F, 8.  
Assistant Professor DAUS
119. Differential Equations. (3) II. (Credit A, B) Tu Th S, 9.  
Prerequisite: course 109 or its equivalent. Professor HEDRICK
122. Advanced Calculus. (3) I. (Credit A, B) M W F, 9.  
Prerequisite: course 109. Professor HEDRICK
- \*124. Vector Analysis. (3) II. (Credit A, B) Tu Th, 10.  
Associate Professor JAMES  
Prerequisite: one year of college physics and calculus.
- 125A-125B. Analytic Mechanics. (3-3) Yr. (Credit A, B) M W F, 10.  
Assistant Professor SHOWMAN  
Prerequisite: course 109 or its equivalent.
190. The Teaching of Mathematics. (3) II. (Credit B). M W F, 10.  
Prerequisite: course 9 or its equivalent. Professor SHERWOOD  
A critical inquiry into present-day tendencies in the teaching of  
mathematics.

**CIVIL ENGINEERING†**

- 11A-11B. Plane Surveying Lectures. (2-2) Yr. (Credit A)  
Tu Th, 9, 10. Assistant Professors SHOWMAN, HUNT  
Prerequisite: trigonometry and geometric drawing.
- 1FA-1FB. Plane Surveying Field Practice. (1-1) Yr. (Credit A)  
M, W, or F, 2-5; Tu or Th, 1-4; S, 9-12. Mr. MASON  
This course may be taken only in conjunction with, or subsequent  
to Civil Engineering 11A-11B.
3. Summer Class in Plane Surveying. (3). (Credit A)  
Assistant Professor SHOWMAN  
Prerequisite: Civil Engineering 1FA-1FB.  
Four weeks of field work after the close of the school year.
8. Materials of Engineering Construction. (2) II. (Credit A)  
Tu Th, 10. Mr. MASON  
Prerequisite: sophomore standing.

\* Not to be given, 1926-27.

† First two years only.

**ASTRONOMY\*****LOWER DIVISION COURSES**

1. **Elementary Astronomy.** (3) Either half-year. (Credit A, B)  
 Sec. 1, M W F, 8; Sec. 2, M W F, 3. Dr. LEONARD  
 Prerequisite: elementary algebra and plane geometry.  
 An introductory, descriptive course in the general principles and facts of astronomy, presented as far as possible in non-technical language.
3. **Surveyor's Course in Practical Astronomy.** (1) II. (Credit A)  
 Th, 1-4. Dr. LEONARD  
 Prerequisite: Civil Engineering 1FA, and credit or registration in Civil Engineering 1FB.  
 A course intended primarily for engineers. The principles of spherical trigonometry and elementary practical astronomy adapted to the needs of students in the Colleges of Engineering. Computing.
5. **History of Astronomy.** (3) I. (Credit A, B) M W F, 11.  
 Prerequisite: Astronomy 1. Dr. LEONARD
11. **Modern Astronomy.** (3) II. (Credit A, B) M W F, 8.  
 Prerequisite: Astronomy 1. Dr. LEONARD  
 The stars and nebulae. Progress in astronomy through modern methods, especially spectroscopic and photographic.

**UPPER DIVISION COURSES**

- 103A-103B. **General Astronomy.** (3-3) Yr. (Credit A, B)  
 M W F, 2. Dr. LEONARD  
 Prerequisite: Mathematics 3A and Physics 2A-2B, 3A-3B, or their equivalent.  
 The general principles and facts of astronomy in all its branches developed and discussed in detail.
- †117. **Astrophysics.** (3) I. (Credit A, B) Dr. LEONARD  
 Tu Th, 1, and one laboratory period.  
 A general review of present-day problems in astrophysics, with particular reference to the application of the spectroscope to their solution. Open to upper division students whose major subject is mathematics, physics, or chemistry, and to others who have equivalent prerequisites.

\* A major in Astronomy in the College of Letters and Science is not offered in the Southern Branch of the University. Students wishing to satisfy the requirements for a major in Astronomy are referred to the Announcement of Courses in the Departments at Berkeley.

† Not to be given, 1926-27.

## MECHANIC ARTS

HAROLD WILLIAM MANSFIELD, Assistant Professor of Mechanic Arts and Director of Shops.

JOHN B. PHILLIPS, Associate in Mechanic Arts.

JAMES WILLARD MARSH, Associate in Mechanic Arts.

FOSS R. BROCKWAY, Associate in Mechanic Arts.

CHARLES H. PAXTON, B.S., Associate in Mechanic Arts.

ADRIAN B. KELLER, B.S. in E.E., Associate in Mechanic Arts.

*Requirements for the Secondary Special Teaching Credential in Mechanic Arts.*—Completion of all requirements for the degree of Bachelor of Education listed on pages 75-76, including the following specified courses:

(a) Education 148, 160, 166, 170, 180; Teaching, 10 units.

(b) Mechanic Arts 10A, 10B, 12, 40, 50, 51, 70, 75A, 75B, 100A, 100B, 150A, 150B, 151, 160A, 160B, 165, 180A, 180B, 190.

(c) Mathematics 8; Mechanical Engineering D; Physics 2A, 2B.

*Laboratory Fees.*—The fee required for Mechanical Engineering 8A, 8B, 9A, 9B, Mechanic Arts 10A, 10B, 11A, 11B, 12, 40, 45, 75A, 75B, 100A, 100B, 151, 160A, 160B, 165, 180A, 180B is \$3.

A two-year curriculum leading to the secondary special teaching credential in Vocational Arts is maintained under the provisions of the Smith-Hughes Act. This course is open to experienced journeyman workmen who have had two years of schooling beyond the eighth grade. All applications must be approved by the Director of the Division of Vocational Education.

## MECHANICAL ENGINEERING\*

Not more than 12 units of the courses in Mechanical Engineering may be counted toward graduation from the College of Letters and Science.

D. Engineering Drawing. (2) Either half-year. (Credit A, B)  
Tu Th, 9, 10. Assistant Professor MANSFIELD, Mr. PAXTON

1. Elements of Heat Power Engineering. (3) (Credit A, B)  
M W F, 11. Mr. PAXTON

2. Descriptive Geometry. (3) Either half-year. (Credit A, B)  
Mr. PAXTON  
Lectures, Tu, 11. Drafting: Sec. 1, Tu Th, 1-4; Sec. 2, W, 2-5,  
8, 9-12.

6. Machine Drawing and Design. (5) Either half-year. (Credit A)  
Lecture, M W F, 10. Drafting, M F, 2-5. Mr. PAXTON

\* The Southern Branch offers the first two years in preparation for admission to the junior year of the College of Mechanics in the University at Berkeley. Students intending to pursue their studies in this College should present their programs for approval to the pre-engineering advisor in the Department of Mathematics.

- 8A-8B. Shop Work. (2-2) Yr. (Credit A, B) Mr. KELLER  
Lecture, Tu, 12, and five hours laboratory.  
Pattern making and foundry practice.
- 9A-9B. Shop Work. (2-2) Yr., (Credit A, B) Mr. PHILLIPS  
Lecture, Th, 12, and five hours laboratory.  
Metal work in metal.
- S18. Summer Shop Work. (3). (Credit A, B)  
(144 working hours required.) Assistant Professor MANSFIELD  
Shop work in pattern making and foundry practice or in machine shop practice.

**MECHANIC ARTS**

- 10A-10B. Shop Work. (2-2) Yr. (Credit B) Mr. KELLER  
Bench work in wood. Fundamental tool and joinery operations; care and operation of power machinery.
- 11A-11B. Shop Work. (2-2) Yr. (Credit B) Mr. KELLER  
Elementary woodwork, painting, finishing, and decorating.
12. Shop Work. (2) II. (Credit B) Mr. KELLER  
Furniture construction and repair, upholstering, finishing, and re-finishing. Study of period furniture. Construction, methods of laying out various parts; use of jigs. Methods of preparing and applying paints, stains, and varnishes in finishing and refinishing.
- 20A-20B. Printing. (3-3) Yr. (Credit B) Mr. BROCKWAY  
A course for teachers dealing with the principles, maintenance, and operation of the school print shop. Problems and practice in job printing and newspaper make-up will be given. Type and equipment will be studied.
40. Shop Work. (1). (Credit B) Mr. PHILLIPS  
Forging and oxy-acetylene welding.
45. Shop Work. (2) I. (Credit B) Mr. MARSH  
Storage battery construction and repair; lead burning; battery charging, treatment, and care.
50. Machine Drawing. (2) I. (Credit B) Assistant Professor MANSFIELD  
Machine elements and their application to problems in occupations and home mechanics.
51. Architectural Drawing. (2) II. (Credit B) Assistant Professor MANSFIELD  
Lettering, details of typical frame and masonry construction, plans, elevations, sections and specifications.



70. The Gasoline Automobile. (2) I. (Credit B) Mr. MARSH  
Unit construction; operation and upkeep of the car.
- 75A-75B. Shop Work. (2-2) Yr. (Credit B). Mr. PHILLIPS  
Machine shop practice.
- 100A-100B. Shop Work. (3-3) Yr. (Credit B) Mr. KELLER  
Building construction. Essential operations in framing building  
throughout. Finishing, including interior trim; built-in features.  
Fundamentals of mixing and applying various coats of paint.
- 150A-150B. Applied Electricity. (2-2) Yr. (Credit B) Mr. MARSH  
Electron theory, electric and magnetic circuits; direct current, in-  
ductance; capacity; alternating and oscillating currents; and principles  
of radio communication.
151. Shop Work. (2) II. (Credit B) Mr. MARSH, Mr. BROCKWAY  
Electrical bench work and radio construction.
- 160A-160B. Shop Work. (3-3). (Credit B) Mr. MARSH, Mr. BROCKWAY  
Automobile repair; general garage work.
165. Automotive Laboratory. (3) II. (Credit B) Mr. MARSH  
Engine design and testing; fuels and lubricants.
- 180A-180B. Occupations and Home Mechanics. (3-3) Yr. (Credit B)  
Assistant Professor MANSFIELD, Mr. MARSH  
Organization and methods of pre-vocational teaching with applica-  
tion to the general shop plan. Pipe fitting; sheet metal; bench metal;  
pumps; shoe repair.
190. Organization and Administration of Industrial Education. (2) II.  
(Credit B) Assistant Professor MANSFIELD

**MILITARY SCIENCE AND TACTICS**

**GUY G. PALMER**, Colonel U. S. Army, Retired, Professor of Military Science and Tactics.

**FREDERICK B. TERRELL**, Major, U. S. Army, Retired, Assistant Professor of Military Science and Tactics.

**CHARLES H. OWENS**, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

**CARTER COLLINS**, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

**HORACE K. HEATH**, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

**ROBERT L. CHRISTIAN**, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

A major in Military Science and Tactics in the College of Letters and Science is not offered in the Southern Branch of the University. In Berkeley, a combination major of Military Science and either (a) History and Political Science, or (b) Jurisprudence may be offered. Students wishing to satisfy the requirements for such a combination major are referred to the Announcement of Courses in the Departments at Berkeley.

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 textbooks for the use of the students belonging to such units. The University, being responsible for textbooks and uniforms furnished by the United States, requires the student to deposit with the Comptroller \$20 to cover the cost of the textbooks and uniform issued to them. The deposit to cover special uniforms furnished students in the advanced course is \$25. This deposit must be made before the student files his study-list. It is refunded at the close of the academic year or upon the student's withdrawal, provided the student then returns in good condition all the articles issued to him. An amount necessary to replace articles not returned by the student will be retained by the Comptroller.

Students who are otherwise eligible for enrollment in the Department of Military Science and Tactics but are physically disqualified are required to take Physical Education 2A-B-C-D.

The primary object of establishing units of the Reserve Officers Training Corps is to qualify students for appointment in the Officers' Reserve Corps of the United States Army. Students who complete the advanced course, and who participate in such summer camps as the Secretary of War may prescribe, are eligible upon graduation for appointment and commission by the President of the United States in the Officers' Reserve Corps, which is intended to furnish a great part of the commissioned personnel for the temporary forces which this nation will require in time of emergency.

The courses are divided into two groups, viz., the basic course and the advanced course.

**BASIC COURSE**

The basic course is 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 and enter the course prescribed for his year.

Students who have received training in a junior R. O. T. C. unit may be given advanced standing on the basis of two years junior R. O. T. C. for one year senior R. O. T. C. However, advanced standing will not excuse a student from the two years basic training required by the University unless he elects to take the advanced course, in which event junior R. O. T. C. credit to the extent of 1½ years senior R. O. T. C. credit may be given. Application for advanced standing must be made when registering and must be accompanied by a recommendation from the professor of military science and tactics at the school which the student attended.

**1A-1B. Basic Military Training. (1½-1½) Yr. (Credit A, B)**

Professor PALMER, Assistant Professors TERRELL, OWENS,  
COLLINS, HEATH, CHRISTIAN

†Field, M W, 8, 11, 1. Two hours of field instruction; one hour of class instruction.

Instruction in infantry drill, rifle marksmanship, military courtesy, military hygiene and first aid, physical training, and command and leadership.

**2A-2B. Basic Military Training. (1½-1½) Yr. (Credit A, B)**

Professor PALMER, Assistant Professors TERRELL, OWENS,  
COLLINS, HEATH, CHRISTIAN

†Field, M W, 8, 11, 1. Two hours of field instruction; one hour of class instruction.

Instruction in scouting and patrolling, musketry, interior guard duty, automatic rifle, and command and leadership.

**ADVANCED COURSE**

The advanced course is prescribed for such third-year and fourth-year students as have completed the basic course and elect to continue their military training.

Any member of the senior division of the Reserve Officers' Training Corps who has completed two academic years of service in that division, who has been selected for further military training by the Director of the Southern Branch and the professor of military science and tactics, and who executes the following written agreement, will be entitled, while not subsisted in kind, to a commutation of subsistence fixed by the Secretary of War in accordance with law (about \$120.00 per year).

† Each student must enroll for two hours of field instruction and one hour of class instruction each week.

In consideration of commutation of subsistence to be furnished in accordance with law, I hereby agree to complete the advanced course Infantry R. O. T. C. in this or any other institution where such course is given, to devote five hours per week during such period to military training prescribed and to pursue the courses of camp training during such period as prescribed by the Secretary of War.

Signature

The course of camp training is for six weeks during the summer vacation normally following the student's completion of the first year of the advanced course. The United States furnishes uniform, transportation and subsistence and pays students at the rate prescribed for the seventh enlisted grade of the regular army. Students who attend receive one-half unit of credit for each week of the duration of the camp.

Cadet officers and, so far as practicable, sergeants of the unit, will be appointed from members of the junior and senior classes.

103A. Advanced Infantry Training. (3) Either half-year. (Credit A, B)

†Tu Th, 8, 11, 1. Assistant Professors OWENS, CHRISTIAN

Instruction and practice in the duties of officers in connection with the basic course; instruction in military sketching, military field engineering, military law, and rules of land warfare.

103B. Advanced Infantry Training. (3) Either half-year. (Credit A, B)

†Tu Th, 8, 11. Assistant Professor HEATH

Instruction and practice in the duties of officers in connection with the basic course; instruction in machine gun theory of fire, direct and indirect fire, barrage firing, and tactical handling in the offense and defense.

104A. Advanced Infantry Training. (3) Either half-year. (Credit A, B)

†Tu Th, 8, 11, 1. Assistant Professor COLLINS

Instruction and practice in the duties of officers in connection with the basic course; instruction in infantry weapons (37 mm.-3 in. trench mortar), company administration, military history, and national defense act.

104B. Advanced Infantry Training. (3) Either half-year. (Credit A, B)

Tu Th, 11. Assistant Professor TERRELL

Instruction and practice in the duties of officers in connection with the basic course; instruction in combat principles of the rifle squad, section, platoon, and company, the service company and the solving of practical and map problems.

The basic R. O. T. C. camp may be attended by students who are members of the basic course at the completion of either the first or the second year. Attendance is voluntary. Students who satisfactorily complete a course in a Reserve Officers' Training Corps or a military training summer camp conducted by the United States Government may receive credit toward graduation at the rate of one-half (½) unit per week for each course so completed. But it is provided: (a) that no credit thus earned in or after 1925 shall excuse a student from the courses in military science and tactics required of all male undergraduates during their freshman and sophomore years, and (b) that the total credit thus earned by any student shall not exceed six (6) units.

† Each student must enroll for one hour of basic course class instruction.

## MUSIC

SQUIRE COOP, Lecturer in Music.

FRANCES A. WRIGHT, Associate Professor of Music.

WILLIAM J. KRAFT, Mus.Bac., F.A.G.O., Lecturer in Music.

A. J. GANTVOORT, Lecturer in Music.

—————, Instructor in Music.

BERTHA C. VAUGHN, Teacher of Voice.

*Requirements for the Secondary Special Teaching Credential in Music.*—  
Completion of all requirements for the degree of Bachelor of Education\*  
listed on pages 75-76, including the following specified courses:

(a) Education 148, 170, 180; Psychology 110 or 112; Teaching 10  
units; elective courses in Education to total 24 units.

(b) Music 1A-1B, 3A-3B, 4A-3B, 7A-7B, 8A-8B, 101A-101B, 105A-105B,  
109, 111A-111B, 112A-112B, 114, 135, 155A-155B, 184.

1A-1B. Solfeggio. (3-3) Yr. (Credit A, B) Mr. KRAFT, Mr. GANTVOORT  
Theory and practice of reading and writing music.

3A-3B. History of Music. (2-2) Yr. (Credit A, B) Mr. COOP  
Lectures with illustrative programs. A survey of the history of  
music with reference to those events which effect our present musical  
interests.

4A-4B. Elementary Harmony. (3-3) Yr. (Credit A, B) Mr. GANTVOORT  
Prerequisite: course 1A-1B.

7A-7B. Voice. (1-1) Yr. (Credit B) Mrs. VAUGHN

8A-8B. Voice. (1-1) Yr. (Credit B) Mrs. VAUGHN

9A-9B. Choral Practice. (1-1) Yr. (Credit A, B) Mr. COOP  
Open only to vocalists of ability.

10A-10B. Orchestral Practice. (2-2) Yr. (Credit A, B) Mr. COOP

101A-101B. Counterpoint. (2-2) Yr. (Credit A, B) Mr. KRAFT  
Prerequisite: Music 155A-155B.

Practice in one of the technical processes of music writing. The  
association of tone lines independent melodically.

\* A major in Music is not offered in the College of Letters and Science in the  
Southern Branch of the University. Students wishing to satisfy the requirements for  
a major in Music are referred to the Announcement of Courses in the Departments at  
Berkeley.

- 105A-105B. Composition. (2-2) Yr. (Credit B) Mr. KRAFT  
Prerequisite: Music 155A-155B.  
Vocal and instrumental composition in the smaller forms.
109. Conducting (2) II. (Credit B) Mr. KRAFT  
Prerequisite: Music 4A-4B, 5A-5B. (Music 5A-5B unless previously taken may be required for supplementary study.)  
Chorus organization and training; the technique of the baton.
- 111A-111B. Music Appreciation. (2-2) Yr. (Credit A, B) Mr. COOP  
Prerequisite: junior standing.  
Introduction to the critique of music.
114. Instrumentation. (2) I. (Credit B) Mr. KRAFT  
Prerequisite: Music 155A-155B. Orchestra, theory of the instruments.
- 155A-155B. Advanced Harmony. (3-3) Yr. (Credit A, B)  
Prerequisite: Music 4A-4B. Mr. GANTVOORT

*Music Education .*

60. Music in the Elementary School. (2) Either half-year. (Credit B)  
Associate Professor WRIGHT  
Not open for credit to students taking Music 61.
61. Music in the Kindergarten and Primary School. (3) Either half-year.  
(Credit B) Associate Professor WRIGHT  
Not open for credit to students taking Music 60.
- 112A-112B. Music Education. (3-3). (Credit B)  
Associate Professor WRIGHT  
Prerequisite: Music 4A-4B, 7A-7B, 135.  
Organization and administration of public school music.
135. Music Supervision—Elementary Grades. (1) II. (Credit B)  
Associate Professor WRIGHT  
Technique of constructive criticism for supervisors of elementary school music.
184. Music Supervision—Secondary Grades. (2) I.  
(Credit B) Associate Professor WRIGHT  
Technique of constructive criticism for supervisors of secondary school music.  
Prerequisite to practice teaching.

**PHILOSOPHY**

**CHARLES H. RIEBER, Ph.D.**, Professor of Philosophy and Dean of the College of Letters and Science.

**DONALD S. MACKAY, Ph.D.**, Assistant Professor of Philosophy.

**HOWARD D. ROELOFS, Ph.D.**, Assistant Professor of Philosophy.

**CLIFFORD L. BARRETT, M.A.**, Instructor in Philosophy.

**KATE GORDON, Ph.D.**, Associate Professor of Psychology.

*Preparation for the Major.*—Courses 1A-1B, 3A-3B.

*The Major.*—The upper division program: (a) Each student offering a major in philosophy shall choose from upper division courses in the department at least 18 units, which shall include two year-courses.

(b) The remainder of the 24 units required for the major may be chosen by the student, with the approval of a departmental adviser, from the following courses in departments related to the major:

English 121A-121B, 125G-125H; French 109A-109B; German 105A-105B; Classics, 112A, 112B; Mathematics 109; Physics 111; Political Science 112, 113.

**LOWER DIVISION COURSES**

**1A-1B. Logic.** (3-3) Beginning either half-year. (Credit A, B)

M W F, 11, 2. Professor **RIEBER**, Assistant Professor **ROELOFS**

A. Deductive logic. Division, definition, the forms and transformations of judgments, the syllogism.

B. Inductive logic. The presuppositions, methods and limits of inductive sciences. Prerequisite: course 1A.

**3A-3B. History of Philosophy.** (3-3) Beginning either half-year.

(Credit A, B) Assistant Professor **MACKAY**, Mr. **BARRETT**

A. The development of ideas from Thales to Plotinus.

B. The problems and systems of philosophy from the rise of Christendom to the nineteenth century. Prerequisite: course 3A.

**UPPER DIVISION COURSES**

Six units of work in the lower division courses, 1A-1B, 3A-3B, are prerequisite to all upper division courses.

**103. Continental Philosophy of the Nineteenth Century (3) I.**

(Credit A, B)

Mr. **BARRETT**

A survey of the chief currents of philosophical thought in Europe with special reference to Fichte, Schelling, Hegel, Schopenhauer, the French school of Positivism, and Bergson.

## 104A-104B. Ethics. (3-3) Yr. (Credit A, B)

Assistant Professor MACKAY

First half-year: A study of the natural basis of conduct in the light of ethical theory, and an analysis of different types of life and character in selected biographies. Second half-year: A discussion of the development, meaning and conflict of moral standards as revealed in present industrial and political conditions. Recommended: Psychology 1A.

## 105. Kant. (3) Either half-year. (Credit A, B)

Assistant Professor ROELOFS, Mr. BARNETT

The critical philosophy of Kant. Historical aspects of Kant's position; the significance of his method for problems of contemporary thought.

## 112. Philosophy of Religion. (3) I. (Credit A, B) Professor RIEBER

A study of the nature and methods of religious knowledge. The problem of how religious truth may be known; its field and extent. The three chief avenues to religious truth: Rationalism, Empiricism, and Mysticism.

## 116. Plato. (3) Either half-year. (Credit A, B)

Recommended: Greek 101. Assistant Professors MACKAY, ROELOFS

The principal dialogues of Plato will be read in English with interpretations of their dramatic form and their philosophical import, especially in relation to the Socratic teachings and the subsequent thought of Aristotle.

## 118. Descartes and Leibniz. (3) I. (Credit A, B)

Mr. BARRETT

## 119. Hume. (2) II. (Credit A, B)

Assistant Professor MACKAY

A study of Hume's logical and moral theories as part of the development of British empiricism from Francis Bacon to Herbert Spencer.

## 121A-121B. Social and Political Philosophy. (2-2) Yr. (Credit A, B)

Assistant Professor ROELOFS

Typical theories of the state and definitions of social ideals considered in their historical development and contemporary significance.

## 136A-136B. Esthetics. (3-3) Yr. (Credit A, B)

Associate Professor GORDON

First half-year: Discussion of the standards of taste (including experiments in group judgments), the individual and social function of art, emotion, imagination. Study of certain principles of beauty in visual arts.

Second half-year: Discussion of concepts of "soul," "self" and "character," with special reference to their meaning in art. Also a study of some of the principles of esthetic value in the musical and literary arts.

## 146. Literary Expressions of Philosophical Problems. (3) II.

(Credit A, B)

Professor RIEBER, Mr. BARRETT

Comparison between philosophical and literary expressions of typical problems of philosophy. A discussion of idealism, realism, mysticism, and other human attitudes as expressed in literature.



## PHYSICAL EDUCATION FOR MEN

WILLIAM H. SPAULDING, A.B., Director of Physical Education for Men.

FREDERICK W. COZENS, M.A., Assistant Professor and Assistant Director of Physical Education for Men.

PAUL FRAMPTON, Ed.B., Assistant Supervisor of Physical Education for Men.

FRED H. OSTER, Associate in Physical Education for Men.

GALE B. NEEDHAM, Associate in Physical Education for Men.

HARRY TROTTER, Assistant in Physical Education for Men.

PIERCE H. WORKS, A.B., Assistant in Physical Education for Men.

WILLIAM C. ACKERMAN, Ed.B., Assistant in Physical Education for Men.

CECIL E. HOLLINGSWORTH, Ed.B., Assistant in Physical Education for Men.

WILLIAM J. NORRIS, M.D., Physician for Men.

E. B. WARE, M.D., Assistant Physician for Men.

*Requirements for the Secondary Special Teaching Credential in Physical Education.*—Completion of all requirements for the degree of Bachelor of Education\* as listed on pages 75-76, including the following specified courses:

(a) Education 148, 170, 180; Psychology 110 or 112; Teaching, 10 units; elective courses in Education to total 24 units.

(b) Physical Education 29A-B-C-D, 130A-B-C-D, †5, †121A-†121B, 131, †149, 155A-155B, 156A-156B, †180, †182A-182B, †190, †192A-192B.

(c) Chemistry 2A-2B; Physiology 1; Biology 1; Zoology 35.

*Medical Examination.*—(a) Students entering the University for the first time and (b) reëntering students (not in attendance throughout the preceding semester) must pass a medical examination. The examiner may exempt the student from required Military Training; he may assign the student to the individual gymnastics section of Physical Education 3.

*Gymnasium Suit Fee.*—All students unless excused from physical education by formal petition are required to pay a gymnasium suit fee of \$5.00 at the time of first registration. This fee entitles the student to the use of a regulation gymnasium costume during his course. Tennis shoes must be furnished by the individual.

\* A major in Physical Education in the College of Letters and Science is not offered at the Southern Branch of the University. In the College of Letters and Science at Berkeley a combination major of Physical Education and Hygiene may be offered. Students planning to become candidates for the A.B. degree at Berkeley, offering this major, are referred to the publications of the departments at Berkeley.

† Courses so marked are listed under the Department of Physical Education for Women, and are open to both men and women.

1. Hygiene and Sanitation. (1) Either half-year. (Credit A, B)  
S, 8. Dr. NORRIS, Dr. WARE
3. \*Prescribed Physical Education for freshmen and sophomores. ( $\frac{1}{2}$ )  
Either half-year. (Credit A, B) Mr. FRAMPTON and the STAFF  
Baseball, Basket-ball, Boxing, Fencing, American Football, Gymnastics, Handball, Swimming, Tennis, Track, Wrestling, Individual Gymnastics. Sections meet twice weekly. Section assignments are made by the department after students have been classified on the basis of physical efficiency, health, strength, endurance, agility, ability to swim and skill in self-defense.  
Physical Education 3 may be elected by students in the junior and senior years.
- 29A-B-C-D. Practice in Athletic Activities. (1-1) Yr. (Credit B)  
Mr. FRAMPTON  
Required of physical education majors in their first and second years of work.
- 130A-B-C-D. Practice in Athletic Activities. (1-1) Yr. (Credit B)  
Mr. FRAMPTON  
Required of physical education majors in their third and fourth years of work.
131. Organization and Management of School Playgrounds. (2) II.  
(Credit B) Assistant Professor COZENS  
Details of the organization of physical training activities, organization and classification of children, the planning of a program for the elementary school; playground arrangement and construction.
154. The Teaching of Elementary School Activities. (2) II (Credit B)  
Mr. FRAMPTON  
The technique of activities taught in the elementary school leading up to games of higher organization.
- 155A-155B. Methods and Practice in Teaching Gymnasium Activities.  
(2-2) Yr. (Credit B) Assistant Professor COZENS  
Prerequisite: Gymnastics, and boxing or wrestling.  
Tactics, free exercises, apparatus, gymnastic dancing, and gymnastic games.
- 156A-156B. Methods and Practice in Coaching Athletics. (2-2) Yr.  
(Credit B) Mr. SPAULDING  
Prerequisite: Track, and basket-ball or baseball.  
(A) Football and basket-ball. (B) Track and baseball.

\* Full statement of the requirements of this course is given on page 41.

### PHYSICAL EDUCATION FOR WOMEN

RUTH V. ATKINSON, B.S., Assistant Professor of Physical Education for Women, and Director of Physical Education for Women.

LUCILE R. GRUNEWALD, B.S., Assistant Supervisor of Physical Education for Women.

HAZEL CUBBERLEY, B.S., Associate in Physical Education for Women.

MARTHA DEAN, B.S., Associate in Physical Education for Women.

BERTHA HALL, Associate in Physical Education for Women.

EDITH R. HARSHBERGER, A.B., Associate in Physical Education for Women.

———, Associate in Physical Education for Women.

EFFIE SHAMBAUGH, A.B., Associate in Physical Education for Women.

———, Associate in Physical Education for Women.

MARION SHEPARD, A.B., Associate in Physical Education for Women.

———, Associate in Physical Education for Women.

ETHEL SUTTON BRUCE, Associate in Physical Education for Women.

RUBY I. MCLINN, R.N., Associate in Physical Education for Women.

HORTENSE GERVISS, B.S., Associate in Physical Education for Women.

ADELIN CHAPMAN, Associate in Physical Education.

EDITH HYDE, A.B., Associate in Physical Education.

———, Associate in Physical Education.

———, Assistant in Physical Education.

LILLIAN RAY TITCOMB, M.D., Physician for Women.

KATHERINE CLOSE, M.D., Lecturer in Hygiene.

*Requirements for the Secondary Special Teaching Credential\* in Physical Education.*—Completion of all requirements for the degree of Bachelor of Education as listed on pages 75-76, including the following specific courses:

(a) Education 148, 170, 180; Psychology 110 or 112; Teaching, 10 units; elective courses in Education to total 24 units.

(b) Physical Education 5, 50A-B, 62A-B, 63A-B, 64, 70A-B, 72A-B, 73A-73B, 75A-B, 76A-B, 121A-121B, 149, 151A-151B, 162A-162B, 172A-172B, 173A-173B, 180, 182-183, 190, 192-192B.

(c) Chemistry 2A-2B; Biology 1; Zoology 35; Physiology 1. Home Economics 32.

*Medical Examination.*—New students and reëntering students must pass a medical examination. The examiner may assign students to the individual gymnastics section of Physical Education 4.

\* A major in Physical Education is not offered in the College of Letters and Science in the Southern Branch. A group major in Physical Education and Hygiene is offered in the University at Berkeley. Students wishing to satisfy the requirement for this major are referred to the Announcement of Courses in the Departments at Berkeley.

2. Hygiene. (2) Either half-year. (Credit A, B) Dr. TITCOMB
4. \*Prescribed Physical Education for freshmen and sophomores. ( $\frac{1}{2}$ )  
 Either half-year. (Credit A, B)  
 Assistant Professor ATKINSON and the STAFF  
 Folk Dancing, Clog Dancing, Natural Dancing, Archery, Baseball,  
 Basketball, Hockey, Swimming, Tennis, Individual Gymnastics (cor-  
 rective or restrictive). Sections meet twice weekly; section assignments  
 are made by the department.  
 Physical Education 4 may be elected by students in the junior and  
 senior years.
5. First Aid. (1) I. (Credit A, B) Mrs. McLINN
- 10A-10B. Theory of Physical Education, with Practice Teaching. (2-2)  
 Either half-year. (Credit B)  
 Required of candidates for General Elementary Teaching Creden-  
 tial and candidates for Ed.B degree with the exception of Physical  
 Education majors and those who offer Physical Education 12A-12B or  
 14A-14B.
- 12A-12B. Theory of Physical Education with Practice Teaching. (2-2)  
 Either half-year. (Credit B)  
 Required of candidates for Kindergarten-Primary credential.
- 14A-14B. Theory of Physical Education with Practice Teaching. (2-2)  
 Either half-year. (Credit B)  
 Required of candidates for special teaching credentials in Art  
 and Music. 14B relates particularly to festivals and pageants.
- 50A-50B. Gymnastics ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. (Credit B)  
 Miss HARSHBERGER, Miss CUBBERLEY, Miss GERVISS
- 62A-62B. Folk Dancing. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. (Credit B) Miss DEAN
- 63A-63B. Natural Dancing. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. (Credit B) Miss DEAN
64. Clog Dancing. ( $\frac{1}{2}$ ) I. (Credit B) Miss DEAN
- 70A-70B. Games. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. (Credit B) Miss GRUNEWALD  
 A. Hunting games.  
 B. Dramatic games.
- 72A-72B. Practice in Athletic Activities. (1-1) Yr. (Credit B)  
 Miss CUBBERLEY
- 73A-73B. Practice in Athletic Activities. (1-1) Yr. (Credit B)  
 Miss CUBBERLEY
- 75A-75B. Tennis. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. (Credit B) Mrs. BRUCE, Miss GERVISS
- 76A-76B. Swimming. ( $\frac{1}{2}$ - $\frac{1}{2}$ ) Yr. (Credit B) Miss GERVISS

\* Full statement of the requirement of this course is given on page 41.

- †121A-121B. Theory of Health Education. (3-3) Yr. (Credit B)  
Assistant Professor ATKINSON  
Principles underlying the organization and administration of physical education and hygiene.
- †149. Kinesiology. (3) I. (Credit B) Miss GRUNEWALD  
Prerequisite: Zoology 35.
- 151A-151B. Theory of Gymnastics. (1-1) Yr. (Credit B)  
Miss CUBBERLEY, Miss HARSHBERGER
- 162A-162B. Theory of Dancing. (1-1) Yr. (Credit B) Miss DEAN  
Prerequisite: courses 62D and 63B.  
Lectures and practice, study of festival and pageant.
- 172A-172B. Theory of Athletics. (1-1) Yr. (Credit B) Miss CUBBERLEY  
Sport technique covering major sports.
- 173A-173B. Theory of Athletics. (1-1) Yr. (Credit B) Miss CUBBERLEY  
Sport coaching and administration.
180. Administration of Physical Education. (2) I. (Credit B)  
Assistant Professor ATKINSON  
Practicum or Problems in Physical Education. Open to mature students only with permission of instructor.
- †182. Therapeutic Gymnastics. (3) II. (Credit B) Miss GRUNEWALD  
Study of posture and of the etiology and treatment of orthopedic conditions.
- †183. Therapeutic Gymnastics. (3) I. (Credit B) Miss GRUNEWALD  
Study of anthropometry, massage and treatment of remediable conditions. Two hours of clinic per week.
- †190. Physiology of Exercise. (3) II. (Credit A, B) Dr. CLOSE  
Prerequisite: Physical Education 149 and Physiology 1.
- 192A-192B. Normal Diagnosis. (2-2) Yr. (Credit A, B) Dr. CLOSE  
Prerequisite: Physical Education 190 and Physiology 1.

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† Open to both men and women.

## PHYSICS

SAMUEL JACKSON BARNETT, Ph.D., Professor of Physics.  
 JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.  
 LAURENCE ELLSWORTH DODD, Ph.D., Associate Professor of Physics.  
 HIRAM W. EDWARDS, Ph.D., Associate Professor of Physics.  
 VERN O. KNUDSEN, Ph.D., Assistant Professor of Physics.  
 JOSEPH W. ELLIS, Ph.D., Assistant Professor of Physics.  
 ARTHUR H. WARNER, Ph.D., Instructor in Physics.  
 LEO P. DELSASSO, A.B., Associate in Physics.  
 HARRY A. KIRKPATRICK, A.B., Associate in Physics.

Courses 1A-1B and 1C-1D are fundamental and are designed to meet the needs of students whose major is physics and of students preparing for applications of physics in Pre-Engineering and Pre-Chemistry.

*Preparation for the Major.*—Required: Physics 1A-1B, 1C-1D or their equivalents (in meritorious cases Physics 2A-2B, 3A-3B may be accepted); Chemistry 1A-1B; Mathematics C, 5, 9A-9B, or their equivalents. Recommended: a reading knowledge of French and German.

*The Major.*—Twenty-four units of upper division work are required. Courses 105A-105B, 108B, and either 110A-110B or 107A-107B must be included. Mathematics 124 and Chemistry 110 may be counted toward the 24 unit requirement.

*Laboratory Fees.*—The laboratory fee for each lower division course (1A-1B, 1C-1D, 3A-3B) is \$4 per half-year. The fee for each upper division laboratory course (107A-107B, 108A-108B, 111) is \$3 per half-year. The student will, in addition, be held responsible for all apparatus lost or broken.

## LOWER DIVISION COURSES

Prerequisite for all lower division courses: either (1) the high school course in physics, or (2) three years of high school mathematics, including trigonometry, and the high school course in chemistry.

1A-1B. General Physics. (3-3) Yr. (Credit A, B)

Associate Professor ADAMS and the STAFF

Lectures, Tu Th, 11, 1; quiz and laboratory, 3 hours.

Mechanics, sound and heat. Open to students in all colleges. Required for students in the College of Letters and Science whose major subject is physics, and for students in engineering, chemistry, and architecture.

- 1C-1D. General Physics. (3-3) Yr. (Credit A, B)  
 Assistant Professor ELLIS, Dr. WARNER  
 Lectures, Tu S, 9; Th S, 9; laboratory, 3 hours.  
 Electricity and light. Open to students in all colleges. Required for students in the College of Letters and Science whose major subject is physics, and for students in engineering, chemistry and architecture.
- 2A-2B. General Physics. (3-3) Yr. (Credit A, B)  
 Lectures, M W F, 11. Associate Professor EDWARDS  
 Mechanics, sound, heat, light, electricity.  
 Prescribed for pre-medical students; open to others only if they take course 3A-3B concurrently.
- 3A-3B. Physical Measurements. (1-1) Yr. (Credit A, B) —  
 Prescribed for pre-medical students; open to others who take Physics 2A-2B concurrently.
- 4A-4B. General Physics. (3-3) Yr. (Credit A, B) Professor BARNETT  
 Lectures, M W F, 9. For students desiring a descriptive course, without laboratory work.
5. Magnetism and Electricity. (3) II. (Credit A) Dr. WARNER  
 Prerequisite: Physics 1C; Mathematics 4A.  
 Preparatory to courses in electrical engineering.

UPPER DIVISION COURSES

Prerequisite for all upper division courses: Physics 2A-2B, 3A-3B; Mathematics 3A-3B, or the equivalents.

- 103A-103B. Mathematical Physics. (2-2) Yr. (Credit A, B)  
 Professor BARNETT  
 Gravitational attraction, potential theory, hydrodynamics, Fourier series and heat conduction, wave-motion.
- \*105A-105B. Analytic Mechanics. (3-3) Yr. (Credit A, B)  
 Associate Professor EDWARDS  
 The statics and the dynamics of particles and rigid bodies.
- 107A-107B. Electrical Measurements. (3-3) Yr. (Credit A, B)  
 Prerequisite: Physics 1C. Assistant Professor KNUDSEN  
 Lectures, student reports and laboratory work on direct and alternating measuring instruments, alternating circuits, filter circuits, and thermionics.
- 108A. Geometrical Optics. (3) I. (Credit A, B)  
 Associate Professor DODD  
 Lectures, demonstrations and laboratory work on geometrical methods applied to the optics of mirrors, prisms and lenses.

\* Not to be given, 1926-27.

- 108B. Physical Optics. (3) II. (Credit A, B) Associate Professor DODD  
Lectures, demonstrations and laboratory work dealing with diffraction, interference, polarization, and their applications.
- 110A-110B. Electricity and Magnetism. (3-3) Yr. (Credit A, B)  
Professor BARNETT  
The elementary mathematical theory.
111. Introduction to Spectroscopy. (3) II. (Credit A)  
Assistant Professor ELLIS  
Lectures and laboratory.
- 112B. Heat. (2) I. (Credit A) Associate Professor ADAMS  
Kinetic theory and thermodynamics.
114. Sound. (2) II. (Credit A) Assistant Professor KNUDSEN  
Lectures on theory and applications.
121. Modern Physics: Methods, Results and Interpretation. (3) II.  
(Credit A) Associate Professor EDWARDS  
Prerequisite: course 112B.  
An introductory view of the nature, the constituents, and the structure of atoms, as developed by the work of the last thirty years. Lectures, reading, reports, and demonstrations.

COURSE IN ANOTHER DEPARTMENT

Astrophysics. (See Mathematics: Astronomy 117.)



**POLITICAL SCIENCE**

CHARLES GROVE HAINES, Ph.D., Professor of Political Science.

—————, Associate Professor of Government.

MALBONE W. GRAHAM, JR., Ph.D., Assistant Professor of Political Science.

JOHN F. SLY, Ph.D., Assistant Professor of Political Science.

ORDEAN ROCKEY, B.Litt., Assistant Professor of Political Science.

VICTOR H. HARDING, A.B., LL.B., Instructor in Political Science.

MARSHALL F. MCCOMB, A.B., LL.B., Lecturer in Government.

CLARENCE A. DYKSTRA, A.B., Lecturer in Municipal Government.

H. G. LYMAN, A.B., LL.B., Lecturer in Commercial Law.

*Preparation for the Major.*—Political Science 1A-1B, or its equivalent, and one of the following: Political Science 51A-51B, Political Science 74A-74B, Economics 1A-1B, History 4A-4B, History 5A-5B, or History 8A-8B.

Students intending to select political science as a major subject are advised to take one course in political science throughout the year in each of the freshman and sophomore years.

*The Major.*—Twenty-four units in upper division courses, not more than six of which may be taken in courses approved by the department, in history, economics, philosophy, psychology, geography, or education. Major programs must include two year-courses and be approved by the departmental adviser.

**LOWER DIVISION COURSES**

1A-1B. American Government. (3-3) Yr. (Credit A, B)

Assistant Professors SLY, ROCKEY, Mr. DYKSTRA, Mr. HARDING

A. A study of principles and problems in relation to the organization and functions of the American system of government.

B. A survey of the organization and functions of the national government with special attention to the features and principles of the Federal Constitution. Some features of the organization of state and local governments will be briefly considered.

18A-18B. Commercial Law. (3-3) Yr. (Credit A, B)

Mr. MCCOMB, Mr. LYMAN

Definitions and elementary principles of law; essentials of the law of contracts, agency, sales, partnership, negotiable instruments and private corporations.

51A-51B. Introduction to European Governments. (3-3) Yr.

(Credit A, B) Assistant Professor GRAHAM

A comparative study of the governments of Great Britain and the self-governing Dominions, France, Germany, Italy, Switzerland, and Russia.

**74A-74B. American State and Local Government. (3-3) Yr.**

(Credit A, B)

Assistant Professor **SLY**

Development of state constitutions. The legislative, executive, and judicial departments in state government; growth of popular methods of legislation; political reconstruction of state government. Special attention will be given to the organization and functions of state and local government in California.

**UPPER DIVISION COURSES**

Prerequisites: Political Science 1A-1B, or its equivalent, and one of the following: Political Science 51A-51B, Political Science 74A-74B, Economics 1A-1B, History 4A-4B, History 5A-5B, or History 8A-8B.

**112. History of Political Theory. (3) I. (Credit A, B)**Assistant Professor **SLY**

A comparative study of ancient, medieval and modern ideas and institutions of statehood; periods and schools in the development of political thought; recent tendencies.

**113. American Political Theories. (2) II. (Credit A, B)**Assistant Professor **ROCKEY**

A comparative study of the characteristic types of American political theory of the past, together with a consideration of recent tendencies in American political thought.

**117A-117B. Elements of Law. (2-2) Yr. (Credit A, B)**Professor **HAINES**

Prerequisite: junior standing and the consent of the instructor.

Development of law and legal systems; comparison of methods and procedure in making and enforcing law in Roman and common law systems; consideration of fundamental legal concepts; contributions and influence of modern schools of legal philosophy in relation to law and government.

**125. Foreign Relations of the United States. (3) I. (Credit A, B)**Assistant Professor **GRAHAM**

Leading American foreign policies as regards Europe, Latin America and the Far East; the administration of American foreign relations; American participation in international administrative and judicial agencies.

**127. International Relations. (3) II. (Credit A, B)**Associate Professor **MARTIN**, Assistant Professor **GRAHAM**

Factors underlying international relations; the modern system of states; alliances and the balance of power; diplomatic practice and problems; international, political, administrative, and judicial agencies; present tendencies in international organization and administration.

133A-133B. Introduction to International Law. (2-2) Yr. (Credit A, B)

The general principles of international law as developed by custom and agreement, and as exhibited in decisions of international tribunals and municipal courts, diplomatic papers, treaties and conventions, in legislation, in the works of authoritative writers, and in the conduct of nations.

\*152. American Political Parties. (3) II. (Credit A, B)

Mr. DYKSTRA

American party history; federal and state party organizations; the electorate; nominations and elections; the direct primary; party control of the legislature; the President as party leader; theory of American party divisions; American public opinion; the rise of blocs.

154A-154B. European Governments and Political Institutions. (3-3) Yr. (Credit A, B)

Assistant Professor GRAHAM

An intensive study of the breakdown of the German, Austrian, and Russian empires and the creation and constitutional organization of the Succession States: special attention will be given to contemporary political issues, parties, elections, and foreign relations.

156A-156B. Administrative Law. (2-2) Yr. (Credit A, B)

Professor HAINES

The rights, duties, and liabilities of public officers; relief against administrative action; extraordinary legal remedies; jurisdiction, conclusiveness, and judicial control; legal principles and tendencies in the development of public administration.

157A-157B. Constitutional Law. (3-3) Yr. (Credit A, B)

Professor HAINES

General principles of constitutional law, federal and state; relations and powers of the federal government and the states; limitations on the federal government and the protection accorded to individual rights under the American constitutional system.

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\* Not to be given, 1926-27.

162. **Municipal Government.** (2) I. (Credit A, B) **Mr. DYKSTRA**  
 History and growth of cities; forms of city government; the municipal councils and courts; the city and the state; the charter; recent reforms in municipal government; issues in municipal government today.
163. **Municipal Administration.** (2) II. (Credit A, B) **Mr. DYKSTRA**  
 The mayor; the city departments; the city employees; the civil service; municipal functions.
172. **State and Local Administration.** (3) II. (Credit A, B)  
**Assistant Professor SLY**  
 Study of powers, functions, organization, and methods of the executive and administrative officers and commissions of the American states with special reference to the problems of centralization, departmental reorganization, and coöperation with federal and municipal agencies.

#### AMERICAN INSTITUTIONS

101. **American Institutions.** (2) Either half-year. (Credit A, B)  
**Assistant Professors SLY, ROCKEY, Mr. MOCOMB**  
 The fundamental nature of the American constitutional system and of the ideals upon which it is based.  
 Required of all students during their junior or senior year except students who have completed Political Science 1A-1B (after September, 1926), or history majors who may substitute History 171A-171B, for this course.  
 American Institutions 101 may not be applied to the political science major.

## PSYCHOLOGY

SHEPHERD IVORY FRANZ, Ph.D., M.D., LL.D., Professor of Psychology.

GRACE M. FERNALD, Ph.D., Associate Professor of Psychology.

KATE GORDON, Ph.D., Associate Professor of Psychology.

S. CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.

ELLEN B. SULLIVAN, Ph.D., Assistant Professor of Psychology.

*Preparation for the Major.*—Required: Psychology 1A and 1B, and Zoology 1A, 1B. Recommended: French, German, chemistry, physics.

*The Major.*—Required: Psychology 106A, 107A, and 12 other units in upper division courses in psychology. The remaining 6 units may be chosen from other upper division courses in psychology, or from the following, subject to the approval of the department: any upper division courses in philosophy; Zoology 103; Education 183.

*Laboratory Fees.*—A fee of \$3 is required in courses 106A, 106B, 107A, 107B, 150.

## LOWER DIVISION COURSES

X. The Psychology of Study. (1) Either half-year. (Credit A, B)  
 Sec. 1, Tu, 8; Sec. 2, Th, 8. Professor MOORE

1A-1B. General Psychology. (3-3) Either half-year. (Credit A, B)  
 Associate Professor GORDON, Assistant Professor FISHER and STAFF  
 Course 1A is prerequisite to all other courses in psychology. It is not open to freshmen, but is open to sophomores without prerequisite. The year sequence 1A-1B is required of all Teachers College students in their sophomore year.

An account of the development of consciousness and behavior, including reflex, instinctive, and emotional tendencies; conditioned reflex; learning and habit formation; sensation, perception, imagination, memory, reasoning, and volition. The second half-year is devoted to the more detailed treatment of special topics.

Lectures, readings, demonstrations, and laboratory exercises.

2. Applied Psychology. (2) II. (Credit A, B)  
 Tu Th, 12. Assistant Professor SULLIVAN  
 Prerequisite: Psychology 1A.

A discussion of psychological principles bearing on problems of daily life, and on legal, medical, and industrial problems.

Lectures, readings, demonstrations.

## UPPER DIVISION COURSES

Psychology 1A is prerequisite to all upper division courses; course 1B or 2 is recommended. After the year 1926-27, Psychology 1B will be made an additional prerequisite.

106A-106B. Experimental Psychology. (3-3) 106A, either half-year; 106B, II only. (Credit A, B)

Professor FRANE, Assistant Professor SULLIVAN

Lecture, F, 8; laboratory, M W, 8-10, for 106A; lecture, S, 8; laboratory, Tu Th, 8-10, for 106B.

The methods and typical results in the experimental investigation of movement, fatigue, habit, memory, association, attention, perception, etc.

One hour lecture or conference, four hours laboratory, outside readings.

107A-107B. Psychological Measurement and the Use of Statistics. (3-3) Yr. (Credit A, B)

Associate Professor FERNALD, Assistant Professor SULLIVAN

First half-year: Statistical methods and their use in relation to psychological problems, including illustrations and problems from the field of educational and experimental psychology and mental tests.

Second half-year: A study of the standard intelligence tests, and their applications. Two lectures or conferences and three hours of clinical work in the use of various tests.

Lectures, clinical demonstrations, laboratory exercises, outside readings and conferences.

108. Physiological Psychology. (3) I. (Credit A, B) Professor FRANE

The physiological correlates of mental conditions, with special reference to the sensory, motor, and association processes of the cerebrum.

Lectures, readings, demonstrations, and discussions.

110. Educational Psychology. (3) Either half-year. (Credit A, B)

Assistant Professor SULLIVAN

Discussion of special topics pertaining to fundamental educational problems and their applications to educational procedures. Laboratory and clinical or teaching exercises pertaining to the problems of learning, memory, etc., in children and adults.

Two hours lectures, three hours laboratory, outside readings.

112. Child Psychology. (3) Either half-year. (Credit A, B)

Associate Professor FERNALD

The psychology of the child, with special reference to the problem of mental development.

119. Psychology of Special School Subjects. (3) Either half-year.

(Credit B)

Associate Professor FERNALD

Prerequisite: Psychology 110.

An analysis of the psychological problems involved in learning to write, read, solve problems in mathematics, grasp the meaning of history, geography, natural science, and other school subjects.

Lectures, assigned readings, and conferences.

**145A-145B. Social Psychology. (2-2) Yr. (Credit A, B)**

Tu Th, 3.

Assistant Professor FISHER

**First half-year:** The instinctive and the higher mental processes that are the basis of social life; the behavior of men in groups.

**Second half-year:** Adjustment and maladjustment. Race, intelligence, and psychic stability as factors in national unity.

Lectures, readings, discussions, and clinical demonstrations.

**\*150. Animal Psychology. (3) II. (Credit A, B) Professor FRANZ**

Prerequisite: Biology 1 or the equivalent.

The mental processes of animals, and their relations to human mental processes. Each student will carry out a number of observations and experiments on animals illustrating the general facts of animal behavior in different phyla.

Lectures, readings, and laboratory exercises.

**166A-166B. Clinical Psychology. (2-2) Yr. (Credit A, B)**

Professor FRANZ, Associate Professor FERNALD

One lecture and three hours clinical work weekly.

A study of the problems connected with the atypical child, including the discussion of mental and physical deficiencies, abnormalities, genius, and emotional instability. Special emphasis is placed on the methods by which such children may be developed to a maximum of efficiency. In the second half-year practice in mental testing in the clinics, juvenile court, and schools is given.

Lectures, readings, clinical demonstrations, testing, and training of special cases.

**\*168. Abnormal Psychology. (3) II. (Credit A, B) Professor FRANZ**

The facts of abnormality: in movement, speech, and sensation; delusions, disorders of attention, memory, and association; the relation of psychology to psychiatry and other subjects dealing with mental abnormalities.

Lectures, readings, demonstrations.

**199. Special Problems in Psychology. (3) Either half-year. (Credit A, B)**

Professor FRANZ and the STAFF

Prerequisite: Psychology 106A, 107A, and one of the following courses: 108, 110, 112, 119, 145A, 150, 166A, or 168. Special permission to register for this course is required.

In this course students will undertake the special study of problems in connection with their major interests, in some fields of psychology: animal, clinical, experimental, physiological, statistical, social, and under the direction of the special instructor in whose field the interest lies.

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\* One of these courses may not be given in 1926-27.

## SPANISH

S. L. MILLARD ROSENBERG, Ph.D., Associate Professor of Spanish.  
 LAURENCE D. BAILIFF, Ph.D., Assistant Professor of Spanish (Chairman  
 of the Department).

MANUEL PEDRO GONZÁLEZ, Ph.D., Assistant Professor of Spanish.

ERNEST H. TEMPLIN, Ph.D., Instructor in Spanish.

—————, Instructor in Spanish.

JOHN HARTMAN, M.A., Associate in Spanish.

SYLVIA N. RYAN, M.A., Associate in Spanish.

FRANCISCO MONTAU, A.B., Associate in Spanish.

—————, Associate in Spanish.

CÉSAR BARJA, Doctor en Derecho, Lecturer in Spanish.

MARIA LÓPEZ DE LOWTHER, B.S., M.A., Lecturer in Spanish.

*Preparation for the Major.*—(1) Spanish A, B, C, D, or four years of high school Spanish. (2) A minimum of two years of Latin in the high school. Those unable to fulfill this requirement must offer compensatory courses in the other Romanic languages, or in German. (3) Only students who pronounce correctly and read fluently will be admitted to upper division courses. Transfers from other institutions will be tested by oral examination. (4) English 1A-1B or the equivalent. (5) History 4A-4B.

*The Major.*—Required: Spanish 106A-106B and 107A-107B. The remaining 12 units may include not more than 6 units of upper division work either in French or Latin, or may be completed from other upper division courses in Spanish.

The department recommends supplementary choice of electives from the following: (1) history of the country or countries most intimately connected with the major; (2) additional study in Latin literature; (3) related courses in other literatures; (4) courses dealing with English expression; (5) the history of philosophy; (6) French; (7) German; (8) Greek.

## LOWER DIVISION COURSES

The prerequisites for the various lower division courses are listed under these courses. Students whose high school record seems to warrant it may by examination establish their right to take a more advanced program; or, they may be transferred to a more advanced course upon recommendation of the instructor.

A. Elementary Spanish. (5) Either half-year. (Credit A, B)

Dr. TEMPLIN and the STAFF

M Tu W Th F, 8, 9, 10, 11, 12, 2.

The equivalent of two years of high school Spanish.



A<sup>2</sup>. Elementary Spanish. (3) I. (Credit A, B) M W F, 9.

Open only to students who have had one year of high school Spanish or Spanish A<sup>1</sup> in summer session, or the equivalent.

B. Elementary Spanish. (5) Either half-year. (Credit A, B)

Dr. **TEMPLIN** and the **STAFF**

M Tu W Th F, 8, 9, 10, 12, 2.

Prerequisite: course A, or two years of high school Spanish.

C. Intermediate Spanish. (3) Either half-year. (Credit A, B)

Assistant Professor **BAILIFF** and the **STAFF**

M W F, 9, 11, 12, 2; Tu Th S, 10.

Prerequisite: course B, or three years of high school Spanish, or the equivalent.

D. Intermediate Spanish. (3) Either half-year. (Credit A, B)

Assistant Professor **BAILIFF** and the **STAFF**

M W F, 8, 12; Tu Th S, 10, 11.

Prerequisite: course C, or four years of high school Spanish.

CD. Intermediate Spanish. Continuation of B. (5) II. (Credit A, B)

M Tu W Th F, 9.

Assistant Professor **BAILIFF**

Prerequisite: course B or three years of high school Spanish.

50A-50B. Conversation and Composition. (3-3) Yr. (Credit A, B)

M W F, 11.

Mr. **MONTAU**, Miss **RYAN**, —

For students who have had D or the equivalent.

Designed especially for Spanish majors.

#### UPPER DIVISION COURSES

Prerequisite: 16 units of lower division Spanish, or the equivalent.

101A-101B. Conversation and Composition. (3-3) Yr. (Credit A, B)

Assistant Professor **GONZÁLEZ**, Mrs. **LOWTHER**

Two sections A, one section B: M W F, 8, 2; Tu Th S, 9.

Students who enter the upper division without course 50A-50B must take 101A-101B.

103A-103B. Eighteenth and Nineteenth Century Literature. (3-3) Yr.

(Credit A, B) M W F, 11.

Assistant Professor **BAILIFF**

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Prerequisite: course 103A-103B.
110. Modern Prose. (2) I. (Credit A, B) Tu, Th, 11. Dr. BARJA  
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The work is done under the direction of the Director of the Training Schools and a corps of assistant supervisors and training teachers.

## PRACTICE TEACHING COURSES†

## Prerequisites:

1. At least sophomore standing.
2. Satisfactory scholarship (freedom from probation).
3. Not less than a three-unit course in the Principles of Education.

**K190A. Kindergarten-Primary Teaching. (5)**

**K190B. Kindergarten-Primary Teaching. (5)**

**E190A. Elementary Teaching. (5)**

**E190B. Elementary Teaching. (5)**

**J191A. Junior High School Teaching. (5)**

**J191B. Junior High School Teaching. (5)**

**A190A. Elementary Art Teaching. (3)**

**A191. Junior High School Art Teaching. (3)**

**A192. Secondary Art Teaching. (4)**

**C192A. Secondary Commerce Teaching. (5)**

**C192B. Secondary Commerce Teaching. (5)**

**H190A. Elementary Home Economics Teaching. (2)**

**H190B. Elementary Home Economics Teaching. (2)**

- H191. Junior High School Home Economics Teaching. (2)
- H192A. Secondary Home Economics Teaching. (2)
- H192B. Secondary Home Economics Teaching. (2)
- MA192A. Secondary Mechanic Arts Teaching. (5)
- MA192B. Secondary Mechanic Arts Teaching (5)
- M190A. Elementary Music Teaching. (3)
- M190B. Elementary Music Teaching. (2)
- M191. Junior High School Music Teaching. (1)
- M192. Secondary Music Teaching. (4)
- P190A. Elementary Physical Education Teaching. (2)
- P190B. Elementary Physical Education Teaching. (3)
- P191. Junior High School Physical Education Teaching. (3)
- P192A. Secondary Physical Education Teaching. (3)
- P192B. Secondary Physical Education Teaching. (2)

#### ELECTIVE TEACHING

When elective teaching is taken it is to be designated as Teaching 195, preceded by the letter indicating the proper department and followed by a dash and the number of units.

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† Credit B. All courses offered either semester.

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