

University of California Bulletin

THIRD SERIES, Vol. XXII, No. 4

ANNOUNCEMENT

OF THE

University of California at Los Angeles

FOR THE

ACADEMIC YEAR, 1928-29

SEPTEMBER, 1928

UNIVERSITY OF CALIFORNIA PRESS

BERKELEY, CALIFORNIA

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Price, 15 Cents

Administrative Bulletins of the University of California

1928-29. No. 11

The bulletins concerning the colleges, schools, and departments of the University are listed below. For copies of these circulars, and for further information, use the addresses given at the end of this list. The circulars are sent free except those for which a price (which includes postage) is given.

1. The Circular of Information, with reference primarily to the Undergraduate Division at Berkeley: containing general information about the University, its organization, requirements for admission to undergraduate status, and for the bachelor's degree in the colleges of Letters and Science, Agriculture, Commerce, and Engineering; students' fees 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 Courses of Instruction in the University of California at Los Angeles. Price, 20 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 Program containing the list of degrees conferred, scholarships, prizes, and other honors.
11. The Annual Announcement of the College of Dentistry, San Francisco.
12. The Annual Announcement of the School of Education.
13. The Announcement of the Graduate Division.
14. The Annual Announcement of the Hastings College of the Law, San Francisco.
15. The Annual Announcement of the School of Jurisprudence.
16. The Annual Announcement of the Medical School, San Francisco.
17. The Announcement of the Curriculum in Social Service.
18. The Announcement of the School of Librarianship.
19. The Annual Announcement of the Los Angeles Medical Department.
20. The Catalogue of Officers and Students, Section I (Berkeley departments). Published in September and February. Price, 30 cents.
21. The Catalogue of Officers and Students, Section II (University of California at Los Angeles). Published annually in October. Price, 25 cents.

(Continued on third page of cover)

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1928

UNIVERSITY OF CALIFORNIA BULLETIN

A SERIES IN THE ADMINISTRATIVE BULLETINS OF THE UNIVERSITY OF CALIFORNIA. ENTERED JULY 1, 1911, AT THE POST OFFICE AT BERKELEY, CALIFORNIA, AS SECOND-CLASS MATTER, UNDER THE ACT OF CONGRESS OF JULY 16, 1894. ISSUED MONTHLY FROM AUGUST TO APRIL, AND TWICE A MONTH FROM MAY TO JULY.

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 ("O" 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.

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

CONTENTS

	PAGE
Calendar.....	5
Regents of the University.....	6
Officers and committees of the Regents.....	7
Administrative officers.....	8
I. History of the University.....	9
History of the University of California at Los Angeles.....	10
II. Organization and administration.....	11
III. The University.....	12
IV. Officers and faculty.....	14
V. Admission to the University.....	23
Accrediting of schools in California.....	23
Admission to freshman standing:	
Plan I, from an accredited school in California.....	23
Plan II (A) from an approved high school outside California	27
(B) admission by examination.....	27
Program of high school subjects to be required.....	28
Examinations at the University of California.....	31
College Entrance Examination Board.....	31
List of preparatory subjects.....	32
Admission with advanced standing:	
From other colleges and universities.....	33
From schools and colleges in foreign countries.....	34
Language credit for a foreign student.....	34
Teaching experience.....	34
Surplus matriculation credit.....	34
Admission of special students.....	35
No graduate instruction.....	36
VI. General information.....	37
Regulations concerning students.....	37
Registration.....	37
Medical Examination.....	37
Late admission and registration.....	37
Classification of students.....	38
Student's responsibility.....	39
Units of work and credit: Study-list limits.....	39
Subject A: English Composition.....	41
Examinations for students entering the Teachers College.....	42
Military Science and Physical Education.....	42

	PAGE
American Institutions.....	43
Authority of instructors.....	43
Examinations.....	44
Grades of scholarships: Grade points.....	45
Conditions and failures.....	46
Scholarship rules.....	47
Honorable dismissal and leave of absence.....	48
Discipline.....	48
Degrees, teaching credentials.....	49
Fees.....	50
Schedule of refunds.....	52
Scholarships.....	53
Living accommodations.....	53
Employment.....	53
Library.....	54
Gymnasium and athletic facilities.....	55
Medical facilities.....	55
Musical events.....	55
Associated Students.....	55
Summer Session.....	56
Extension Division.....	56
VII. Curricula.....	57
A. College of Letters and Science.....	57
Lower division, junior certificate.....	57
Upper division.....	61
Majors for the A.B. degree.....	63
Letters and Science List of Courses.....	64
Honors.....	65
Preparation for professional curricula:	
A. Pre-dental curriculum.....	66
B. Pre-medical curriculum.....	68
C. Pre-agriculture.....	71
D. Pre-commerce.....	71
E. Pre-civil engineering.....	72
F. Pre-mechanical and electrical engineering.....	72
G. Pre-mining.....	73
H. Pre-chemistry.....	74
B. Teachers College.....	74
Requirements for graduation.....	75
VIII. Announcement of Courses.....	77
Index.....	172

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

CALENDAR 1928-29

1928

Sept. 5, Wednesday	Applications for admission in September, 1928, with complete credentials, should be filed on or before this date. Late filing fee \$2.00, payable when student registers.*
Sept. 12, Wednesday	{ 8:30 a.m., Examination in Subject A. 1:30 p.m., Intelligence Test (Teachers College).
Sept. 15, Saturday	8:00-3:00, Registration of old students, including re-entrants.
Sept. 17, Monday	8:00-3:00, Registration of new students.
Sept. 18, Tuesday	Instruction begins.
Nov. 23-Dec. 1, incl.	Thanksgiving recess.
Dec. 17-Jan. 1, incl.	Christmas recess.

1929

Jan. 26-Feb. 2	Final examinations (subject to change).
Feb. 1, Friday	Applications due for admission in February.*
Feb. 2, Saturday	Last day of first half-year.
Feb. 7, Thursday	{ 8:30 a.m., Examination in Subject A. 1:30 p.m., Intelligence Test (Teachers College).
Feb. 9, Saturday	8:00-3:00, Registration of old students.
Feb. 11, Monday	8:00-3:00, Registration of new students.
Feb. 12, Tuesday	Instruction begins.
Feb. 22, Friday	Washington's Birthday, a holiday.
Mar. 23, Saturday	Charter Day.
May 30, Thursday	Memorial Day, a holiday.
June 3-June 10	Final examinations (subject to change).
June 14, Friday	The tenth annual commencement at Los Angeles.
June 17-June 22	College Entrance Examination Board examinations.
June 17-July 13	Summer course in surveying.
July 1-August 10	Summer session.

The University will occupy its new buildings in September, 1929.

For the calendar of the departments of the University at Berkeley, address the Recorder of the Faculties, University of California, Berkeley. In 1928-29 the fall semester at Berkeley opens August 16, the spring semester January 12th.

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

THE 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 Room 804, Subway Terminal Building, Los Angeles.

REGENTS EX OFFICIO

HIS EXCELLENCY CLEMENT CALHOUN YOUNG,
B.L.
Governor of California and President of
the Regents
Sacramento

BYRON FITTS, LL.B.
Lieutenant Governor of California
Sun Finance bldg, Los Angeles

EDGAR C. LEVY, A.B., LL.B.
Speaker of the Assembly
166 Nineteenth av, San Francisco

WILLIAM J. COOPER, M.A.
State Superintendent of Public Instruc-
tion
Sacramento

ROBERT A. CONDRÉ
President of the State Agricultural
Society
Chino

BYRON MAUZY
President of the Mechanics Institute
608 West Coast Life bldg, San Francisco

EVERETT J. BROWN, Ph.B., LL.B.
President of the Alumni Association
Central Bank bldg, Oakland

WILLIAM WALLACE CAMPBELL, Sc.D., 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 parentheses. The names are arranged in the order of original accession to the Board.

ARTHUR WILLIAM FOSTER, LL.D. (1932)
244 California st, San Francisco

GARRET WILLIAM MCENHENEY (1936)
2002 Hobart bldg, San Francisco

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

WILLIAM HENRY CROCKER, Ph.B. (1940)
Crocker First National Bank, San Fran-
cisco

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

CHESTER HARVEY ROWELL, Ph.B. (1936)
149 Tamalpais rd, Berkeley

MORTIMER FLEISHHACKER (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 ORLBY HAYES, LL.B. (1928)
808 First National Bank bldg, San Jose

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

OFFICERS OF THE REGENTS

His Excellency Clement Calhoun Young, B.L.

President
Sacramento

William Henry Crocker, Ph.B.

Chairman
Crocker First National Bank,
San Francisco

Robert Gordon Sproul, B.S., LL.D.

Secretary and Comptroller
320 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 1928-29*

Agriculture:

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Cochran, Earl, and Anderson

Educational Relations:

Regents Cooper, Rowell, Ramm, Earl,
Merritt, and Brown

Endowments:

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

Engineering:

Regents Ramm, Brown, and Hayes

Executive Committee:

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

Finance:

Regents Earl, Foster, Moffitt, McEnerney,
Fleishhacker, Crocker, and Merritt

Grounds and Buildings:

Regents Fleishhacker, Dickson, Ramm,
Mausy, Merritt, Hayes, and Fitts

Jurisprudence:

Regents McEnerney, Cochran, Moffitt,
Fitts, and Levey

Letters and Sciences:

Regents Rowell, Ramm, Brown, Cooper,
Cochran, and Mrs. Sartori

Library, Research, and Publications:

Regents Cochran, Moffitt, Brown, Mausy,
Rowell, and Cooper

Lick Observatory:

Regents Hayes, Fleishhacker, Crocker,
Mausy, Anderson, and Fitts

Medical School:

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

San Francisco War Memorial:

Regents Moffitt, Fleishhacker, and Levey

**University of California at Los Angeles and
Scripte Institution of Oceanography:**

Regents Dickson, Cochran, Brown, Mrs.
Sartori, Rowell, Haynes, Cooper, Fitts,
and Condee.

Wilmington School:

Regents Mausy, 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

ADMINISTRATIVE OFFICERS

IN BERKELEY

President of the University:

William Wallace Campbell
219 California Hall

Vice-President and Dean of the University:

Walter M. Hart
219 California Hall

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

Robert G. Sproul
220 California Hall

Associate Dean of the University and University Representative in Educational Relations:

Baldwin M. Woods
219 California Hall

Recorder of the Faculties:

James Sutton
Thomas B. Steel, *Assistant Recorder*
204 California Hall

Dean of the Summer Session in Los Angeles:

Thomas M. Putnam
105 California Hall

IN LOS ANGELES

University of California at Los Angeles:

Director: Ernest C. Moore
Dean of the College of Letters and Sciences:

Charles H. Rieber
Dean of the Teachers College:
Marvin L. Darsie
Recorder: Harry M. Showman

Assistant Comptroller and Assistant Secretary of the Regents:

Robert M. Underhill
855 N. Vermont av

**Los Angeles Medical Department:*

Dean: George H. Kress
304 S Broadway, Suite 245

Extension Division:

Associate Director in Southern California:
Howard S. Noble
815 S Hill st

Summer Session, Los Angeles Office:

Assistant to the Dean: Miss Belle Hechtman
815 S Hill st

* 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.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

In March, 1881, the legislature of California created the Los Angeles State Normal School. Five acres of ground were donated at the corner of Fifth street and Grand avenue—the present site of the Los Angeles City Library; and the cornerstone of the first building was laid on December 17th of that year. Instruction began in August, 1882, with a faculty of three teachers and an enrollment of sixty-one students.

Following a legislative appropriation in 1911, a new site of twenty-five acres on North Vermont avenue was obtained for the Normal School. In the fall of 1913 the cornerstone was laid for the first building, Mills-paugh Hall, named to commemorate Jesse F. Millspaugh, who was president during the period 1904-1917. The School moved into its new quarters in September, 1914.

Through legislative action made effective by the Governor's signature on July 24, 1919, the Los Angeles State Normal School was transferred to the Regents of the University of California. The name of the School was changed to Southern Branch of the University of California. The educational facilities were expanded to include the freshman and sophomore years in Letters and Science beginning with September, 1919; the third and fourth years with September, 1923 and 1924, respectively. The degree of Bachelor of Arts was conferred in the College of Letters and Science for the first time in June, 1925. In 1922 the teacher training courses were organized as a Teachers College. The degree of Bachelor of Education was conferred for the first time in June, 1923.

On February 1, 1927, the name of the institution was changed to UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

The University is now engaged in building a new physical plant upon a campus of three hundred and eighty-four acres recently bought and presented to it by the cities of Santa Monica, Venice, Beverly Hills, and Los Angeles. It plans to occupy its new buildings in September, 1929.

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, teaching, 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 University of California at Los Angeles 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 University of California at Los Angeles is organized as a council of the Academic Senate of the University.

III. THE UNIVERSITY

The University comprises the following colleges, divisions, and departments:

I. IN BERKELEY

The Colleges of

Letters and Science,
Commerce,

Agriculture, including the courses at Berkeley, the Branch of the College of Agriculture 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 in the Santa Clara Valley, 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),

Chemistry.

The Schools of

Architecture,

Education,

Jurisprudence,

Librarianship,

Medicine (first year and part of the 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 instruction).

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

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

V. IN LOS ANGELES

Los Angeles Medical Department— Graduate instruction only.
University of California at Los Angeles:
College of Letters and Science,
Teachers College.
The Lower Division in Agriculture, Chemistry, Civil Engineering,
Commerce, Mechanics, and Mining.
The Summer School of Surveying.

VI. AT DAVIS

The Branch of the College of Agriculture.

VII. AT RIVERSIDE

Citrus Experiment Station and Graduate School of Tropical Agriculture.

VIII. AT LA JOLLA

The Scripps Institution of Oceanography.

IV. OFFICERS AND FACULTY OF THE UNIVERSITY OF CALIFORNIA AT LOS ANGELES

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 GORDON SPROUL, B.S., LL.D., Vice-President and Comptroller of the University, Secretary of the Regents, and Land Agent.
 BALDWIN MUNGER WOODS, Ph.D., Associate Dean of the University.
 ROBERT MACKENZIE UNDERHILL, B.S., Assistant Comptroller of the University, and Assistant Secretary of the Regents.
-
- ERNEST CARROLL MOORE, Ph.D., LL.D., Director of the University of California at Los Angeles and Professor of Education.
 CHARLES HENRY RIEBEE, Ph.D., Dean of the College of Letters and Science and Professor of Philosophy.
 MARVIN LELOYD DARSIE, Ph.D., Dean of the Teachers College and Professor of Education.
 HELEN MATTHEWSON LAUGHLIN, Dean of Women.
 EARL JOYCE MILLER, Ph.D., Dean of Men and Associate Professor of Economics.
 LEWELLYN MORGAN BUELL, Ph.D., Executive Secretary and Lecturer in English.
 HARRY MUNSON SHOWMAN, E.M., M.A., Recorder and Lecturer in Mathematics.
 CLARENCE HALL ROBISON, Ph. D., University Examiner and Assistant Professor of Education.
 CHARLES WILKIN WADDELL, Ph. D., Director of the Training Schools and Professor of Education.
 JOHN EDWARD GOODWIN, B.L., B.L.S., Librarian.
 WILLIAM JONATHAN NORRIS, M.D., Physician for Men.
 LILLIAN BAY TITCOMB, M.D., Physician for Women.
 ————, M.D., Assistant Physician for Men.
 M. BURNEY PORTER, Appointment Secretary and Supervisor of Teacher Training.

Advisory Administrative Board

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

OFFICERS AND FACULTY

Faculty

- WILLIAM COIT ACKERMAN, Ed.B., Associate in Physical Education for Men.
SIR JOHN ADAMS, B.Sc., M.A., LL.D., F.C.P., Lecturer in Education
(Professor Emeritus of Education, University of London).
JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.
BENNETT MILLS ALLEN, Ph.D., Professor of Zoology.
BERNICE ALLEN, M.A., Associate in Home Economics.
EVA MARIA ALLEN, Associate in Commercial Practice.
HERBERT FRANCIS ALLEN, Ph.D., Associate Professor of English.
DIANA ANDERSON, A.B., Associate in Physical Education for Women.
RUTH ANDERSON, M.A., Associate in Biology.
RUTH V. ATKINSON, M.A., Assistant Professor of Physical Education for
Women and Director of Women's Gymnasium.
GEORGE E. AXELLE, B.S., M.A., Lecturer in Education and Supervisor of
Training, Junior High School.
ETHEL WILLIAMS BAILEY, Ph.B., Associate in French.
LAURENCE DEANE BAILIFF, Ph.D., Assistant Professor of Spanish.
GORDON H. BALL, Ph.D., Assistant Professor of Zoology.
CÉSAR BARJA, Doctor en Derecho, Associate Professor of Spanish.
SAMUEL JACKSON BARNETT, Ph.D., Professor of Physics.
CLIFFORD L. BARRETT, Ph.D., Assistant Professor of Philosophy.
EMILY M. BARTLETT, Ph.D., Instructor in Biology.
WILLIAM B. BARTON, A.B., Associate in Public Speaking.
CLIFFORD BELL, Ph.D., Instructor in Mathematics.
EMILY TODD BELL, Assistant in Kindergarten-Primary Education.
ALBERT WILLIAM BELLAMY, Ph.D., Associate Professor of Zoology.
*BENJAMIN H. BISSELL, Ph.D., Assistant Professor of English.
DAVID KNUTH BJORK, Ph.D., Assistant Professor of History.
FREDERICK THOMAS BLANCHARD, Ph.D., Professor of English.
EDWARD BOCK, A.B., Associate in English.
JOHN ELOF BOODIN, Ph.D., Professor of Philosophy.
LOUIS F. D. BENOIS, M.A., Associate in French.
FOSS RUSSELL BROCKWAY, Associate in Mechanic Arts.
JULIA BROQUET, M.A., Associate in French.
BURDETTE E. BROWN, A.B., Associate in Public Speaking.
ETHEL SUTTON BRUCE, Associate in Physical Education for Women.
HENRY RAYMOND BRUSH, Ph.D., Professor of French.
LEWELLYN M. BUELL, Ph.D., Executive Secretary and Lecturer in English.
FLOYD F. BUTCHETT, Ph.D., Assistant Professor of Economics.
HAROLD GILMORE CALHOUN, A.B., LL.B., Lecturer in Political Science.

* Absent on leave, 1928-29.

Officers and Faculty

- LILY BESS CAMPBELL, Ph.D., Assistant Professor of English.
 CAROLYN PRESCOTT CANBY, M.A., Associate in Biology.
 FREDERICK MASON CAREY, Ph.D., Assistant Professor of Greek and Latin.
 MARGARET SPRAGUE CARHART, Ph.D., Assistant Professor of English.
 *FORD ASHEMAN CARPENTER, LL.D., D.Sc., Lecturer in Meteorology.
 HELEN CLARK CHANDLER, Assistant Professor of Fine Arts.
 KATHARINE M. CLOSE, M.D., Lecturer in Hygiene.
 CARTER COLLINS, Captain, U.S. Army, Assistant Professor of Military Science and Tactics.
 KATHERINE ESTELLE COLLINS, M.A., Associate in English.
 SQUIRE COOP, Lecturer in Music.
 RAYMOND B. COWLES, M.S., Associate in Biology.
 FREDERICK WARREN COZENS, M.A., Assistant Professor and Assistant Director of Physical Education for Men.
 COLIN HAYTER CRICKMAY, Ph.D., Assistant Professor of Geology.
 WILLIAM RANSOM CROWELL, Ph.D., Assistant Professor of Analytical Chemistry.
 HAZEL J. CUBBERLEY, B.S., Assistant Supervisor of Physical Education for Women.
 JANE ELIZABETH DALE, Ph.D., Assistant Professor of Home Economics.
 MARVIN LLOYD DARSIE, Ph.D., Dean of the Teachers College and Professor of Education.
 PAUL HAROLD DAUS, Ph.D., Assistant Professor of Mathematics.
 MARTHA BLANCHARD DEAN, B.S., Assistant Supervisor of Physical Education for Women.
 ANNITA DELANO, Associate in Fine Arts.
 LEO PETER DELSASSO, A.B., Associate in Physics.
 WILLIAM DIAMOND, Ph.D., Associate Professor of German.
 MARSHALL E. DIMOCK, Ph.D., Instructor in Political Science.
 LAURENCE ELLSWORTH DODD, Ph.D., Associate Professor of Physics.
 PAUL A. DODD, A.B., Associate in Economics.
 ALFRED KARL DOLCH, Ph.D., Assistant Professor of German.
 CARL SAWYER DOWNES, Ph.D., Assistant Professor of English.
 JOHN F. DUFF, Assistant in Fencing.
 MAX SHAW DUNN, Ph.D., Associate Professor of Chemistry.
 CLARENCE ADDISON DYKSTRA, A.B., Professor of Political Science.
 HARVEY LEATHERMAN EBY, Ph.D., Associate Professor of Education.
 HIRAM WHEELER EDWARDS, Ph.D., Associate Professor of Physics.
 JOSEPH WESLEY ELLIS, Ph.D., Assistant Professor of Physics.
 CARL CLAWSON EPLING, Ph.D., Assistant Professor of Botany.
 MAUD DARROW EVANS, M.A., Associate in Home Economics.
 GRACE MAXWELL FERNALD, Ph.D., Associate Professor of Psychology.
 ALEXANDER FINLAY, Assistant in Physical Education for Men.

* In residence first half-year only.

- SARAH CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.
- *ALEXANDER GREEN FITE, Ph.D., Associate Professor of French.
- MARJORIE FORCHEMER, M.A., Associate in Physical Education for Women.
- PAUL FRAMPTON, Ed.B., Assistant Supervisor of Physical Education for Men.
- SHEPHERD IVORY FRANZ, Ph.D., M.D., LL.D., Professor of Psychology.
- IRA NOBLES FRISBEE, M.B.A., C.P.A., Assistant Professor of Accounting.
- LUCY MATTHEWS GAINES, M.A., Instructor in History.
- ARNOLD J. GANTVOERT, Lecturer in Music.
- JONATHAN GARST, B.S., Associate in Geography.
- RAYMOND GARVER, Ph.D., Assistant Professor of Mathematics.
- NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts.
- SILAS GIBBS, Ed.B., Assistant in Physical Education for Men.
- FRANCES GIDDINGS, M.A., Supervisor of Training and Associate in Kindergarten-Primary Education.
- HARRIET EUDORA GLAZIER, M.A., Assistant Professor of Mathematics.
- JEAN GONTARD, Ph.D., Agrégé, Lecturer in French.
- MANUEL PEDRO GONZÁLES, Ph.D., Assistant Professor of Spanish.
- JOHN EDWARD GOODWIN, B.L., B.L.S., Librarian.
- KATE GORDON, Ph.D., Associate Professor of Psychology.
- MALBONE WATSON GRAHAM, Jr., Ph.D., Associate Professor of Political Science.
- GRETA GRAY, Ph.D., Associate Professor of Home Economics.
- BARBARA GREENWOOD, Supervisor of Nursery School Training and Associate in Kindergarten-Primary Education.
- LUCILE ROENA GRUNEWALD, M.A., Assistant Director of Women's Gymnasium.
- *CHARLES GROVE HAINES, Ph.D., Professor of Political Science.
- BERTHA ALLINE HALL, A.B., Associate in Physical Education for Women.
- VICTOR HUNT HARDING, A.B., LL.B., Instructor in Political Science.
- ROBERT E. HARRIS, A.B., Associate in English.
- BENJAMIN S. HARRISON, A.B., Associate in English.
- EDITH RODGERS HARSHBERGER, M.A., Assistant Supervisor of Physical Education for Women.
- BOWLAND HILL HARVEY, Ph.D., Assistant Professor of History.
- ARTHUR WING HAUPT, Ph.D., Assistant Professor of Botany.
- BESSIE E. HAZEN, Ed.B., Assistant Professor of Fine Arts.
- EARLE RAYMOND HEDRICK, Ph.D., Professor of Mathematics.
- CHARLES H. HICKS, M.A., Associate in Biology.
- MARTHA L. HILEND, M.A., Associate in Botany.
- MARGARET ARMSTRONG HITCH, M.S., Associate in Geography.
- HERBERT BENNO HOFFLETT, Ph.D., Instructor in Latin and Greek.
- ROLF HOFFMANN, Ph.D., Associate Professor of German.

* Absent on leave, 1928-29.

* In residence second half-year only.

- ANNA FÉNELON HOLAHAN, Ph.B., Associate in French.
- CECIL BERNARD HOLLINGSWORTH, Ed.B., Associate in Physical Education for Men.
- BERENICE HADDON HOOPER, B.S., Associate in Physical Education for Women.
- HELEN M. HOWELL, Associate in Fine Arts.
- ALICE HUBARD, M.A., Associate in French.
- GEORGE SHELTON HUBBELL, Ph.D., Assistant Professor of English.
- ALICE OSDEN HUNNEWELL, Instructor in English.
- GUY HILDEBRAND HUNT, C.E., Assistant Professor of Applied Mathematics.
- ROLAND DENNIS HUSSEY, B.S., Associate in History.
- SIGURD BERNARD HUSTVEDT, Ph.D., Associate Professor of English.
- EDITH I. HYDE, A.B., Associate in Physical Education for Women.
- SELINA P. INGRAM, Instructor in Subject A.
- GLENN JAMES, Ph.D., Associate Professor of Mathematics.
- EMILY D. JAMESON, A.B., Assistant Supervisor of Physical Education for Women.
- ARTHUR M. JOHNSON, Ph.D., Assistant Professor of Botany.
- BENJAMIN WILEY JOHNSON, Lecturer in Education, Assistant Director of the Division of Vocational Education, and Supervisor of Classes for the Training of Trade and Industrial Teachers (Los Angeles).
- ALFRED H. JONES, M.A., Associate in Psychology.
- MARGARET CORNWELL JONES, M.A., Associate in Home Economics and Supervisor of Classes for the Training of Home Economics Teachers (Los Angeles).
- JOSEPH KAPLAN, Ph.D., Assistant Professor of Physics.
- ADRIAN D. KELLER, B.S. in E.E., Associate in Mechanic Arts.
- JOHN F. KESSEL, Ph.D., Associate Professor of Zoology.
- W. A. KINCAID, Ph.D., Instructor in Spanish.
- E. L. KINSEY, Ph.D., Assistant Professor of Physics.
- H. DARWIN KIRSCHMAN, M.S., Associate in Chemistry.
- FRANK J. KLINGBERG, Ph.D., Professor of History.
- VERN OLIVER KNUDSEN, Ph.D., Associate Professor of Physics.
- LOUIS KNOTT KOONTZ, Ph.D., Assistant Professor of History.
- WILLIAM JACOB KRAFT, Mus.Bac., F.A.G.O., Lecturer in Music.
- ANNA KRAUSE, Ph.D., Instructor in Spanish.
- MELVA LATHAM, Ph.B., Assistant Professor of History.
- HELEN MATTHEWSON LAUGHLIN, Dean of Women.
- EDGAR L. LAZIER, B.A., Instructor in Zoology.
- WILLIAM H. LEAKE, M.D., Assistant Physician for Men.
- HELEN J. LEDGERWOOD, Ed.B., Associate in Fine Arts.
- FREDERICK CHARLES LEONARD, Ph.D., Assistant Professor of Astronomy.
- MADELEINE L. LETESSIER, A.B., Associate in French.
- WESLEY LEWIS, M.A., Associate in Public Speaking.

JOHN R. LIGGETT, Ph.D., Instructor in Psychology.

*JOSEPH BYRNE LOCKEY, Ph.D., Associate Professor of History.

ALFRED EDWIN LONGUEIL, Ph.D., Associate Professor of English.

MARÍA LÓPEZ DE LOWTHER, M.A., Lecturer in Spanish.

MATTHEW C. LYNCH, B.L., J.D., Lecturer in Political Science.

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

GEORGE MCCUTCHEEN MCBRIDE, Ph.D., Associate Professor of Geography.

MYRTA LISLE MCCLELLAN, B.S., Assistant Professor of Geography.

CLAUDE M. MACFALL, Ph.D., Assistant Professor of Physiology.

CARLYLE F. MACINTYRE, Ph.D., Assistant Professor of English.

FRANK MCKECHNIE, M.A., Associate in Spanish.

HARRIET MARGARET MACKENZIE, Ph.D., Assistant Professor of English.

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

KATHERINE LOUISE MCLAUGHLIN, M.A., Associate Professor of Education.

RUBY I. MCLINN, B.N., Nurse.

ANNIE C. B. MCPHAIL, Ed.B., Associate in Fine Arts.

PATRICK MALONEY, Associate in Physical Education for Men.

HAROLD WILLIAM MANSFIELD, Assistant Professor of Mechanic Arts and
Director of Shops.

CHARLES ALMER MARSH, B.S., Assistant Professor of Public Speaking.

JAMES WILLARD MARSH, Associate in Mechanic Arts.

WENDELL E. MASON, M.S., Assistant Professor of Applied Mathematics.

JAMES E. MATTHEWS, Captain, U. S. Army, Assistant Professor of Military
Science and Tactics.

JUNIUS LATHROP MERIAM, Ph.D., Professor of Education.

FLORENCE MERRILL, A.B., Associate in Psychology.

PERRY MILES, Colonel, U. S. Army, Professor of Military Science and
Tactics.

EARL JOYCE MILLER, Ph.D., Dean of Men and Associate Professor of
Economics.

HUGH MILLER, Ph.D., Assistant Professor of Philosophy.

LOYE HOLMES MILLER, Ph.D., Professor of Biology.

WILLIAM JOHN MILLER, Ph.D., Sc.D., Professor of Geology.

FRANCISCO MONTAU, A.B., Associate in Spanish.

ERNEST CARROLL MOORE, Ph.D., LL.D., Director of the University of
California at Los Angeles and Professor of Education.

BARBARA JOHNSON MORGAN, Associate in Fine Arts.

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

ADELAIDE MORRIS, M.A., Associate in Fine Arts.

JOSEPH MURDOCH, Ph.D., Instructor in Geology.

OLIVE NEWCOMB, Associate in Fine Arts.

HOWARD SCOTT NOBLE, M.B.A., C.P.A., Associate Professor of Accounting
and Associate Director of University Extension.

* Absent on leave, 1928-29.

- WILLIAM JONATHAN NORRIS, M.D., Physician for Men.
- FRANK EDWIN OLDER, B.S., Assistant Professor of Agricultural Teaching.
- FRED HYDE OSTER, Assistant Supervisor of Physical Education for Men.
- CHARLES H. OWENS, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
- GUY GEORGE PALMER, Colonel, U. S. Army, Retired, Professor of Military Science and Tactics, Emeritus.
- JOHN CARL PARISH, Ph.D., Professor of History.
- DONALD K. PARK, A.B., Associate in Physical Education for Men.
- CHARLES HUGH PAXTON, A.B., Associate in Mechanic Arts.
- DUDLEY F. PEGRUM, Ph.D., Assistant Professor of Economics.
- PAUL PÉRIGORD, Ph.D., Professor of French Civilization.
- JOHN B. PHILLIPS, Associate in Mechanic Arts.
- ESTELLA BLANCHE PLOUGH, Associate in Commercial Practice.
- ORDA ALLEN PLUNKETT, Ph.D., Assistant Professor of Botany.
- RICHARD D. POMEROY, M.S., Associate in Chemistry.
- FREDERICK R. POND, A.M., Associate in English.
- ALFRED WILLIAM PRATER, A.B., Assistant in Mathematics.
- JAMES BLAINE RAMSEY, Ph.D., Assistant Professor of Physical Chemistry.
- HELEN M. BANKIN, Instructor in Subject A.
- FRANK HERMAN REINSCH, Ph.D., Assistant Professor of German.
- CHARLES HENRY RIEBER, Ph.D., Dean of the College of Letters and Science and Professor of Philosophy.
- JOHN RANDOLPH RIGGLEMAN, M.B.A., Assistant Professor of Economics.
- MARGARET MANNING ROBERTS, Ph.B., Associate in Kindergarten-Primary Education.
- GEORGE ROSS ROBERTSON, Ph.D., Assistant Professor of Organic Chemistry.
- CLARENCE HALL ROBISON, Ph.D., University Examiner and Assistant Professor of Education.
- ORDEAN ROCKEY, B.Litt., Assistant Professor of Political Science.
- S. L. MILLARD ROSENBERG, Ph.D., Associate Professor of Spanish.
- SELMA ROSENFELD, A.B., Associate in German.
- NELSON VANCE RUSSELL, Ph.D., Assistant Professor of History.
- SYLVIA NIGEL RYAN, M.A., Associate in Spanish.
- ETHEL I. SALISBURY, M.A., Supervisor of Training and Associate Professor of Elementary Education.
- ²FERDINAND CANNING SCOTT SCHILLER, M.A., D.Sc., F.B.A., Lecturer in Philosophy (Fellow of Corpus Christi College, Oxford University).
- FLORA MURRAY SCOTT, Ph.D., Assistant Professor of Botany.
- CORINNE A. SEEDS, Principal of the Training School and Assistant Professor of Elementary Education.
- MARY EFFIE SHAMBAUGH, A.B., Associate in Physical Education for Women.

² In residence second half-year only.

- MARION ALICE SHEPARD, A.B., Associate in Physical Education for Women.
GEORGE EULAS FOSTER SHERWOOD, Ph.D., Professor of Mathematics.
HARRY M. SHOWMAN, E.M., M.A., Recorder and Lecturer in Mathematics.
DECALVUS WILLIAM SIMONSON, M.A., Associate in English.
NATHAN L. SILVERSTEIN, A.B., Associate in Economics and Accounting.
SLOAN, JACK, M.S., Associate in Physiology.
BERYL KIRK SMITH, Associate in Fine Arts.
MAXWELL AUSTIN SMITH, Ph.D., Assistant Professor of French.
WILLIAM ANTHONY SMITH, Ph.D., Associate Professor of Education.
HAROLD E. SMYSER, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
LOUISE PINKNEY SOOY, Associate Professor of Fine Arts.
E. K. SOPER, Ph.D., Associate Professor of Geology.
WILLIAM HENRY SPAULDING, A.B., Director of Physical Education for Men.
OLENUS LEE SPONSLER, Ph.D., Professor of Botany.
MARVEL MARION STOCKWELL, Ph.D., Assistant Professor of Economics.
HOSMER WARD STONE, Ph.D., Assistant Professor of Inorganic Chemistry.
ELLEN BLYTHE SULLIVAN, Ph.D., Assistant Professor of Psychology.
ERNEST HALL TEMPLIN, Ph.D., Assistant Professor of Spanish.
FREDERICK BRABAN TERRELL, Major, U. S. Army, Retired, Assistant Professor of Military Science and Tactics.
EVALYN A. THOMAS, B.L.I., Instructor in English.
HELEN BISHOP THOMPSON, Ph.D., Professor of Home Economics.
LOUISE GUTHRIE THOMPSON, Ed.B., Associate in Fine Arts.
THOMAS EDWARD THOMPSON, A.B., Instructor in Subject A.
LILLIAN RAY TITCOMB, M.D., Physician for Women.
CHARLES HICKMAN TITUS, Ph.D., Assistant Professor of Political Science.
RUTH SHERMAN TOLMAN, A.B., Associate in Psychology.
HARRY TROTTER, Assistant in Physical Education for Men.
BERNHARD ALEXANDER UHLENDORF, Ph.D., Assistant Professor of German.
LOUIS CHAPIN VALENTINE, A.B., Associate in English.
VIRGINIA VAN NORDEN, Ed.B., Associate in Fine Arts.
BURTON M. VARNEY, Ph.D., Associate Professor of Geography.
BERTHA WINSLOW VAUGHN, Teacher of Voice.
CHARLES WILKIN WADDELL, Ph.D., Director of Training Schools and Professor of Education.
ARTHUR H. WARNER, Ph.D., Instructor in Physics.
*GORDON S. WATKINS, Ph.D., Professor of Economics.
W. B. WELSH, A.B., Associate in Botany.
WINONA WENZLICK, Ed.B., Assistant in Fine Arts.
WALDEMAR CHRISTIAN WESTERGAARD, Ph.D., Professor of History.
BELLE H. WHITICE, Associate in Industrial Arts.
ALFRED RUSSELL WHITMAN, Ph.D., Assistant Professor of Geology.

* In residence first half-year only.

- W. M. WHYBURN, Ph.D., Assistant Professor of Mathematics.
 J. HAROLD WILLIAMS, Ph.D., Associate Professor of Education.
 FLORENCE ALDEN WILSON, A.B., B.S., Associate in Home Economics.
 FREDERICK P. WOELLNER, Ph.D., Associate Professor of Education.
 DOROTHEA CLINTON WOODWORTH, Ph.D., Assistant Professor of Latin and Greek.
 PIERCE HEDGES WORKS, A.B., Assistant in Physical Education for Men.
 EUPHEMIA RICHARDSON WORTHINGTON, Ph.D., Assistant Professor of Mathematics.
 FRANCIS A. WRIGHT, Associate Professor of Music.
 CLIFFORD MAYNARD ZIERER, Ph.D., Assistant Professor of Geography.

STAFF OF TRAINING INSTRUCTION

University Training School

- CHARLES WILKIN WADDELL, Ph.D., Director of Training Schools and Professor of Education.
 ETHEL I. SALISBURY, M.A., Supervisor of Training and Associate Professor of Elementary Education.
 CORINNE ALDINE SEEDS, M.A., Principal of the Training School and Assistant Professor of Elementary Education.
 BERTHA E. WELLS, Supervisor of Training, Elementary.
 FRANCES GIDDINGS, M.A., Supervisor of Training, Kindergarten-Primary.
 HELEN B. KELLER, Ed.B., Supervisor of Training, Elementary.
 FLORENCE MARY HALLAM, A.B., Supervisor of Training, Home Economics.
 LAVERNA L. LOSSING, Supervisor of Training, Music.
 NATALIE WHITE, M.A., Supervisor of Training, Art.
 LULU M. STEDMAN, Ed.B., Supervisor of Special Education.
 EDITH HOPE RINGER, Supervisor of Special Education.
 GEORGE E. AXTELLE, B.S., M.A., Supervisor of Training, Junior High School.
 ELIZABETH BRUENE, M.A., School Counselor.
 EMMA JANE ROBINSON, Training Teacher, Sixth Grade.
 HELEN F. BOUTON, Ed.B., Training Teacher, Fifth Grade.
 BESSIE WINSTON HOYT, Ph.B., Training Teacher, Fourth Grade.
 GERTRUDE C. MALONEY, Training Teacher, Third Grade.
 CLAYTON BURROW, B.S., Training Teacher, Second Grade.
 SALLIE GARRETT, B.S., Training Teacher, First Grade.
 JANE BERNHARDT, M.A., Training Teacher, Kindergarten.
 ELIZABETH PELL, A.B., Assistant Training Teacher, Kindergarten and Nursery School.
 BARBARA GREENWOOD, Supervisor of Nursery School Training.
 GERTRUDE P. RICHARDSON, Assistant Training Teacher, Nursery School.
 MARGARET DAWSON, Assistant, Kindergarten.

V. ADMISSION TO THE UNIVERSITY

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, address 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 to have been 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 should 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 in his judgment fitted to undertake college work with reasonable prospect of success.

In recommending a graduate for admission to the University by this plan, the principal should use Recommendation Form A, which has an application for admission attached. Copies of this form are supplied by the

* If, however, the candidate has completed all of his high school work in accredited institutions, and if the principal of each of the schools attended certifies that the candidate has fully maintained the standing required of pupils seeking the University recommendation, the usual requirement that the candidate must have spent his senior year in the school from which he is graduated may be set aside.

Recorder of the Faculties to the principals of accredited schools in California.

It is expected that, ordinarily, the candidate will complete the requirements for the University recommendation in the school from which he graduates. It is possible, however, for a graduate of a given school who lacks the recommendation to qualify for it in another school, provided both institutions are accredited by the University and at least one school year with a full program of studies be devoted to this additional work. In such cases, the recommendation may be issued only by the principal of the school in which the additional work has been completed; a form to be used by the principal will be supplied by the Recorder upon request.

An applicant for admission who has already attended an institution of college grade is not at liberty to disregard his college record and to apply for admission to the University upon the basis of his high school record; the applicant in this case is subject to the regulations governing admission to advanced standing as described in a later paragraph.

The High School Program.—For the graduate of an accredited school in California, recommended as explained above, 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.

Nevertheless, to insure adequate preparation for the work of the University, the prospective student is advised to arrange his high school program in accordance with the following schedule:

(a) English	2 units
(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) One unit of additional mathematics, 1 unit of additional work in the language offered under (e) or 2 units in another foreign language.....	1 (or 2)
(g) Electives from the following list: English, history, mathematics, natural science, foreign language, drawing	3 (or 2)
(h) Unrestricted electives	3
	15 units

† 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.

* Footnote on page 25.

Candidates who do not present the principal's recommendation must qualify for admission by passing entrance examinations in the program of high school subjects required according to Plan II as explained 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 of the particular curriculum to which he seeks admission; otherwise he 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 for certain colleges and curricula and for which no equivalent courses are offered by the University during regular sessions, are: physics, 1 unit; chemistry, 1 unit; elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, $\frac{1}{2}$ 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 otherwise prescribed for him in the University, and will thereby enlarge his opportunity for elective study. Matriculation credit for plane geometry and elementary algebra must be obtained before the student can receive his junior certificate in this college. For the biological sciences, and for the pre-medical and pre-dental curricula, both chemistry and physics, as well as French or German, are strongly recommended. For mathematics, physics, or chemistry, the high school program should include, in addition to chemistry and physics, and French or German, three years' work in mathematics, including algebra, plane geometry, and algebraic theory. For the geological sciences, geometrical drawing, freehand drawing, and trigonometry should also be included. 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, one unit, and Latin or French, at least two units. The importance of the study of

* Certain studies that may be offered as part of the high school program will be accepted toward University requirements for junior certificates, for teachers' credentials, and for degrees. It is the intention of the University that such studies shall be completed before the student matriculates in the University. However, students may upon petition be permitted to enroll in high school courses concurrently with University courses. Credit for high school work completed subsequent to matriculation will be allowed only on the basis of passing the College Entrance Examination Board examination. Similarly, work of essentially high school grade carried in the Extension Division of the University may be refused credit until the student has passed the College Entrance Examination Board examination.

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 chemistry, or physics and trigonometry.

Teachers College: The inclusion of at least two years of a foreign language, ancient or modern, in the high school program will release the student from requirements prescribed for him in the University. Matriculation credit for plane geometry and elementary algebra must be obtained before the student can receive the bachelor's degree in this college. 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: Students will find it to their advantage to anticipate a portion of the University requirement in natural science by taking high school courses in physics and chemistry, and to obtain in high school a reading knowledge of some foreign language which will enable them to pass the examination in "Subject B" required of all students in this college. 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 will the junior certificate be granted without credit in all three subjects. Students are urged not to emphasize vocational courses in their preliminary programs, but to seek a broad foundation upon which later specialization may be built.

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 2 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, geometrical drawing, 1 unit, should be added.

A candidate for admission to professional curricula in Berkeley and elsewhere should consult the appropriate announcements listed on pages 2 and 3 of cover.

* Only two years of Commerce, Engineering, Chemistry, and Agriculture are offered at the University of California at Los Angeles.

**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 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:

The University Examiner must have evidence showing 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 15 standard secondary units; and that he has maintained an average scholarship well above the mark required by the school for promotion or for graduation. The list of high school subjects presented must conform to the program required of an applicant entering by PLAN II, as set forth in detail below.

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.

B. Admission by Examination

Any applicant for admission, not included under Plan I or Section A of PLAN II, may be admitted to the University solely by examination. This classification includes:

1. A graduate of a California secondary school not accredited by the University;
2. An applicant from an accredited California secondary school who has not been graduated from the school;
3. An applicant from an accredited California secondary school who, though graduated, has not received the principal's recommendation;
4. Any other applicant whose school work in California or elsewhere has not been such as to entitle him, in the opinion of the University Examiner, to admission on his credentials.

The subjects in which examinations will be required must amount to at least 12 units, and must conform to items (a) to (g) inclusive, of the program of high school subjects required by Admission Plan II as listed below. For the remaining 3 units, or for any part of them, 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 subjects. The credit to be given will be determined by the University Examiner upon inspection of the applicant's credentials.

All who enter by examination will be required to take the examinations of the College Entrance Examination Board. For further information concerning examinations, see page 31.

Program of High School Subjects Required of an Applicant Entering by Admission Plan II

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 follows:

(a) English	2 units
(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) One unit of additional mathematics, 1 unit of additional work in the language offered under (e) or 2 units in another foreign language.....	1 (or 2)
(g) Electives from the following list: English, history, mathematics, natural science, foreign language, drawing	3 (or 2)

However, until February, 1929, the applicant may present, in lieu of requirements (f) and (g), four (4) units of electives; these electives *must be restricted* to the list of subjects in which entrance examinations are given by the University or by the College Entrance Examination Board (see page 31).

(h) Unrestricted electives	3
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15 units

† An applicant who passes an examination of the College Entrance Examination Board in any of these subjects and who presents a teacher's certificate showing that the laboratory work has been satisfactorily completed will be deemed to have met this requirement regardless of the place of the course in the high school program.

Applicants for admission from California schools must present record of formal examination in items (a) to (g) of the foregoing program, amounting to at least 12 units. Applicants from high schools outside the state will be required to meet the above distribution of subjects, but the University Examiner may accept credentials in lieu of formal examinations (see the regulations in PLAN II, Section A, page 27).

Credit for item (h), amounting to 3 units, may be given either upon the basis of formal examination or of school or college records of grade "A" or "B" (excellent, or good) in the subjects so presented. The credit to be given will be determined by the University Examiner upon inspection of the applicant's credentials.

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 of the particular curriculum to which he seeks admission; otherwise he may find himself unable to proceed to the bachelor's degree in the normal period of four years.

The high school subjects—other than those *required* for admission by PLAN II—which are prerequisite for certain colleges and curricula, and for which no equivalent courses are offered by the University during regular sessions, are: physics, 1 unit; chemistry, 1 unit; algebraic theory, $\frac{1}{2}$ 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 in the high school program will release the student from requirements otherwise prescribed for him in the University, and will thereby enlarge his opportunity for elective study. For the biological sciences, and for the pre-medical and pre-dental curricula, both chemistry and physics, as well as French or German, are strongly recommended. For mathematics, physics, or chemistry, the high school program should include, in addition to chemistry and physics, and French or German, a third year of mathematics, for the geological sciences, geometrical drawing, freehand drawing and trigonometry should also be included. 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, one 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 either for chemistry or for physics and trigonometry.

Teachers College.—The inclusion of at least two years of a foreign language, ancient or modern, in the high school program, will release the student from requirements prescribed for him in the University. 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 sciences group but does release the student from the necessity of taking additional laboratory courses.

**College of Commerce:* Students will find it to their advantage to anticipate a portion of the University requirement in natural science by taking high school courses in physics and chemistry, and to obtain in high school a reading knowledge of some foreign language which will enable them to pass the examination in "Subject B" required of all students in this college. Matriculants who fail to present algebraic theory, $\frac{1}{2}$ unit, in addition to elementary algebra and plane geometry, will be at a disadvantage. Students are urged not to emphasize vocational courses in their preliminary programs, but to seek a broad foundation upon which later specialization may be built.

**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 2 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 curricula in forestry or in landscape design, geometrical drawing, 1 unit, should be added.

Professional Curricula: Candidates for admission to professional curricula in Berkeley or elsewhere, should consult the appropriate announcements as listed on pages 2 and 3 of cover.

* Only two years of Commerce, Engineering, Chemistry, and Agriculture are offered at the University of California at Los Angeles.

EXAMINATIONS AT THE UNIVERSITY OF CALIFORNIA

In January, 1927, the University discontinued the holding of complete entrance examinations. In August, 1928, and in January, 1929, the University will offer in Berkeley examinations in these subjects: mechanic arts, music, and bookkeeping. Corresponding examinations will not be offered in Los Angeles.

Candidates for admission by examination must therefore present examination of the College Entrance Examination Board, described below.

COLLEGE ENTRANCE EXAMINATION BOARD

The examinations of the College Entrance Examination Board are usually held during the third week in June; in 1929, probably June 17-22.

The office of the College Entrance Examination Board is at 431 West 117th Street, New York, N. Y. Blanks for applying for admission to the examinations may ordinarily be obtained from the University Examiner, University of California at Los Angeles, as well as from the Board in New York. These blanks, with fees, must be filed in the New York office, according to the following schedule: for examinations to be taken in the United States west of the Mississippi River or in Canada, at least four weeks in advance of the first day of the examinations; for points in the United States east of the Mississippi River, three weeks in advance; for points outside the United States and Canada, six weeks in advance.

If the application and fee are received on time, the fee will be \$10 for each candidate, wherever examined. Late applications will, when possible, be granted, but in such cases the fee is \$15. The fee should be remitted by postal order, express order, or draft on New York, to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board in June, 1929, will be published about March 1.

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

As a basis for matriculation credit at the University of California an examination rating of at least 60 per cent in each subject presented is required. Comprehensive examinations are acceptable.

Definitions of the requirements in all examination subjects are given in a circular of information published annually in December by the College Entrance Examination Board. Upon request to the New York office 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 stamps, will be made.

A candidate for admission who passes the College Entrance Examination Board examination in English 1, English A, or comprehensive English, will be declared to have met the Subject A requirement of the University.

LIST OF PREPARATORY SUBJECTS

A list of the high school subjects commonly presented for admission, with the amount of credit in units assigned to each subject, is given below.

	Units		Units
1a English, elem.....	2	75c ¹ French, elem., 1 yr. of 5c ²	1
1b English, adv. I.....	1	75c ² French, elem.....	2
1c English, adv. II.....	1	75c ³ French, intermed.....	1
2a Algebra, elem.....	1	75c ⁴ French, adv.....	1
2b ¹ Algebraic Theory, I.....	†	5d ¹ German, elem., 1 yr. of 5d ²	1
2b ² Algebraic Theory, II.....	†	75d ³ German, elem.....	2
2c Plane Geometry.....	1	75d ⁴ German, intermed.....	1
2d Solid Geometry.....	†	75d ⁵ German, adv.....	1
12e Plane Trigonometry.....	†	5e ¹ Spanish, elem., 1 yr. of 5e ²	1
12f Plane Analytic Geometry.....	†	75e ² Spanish, elem.....	2
3a Physics.....	1	75e ³ Spanish, intermed.....	1
3b Chemistry.....	1	75e ⁴ 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.....	1-3
3f Biology.....	1	8 Agriculture.....	1-3
3g Physical Geography.....	1	9abc Home Economics.....	1-3
3h Elem. Physical Science.....	1	10a Music, Sight Singing and Dictation.....	1
4a History and Gov. of 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
75a ¹ Greek, elem., 1 yr. of 5a ²	1	12 Stenography and Typewriting.....	1-2
75a ² Attic Prose.....	2	13 Military Science and Tactics.....	†
75a ³ Attic Prose, adv.....	†		
75a ⁴ Homer.....	†		
5b ¹ Latin, elem., 1st yr.....	1		
5b ² Latin, elem., 2 yrs.....	2		
75b ³ Latin, adv., 3d yr.....	1		
75b ⁴ Latin, adv., 4th yr.....	1		

The foregoing list of preparatory subjects is used by the principals of accredited high schools in California in designating the matriculation credits assigned to the graduates of these schools who are recommended for admission to the University according to Admission Plan I. The College Entrance Examination Board does not give examinations in subjects 3c, 3h, or those numbered 7 to 13, inclusive. No entrance examination is provided in less than two units of a language, whether English or foreign. It will be possible for a limited time to take examinations at Berkeley, but not at Los Angeles, in subjects 7, 10, and 11.

† 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 Annual Announcement of the University of California at Los Angeles.

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

ADMISSION TO ADVANCED STANDING

ADMISSION FROM OTHER COLLEGES, INCLUDING JUNIOR COLLEGES AND
NORMAL SCHOOLS, AND FROM 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 University Examiner. A form of statement of university work, which may be used for such certificates, will be furnished on application to the Recorder. There should also be submitted some credential showing *in detail* the basis upon which the applicant was matriculated in the institution from which he comes and the preparatory subjects for which matriculation credit was given. These documents should be filed with the University Examiner for an estimate of their value in terms of the requirements of the University of California. The Examiner, 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. Applicants who have failed to maintain a thoroughly satisfactory scholarship record, as distinguished from a record which is poor or is barely passable, will not be admitted.

An applicant for admission to advanced standing whose preparation for college was received in a high school in California, and whose college credentials, upon appraisal by the University Examiner, yield less than sixty semester units of advanced standing, must satisfy the Examiner that, at the time of leaving the high school, he received, or was then entitled to receive, the university recommendation in accordance with Admission Plan I; otherwise the entrance examinations in the subjects 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 page 28. In each case the examinations to be required will be assigned by the University Examiner in accordance with the provisions of Plan II, after an inspection of the record of the applicant's high school and college studies.

Credit for Subject A (English composition) is given upon certificate to students who enter the University of California with 60 or more units of advanced credit, and who in addition have passed an examination similar to the examination in Subject A at the institution from which they come, or have completed an acceptable college course in English composition. An examination by this University, at Los Angeles or elsewhere, is required in all other cases. (Refer to page 41 for a more complete statement.)

ADMISSION FROM SCHOOLS AND COLLEGES IN FOREIGN COUNTRIES

An applicant for admission from a foreign country must present credentials which can be accepted in satisfaction 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 University Examiner 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 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 granted only for courses taken in native institutions of college grade, or for upper division courses actually taken at the University of California or at another English-speaking institution of approved standing.

TEACHING EXPERIENCE

No University credit is given for teaching experience. Students presenting evidence of successful teaching experience may substitute approved courses in Education for part or all of the regular requirement in Directed Teaching upon the recommendation of the Director of the Training Schools.

SURPLUS MATRICULATION CREDIT

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

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.

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

Instruction is not offered in such essential preparatory subjects as elementary English, United States history, elementary Latin and Caesar, nor, save in the Summer Sessions or in the Extension Division, in elementary algebra, plane geometry, algebraic theory, elementary chemistry, or elementary physics.

Applicants will not be admitted directly from high school to the status of special student. The graduates of such schools are expected to qualify for admission in accordance with the usual rules; students so admitted to regular status will be required to carry the work of the regular curriculum, but may, with the approval of the dean of their college, pursue limited programs. No person under the age of twenty-one years will be admitted as a special student; but the mere attainment of any given age is not in itself a qualification for admission.

Entrance examinations in the subjects of fundamental importance for the work proposed may be required especially of applicants under twenty-five years of age. Special students will seldom be able to undertake the work of the engineering and professional schools until they have completed the prerequisite subjects. All applicants for admission to special status may be required to take a psychological test, which will be given upon a date to be announced. Further information may be obtained from the University Examiner.

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 matriculation requirements.

Importance of Early Application.—Application should be submitted at a sufficiently early date to give time to prepare for the entrance examinations assigned for admission.* In general, admission to the University in special status can be arranged only by personal conference with the University Examiner; in addition, a conference with the dean or other representative of the department, school, or college concerned may be necessary.

GRADUATE INSTRUCTION

Graduate instruction is not offered at the "University of California at Los Angeles," but it is offered at the "University of California Summer Session in Los Angeles." 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 the inside pages of the cover.

* After January, 1927, the examinations given annually in June by the College Entrance Examination Board will constitute the only regular examinations for admission to the University of California.

VI. GENERAL INFORMATION

REGULATIONS CONCERNING STUDENTS

REGISTRATION

Each student registers in the University of California at Los Angeles 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

Each applicant must also appear before the University Medical Examiner 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 Medical Examiner, of successful immunization against smallpox is required.

LATE ADMISSION AND REGISTRATION

The student or applicant for admission should consult the calendar of the University of California at Los Angeles (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 of the dean of his proposed college, before his registration may be completed. The qualifications of an applicant for admission to the University after the first two weeks of instruction will be given special scrutiny by the Examiner and the dean of the college to which admission is sought.

Transfer to the University of California at Los Angeles in February.—It is of special importance that a student in another institution who is desirous of transferring to the University of California at Los Angeles after the stated registration day of the second half-year should communicate in advance with the University Examiner, and should await assurance that late admission will be permitted before discontinuing studies in progress elsewhere. The applicant should indicate the college to which he wishes admission, and the advanced standing which he expects to offer at the time of transfer.

CLASSIFICATION OF STUDENTS

A *regular student* is an undergraduate who has complied with the requirements for matriculation, and who pursues, or is entitled to pursue, the established curriculum of a college.

A student who has attained junior standing is in the "upper division," which includes the third and fourth years of the course.

A *special student* is one who, though he does not meet the University matriculation requirements, is nevertheless allowed to register for a restricted program because of maturity and fitness to carry the special work elected. His fitness to carry the work may be attested to by official transcripts of preparatory studies and will normally be tested by formal examination covering his familiarity with the field prerequisite to the elected work.

A special student by virtue of his status is not a candidate for any degree. The privileges of the University are normally extended to a special student 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 University Examiner 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 a University exercise, should be made to the instructor; if for unavoidable cause the student absents himself from all college exercises for one day or several days he should present his excuse to the dean of his college. 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 the student who desires to withdraw from courses in which he is regularly enrolled. Petition for change in study-list should be presented to the Recorder. Attendance upon all exercises is obligatory pending receipt of formal permission to discontinue.

For regulations concerning withdrawal from the University see page 48 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. A university *unit of registration* represents one hour of a student's time at the University each week, during one half-year, in lecture or recitation, together with the time necessary for preparation; or a longer time in laboratory or other exercises not requiring preparation. Credit for 124 units in the College of Letters and Science or 128 in the Teachers College, distributed according to the requirements of the college is necessary for a degree.

In the College of Letters and Science a student may present a study-list aggregating 12 to 16 units per half-year without special permission.* During his first half-year in residence in this college no student may receive credit in more than 16 units of work. A student may on peti-

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

Commerce A (Typing) by 1 unit.

Commerce B (Shorthand) by 2 units.

Course in Subject A by 2 units.

tion carry a program of not more than 18 units, if in the preceding half-year he attained an average of at least grade B in his total program (of 12 units or more). A student whose record during the preceding half-year was free of all deficiencies, and who is not on probation, may without special permission submit a program $\frac{1}{2}$ unit in excess, providing the $\frac{1}{2}$ unit be in required physical education. The student may not, however, count toward the degree more than the allowable study-list maximum of his college. Prescribed courses in military science and physical education and repeated courses are to be counted in study-list totals. Any work undertaken in the University or elsewhere at the same time with a view to credit toward a degree must also be included.

A student in the Teachers College may without special permission present a study-list aggregating from 12 to 17 units per half-year.* During the first half-year in residence in this college no student may receive credit in more than 17 units of work. A student may on petition carry a program of not more than 18 units, if in the preceding half-year he attained an average of at least grade B in his total program (of 12 units or more). 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 $\frac{1}{2}$ unit in physical education in excess of the limit announced, 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 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 study-list totals.

In the pre-engineering and pre-commerce curricula, a regular student who is free from deficiencies in the work of the preceding half-year may register for not more than 19 units of new work.* In the freshman and sophomore years in pre-engineering prescribed courses in military science and physical education may, with the express approval of the adviser, be added to this study-list maximum. A student whose record for the preceding half-year shows deficiencies (who did not pass in his entire program) will be limited to 16 units, including repeated work.

A special student has free election of subjects within the fields specified at the time of his admission. His program is limited to 16 units.

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

Commerce A (Typing) by 1 unit.

Commerce B (Shorthand) by 2 units.

Course in Subject A by 2 units.

SUBJECT A: ENGLISH COMPOSITION

1. With the exceptions noted below, every undergraduate entrant must at the time of his first registration at the University of California at Los Angeles take an examination known as the *Examination in Subject A* designed to test his 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 University of California at Los Angeles). A second examination for late entrants 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.

3. Every student who does not pass in the examination in Subject A will be required to take, immediately after his 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.

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. A student who has not passed the examination or course in Subject A will not be admitted to any University course in oral or written composition; he will not be granted a junior certificate or given junior standing; he will not be granted a bachelor's degree.

6. 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.

7. A student who passes Subject A is not required, but is advised to continue his training in oral or written composition.

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

Exemption:

A student who has received a grade of 60 per cent in the College Entrance Examination Board examination in English 1 or in English A or in the Comprehensive Examination in English will receive credit for Subject A. A 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.

A student who enters the University of California at Los Angeles with 60 or more units of advanced standing, and who in addition has passed an examination similar to the examination in Subject A at the institution from which he came, or has completed a course in English composition at that institution, deemed acceptable by the University Examiner, will be exempt from the requirement in 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 every student at the time of admission to the Teachers College.

(2) Piano Test: Every student entering the Kindergarten-Primary curriculum must show ability to play on the piano music suitable for use with young children. Application for the test may be made to the departmental adviser. The test should be taken at the time of admission; it must be taken before the student may be assigned to practice teaching.

MILITARY SCIENCE AND PHYSICAL EDUCATION

Every student, man or woman, shall, upon admission, report immediately to the proper officer for enrollment in physical education,* following the Registration Circular or the announcements which may be posted on the bulletin boards. Every able-bodied male student who is under twenty-four years of age at the time of admission, and who is a citizen of the United States, shall report immediately for enrollment in military science. A fee of fifty cents per semester must be paid to the Comptroller of the University in military courses in which government

* The University requirements in physical education referred to in this section cover Physical Education 3 (men) and 4 (women), $\frac{1}{2}$ unit courses which are required of students in each semester of the first and second years.

property is issued to the student. A fee of \$5.00 is charged every man registered in physical education for the use of the standard gymnasium suit. The student shall list these courses upon his study card 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. A student who petitions to be excused from one of these subjects should nevertheless present himself to the proper instructors for enrollment during the pendency of the petition.

Upon petition a student more than twenty-four years of age at the time of admission will be 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 a student 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 University of California at Los Angeles, 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 138 and 147 (men), and 150 (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 whose major subject is political science or history, is American Institutions 101.

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 University of California at Los Angeles, 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 required in all undergraduate courses except 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 shall, so far as practicable, be conducted in writing. In advance of each, a maximum time shall be set which no candidate shall 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. A student who has received grade B, C, or D in any course is not allowed a reexamination.

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 at the time of entrance to the University. If a student who has already matriculated proposes to enter upon study outside the University of California with a view to asking the University to examine him upon that work and to allow him credit toward the degree, then he must make all arrangements *in advance* with the department concerned and with the University Examiner.

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, if the work in an examination or other exercise of the course is either incomplete or unsatisfactory, and if in the judgment of the instructor the deficiency is sufficient to prevent a passing grade, without necessitating a repetition of the course. See heading below, "Conditions and Failures," for grades students may earn upon removing conditions.

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 not 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.

In all colleges and curricula except pre-engineering, 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.

A candidate 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 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 should not be assumed, however, that a passing grade in the work of the second half-year removes a deficiency incurred in the first.

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 out of 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 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 reexamination (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.

A condition in a course in which a final examination is regularly held may not 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 reexamination 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 has no control. In such a case the student may petition to have that grade assigned which he would have received had the work been completed in regular course, together with full grade points. His petition must set forth in detail the reasons for his failure to complete the work; it should receive endorsement by the instructor that the work, as far as presented, was satisfactory. The Recorder shall refer the petition to the dean of the college for decision.

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 an 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) Unless the student during the probationary half-year maintains an average grade of at least "C," or passes all work undertaken, dismissal will follow.

HONORABLE DISMISSAL AND LEAVE OF ABSENCE

A *letter of honorable dismissal* is issued on request to a student in good standing who withdraws without the expectation of resuming his work at Los Angeles. An *indefinite leave of absence* is issued on request to a student in good standing who finds it necessary to withdraw but who expects to resume his studies at Los Angeles at the beginning of some future session. A *brief leave of absence* may be issued, as an exceptional privilege, to a student who finds it necessary to withdraw for two weeks or longer, but who wishes to retain his status in his classes and to resume his work before the close of the current half-year, upon a date to be fixed by the University.

A student is in "good standing" if he is entitled to enjoy the normal privileges of a student in the status in which he is officially registered. Students dismissed by reason of scholarship deficiencies, students on probation, and students under suspension are not regarded as students in "good standing." A student who withdraws from the University before the end of the session without giving notice of withdrawal to the Recorder, may be debarred from subsequent registration.

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 by unseemly 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 is expressed in four grades: 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 with the presumption that the student's connection with the University will be ended. Expulsion is the extreme academic censure, final exclusion of the student from the University.

The Director of the University of California at Los Angeles is entrusted with the administration of student discipline with full power to act.

Student Self-Government.—One of the most responsible committees of the Associated Students is the University Affairs Committee, a body of students which passes on cases of misconduct among students. To this committee the Director customarily refers cases of student delinquencies, including cases of cheating and dishonesty in examinations and classroom work. The committee reports to the Director its findings of guilt or innocence and suggests suitable penalties.

DEGREES: TEACHING CREDENTIALS

Detailed statements of requirements for degrees and teaching credentials issued by the University will be found in Section VII, Curricula, under the headings of College of Letters and Science and The Teachers College, and in Section VIII, Announcement of Courses, under the different departments.

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

State Board Teaching Credentials.—The State Board of Education issues teaching credentials of a wider variety than those for which the University has especially designed curricula. In some cases, moreover, the State Board accepts teaching experience or other individual qualifications as a substitute for the standard requirements of University credit. If a student proposes to meet the State Board requirements directly, and is not a candidate for the University credentials, he should make direct application to the State Board for a statement of the courses which he must still complete. His program of University study will then be based in part on this statement from the State Board, and in part upon the general University requirements in military science, physical education, Psychology X, Subject A, and American Institutions.

Senior Residence.—Every candidate for the bachelor's degree is required to enroll 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 within 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 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.

† During registration and for the first few days of instruction, fees will be paid as part of the registration procedure. Thereafter, they will be paid in the office of the Comptroller, 106 Millsbaugh Hall. The cashier's department of this office is open from 8:30 a.m. to 3 p.m. daily, and from 8:30 to 11:30 a.m. on Saturday.

* 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 1394½, 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 one (1) 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."

Section 25, Civil Code of the State of California.

"Minors are all persons under twenty-one years of age; provided, that this section shall be subject to the provisions of the titles of this code on marriage and shall not be construed as repealing or limiting the provisions of section 204 of this code; provided, further, that upon the lawful marriage of any female of the age of eighteen years or over but under the age of twenty-one years, such female shall be deemed an adult person for the purpose of entering into any engagement or transaction respecting property or any contract, the same as if such person was over twenty-one years of age."

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, 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 of departmental fees or deposits, \$1.00. Departmental fees and deposits must be paid within seven days after registration.

Late application for admission (after September 5, 1928, or February 1, 1929), \$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 6 or March 2, \$1.00 per course.

Medical examination: original appointment, or deferment arranged in advance, no fee; fee for a second appointment, \$1.00.

Laboratory and Departmental Fees.—In laboratory and certain other courses, a charge is made to cover materials used. Students should refer to Section VIII, Announcement of Courses, where such fees are listed for each department. The total charge for students in the elementary laboratories may amount to from \$5 to \$30 per year.

The military uniform and textbook fee is fifty cents a semester for students in the basic course. 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 student is responsible for the articles issued to him. The amount necessary to replace articles not returned by the student will be collected 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.

Deposit required of applicants for teaching positions who register with the Appointment Secretary: Persons registering with the Appointment Secretary will be required to pay \$5.00 to cover clerical cost of correspondence and copying of credentials.

Other expenses: Gymnasium outfit for men, \$5.00; for women, about \$8.00; books and stationery, from \$18.00 to \$40.00 per year. Every student is eligible to membership in the Associated Students of the University of California at Los Angeles. The cost of membership is \$10.00 per year. The membership card entitles the holder to participation in the affairs of the Associated Students; a subscription to the *California Daily Bruin*; free admission to many athletic contests and reduction in admission to all other athletic contests, as well as dramatic, social, and similar events that are under the jurisdiction of the Associated Students.

SCHEDULE OF REFUNDS

Dates are computed from September 17, 1928, and February 11, 1929.

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 third week.....	Refund 50.00
From third week to end of sixth week.....	Refund 35.00
From sixth week to end of 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 at Los Angeles is authorized to award a limited number of scholarships annually to students in the University of California at Los Angeles. 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 \$40.00 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 \$30.00 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.

No woman is permitted to complete her registration if her living accommodations are not approved by the Dean of Women. Lists of approved accommodations may be obtained at the office of the Dean of Women, Millsbaugh Hall.

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

The ordinary yearly expenses of a student would probably be at least \$750.00.

EMPLOYMENT

Students desiring employment other than teaching and tutoring should register with the Alumni Bureau of Occupations, Lecture Hall. Confi-

dential reports on the character and ability of applicants will be furnished prospective employers on request.

Limited opportunities exist for women's employment on an hourly basis in the following fields: stenography, typewriting, general office work, 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.

Many men students exchange two hours service per day for room and board.

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. Since it is so difficult for a stranger to obtain remunerative employment, 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, Millsbaugh 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 applicants 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 for the service rendered by this office.

LIBRARY, GYMNASIUM, MEDICAL FACILITIES

THE LIBRARY

The Library has 116,500 volumes that are catalogued; the reading rooms accommodate about 900 students. Approximately 700 periodicals and continuations are regularly received.

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 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, adjoins the gymnasium.

For Women

In the women's gymnasium, 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.

MEDICAL FACILITIES

The University of California at Los Angeles provides on the campus, for the care of emergencies, medical service, 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 medical examination.

MUSICAL EVENTS

The regular musical events of the academic year consist of the Christmas Concert by the University Choral Club presenting a program of carols, a Symphony Choral Concert in conjunction with the Los Angeles Philharmonic Orchestra, and a series of public recitals by the University Orchestra on the campus.

THE ASSOCIATED STUDENTS

The Associated Students administers and controls the extra-curricular activities. The 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 and publications; while the Council coordinates the work of these boards and administers the general business of the Association.

The financial and athletic interests of the Associated Students are administered by the Graduate Manager of the Associated Students.

The University Affairs Committee makes recommendations to the Director as to innocence or guilt and suitable penalties in cases of misconduct among the students.

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

The *California Daily Bruin* and *The Southern Campus* are the official publications of the students. The *California Daily Bruin* 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 record of the college life of the year, and is edited, managed, and financed by the 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 the conditions of work and examinations imposed by the instructors in charge.

The tuition fee is \$30, regardless of the number of courses taken.

The Announcement of the Summer Session, issued in January of each year, may be obtained by addressing University of California Summer Session in Los Angeles, 815 Hillstreet Building, Los Angeles.

Summer Sessions are conducted by the University in Berkeley, in Los Angeles, in Davis, and in 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 students. The Los Angeles office is at 817 Hillstreet Building.

VII. CURRICULA

There are established at the University of California at Los Angeles: (a) The College of Letters and Science, with a curriculum leading to the degree of Bachelor of Arts and curricula of the earlier years of the College of Dentistry, of the Medical School, of the College of Commerce, of the Colleges of Engineering, and of the College of Chemistry; (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 and physical education, 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:

(a₁) *General University requirements.*†

Subject A.‡

Military Science and Tactics, 6 units (men).

Physical Education, 2 units.

*(a₂) *University of California at Los Angeles requirement: Psychology X.*

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

‡An examination in Subject A (English Composition) is required of all entrants 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.

* Not required, 1928-29, because not offered.

(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) *Matriculation Mathematics.* Elementary Algebra and Geometry. Instruction in these subjects is not given in the fall or spring sessions of the University. Students entering the University under Plan II (see page 27) must present these subjects for admission. Students entering under Plan I (see page 23) may make up deficiency in these subjects after matriculation; but unless the study is carried on in the University Summer Session, credit will be granted only upon passing the College Entrance Examination Board examination.

(d) *Natural Science.* At least 12 units chosen from the following list, at least 2 units of which must be in laboratory work. Courses marked with an asterisk meet the laboratory requirement.

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.

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

Physiology 1.

Zoology 1A*, 1B*.

(e) *Year-Courses.* A year course (of at least six units) in each of three of the following groups. This requirement must be met in the fall and spring sessions, and may not include courses other than those specified below.

(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, spherical trigonometry, plane analytic geometry, college algebra, introduction to calculus. This may be satisfied partly in the high school.

(4) Social sciences.

(5) Philosophy.

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 (or A²), B, C, D, 5A, 5B, or any upper division year sequence.

German: any two consecutive courses of A, B, C, D, CD, 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 (or A²), B, C, D, CD, 50A-50B, or any upper division year sequence.

Group 3—Mathematics

A total of six units chosen from the following courses: C, F, 2, 5, 6, 8, 9A, 9B, 3A, or 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

Economics 1A-1B.

Geography 1-2.

History 4A-4B.

History 5A-5B.

History 8A-8B.

Political Science 3A-3B.

Political Science 51A-51B.

Psychology 1A-1B.

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 65.

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, of which at least 112 must be in courses chosen from the Letters and Science List of Courses (see page 64).

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 45.

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 courses named in the Letters and Science List of Courses (see page 64) with the exceptions noted.

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	Latin, M
Astronomy	Mathematics, M
Botany, M	Mechanic Arts
Chemistry, M	Military Science
Economics, M	Music
Education	Philosophy, M
English, M	Physical Education for Men
French, M	Physical Education for Women
Geography, M	Physics, M
Geology, M	Political Science, M
German, M	Psychology, M
Greek	Spanish, M
History, M	Zoology, M
Home Economics	

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 6 units in their major (either 3 units each half year or 2 units one half-year and 4 units the other) 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 University of California at Los Angeles, require the student to withdraw from the college.

10. Students who transfer to the University of California at Los Angeles 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.

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. 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).

The student must attain an average grade of C (1 grade-point per unit) in all courses offered as a part of the 24-unit major.

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 39.

LETTERS AND SCIENCE LIST OF COURSES

At least 112 units offered for the degree of A.B. must be in courses chosen from the Letters and Science List of Courses, and the 36 units in upper division courses required in the upper division must be selected from the same list.

This rule is effective immediately for students entering the College of Letters and Science in and after September, 1928, and for students graduating after June, 1930. Students graduating in February and June, 1929, may count toward the degree not more than 6 units in courses excluded from the Letters and Science List which are undertaken in or after September, 1928. Students graduating in August, 1929, and in February and June, 1930, may count toward the degree not more than 9 units in courses excluded from the Letters and Science List which are undertaken in or after September, 1928.

Any course not included in the Letters and Science List of Courses but required, or accepted, by a department as part of its major or as a prerequisite therefor, will, for students offering a major in that department at graduation, but for no others, be treated as if it were in the Letters and Science List of Courses.

The following list refers to the courses as given in the Announcement for the year 1928-29:

Art. 1A-1B, 2A-2B, 4A-4B, 31A-31B, 32A-32B, 34A-34B, 103, 154, 161A-161B.

Biological Sciences.

Biology. All undergraduate courses.

Botany. All undergraduate courses.

Paleontology. All undergraduate courses.

Zoology. All courses.

Chemistry. All undergraduate courses except 10.

Classical Languages. All undergraduate courses.

Economics. 1A-1B, 14A-14B, 100, 101, 106, 121A-121B, 123, 131, 133, 135, 140, 150, 160A-160B, 161, 162, 173, 195, 199.

Education. 103, 120, 121, 122, 128, 142, 170.

English and Public Speaking.

English. All undergraduate courses except 161.

Public Speaking. 1A-1B, 2A-2B, 5A-5B, 10A-10B, 110, 111.

French. All undergraduate courses except 190.

Geography. All undergraduate courses except 7A-7B and 169.

Geology. All undergraduate courses.

German. All courses except A3-B3.

History. All undergraduate courses except 11 and 77.

Home Economics. 1A-1B, 11A-11B, 120, 128A-128B.

Mathematics. All undergraduate courses except 19 and 74.

Astronomy. All undergraduate courses.

Engineering. All undergraduate courses.

Mechanic Arts. None.

Military Science and Tactics. All undergraduate courses.

Music. 1A-1B, 3A-3B, 4A-4B, 9A-9B, 9C-9D, 10A-10B, 10C-10D, 55A-55B,
101A-101B, 105A-105B, 111A-111B.

Philosophy. All undergraduate courses.

Physical Education for Men. 1 and 3.

Physical Education for Women. 2, 4, 44.

Physics. All undergraduate courses.

Political Science. All undergraduate courses.

Psychology. All undergraduate courses except 119.

Spanish. All undergraduate courses except 190.

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 University of California at Los Angeles.

- (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 University of California at Los Angeles may be used as preparatory to admission to the professional colleges and schools of the University in Berkeley and in San Francisco.

A. PRE-DENTAL 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 semester	Units second semester
<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
Electives as necessary to make up units .....	.....	.....
	<hr/> 16	<hr/> 16

Second Year

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
	<hr/> 16	<hr/> 16

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.

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

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

‡ University of California at Los Angeles requirement. Note: not required, 1928-29, because not given.

B. PRE-MEDICAL CURRICULUM—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 limitation of enrollment, 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 University of California at Los Angeles 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.

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.

For matriculation in the Medical School the student must be eligible for admission to senior standing in the College of Letters and Science.

This requires the attainment of the Junior Certificate and the subsequent completion of a minimum of 22 units, of which at least 4 units must be in upper division courses. The total number of college units presented must be at least 92.

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

It is very important that students remember that the class entering the Medical School is at present limited, the basis of selection being scholarship during the Pre-Medical years; in the past there have been a great many more applicants than could be admitted. Pre-Medical students who, upon the conclusion of their third or junior year, find themselves thus excluded from the Medical School, will be unable to obtain the Bachelor's degree in the College of Letters and Science at the end of the fourth year, unless they plan their program with this contingency in mind. They should, therefore, either enter a departmental major at the beginning of the junior year, at the same time meeting all Pre-Medical requirements, or include in their Pre-Medical program a sufficient number of appropriate courses in some major department. Provision for the completion of such a major does not prejudice the student's eligibility for admission to the Medical School.

PRE-MEDICAL PROGRAM¹

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

	<i>First Year</i>	
	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

¹ 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.

* 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 (c) in place of English 1A-1B.

‡ 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.

‡ University of California at Los Angeles requirement. Note: not required, 1928-29, because not given.

	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 junior certificate)	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
² 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
	16	16

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

<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 junior certificate)	6	6
	16	16

² 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.

‡ University of California at Los Angeles requirement. Note: not required, 1928-29, because not given.

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

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 5 (Economic Geography)..... 6

Natural Sciences 9

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

Mathematics:

Mathematics 2 (Mathematical Theory of Investment)..... 3

Economics:

Economics 1A-1B 6

Military Science, Physical Education..... 8

Electives 20

Total..... 64 units

Mathematics.—Elementary Algebra and Plane Geometry. Students entering without these subjects must meet the requirement either by College Entrance Examination Board examinations or in the summer session. Credit for such work will not be counted as part of the 64 units.

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

‡ University of California at Los Angeles requirement. Note: not required, 1928-29, because not given.

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 (two years), and geometrical drawing (one year). Without this preparation it will be difficult or impossible to complete the required curriculum within four years.

Foreign Language Requirement.—A satisfactory reading knowledge of scientific German before the junior year is essential. A reading knowledge of French will be of advantage, also.

A student who has chosen his high school work with thought for his future will take approximately the following curriculum:

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 3C, 4B	6	8
†Psychology X	(1)		Physics 1C-1D	8	8
Mathematics 8, 8A	8	8	Chemistry 6A-6B	8	8
Physics 1A-1B	8	8	Chemistry 8A, 9	8	8
Chemistry 1A-1B	5	5	Elective		8
‡German A-B	5	5			
				17	17
	18	18			

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 degree of Bachelor of Education. Each also leads to one of the following teaching credentials:

1. The Kindergarten-Primary Credential, valid in the kindergarten and grades one, two and three of the elementary school.
2. The General Elementary Credential, valid in the eight grades of the elementary school.
3. The Junior High School Credential, valid in the junior high school.

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

† University of California at Los Angeles requirement. Note: not required, 1928-29, because not given.

‡ German A is the equivalent of the first two years of high school German. Completing of this in high school will lessen the work of the freshman year.

4. The Secondary Special Credential of the following types: Art, Commerce, Home Making, Industrial Arts Education, Music and Physical Education. These credentials are valid in the high school, junior high school, and elementary school.

Prior to September 15, 1930, students may qualify for either the Kindergarten-Primary or the General Elementary Credential upon the completion of the first three years of the regular four-year curricula leading to these credentials. Students wishing to avail themselves of this provision should consult the adviser concerned, at the time of registration, in order that their courses may be properly arranged. This opportunity is not open to students registering as freshmen after February, 1928.

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 45.
- III. Presentation of a certificate of physical health and fitness from the University of California at Los Angeles 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 Requirements	42-44 units
1. Subject A.	
2. Psychology X, [†] 1A-1B	6
3. English (including English 1A)	6

* Although students may enter the Teachers College under Plan I (see page 23) 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 during regular sessions. 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.

‡ Not required, 1928-29, because not offered.

4. Natural Sciences	12
Courses in physical or biological sciences approved by adviser. One course must include laboratory work.†	
5. Social Sciences:	
Political Science 101	2
Courses in Economics, Geography, History or Political Science approved by adviser	10
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
B. Departmental Sequences	44-54 units

Courses chosen from the following departments:

Art, Biology, Chemistry, Classical Languages, Economics, English, French, Geography, Geology, German, History, Home Economics, Mathematics, Mechanic Arts, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Spanish.

At least 20 units must consist of advanced courses completed in the upper division. Of these, the student must choose sequences of not less than 8 units in each of two departments, or not less than 5 units in each of three departments. Each such sequence must be preceded by at least 6 units of preparatory study in the department concerned.

Including upper and lower division courses, a minimum of 12 units must be completed in one department.

C. Professional Courses	24-40 units
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Students must complete not less than 24 units of courses approved by the Department of Education as affording adequate professional preparation for the field in which certification is desired.

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

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. 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.

ART*

- NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts.
 LOUISE P. SOOY, Associate Professor of Fine Arts.
 HELEN CLARK CHANDLER, Assistant Professor of Fine Arts (Chairman).
 BESSIE E. HAZEN, Ed.B., Assistant Professor of Fine Arts.
 ANNITA DELANO, Associate in Fine Arts.
 HELEN M. HOWELL, Associate in Fine Arts.
 HELEN J. LEDGERWOOD, Ed.B., Associate in Fine Arts.
 ANNIE C. B. MCPHAIL, Ed.B., Associate in Fine Arts.
 BARBARA BROOKS MORGAN, Associate in Fine Arts.
 ADELAIDE MORRIS, M.A., Associate in Fine Arts.
 OLIVE NEWCOMB, Associate in Fine Arts.
 BERYL KIRK SMITH, Associate in Fine Arts.
 LOUISE GUTHRIE THOMPSON, Ed.B., Associate in Fine Arts.
 VIRGINIA VAN NORDEN, Ed.B., Associate in Fine Arts.
 BELLE H. WHITICE, Associate in Fine Arts.
 WINONA WENZLICK, Ed.B., Assistant in Art.

Letters and Science List.—Courses 1A-1B, 2A-2B, 4A-4B, 31A-31B, 32A-32B, 34A-34B, 103, 154, 161A-161B are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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

(a) Education 103, 170; Teaching, 6-10 units; Art 160A-160B, 180; approved courses in Education to total 24 units.

(b) Art—Required basic courses totaling 25 units are as follows: Appreciation and History of Art 1A-1B, 31A-31B, 161A-161B (6); Design 2A-B, 12A, 32A-32B (9); Costume Appreciation 133 (1); Drawing and Painting 4A-4B (4); House Design and Decoration 16A (1); Landscape 37A (1); Stage Craft 8A-8B, 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 adviser.

Laboratory Fees.—The fee required for courses 9B, 29A, 29B, 34A, 158, is 50 cents; for courses 8A, 8B, 198A, 198B is \$1; for courses 19A, 19B, 30K, 30E, 39A, 39B is \$2; for courses 34B, 164 is \$4.50.

Courses 1A and 2A are prerequisite to all other courses in the department except 30; 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 paintings and brief outlines of previous work.

* A major in art is not offered in the College of Letters and Science in the University of California at Los Angeles. 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. M W, 12, 1; Tu Th, 10. Associate Professor GERE
 A. Principles of Aesthetics.
 B. Prehistoric and Primitive Art. History of Ancient, Early Mediaeval and Gothic Art.
30. Fine and Industrial Art Education. (2) Either half-year.
 Miss MORRIS, Miss WHITE, Miss NEWCOMB, Mr. KELLER
 Prerequisite: Art 2A.
 The place of fine and industrial arts in kindergarten-primary and elementary education; the place of art appreciation in constructive activities; individual and group activities in the study of industrial art subject matter.
 Section E—Elementary (Miss White).
 Section K—Kindergarten-Primary (Miss Morris).
- 31A-31B. (1-1) Yr. Associate Professor GERE
 A. History of Renaissance Architecture; History of Italian Painting and Sculpture.
 B. History of Spanish, Flemish, Dutch, German, French and American Painting. Modern Painting.
- 160A-160B. Principles of Art Education. (2-2) Yr.
 Miss MORRIS, Miss HOWELL
 A. Principles of Elementary Art Education.
 B. Principles of Secondary Art Education.
- 161A-161B. (1-1) Yr. Associate Professor GERE
 A. Mohammedan Art. East Indian, Chinese, Korean and Japanese Art.
 B. American Contributions to Art. European Art Centers.
180. Organization and Administration of Art Education. (2) II.
 Associate Professor SOOY
 Prerequisite: senior standing.

Costume

13. Costume Appreciation and Design. (2) II. Miss VAN NORDEN
 For home economics students. Appreciation through study of line, color, and texture in costume with practical application to individuals. Original designing of costumes.
133. Costume Appreciation. (1) II.
 Associate Professor SOOY, Miss VAN NORDEN
 Discussion and demonstration to develop appreciation of costume as a means of art expression. Costume is considered from the standpoint of abstract design, becomingness, suitability, and expressiveness.

103. History of Costume. (1) II. Associate 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. Associate Professor SOOY, Miss VAN NORDEN

Prerequisite: 32A, 134A.

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 fashion, etc.

Crafts

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

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.

9. Elementary Construction. (2) Either half-year. Miss WHITICE

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. Miss NEWCOMB

Prerequisite: 2B.

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

- 29A-29B. Bookbinding. (2-2) Yr. Miss WHITICE

Prerequisite: 9.

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. Miss WHITICE

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

49. Basketry. (2) I. 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.

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.

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.

Miss NEWCOMB

Prerequisite: 19B.

Study of glazes—stacking kiln and firing.

158. Textile Decoration and Block Print. (2) II.

Prerequisite: 8B, 32A.

Miss LEDGERWOOD, Mrs. MORGAN

The design and execution of textiles using the process of tie dyeing and batik, and the use of block printing process in textile decoration and in pictorial composition.

168. Stage Craft. (1) I.

Associate Professor SOOY

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.

Miss NEWCOMB

S, 9, 10, 11. Prerequisite: 134A.

Design

2A-2B. Art Structure. (2-2) Yr.

Mrs. MORGAN, Mrs. THOMPSON, and the STAFF

A. Fundamental course upon which all other courses are based. Elements and principles of art. Color theory and harmony.

B. Course in composition of natural forms.

12A-12B. Lettering. (1-2) Yr.

Assistant Professor HAZEN, Miss MORRIS, Mrs. SMITH,
and the STAFF

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.

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.

Associate Professor SOOY, Assistant Professor CHANDLER,

Miss DELANO

Prerequisite: 32A-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.

Assistant Professor HAZEN, Miss McPHAIL

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.

34A-34B. Figure Drawing and Painting. (2-2) Yr.

Assistant Professor CHANDLER, Mrs. SMITH, Mrs. THOMPSON

Prerequisite: 2B, 4A-4B.

A. Imaginative figure drawing in preparation for illustration and costume design.

B. Life class.

154. Advanced Drawing and Painting. (2) II.

Assistant Professor CHANDLER

A study of structure and various types of rendering in black and white. Architectural forms, figures, landscapes, etc.

164. Life Class. (2) II.

Mrs. SMITH

Advanced drawing and painting from the figure, including the study of anatomy.

House Design and Decoration

16A-16B. (1-1) Yr.

Miss MORRIS, Miss VAN NORDEN, and the STAFF

A. House furnishing.

B. History of furniture.

156A-156B. Interior Decoration. (2-2) Yr. Miss VAN NORDEN
Prerequisite: 2B, 4B, 16B.

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. Miss VAN NORDEN
Prerequisite: 156B.

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

Illustration

135A-135B. Book Illustration. (2-2) Yr. Assistant Professor CHANDLER, Miss THOMPSON
Prerequisites: 32A, 134A.

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. Miss WENZLICK
Prerequisite: 134A.

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

175. Advanced Illustration including Wall Decorations. (2) II.
Prerequisite: 135A-135B. Assistant Professor CHANDLER

Landscape

37A-37B. Sketching. (1-2) Yr. Assistant Professor HAZEN, Mrs. MORGAN
Prerequisite: 2B, 4B.

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. Assistant Professor CHANDLER
Prerequisite: 137B.

BIOLOGICAL SCIENCES

- LOYE HOLMES MILLER, Ph.D., Professor of Biology (Chairman).**
O. L. SPONSLER, Ph.D., Professor of Botany.
BENNETT M. ALLEN, Ph.D., Professor of Zoology.
ALBERT W. BELLAMY, Ph.D., Associate Professor of Zoology.
JOHN F. KESSEL, Ph.D., Associate Professor of Zoology.
FRANK E. OLDER, B.S., Assistant Professor of Agricultural Teaching.
CARL C. EPLING, Ph.D., Assistant Professor of Botany.
ARTHUR W. HAUPT, Ph.D., Assistant Professor of Botany.
ARTHUR M. JOHNSON, Ph.D., Assistant Professor of Botany.
ORDA A. PLUNKETT, Ph.D., Assistant Professor of Botany.
FLORA MURRAY SCOTT, Ph.D., Assistant Professor of Botany.
GORDON H. BALL, Ph.D., Assistant Professor of Zoology.
EMILY M. BARTLETT, Ph.D., Instructor in Biology.
EDGAR L. LAZIER, B.A., Instructor in Zoology.
CAROLINE P. CANBY, M.A., Associate in Biology.
RAYMOND B. COWLES, M.S., Associate in Biology.
CHARLES H. HICKS, M.A., Associate in Biology.
MARTHA L. HILEND, M.A., Associate in Botany.
W. B. WELCH, A.B., Associate in Botany.
JACK SLOAN, M.S., Associate in Physiology.
RUTH ANDERSON, M.A., Associate in Zoology.

At the University of California at Los Angeles 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.

Letters and Science List.—All undergraduate courses in biology, botany, paleontology, and zoology are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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 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 2A. 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, 35, 100, 105, 106, 107C, 111C, 112, 199, is \$3. The student will be held responsible for all apparatus lost or broken.

AGRICULTURE*

1. General Horticulture. (3) II. 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. 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. Fundamentals of Biology. (3) Either half-year. Associate Professor BELLAMY, Assistant Professor HAUPT, Dr. BARTLETT
Lectures, two hours; quiz, one hour; demonstration, one hour; one required field trip.
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. Professor MILLER and Mr. COWLES
Prerequisite: Biology 1 or equivalent.
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.

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

BOTANY

LOWER DIVISION COURSES

2A-2B. General Botany. (4-4) Yr.

Professor SPONSLER, Assistant Professor SCOTT, Assistant Professor PLUNKETT

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.

6. Plant Histology. (3) I.

Assistant Professor 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.

Professor SPONSLER

Lecture, one hour; laboratory, six hours.

Prerequisite: Botany 2A, 6, and chemistry.

Experimental work designed to demonstrate various activities of the plant.

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

Lecture, one hour; laboratory, six hours, and additional field work to be arranged.

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.

Assistant Professor 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.

Assistant Professor HAUPT

Lecture, one hour; laboratory, six hours.

Structure, development and phylogenetic relationships of the principal orders of liverworts, mosses, ferns, and their allies.

- 105c. Morphology of Spermatophytes. (3) I. Assistant Professor HAUPT
Lecture, one hour; laboratory, six hours.
Prerequisite: Botany 105B.
Continuation of 105B dealing with the gymnosperms and angiosperms.
110. Botanical Microtechnique. (3) I. Dr. BARTLETT
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. Assistant Professor SCOTT
Lecture, one hour; laboratory, six hours.
Prerequisite: Botany 105A or 105B. Botany 105c is recommended.
Anatomy and physiology of the cell.
114. Advanced Plant Physiology. (3) I. Professor SPONSLER
Conferences and laboratory.
Prerequisite: Botany 6 and 7.
Experimental work on certain functions of the plant.
120. Phytopathology. (3) II. Assistant Professor PLUNKETT
Lecture, one hour; laboratory, six hours.
A study of bacterial and fungus diseases of plants.
152. Experimental Plant Ecology. (3) II. —
Lecture, one hour; laboratory, six hours.
Prerequisite: Botany 104A-104B.
A laboratory study of structures and functions of plants as influenced by controlled environmental factors.
- 199A-199B. Problems in Botany. (3-3) Yr. Professor SPONSLER and STAFF
Prerequisite: senior standing.

PALEONTOLOGY†

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

† Courses in Invertebrate Paleontology are offered by the Department of Geology (p. 116).

PHYSIOLOGY†

1. General Human Physiology. (3) I. Mr. SLOAN
Lectures, two hours; laboratory, three hours.
Prerequisite: Chemistry 2A-2B or high school chemistry.
Primarily for students in Home Economics and Physical Education.

ZOOLOGY**LOWER DIVISION COURSES**

- 1A-1B. General Zoology. (5-5) Yr. Assistant Professor 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. Dr. BARTLETT
Laboratory, six hours; assigned readings.
Prerequisite: Zoology 1A and high school chemistry.
The preparation of tissues for microscopical examination.
35. General Human Anatomy. (3) I. Mr. SLOAN
Lectures, two hours; quiz, one hour; laboratory, three hours.
Prerequisite: sophomore standing; Zoology 1A or Biology 1; and
Physiology 1.

UPPER DIVISION COURSES

- 100A. Genetics. (4) I. Associate 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. Associate 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. Associate Professor BELLAMY
Laboratory, six hours. May not be taken without 100B.

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

103. **Experimental Zoology. (2) I.** Professor ALLEN
Lectures, reports on articles in scientific journals and special problems.
Prerequisite: Zoology 1A-1B.
105. **Advanced Vertebrate Embryology. (3) I.** 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.**
Lectures, two hours; laboratory, six hours. Mr. LAZIER
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.** 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.** Professor ALLEN
May be taken only concurrently with course 107.
111. **Parasitology. (2) Either half-year.**
Associate Professor KESSEL, Assistant Professor 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) Either half-year.**
Associate Professor KESSEL, Assistant Professor BALL
Prerequisite: Zoology 111, or may be taken concurrently with course 111.
- 111d. **Advanced Parasitology. (4) II.** Associate Professor KESSEL
Prerequisite: Zoology 111 and 111c.
112. **Advanced Invertebrate Zoology. (4) II.** Assistant Professor BALL
Lectures, two hours; laboratory and field, six hours.
Prerequisite: Zoology 1A. Zoology 1B is 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.** Professor MILLER
Lectures, two hours; laboratory and field, six hours.
Prerequisite: Zoology 1A-1B.
Emphasis will be placed on the habits, distribution, and ecology of the reptile, bird, and mammal faunas of California.
- 199A-199B. **Problems in Zoology. (2-2) Yr.**
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 (Chairman).
 MAX S. DUNN, Ph.D., Associate Professor of Chemistry.
 WILLIAM R. CROWELL, Ph.D., Assistant Professor of Analytical Chemistry.
 JAMES B. RAMSEY, Ph.D., Assistant Professor of Physical Chemistry.
 G. ROSS ROBERTSON, Ph.D., Assistant Professor of Organic Chemistry.
 HOSMER W. STONE, Ph.D., Assistant Professor of Inorganic Chemistry.
 H. DARWIN KIRSCHMAN, M.S., Associate in Chemistry.
 RICHARD D. POMEROY, M.S., Associate in Chemistry.

Letters and Science List.—All undergraduate courses except 10 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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 1A-1B (6); trigonometry, Mathematics 8, 3A-3B (9), and a reading knowledge of German. Recommended: a second course in chemistry, Physics 1C-1D, 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 University at Los Angeles 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 individual responsible. The fees per semester are as follows: Courses 2A-2B, 10, 107A-107B, 199, \$10.00; 1A-1B, 5, 6A-6B, 120, \$14.00; 111, \$22.00; 9, \$25.00.

LOWER DIVISION COURSES

1A-1B. General Chemistry. (5-5) Beginning either half-year.

Professor MORGAN and STAFF

Lectures, M W F, 10 (for those beginning in September); Tu Th S, 10 (for those beginning in February); laboratory, six hours.

Prerequisite: high school chemistry, or physics and trigonometry.

Required for Colleges of Engineering, Chemistry, Agriculture, and of pre-medical and pre-dental students and chemistry majors.

- 2A-2B. General Chemistry. (4-4) Yr.**
Associate Professor DUNN, Assistant Professor STONE
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.**
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. 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. 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 pre-medical and pre-dental students, sanitary and municipal engineers, petroleum engineers, chemistry majors, and College of Chemistry students.
- 9. Elementary Organic Laboratory. (3) II.**
Laboratory, nine hours. Assistant Professor ROBERTSON
Prerequisite: Chemistry 8A, or both courses may be taken at the same time.
Required of petroleum engineers, pre-medical and pre-dental students, chemistry majors, and College of Chemistry students.
- 10. Organic and Food Chemistry. (4) I. 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. Associate Professor DUNN
Lectures, Tu Th, 8; laboratory, 3 hours.
Prerequisite: Chemistry 8A and 9.
110. Physical Chemistry Lectures. (3) I. Assistant Professor RAMSEY
M W F, 10.
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.
M W F, 10. Assistant Professor RAMSEY
Prerequisite: Chemistry 110.
Lectures and problems. A continuation of course 110.
111. Physical Chemistry Laboratory. (4) II. 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. Assistant Professor STONE
Lecture, one hour; laboratory, six hours.
Prerequisite: Chemistry 6A-6B and 110.
Required of chemistry majors.
Preparation and experimental study of substances, designed pri-
marily to illustrate the factors which influence equilibrium and the
speed of chemical reactions. Correlation of material by means of the
periodic system.
199. Problems in Chemistry. (3) Either half-year. The STAFF
Prerequisite: junior standing with such special preparation as the
problem may demand.

CLASSICAL LANGUAGES

ARTHUR PATOH MCKINLAY, Ph.D., Associate Professor of Latin (Chairman).

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

DOROTHEA CLINTON WOODWORTH, Ph.D., Assistant Professor of Latin and Greek.

HERBERT BENNO HOFFLETT, Ph.D., Instructor in Latin and Greek.

Letters and Science List.—All undergraduate courses in classical languages are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

LATIN

Preparation for the Major.—Required: Four years of high school Latin, or two years of high school Latin and Latin O and D; Latin I and 5; Latin 3A-3B; Ancient Civilizations 112A-112B. 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. Assistant Professor WOODWORTH
M W F, 11.

Prerequisite: two years of high school Latin. See under GA-GB.

D. Fourth Year Latin: Vergil. (3) Either half-year.
Assistant Professor WOODWORTH
I, M W F, 12; II, M W F, 11.

Prerequisite: Latin C or three years of high school Latin.

GA-GB. Latin Prose Composition. (1-1) Yr. Th, 9.
Assistant Professor WOODWORTH

Prerequisite: two years of high school Latin.

Required of students in C.

1. Cicero: De Senectute; Pliny: Letters. (3) Either half-year.
Associate Professor MCKINLAY, Assistant Professor WOODWORTH
I, M W F, 11; II, M W F, 9.

Open to those who have had four years of high school Latin.

Classical Languages

- 3A-3B. Latin Prose Composition. (1-1) Yr. Th, 1. Dr. HOFFLETT
Prerequisite: four years of high school Latin.
5. Horace: Odes and Epodes. (3) II. Associate Professor MCKINLAY
M W F, 11.
This course follows Latin 1.

UPPER DIVISION COURSES

Latin 102 and 106 are prerequisite to Latin 117, 120, 140, and 191.

102. Catullus and Livy. (3) I. Dr. HOFFLETT
M W F, 2. Prerequisite: Latin 5.
- 104C-104D. Latin Composition. (1-1) Yr. Dr. HOFFLETT
Tu, 9.
Ciceronian Prose.—104A, Oratory; 104B, Rhetoric.
Prerequisite: Latin 3A-3B. Required of Latin majors.
106. Tacitus and Plautus. (3) II. Assistant Professor WOODWORTH
M W F, 2. Prerequisite: Latin 102.
117. Vergil: Georgics. (3) II. M W F, 11 Assistant Professor CAREY
120. Martial and Juvenal. (3) II. Assistant Professor CAREY
M W F, 10.
140. Ovid: Metamorphoses. (3) I. Assistant Professor CAREY
191. Cicero: Letters. (3) I. Associate Professor MCKINLAY
M W F, 2.

GREEK†

LOWER DIVISION COURSES

- 1AB-2AB. Greek for Beginners, Attic Prose. (5-5) Yr. Dr. HOFFLETT
M Tu W Th F, 10.
- 1A-1B. Greek for Beginners, Attic Prose and Homer. (3-3) Yr.
M W F, 9. Associate Professor MCKINLAY
- 3A-3B. Prose Composition. (1-1) Yr. Th, 10. Assistant Professor CAREY

† A major in Greek in the College of Letters and Science is not offered in the University of California at Los Angeles. 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. Dr. HOFFLEIT
M W F, 9. Prerequisite: Greek 102.
102. Greek Poetry. (3) I. Assistant Professor WOODWORTH
M W F, 9. Prerequisite: Greek 1AB-2AB or Greek 1A-1B.
- *103. Greek Drama: Euripides and Aristophanes. (3) I. Assistant Professor CAREY
M W F, 8. Prerequisite: Greek 101, 102.
- *104. Historical Prose: Herodotus or Thucydides. (3) I. Assistant Professor CAREY
M W F, 8. Prerequisite: Greek 101, 102.
- *105. Greek Drama: Aeschylus and Sophocles. (3) II. Assistant Professor CAREY
M W F, 8. Prerequisite: Greek 101, 102.
- *114. Plato: Republic. (3) II. Assistant Professor CAREY
M W F, 8. Prerequisite: Greek 101, 102.

ANCIENT CIVILIZATIONS†

- 112A. History of Greece to the Fall of Corinth. (3) I. Assistant Professor CAREY
M W F, 12.
- 112B. History of Rome to the Death of Justinian. (3) II. Associate Professor MCKINLAY
M W F, 12.

* Greek 108 and Greek 114 will ordinarily be given in alternation with Greek 104 and Greek 105 respectively. Greek 108 and Greek 114 will be offered in 1928-29.

† Knowledge of Greek or Latin not required. Required of Latin majors. Open in the lower division to properly prepared majors in philosophy, history, political science, English, and foreign language.

ECONOMICS

¹GORDON S. WATKINS, Ph.D., Professor of Economics.

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

EARL JOYCE MILLER, Ph.D., Associate Professor of Economics and Dean of Men.

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

FLOYD F. BURCHETT, Ph.D., Assistant Professor of Economics.

DUDLEY F. PEGRUM, Ph.D., Assistant Professor of Economics.

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

MARVEL M. STOCKWELL, Ph.D., Assistant Professor of Economics.

EVA M. ALLEN, Associate in Commercial Practice.

PAUL A. DODD, A.B., Associate in Economics.

ESTELLA B. PLOUGH, Associate in Commercial Practice.

NATHAN L. SILVERSTEIN, A.B., Associate in Economics and Accounting.

Letters and Science List.—Courses 1A-1B, 14A-14B, 100, 101, 106, 121A-121B, 123, 131, 133, 135, 140, 150, 160A-160B, 161, 162, 173, 195, and 199 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Required: Economics 1A-1B, and at least one of the following: Political Science 3A-3B, 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 103, 170; Teaching, 6-10 units; approved courses in Education to total 24 units.

(b) Economics 1A, 1B, 14A, 14B; Commerce 16, 17, 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 University at Los Angeles 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.

¹ In residence first half-year only.

LOWER DIVISION COURSES

1A-1B. Principles of Economics. (3-3) Yr.

Associate Professor MILLER and the STAFF
Lectures, Tu Th, 9 and 1 hour quiz; Tu Th, 11 and 1 hour quiz;
M W, 8 and 1 hour quiz; M W, 10 and 1 hour quiz.

14A-14B. Principles of Accounting. (3-3) Yr.

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.

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.

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.

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.

Prerequisite: course 14A-14B.

Associate Professor NOBLE

A study of different types of ownership with emphasis on the corporate organization; internal organization, including departmentalization; correlation of functions and activities of departments of marketing, production, personnel, finance, and accounting.

123. Principles of Marketing. (3) Either half-year.

Assistant Professor RIGGLEMAN

A study is made of the functions of middlemen, the marketing of farm products, minerals, forest products, manufactures, wholesaling and retailing. Salesmanship, advertising, brands, trade marks, trade names, cooperative marketing, credits and collections, installment selling, business cycles, and market analysis are also considered.

* Not to be given, 1928-29.

131. Public Finance. (2) Either half-year.

Assistant Professor STOCKWELL

The principles underlying the proper raising and spending of public money. Property, income, corporation, inheritance taxes and other sources of revenue. Budgeting of public expenditures. Economic, social and financial significance of our fiscal structure and policies.

133. Corporation Finance. (3) II.

Assistant Professor BURTOHETT

Prerequisite: course 14A-14B.

A study of the financial structures and financial problems of large business corporations. The instruments and methods of financing a corporation will be considered in their social and economic effects as well as in their effect on the corporation and the shareholders.

135. Money and Banking. (3) Either half-year.

Assistant Professor BURTOHETT

A study of the functions of money and the development of credit institutions; the nature of the banking business, the development of the American banking system, and the significance of commercial banking in the financial organization of society.

140. Elementary Statistics. (4) Either half-year.

Assistant Professors FRISBEE, RIGGLEMAN

Tu Th, 8, 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; study of business cycle.

Recommended in the first half of the junior year.

150. Labor Economics. (3) I.

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.

Associate Professor NOBLE, Assistant Professor FRISBEE

Prerequisite: course 14A-14B.

161. Cost Accounting. (3) I.

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.

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.

Assistant Professor PEGRUM

A general historical and contemporaneous survey of the development of American railroads. Extent and significance of federal and state regulation of railroads. Rates and rate making; classification of freight; valuation for rate-making purposes. Present status of the railroad problem.

195. Principles of Foreign Trade. (3) Either half-year.

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.

*199. International Economic Problems. (2) II.

Professor WATKINS and STAFF

Prerequisites: Economics 100, Economics 135, and 12 units of B average in upper division social sciences.

A critical survey of contemporary international problems. An analysis of foreign trade, world debts, banking relations, and cooperative control of labor conditions, as these affect the movement for constructive international progress. Special emphasis upon original investigation of specific problems.

COMMERCE

TEACHERS' COURSES

- | | |
|--|-------------|
| A. Typing. (No credit) Either half-year. Tu Th, 10. | Mrs. ALLEN |
| B. Shorthand. (No credit) I. M W F, 10. | Mrs. ALLEN |
| 16. Typing. (2) Either half-year. Tu Th, 2.
Prerequisite: course A or its equivalent. | Mrs. ALLEN |
| 17. Shorthand. (3) II. M W F, 10.
Prerequisite: course B or its equivalent. | Mrs. ALLEN |
| 18A-18B. Penmanship. (2-2) Yr. Tu Th, 9, 10. | Mrs. PLOUGH |
| 19. Business Mathematics. (2) II. | Mrs. ALLEN |
| *198. Commercial Education. (3) II.
Associate Professor NOBLE and the STAFF | |

* Not to be given, 1928-29.

EDUCATION

ERNEST CARROLL MOORE, Ph.D., LL.D., Professor of Education and Director of the University at Los Angeles.

MARVIN L. DARSIE, Ph.D., Professor of Education and Dean of the Teachers College.

JUNIUS L. MERIAM, Ph.D., Professor of Education.

CHARLES W. WADDELL, Ph.D., Professor of Education and Director of Training Schools.

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

KATHERINE L. McLAUGHLIN, M.A., Associate Professor of Education.

ETHEL I. SALISBURY, M.A., Associate Professor of Elementary Education and Assistant Supervisor of Training.

WILLIAM A. SMITH, Ph.D., Associate Professor of Education (Chairman).

J. HAROLD WILLIAMS, Ph.D., Associate Professor of Education.

FREDERICK P. WOELLNER, Ph.D., Associate Professor of Education.

CLARENCE HALL ROBISON, Ph.D., Assistant Professor of Education and University Examiner.

CORINNE A. SEEDS, Principal of the Training School and Assistant Professor of Elementary Education.

FRANCES GIDDINGS, M.A., Supervisor of Training and Associate in Kindergarten-Primary Education.

BARBARA GREENWOOD, Supervisor of Nursery School Training and Associate in Kindergarten-Primary Education.

MARGARET MANNING ROBERTS, Ph.B., Associate in Kindergarten-Primary Education.

EMILY TODD BELL, Assistant in Kindergarten-Primary Education.

SIR JOHN ADAMS, B.Sc., M.A., LL.D., F.C.P., Lecturer in Education (Professor Emeritus of Education, University of London).

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).

Letters and Science List.—Courses 103, 120, 121, 122, 123, 142, 170 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

A. REQUIREMENTS FOR GENERAL TEACHING CREDENTIALS*

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."

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

(a) General requirements listed on pages 75-76.

(b) Art, 2A, 30K; Biology 1, 12; History 11; Music 60K; Public Speaking 15.

(c) Education 100K, 101K, 102, 103, 104K; Teaching K190A, K190B.†

(After September 15, 1930, the degree of Bachelor of Education will be required for the Kindergarten-Primary Credential.)

II. GENERAL ELEMENTARY CREDENTIAL

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

(a) General requirements listed on pages 75-76.

(b) Art 2A, 30E; English 52A, Geography 1, 2; History 39, Mathematics 19, Music 60E.

(c) Education 100E, 101E, 102, 103, 104E; Teaching E190A, E190B.†

(After September 15, 1930, the degree of Bachelor of Education will be required for the General Elementary Credential.)

III. GENERAL JUNIOR HIGH SCHOOL CREDENTIAL

Completion of all requirements for the degree of Bachelor of Education listed on pages 75-76. Education 100J, 101J, 102, 103, 104J and Teaching J190A, J190B must be included†

* A major in education in the College of Letters and Science is not offered in the University of California at Los Angeles. Students wishing to satisfy the requirements for a major in education are referred to the Announcement of Courses in the Departments at Berkeley.

Requirements for the special secondary credentials in Art, Commercial Education, Home Making, Industrial Arts Education, Music and Physical Education are listed under these departments.

† 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.

B. BASIC COURSES, REQUIRED FOR ANY GENERAL TEACHING CREDENTIAL

Junior standing is prerequisite to all courses in Education, except for students qualifying for the General Elementary or Kindergarten-Primary Credentials on the 96 unit basis.

100. Growth and Development of the Child. (3) Either half-year.

Prerequisite: Psychology 1A, 1B.

The essential facts of mental and physical development during childhood and adolescence. Particular attention is given to problems of mental hygiene during critical growth periods.

Section K—Kindergarten-Primary.

Associate Professor McLAUGHLIN

Section E—General Elementary.

Associate Professor WILLIAMS

Section J—Junior High School.

Professor WADDELL

101. Principles of Teaching. (3) Either half-year.

Prerequisite: Psychology 1A, 1B.

Application of psychological principles to teaching problems at the various school levels.

Section K—Kindergarten-Primary.

Associate Professor McLAUGHLIN

Section E—General Elementary.

Professor MERIAM, Assistant Professor ROBISON, Assistant Professor SEEDS

Section J—Junior High School.

Assistant Professor ROBISON

102. Introduction to Educational Measurement. (2) Either half-year.

Prerequisite: Psychology 1A, 1B. Associate Professor WILLIAMS

An introduction to the problem of measuring the outcomes of instruction.

103. Social Foundations of Education. (3) Either half-year.

Professor DARSIE, Associate Professor WOELLNER

Education as a factor in social evolution. Analysis of current educational practices in the light of modern social needs.

104. The Curriculum. (3) Either half-year.

Selection and arrangement of curricular materials at the different school levels.

Section K—Kindergarten-Primary.

Miss GIDDINGS

Section E—General Elementary.

Professor MERIAM

Section J—Junior High School.

Associate Professor EBY

C. ELECTIVE COURSES

120. Modern Developments in Educational Theory and Practice. (3) I.
SIR JOHN ADAMS
The newer developments of educational theory and practice as exemplified in the current movements that make up that is commonly called the new education.
121. Philosophy of Education. (3) II. SIR JOHN ADAMS
An examination of the various philosophical systems in their relation to the educational theory of their time and the present day.
122. History of Education. (3) I. SIR JOHN ADAMS
The evolution of educational practices and ideals with emphasis on social, economic, and philosophical backgrounds.
128. Comparative Education. (3) II. SIR JOHN ADAMS
A critical survey of modern school practices with special reference to conservative and progressive trends.
132. The Supervision of Teaching. (2) II.
Prerequisite: Education 101, or equivalent.
The technique of supervision, with special emphasis upon the measurement of teaching efficiency.
Section K—Kindergarten-Primary. Associate Professor McLAUGHLIN
*Section E—General Elementary. Professor WADDELL
Section R—Rural Supervision. Associate Professor EBY
135. Rural Society and Education. (3) Either half-year. Associate Professor EBY
A study of the social-economic conditions and needs in rural communities as related to rural education.
137. Rural School Organization and Administration. (2) I. Associate Professor EBY
A consideration of the problems and principles involved in the organization and administration of a modern rural school system.
142. Introduction to State School Administration. (2) I. Professor DARSIE
Principles underlying effective state and county educational organization and administration as shown in practices of representative states. Particular attention is paid to the school system of California.

160A-160B. Vocational Education and Guidance. (2-2) Yr.

Mr. JOHNSON

The significance of vocational education in the economic and social development of a democracy, with special attention to problems of student guidance and placement.

170. Secondary Education. (3) Either half-year.

Associate Professor SMITH

A study of secondary education in the United States, with special reference to the needs of junior and senior high school teachers.

182. Problems of Americanization. (2) Either half-year.

Associate Professor WOELLNER

Prerequisite: Education 103, 104, or equivalent.

Racial and cultural backgrounds of various immigrant groups, with resulting problems of education.

ENGLISH

FREDERIC T. BLANCHARD, Ph.D., Professor of English (Chairman).

—————, Professor of English.

HERBERT F. ALLEN, Ph.D., Associate Professor of English.

SIGURD BERNARD HUSTVEDT, Ph.D., Associate Professor of English.

ALFRED E. LONGUELL, Ph.D., Associate Professor of English.

*BENJAMIN H. BISSELL, 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.

GEORGE S. HUBBELL, Ph.D., Assistant Professor of English.

HARRIET MARGARET MACKENZIE, Ph.D., Assistant Professor of English.

CARLYLE F. MACINTYRE, Ph.D., Assistant Professor of English.

CHARLES A. MARSH, B.S., Assistant Professor of Public Speaking.

ALICE O. HUNNEWELL, Instructor in English.

EVALYN A. THOMAS, B.L.I., Instructor in English.

EDWARD BOCK, A.B., Associate in English.

KATHERINE COLLINS, M.A., Associate in English.

ROBERT E. HARRIS, A.B., Associate in English.

BENJAMIN S. HARRISON, A.B., Associate in English.

FREDERICK POND, M.A., Associate in English.

DECALVUS W. SIMONSON, M.A., Associate in English.

LOUIS C. VALENTINE, A.B., Associate in English.

WILLIAM B. BARTON, A.B., Associate in Public Speaking.

BURDETTE E. BROWN, A.B., Associate in Public Speaking.

WESLEY LEWIS, M.A., Associate in Public Speaking.

LLEWELLYN M. BUELL, Ph.D., 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 41 of this bulletin.

Letters and Science List.—The following courses are included in the Letters and Science List: (a) All undergraduate courses in English except 161; (b) Public Speaking 1A-1B, 2A-2B, 5A-5B, 10A-10B, 110, 111. For regulations governing this list, see page 64.

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, 1928-29.

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.
 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.

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

Sophomore Courses

English 1A-1B is prerequisite to all sophomore courses in English.

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

52A-52B. Types of English Literature. (3-3) Yr.
 Assistant Professor MACKENZIE

A general course in English literature for students whose major is not English. Credit for both 52A-52B and 56A-56B will not be given.

56A-56B. Survey of English Literature. (3-3) Yr.
 Associate Professors HUSTVEDT, ALLEN, LONGUELL, Assistant
 Professors CAMPBELL, CARHART, HUBBELL, MACKENZIE,
 MACINTYRE

Credit for both 56A-56B and 52A-52B will not be given.

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.
 Associate Professors ALLEN, HUSTVEDT, LONGUELL, Assistant
 Professors CAMPBELL, CARHART, HUBBELL
 Prerequisite: the consent of the instructor.

110. English Diction and Style. (3) I. Assistant Professor HUBBELL
 M W F, 10.

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

121A-121B. Nineteenth Century Poetry. (3-3) Yr.
 Associate Professors ALLEN, LONGUELL, Assistant Professor
 MACINTYRE

(A) Wordsworth to Tennyson; (B) Tennyson to Swinburne.

125C-125D. The English Novel. (3-3) Yr. Professor BLANCHARD
M W F, 2.

125G. Nineteenth Century Prose. (3) Either half-year. —

*130A-130B. American Literature. (3-3) Yr. M W F, 3.
Assistant Professors DOWNES, HUBBELL

*153A. Introduction to the Study of Poetry. (3) Either half-year.
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.

*156. The Age of Elizabeth. (3) Either half-year.
Assistant Professor ALLEN

157. The Age of Milton. (3) Either half-year.
Associate Professor HUSTVEDT

161. Junior High School English. (2) I: Tu Th, 2.
Assistant Professor MACKENZIE

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. M W F, 9, 2.
Associate Professors HUSTVEDT, LONGUEIL, ALLEN; Assistant
Professors CAMPBELL, CARHART, DOWNES

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. Associate Professor ALLEN
M W F, 10.

151G. Literary Criticism. (3) Either half-year. Professor BLANCHARD
Prerequisite: the consent of the instructor.

151L. Chaucer. (3) Either half-year. M W F, 11.
Associate Professors HUSTVEDT, LONGUEIL

* Not to be given, 1928-29; probably given, 1929-30.

C. COMPREHENSIVE FINAL EXAMINATION

The Comprehensive Final Examination in the undergraduate major in English must be taken at the end of the senior year. It will consist of two 3-hour papers, the second of which will take the form of an essay. The examination will cover English literature from 1350 to 1900. The papers will be set by the Board of Examiners of the Department, and on occasion will be supplemented by an oral examination. The student should attend the general conferences held by the board, and may also consult individually with the members of the board. The student's preparation for this examination will presumably extend throughout the entire period of his upper division residence. The work should at no time be entered by the student upon his study card as a separate item in his program for a particular session. However, upon the student's passing the examination the grade assigned by the Department will be recorded. Given each half-year, credit 3 units.

PUBLIC SPEAKING*

LOWER DIVISION COURSES

1A-1B. Elements of Public Speaking. (3-3) Yr.
F 8, and two additional hours.

Assistant Professor MARSH, Mr. LEWIS, Mr. RILEY

2A-2B. The Fundamentals of Expression and Interpretation. (3-3) Yr.
M W F, 9. Mrs. HUNNEWELL, Miss THOMAS

5A-5B. Principles of Argumentation. (3-3) Yr.
M W F, 10.

Assistant Professor MARSH, Mr. LEWIS

Prerequisite: Public Speaking 1A-1B and the consent of the instructor.

10A-10B. Dramatic Interpretation. (3-3) Yr. Miss THOMAS
M W F, 2.

15. The Art of Story Telling. (2) Either half-year. Mrs. HUNNEWELL
Tu Th, 11.

UPPER DIVISION COURSES

110A-110B. Third-Year Public Speaking. (3) Yr.
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 extemporary speaking; the preparation of the occasional address. Open to students selected from 110A.

111A-111B. Literary Interpretation. (3-3) Yr.
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.

* A major in public speaking in the College of Letters and Science is not offered in the University of California at Los Angeles. 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 (Chairman).

HENRY RAYMOND BRUSH, Ph.D., Professor of French.

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

MAXWELL AUSTIN SMITH, Ph.D., Assistant Professor of French.

LOUIS F. D. BRIOIS, M.A., Associate in French.

ETHEL WILLIAMS BAILEY, Ph.B., Associate in French.

JULIA BROQUET, M.A., Associate in French.

ANNA FÉNELON HOLAHAN, Ph.B., Associate in French.

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

MADELEINE L. LETESSIER, A.B., Associate in French.

_____, Associate in French.

JEAN GONTARD, Ph.D., Agrégé, Lecturer in French.

Letters and Science List.—All undergraduate courses in French except 190, are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—French A, B, C, D, 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. No student who has matriculation credit for two years of high school French will receive any credit for French A or A².

A. Elementary French. (5) Either half-year. Mr. BRIOIS in charge
M Tu W Th F, 9, 10, 12, 3.

A²: Elementary French. (3) I. Mr. BRIOIS in charge
M W F, 2.

Intended for students who have had one year of high school French.

* Absent on leave, 1928-29.

- B. Elementary French. (5) Either half-year Mr. BRIOIS in charge
M Tu W Th F, 12, 2.
Prerequisite: course A or two years of high school French.
- C. Intermediate French. (3) Either half-year. Mr. BRIOIS in charge
Tu Th S, 9; M W F, 12.
Prerequisite: course B or three years of high school French.
- D. Intermediate French. (3) Either half-year. Mr. BRIOIS in charge
M W F, 9, 11.
Prerequisite: course C or four years of high school French.
- 5A-5B. Advanced French. (3-3) Yr. Professor PÉRIGORD, Mr. BRIOIS
M W F, 9, 10
Prerequisite: course D.
- 5AB. Advanced French. (5) II. Professor BRUSH
M Tu W Th F, 10.
Prerequisite: course D.

UPPER DIVISION COURSES

The prerequisite to all upper division courses is 16 units in the lower division, including either 3A-3B (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.
M W F, 10. Assistant Professor SMITH
- 109A-109B. A Survey of French Literature and Culture. (3-3) Yr.
M W F, 12. Professor PÉRIGORD
(A) The Middle Ages, the Renaissance, and the XVII Century.
(B) The XVIII, XIX, and XX centuries.
- 112A-112B. The Nineteenth Century. (2-2) Yr. Professor BRUSH
Tu, Th, 1.
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. Tu Th, 12. Dr. GONTARD
- *118-118B. The Sixteenth Century. (2-2) Yr. Professor BRUSH

* Not to be given, 1928-29.

120A-120B. The Seventeenth Century. (2-2) Yr. Dr. SMITH
 Tu Th, 11.

121A-121B. The Eighteenth Century. (2-2) Yr. Professor BRUSH
 Tu Th, 2.

130A-130B. Grammar, Composition and Style. (2-2) Yr. Dr. GONTARD
 Tu Th, 10.

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. Professor PÉRIGORD
 Tu Th, 2.

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 primarily for majors in English and history.

190. The Teaching of French. (2) L. Professor BRUSH
 M W, 11.

Prerequisite: French 101A-101B and 109A-109B, the latter being permitted concurrently.

GEOGRAPHY

GEORGE M. McBRIDE, Ph.D., Associate Professor of Geography (Chairman).

BURTON M. VARNEY, Ph.D., Associate Professor of Geography.

MYRTA LISLE McCLELLAN, B.S., Assistant Professor of Geography.

CLIFFORD M. ZIEGLER, Ph.D., Assistant Professor of Geography.

———, Associate in Geography.

JONATHAN GARST, B.S., Associate in Geography.

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

Letters and Science List.—All undergraduate courses in Geography except 7A-7B, and 169, are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Required: Geography 1, and in addition, 2, 3, or 5; Geology 1c or 1A. Recommended: Geography 2, 3, 5, 7A, and 7B; Geology 2c and 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 153A-153B, 162A-162B, 171A-171B, 177A-177B, 181A-181B.

Economics-Political Science Group.—Economics 123, 140, 173, 195, 199. Political Science 125, 127, 154A-154B, 199A-199B.

The student must maintain an average grade of C in upper division Geography courses.

LOWER DIVISION COURSES

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

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

Prerequisite: Geography 1.

——— and the STAFF

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

* In residence second half-year only.

3. Elements of Meteorology. (3) Either half-year.

Prerequisite: Geography 1.

Associate Professor VARNEY

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.

Prerequisite: Geography 1.

Assistant Professor ZIERER

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.

LECTURES IN APPLIED METEOROLOGY

7A. Weather Science in Relation to Aeronautics and Industry. (1) II.

Tu, 12.

Dr. CARPENTER

7B. Weather Science in Relation to Agriculture and Engineering. (1) II.

Tu, 1.

Dr. CARPENTER

UPPER DIVISION COURSES

Geography 1, and 2, 3, or 5 are prerequisites to all upper division courses except 111 and 181.

101. Field Course; the Geography of Los Angeles and its Environs. (3) II.

Th, 1-5, and occasional Saturdays.

Assistant Professor ZIERER

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.

Associate Professor McBRIDE

Additional prerequisite: Geology 10 and 20.

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. The Conservation of Natural Resources. (3) I.

Assistant Professor ZIERER

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. General Climatology. (3) Either half-year.

Associate Professor VARNEY

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.

114. Regional Climatology: Western Hemisphere. (3) Either half-year.

Associate Professor VARNEY

A study of the various types of climate, with reference to their underlying causes and to the effects of climate on man in the region.

121. The Geography of North America. (3) I.

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.

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.

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. 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.

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.

M W F, 9.

Assistant Professor MCCLELLAN

Limited to twenty students, registration to be made only after consultation with instructor.

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.

Associate Professor McBRIDE

Additional prerequisites: 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.

Associate Professor McBRIDE

No prerequisites except junior standing.

Consideration of the geographical basis of some important problems of domestic and international affairs, with stress upon the geographic principles involved.

141. Advanced Economic Geography. (3) II.

Prerequisite: Geography 5.

Assistant Professor ZIEGLER

A comprehensive geographical analysis of selected manufacturing industries and industrial regions, an interpretation of land and ocean transportation as related to the natural environment, and an explanation of the fundamental economic-geographic principles which underly trade. The scope of the course is world-wide.

GEOLOGY

WILLIAM JOHN MILLER, Ph.D., Sc.D., Professor of Geology (Chairman).

E. K. SOPER, Ph.D., Associate Professor of Geology.

COLIN H. CRICKMAY, Ph.D., Assistant Professor of Geology.

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

———, Instructor in Geology.

Letters and Science List.—All undergraduate courses in Geology are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Required: Chemistry 1A-1B; Elementary Physics; Civil Engineering 1A-1B; Geology 1A-1B; Mineralogy 3A-3B; 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 Fee.—Mineralogy 3A-3B, \$1.50 per half-year.

GEOLOGY

1A. General Geology: Dynamical and Structural. (3) Either half-year.

M W F, 8.

Associate Professor SOPER

Prerequisite: Elementary chemistry and physics.

Two 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.

Professor MILLER.

M W F, 9. Two 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.

10. Physiography. (3) Either half-year.

Professor MILLER, Associate Professor SOPER, Assistant
Professor CRICKMAY

M W F, 11 (Miller); M W F, 10 (Soper); 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.)

20. Map Study of Physiography. (1) Either half-year.

W, 2-5.

Assistant Professor CRICKMAY

Prerequisite: Geology 1A.

UPPER DIVISION COURSES

102A-102B. Field Geology. (2-2) Yr.

S, 9-5.

Assistant Professor WHITMAN

Prerequisite: Geology 1B, 103, and Civil Engineering 1LA-1LB,
1FA-1FB. Credit in this course is given only to students who take
the year's work.

Introduction to field geology. Theory and practice of geologic
mapping, and practice in the observation and interpretation of geologic
phenomena, entailing weekly field trips into the nearby hills, and occa-
sional longer excursions to points of special interest in a region remark-
ably rich in geologic features.

103. Introduction to Petrology. (4) I. Assistant Professor WHITMAN

Lectures, M F, 11; laboratory, M F, 2-5. Two lectures and two
laboratory periods each week.

Prerequisite: Geology 1A, Mineralogy 3A-3B.

The general characteristics, origin, mode of occurrence, and nomen-
clature of rocks, and description of the more common types, accompanied
by determinative laboratory practice.

*104. Petrographical Laboratory. (3) II.

Assistant Professor WHITMAN

Lectures W, 12; laboratory, M F, 2, 3, 4.

Prerequisite: Geology 103.

Mineral optics and microscopy, and the study of thin sections of
rocks.

106. Economic Geology: Metalliferous Deposits. (3) II.

M W F, 11.

Assistant Professor WHITMAN

Prerequisite: Geology 1A, 1B. Mineralogy 3A-3B, and Geology 103.

A systematic study of ore occurrences, and of the genetic processes
and structural factors involved.

* Not to be given, 1928-29.

107. Physical Geology of North America. (2) II. Professor MILLER
 Tu Th, 9.
 Prerequisite: Geology 1A or 1C, and 1B.
 A course in advanced general geology with special reference to North America.
108. Economic Geology: Non-metalliferous Deposits. (2) I. Professor MILLER
 Tu Th, 9.
 Prerequisite: Geology 1A or 1C, 1B and elementary chemistry.
 Special attention is given to coal, petroleum, building stones, clay, limes, salines, gypsum, fertilizers, and various minor minerals.
111. Petroleum Geology. (3) II. Associate Professor SOPER
 Prerequisite: Geology 1A, 1B, 102A.
 Geology applied to exploration for petroleum; the geology of the principal oil fields of the world with emphasis upon U. S. fields; and field methods in oil exploration. Lectures, map work, problems and field trips to nearby oil fields.
116. Structural Geology. (3) I. Associate Professor SOPER
 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.
- 199A-199B. Problems in Geology. (2-2) Yr.
 Tu Th, 12. Professor MILLER and the STAFF
 Open only to seniors who are making geology their major study. Reports and discussions.

MINERALOGY

- 3A-3B. Introduction to Mineralogy. (3-3) Yr. Assistant Professor WHITMAN
 Lecture, M, 1; laboratory, Tu Th, 1-4.
 Prerequisite: Elementary chemistry and physics.
 Lectures and laboratory practice in crystal morphology and projection, determination of minerals by their physical and chemical properties, and descriptive mineralogy.
 This course supplants Mineralogy 1, and is not open to students who took Mineralogy 1 prior to September, 1928.

PALEONTOLOGY*

111. Systematic Paleontology. (4) I. Assistant Professor CRICKMAY
Lectures, Tu Th, 11; laboratory, 6 hours.
Prerequisite: Geology 1B or Paleontology 1.
A general introduction to the study of invertebrate fossils.
112. Advanced Historical Geology. (3) II. Assistant Professor CRICKMAY
Lecture, Th, 11; laboratory, 6 hours.
Prerequisite: Paleontology 111, and Geology 1B.
A general survey of the history of living things from fossil evidence. Paleogeography is studied concurrently as a background to the migrations of faunas.
113. Interpretative Paleontology. (3) II. Assistant Professor CRICKMAY
Lecture, Tu, 11; laboratory, 6 hours.
Prerequisite: Paleontology 111 or Zoology 11A.
A course designed to acquaint the student with paleontological problems and methods. One or more of the important invertebrate groups of fossils will be selected and studied in detail with regard to taxonomy; description; ontogeny in relation to affinity; phylogeny; phenomena and principles of evolution; bionomy; and modern paleontological concepts.

* Courses in Vertebrate Paleontology may be found in the announcement of the Department of Biology (p. 87).

GERMAN

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

ROLF HOFFMANN, Ph.D., Associate Professor of German.

ALFRED KARL DOLCH, Ph.D., Assistant Professor of German.

FRANK HERMAN REINSCH, Ph.D., Assistant Professor of German.

BERNHARD ALEXANDER UHLENDORF, Ph.D., Assistant Professor of German
(Chairman).

SELMA ROSENFELD, A.B., Associate in German.

Letters and Science List.—All undergraduate courses in German except A3-B3 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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.

Seven sections. 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.

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. Assistant Professor REINSCH

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

* Not to be given, 1928-29.

C-D. Intermediate German. (3-3) Yr.

M W F, 10, 11, 12; Tu Th S, 9.

Associate 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.

Associate Professor DIAMOND in charge

Prerequisite: course B or three years of high school German or course B in summer session with grade A and 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.

Assistant Professor REINSCH

Selected works of Heinrich von Kleist, Grillparzer, Hebbel, Ludwig, Wildenbruch, Fulda, Halbe, Hauptmann, Sudermann.

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

Associate Professor DIAMOND

Selected works of Lessing, Goethe, Schiller.

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

Assistant Professor DOLCH

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

Assistant Professor UHLENDORF

110A-110B. German Lyrics and Ballads. (2-2) Yr.

Assistant Professor UHLENDORF

The German ballad and lyric poetry from the Middle Ages to the present.

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

Associate 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.

Associate Professor HOFFMANN

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.

Assistant Professor 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 (Chairman).
 JOHN CARL PARISH, Ph.D., Professor of History.
 WALDEMAR C. WESTERGAARD, Ph.D., Professor of History.
 *JOSEPH B. LOCKEY, Ph.D., Associate Professor of History.
 DAVID K. BJORK, Ph.D., Assistant Professor of History.
 ROWLAND HILL HARVEY, Ph.D., Assistant Professor of History.
 LOUIS K. KOONTZ, Ph.D., Assistant Professor of History.
 MELVA LATHAM, Ph.B., Assistant Professor of History.
 NELSON VANCE RUSSELL, Ph.D., Assistant Professor of History.
 LUCY M. GAINES, M.A., Instructor in History.
 ROLAND D. HUSSEY, B.S., Associate in History.

Letters and Science List.—All undergraduate courses in History except 11 and 77, are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Required: History 4A-4B, or 5A-5B, or 8A-8B, and either Political Science 3A-3B, or Political Science 51A-51B, or Economics 1A-1B, or Geography 1 and 2, or Philosophy 3A-3B. Students who have not had at least two years of European history in high school must take either History 4A-4B or 5A-5B.

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

For upper division work in history a reading knowledge of French or German, or both, is highly advisable; for graduate work, indispensable.

The Major.—Twenty-four units of upper division work in history. In certain cases 2 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, 142A-142B, 153A-153B) and a year course in American history (one of the following: 162A-162B, 171A-171B).

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 142A-142B, or 153A-153B, followed by 144A-144B, or 155A-155B; 162A-162B, or 171A-171B, followed by 181A-181B. 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, which may, with the approval of the department, be counted on the major.

* Absent on leave, 1928-29.

LOWER DIVISION COURSES

- 4A-4B. Social and Political History of Modern Europe. (3-3)
Beginning either half year.
Professor WESTERGAARD, Assistant Professors KOONTZ,
BJORK, Mrs. GAINES
M W F, 10, 12, 2, 4; Tu Th S, 8, 9.
- 5A-5B. History of England and Greater Britain. (3-3) Yr.
Professor KLINGBERG, Assistant Professors HARVEY, RUSSELL
M W F, 8, 9; Tu Th S, 10, 11.
- 8A-8B. History of the Americas. (3-3) Yr.
Associate Professor LOCKEY, Mr. HUSSEY
M W F, 10, 11, 2, 3.
- 9C-9D. Great Personalities. (2-2) Yr.
First half-year, England. Professor KLINGBERG
Second half-year, Modern Europe. Professor WESTERGAARD
11. Social Studies in the Kindergarten-Primary Grades. (2) Either half-year.
Assistant Professor LATHAM
Tu Th, 11, 3.
Prerequisite: Psychology 1A.
Treats of sources of material, curricula now in use, and projects.
39. Pacific Coast History. (2) Either half-year. Mrs. GAINES
Tu Th, 12, 2.
76. Industrial History of the United States. (3) Either half-year.
M W F, 2; W F, 4-5:30 Assistant Professor LATHAM
77. Social Sciences for Junior High Schools. (2) II.
Assistant Professor LATHAM

UPPER DIVISION COURSES

Prerequisite: History 4A-4B, or History 5A-5B, or History 8A-8B, or equivalent preparation in history.

General Requirement: Term papers will be required each half-year of all students in senior history courses (144, 155, 181). Enrollment in these courses is limited to fifty.

- 121A-121B. The Middle Ages. (3-3) Yr. Assistant Professor BJORK
M W F, 8.
- 142A-142B. Modern Continental Europe since 1648. (3-3) Yr.
Professor WESTERGAARD

144A-144B. History of Northern and Eastern Europe. (2-2) Yr.

Professor WESTERGAARD

Prerequisite: senior standing, German or French or Latin or one of the Scandinavian languages, and two years of college history, including History 4 or 5, and one upper division course, preferably in continental or English 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. Professor KLINGBERG, Assistant Professor HARVEY

M W F, 11, 12.

155A-155B. History of the British Empire. (2-2) Yr. W, 3, 4.

Professor KLINGBERG

Prerequisite: senior standing and two years of college history, including History 4 or 5 or 8 and one upper division course in history.

*162A-162B. History of Hispanic America from 1808 to the Present.

(3-3) Yr. M W F, 2.

Associate Professor LOCKEY

*164A-164B. History of Inter-American Diplomatic Relations. (2-2) Yr.

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.

Professor PARISH, Assistant Professors KOONTZ, RUSSELL

A general course dealing with the English colonies and the political history of the United States.

181A-181B. History of the Westward Movement. (2-2) Yr. Tu Th, 8.

Professor PARISH

Prerequisite: senior standing and two years of college history, including one upper division course. In any event, History 8 or 171 is a prerequisite.

A study of expansion in the United States from the Atlantic to the Pacific.

* Not to be given, 1928-29.

HOME ECONOMICS

HELEN B. THOMPSON, Ph.D., Professor of Home Economics (Chairman).

GRETA GRAY, Ph.D., Associate Professor of Home Economics.

JANE E. DALE, Ph.D., Assistant Professor of Home Economics.

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

MAUD D. EVANS, M.A., 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.

Letters and Science.—Courses 1A-1B, 11A-11B, 120, and 128A-128B are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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 103, 170, Teaching, 6-10 units; approved 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, 18, 16A, 16B, 103, 156A, 158B.

(d) Chemistry 2A, 2B, 10; Biology 1; 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 (4).

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 University of California at Los Angeles. 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.
 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.
 Prerequisite: Economics 1A. Miss LYNCH, Miss WILSON
 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.
 Prerequisite: Chemistry 2A. Miss ALLEN
 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.
 Prerequisite: Chemistry 10. Associate Professor GRAY
 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. Assistant Professor DALE
 M W F, 9; W F, 10.
 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. Miss ALLEN
 Prerequisite: senior standing.
 Quantitative methods in food preparation under controlled conditions.
- 128A-128B. Nutrition. (2-2) Yr. Tu Th, 11. Professor THOMPSON
 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.
M W F, 12. 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.
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. Assistant Professor DALE
Prerequisite: senior standing.
Special problems in food with a review of the literature of the subject.
- 160A-160B. Household Administration. (3-3) Yr. M W F, 9. Associate Professor GRAY
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. 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. Miss WILSON
Prerequisite: senior standing.
Special problems in clothing with review of the literature.
180. Problems in Household Economics. (3) II. Associate Professor GRAY
Prerequisite: senior standing.
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. Miss WILSON
Prerequisite: Economics 1A, 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) I. 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. Miss ALLEN
Prerequisite: Chemistry 2A.
Food principles, selection, economic uses, nutritive values as affected by methods of preparation.
32. **Elements of Nutrition.** (2) Either half-year. Professor THOMPSON
Prerequisite: six units of natural science.
The principles of nutrition and their application in normal and subnormal conditions of growth and physical development.
33. **Elementary Dietetics.** (3) II. Assistant Professor DALE
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. Miss JONES
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 on the project basis.
46. **Home Economics Education.** (3) I. 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. M W, 1-3. Miss LYNCH
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 (Chairman).
 GEORGE E. F. SHERWOOD, Ph.D., Professor of Mathematics.
 GLENN JAMES, Ph.D., Associate Professor of Mathematics.
 PAUL H. DAUS, Ph.D., Assistant Professor of Mathematics.
 RAYMOND GARVER, Ph.D., Assistant Professor of Mathematics.
 HARRIET E. GLAZIER, M.A., Assistant Professor of Mathematics.
 GUY H. HUNT, C.E., Assistant Professor of Applied Mathematics.
 WENDELL E. MASON, M.S., Assistant Professor of Applied Mathematics.
 W. M. WHYBURN, Ph.D., Assistant Professor of Mathematics.
 EUPHEMIA R. WORTHINGTON, Ph.D., Assistant Professor of Mathematics.
 FREDERICK C. LEONARD, Ph.D., Assistant Professor of Astronomy.
 CLIFFORD BELL, Ph.D., Instructor in Mathematics.
 A. W. PRATER, A.B., Assistant in Mathematics.

HARRY M. SHOWMAN, E.M., M.A., Lecturer in Mathematics and Recorder.

Letters and Science List.—All undergraduate courses in mathematics except 19 and 74, and all undergraduate courses in Astronomy and Engineering, are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Required: Mathematics C (or the equivalent), 5, 6, 8, 9A, and 9B with an average grade of C, except that students who have completed two years of high school algebra and also trigonometry may be excused from course 8 by examination. 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 University of California at Los Angeles 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, plane trigonometry, and course 8 unless excused as noted above. 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.

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 8 or course 2.

- C. Trigonometry. (2) Either half-year. Mr. PRATER
 Tu Th, 10.
 Prerequisite: elementary algebra and geometry.
- F. Spherical Trigonometry. (1) Either half-year.
 Tu, 8. Assistant Professors HUNT, MASON
 Prerequisite: plane trigonometry and solid geometry.
2. Mathematics of Finance. (3) Either half-year.
 M W F, 11. Associate Professor JAMES
 Prerequisite: Mathematics 8.
- 3A. Plane Analytic Geometry. (3) Either half-year.
 M W F, 9, 11, 12. Assistant Professor DAUS
 Prerequisite: Mathematics C and 8 or the equivalents.
- 3B. Differential Calculus. (3) II. Assistant Professor GARVER
 Prerequisite: Mathematics 3A or its equivalent.
- 3C. Differential and Integral Calculus. (6) I. Professor SHERWOOD
 M Tu W Th F S, 8.
 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.
 M W F, 10. Professor HEDRICK
 Prerequisite: solid geometry and Mathematics 3B.
5. Analytic Geometry. (3) Either half-year.
Assistant Professor WORTHINGTON
 Prerequisite: Mathematics C or the equivalent.
6. Introduction to Projective Geometry. (3) Either half-year.
 Tu Th S, 10. Associate Professor JAMES
 Prerequisite: Mathematics 3A or 5, and consent of instructor.

8. College Algebra. (3) Either half-year.
 Assistant Professors WHYBURN, WORTHINGTON, and others
 M Tu W Th F, 9, 11, 12.
 Prerequisite: at least one year 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. Dr. BELL
 Prerequisite: Mathematics 5.
19. Foundations of Arithmetic. (2) Either half-year.
 Tu Th S, 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.

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.
 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.
 M W F, 2.
 Prerequisite: courses 8 and 9.
 Selected topics in elementary algebra, with particular reference to modern points of view.
104. History of Mathematics. (3) I. Assistant Professor GLAZIER
 M W F, 2.
 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. M W F, 12.
 Assistant Professor WORTHINGTON
 Prerequisite: course 9.
111. Theory of Algebraic Equations. (3) Either half-year.
 Tu Th S, 9. Assistant Professor GARVER
 Prerequisite: courses 8 and 9.

* Not to be given, 1928-29.

112. Analytic Geometry of Space. (3) I. Professor SHERWOOD
Tu Th S, 10.
Prerequisite: courses 5, 6, and 9.
- *114. Advanced Geometry. (3) II. M W F, 10.
Prerequisite: courses 5, 6, and 9.
Introduction to modern methods in geometry.
115. Theory of Numbers. (3) II.
119. Differential Equations. (3) Either half-year. Tu Th S, 9.
Assistant Professor WHYBURN
Prerequisite: course 109 or its equivalent.
- 122A-122B. Advanced Calculus. (3-3) Yr. M W F, 9.
Prerequisite: course 109. Professor HEDRICK
- *124. Vector Analysis. (3) II. Associate Professor JAMES
Prerequisite: Mathematics 109 and one year of college physics.
- 125A-125B. Analytic Mechanics. (3-3) Yr. Mr. SHOWMAN
Prerequisite: course 109 or its equivalent.
190. The Teaching of Mathematics. (3) II.
Prerequisite: course 9 or its equivalent.
A critical inquiry into present-day tendencies in the teaching of mathematics.

CIVIL ENGINEERING†

- 11A-11B. Plane Surveying Lectures. (2-2) Yr.
Tu Th, 9, 10. Assistant Professors HUNT, MASON
Prerequisite: trigonometry and geometric drawing.
- 11A-11B. Plane Surveying Field Practice. (1-1) Yr.
Assistant Professors HUNT, MASON
M, 8-11; M or W, 2-5; Tu or Th, 1-4; S, 9-12.
This course may be taken only in conjunction with, or subsequent to, Civil Engineering 11A-11B.
3. Summer Class in Plane Surveying. (3)
Prerequisite: Civil Engineering 11A-11B.
Four weeks of field work after the close of the school year.
8. Materials of Engineering Construction. (2) II.
Tu Th, 10. Assistant Professor MASON
Prerequisite: sophomore standing.

* Not to be given, 1928-29.

† First two years only.

ASTRONOMY†

LOWER DIVISION COURSES

1. Elementary Astronomy. (3) Either half-year.
 Sec. 1, M W F, 8; Sec. 2, M W F, 2. Assistant Professor 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. Surveyors' Course in Practical Astronomy. (1) II.
 Th, 1-4. Assistant Professor 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. Assistant Professor LEONARD
 M W F, 11.
 Prerequisite: Astronomy 1.
11. Modern Astronomy. (3) II. Assistant Professor LEONARD
 Prerequisite: Astronomy 1.
 The stars and nebulae. Progress in astronomy through modern methods, especially the spectroscopic and the photographic.

UPPER DIVISION COURSES

- 103A-103B. General Astronomy. (3-3) Yr. Assistant Professor 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. Assistant Professor 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.

† A major in astronomy in the College of Letters and Science is not offered in the University of California at Los Angeles. 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, 1928-29.

MECHANIC ARTS

HAROLD WILLIAM MANSFIELD, Assistant Professor of Mechanic Arts and Director of Shops (Chairman).

FOSS R. BROCKWAY, Associate in Mechanic Arts.

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

JAMES WILLARD MARSH, Associate in Mechanic Arts.

CHARLES H. PAXTON, A.B., Associate in Mechanic Arts.

JOHN B. PHILLIPS, Associate in Mechanic Arts.

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

(a) Education 100J, 103, 160A, 160B, 170, Directed Teaching 6-10 units, Mechanic Arts 190, approved courses in Education to total 24 units.

(b) Mechanic Arts 10A, 50, 70, 75A, 80A, 150A, 160A and 34 units of electives approved by adviser.

(c) Physics 2A, 2B.

Laboratory Fees.—A fee of \$3.00 is required for each of the following courses: Mechanical Engineering 8A, 8B, 9A, 9B, Mechanic Arts 10A, 10B, 12A, 12B, 30, 31, 40, 45, 75A, 75B, 76A, 76B, 80A, 80B, 100A, 100B, 151, 160A, 160B, 165.

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 journeymen 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.

Assistant Professor MANSFIELD, Mr. PAXTON

Sec. 1, Tu Th, 9; Sec. 2, Tu Th, 10. Drafting, 4 hours to be arranged.

1. Elements of Heat Power Engineering. (3) Either half-year.

M. W. F., 11.

Mr. PAXTON

* The University of California at Los Angeles 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 adviser in the Department of Mathematics.

2. Descriptive Geometry. (3) Either half-year. Mr. PAXTON
Lecture, Tu, 11. Drafting, 1-4, six hours to be arranged.
6. Machine Drawing. (3) Either half-year. Mr. PAXTON
Lecture, W, 10. Drafting, 1-4, six hours to be arranged.
Prerequisite: Mechanical Engineering 7.
Design and delineation of simple machine parts in the drafting room, with special emphasis upon the production of drawings which conform with standard practice.
7. Mechanism. (2) Either half-year. Mr. PAXTON
Lecture, M F, 10.
A study of motions in machines without reference to the forces which produce them.
- 8A-8B. Shop Work. (2-2) Yr. Mr. KELLER
Lecture, F, 12, and five hours laboratory.
Pattern making and foundry practice.
- 9A-9B. Shop Work. (2-2) Yr. Mr. PHILLIPS
Lecture, Tu, 12, and five hours laboratory.
Metal work in metal.
- S18. Summer Shop Work. (3) Assistant Professor MANSFIELD
(144 working hours required.)
Shop work in pattern making and foundry practice or in machine shop practice.

MECHANIC ARTS

- 10A-10B. Shop Work. (2-2) Yr. Mr. KELLER
Bench work in wood. Fundamental tool and joinery operations; care and operation of power machinery.
- 12A-12B. Shop Work. (2-2) Yr. Mr. KELLER
Furniture construction and repair, upholstering, finishing, and refinishing. Study of period furniture. Construction, methods of laying out various parts; use of jigs. Methods of preparing and applying paints, stains, varnishes and lacquers in finishing and refinishing.
- 20A-20B. Printing. (3-3) Yr. Mr. BROCKWAY
Principles, maintenance, and operation of the school print shop. Problems and practice in job printing and newspaper make-up; type, and equipment.
30. General Shop. (2) I. Mr. BROCKWAY
Analysis and construction of "projects" involving combined use of various tools, materials, and processes.

31. Shop Work. (2) II. Mr. MARSH
Home mechanics including shoe repairing; home plumbing repairs; pipe and pipe fitting; repair of household electric appliances; care and repair of automobile tubes and tires.
40. Shop Work. (1) I. Mr. PHILLIPS
Forging and oxy-acetylene welding.
45. Shop Work. (2) I. Mr. MARSH
Storage battery construction and repair; lead burning; battery charging, treatment, and care.
50. Machine Drawing. (2) I. Assistant Professor MANSFIELD
Prerequisite: Mechanical Engineering D.
Technical sketching, lettering, assembly and detail drawings; design of shop projects.
51. Architectural Drawing. (2) II. Assistant Professor MANSFIELD
Prerequisite: Mechanical Engineering D.
Lettering, details of typical frame and masonry construction, plans, elevations, sections, and specifications.
70. The Automobile. (3) I. Mr. MARSH
Principles of design and operation of internal combustion engines; their lubrication, care and upkeep; essentials of auto-electrics.
- 75A-75B. Shop Work. (2-2) Yr. Mr. PHILLIPS
Elementary machine shop practice, fundamental operations and tool processes; practical operation of standard power tools.
- 76A-76B. Shop Work. (2-2) Yr. Mr. PHILLIPS
Advanced machine shop practice, machine and bench work, machine construction and repair; tool making; heat treatment of steel.
- 80A-80B. Sheet Metal. (2-2) Yr. Assistant Professor MANSFIELD, Mr. MARSH
A. Work in tin plate, galvanized iron and other metals; development of patterns in drafting room; use, care and upkeep of bench machines and shop equipment.
B. Shop developments; cornice work; commercial shop methods.
- 100A-100B. Shop Work. (3-3) Yr. Mr. KELLER
Building construction. Essential operations in frame 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. Mr. MARSH
A. Electron theory; electric and magnetic circuits; batteries; direct current electricity; induction.
B. Electric generators and motors; alternating current electricity; capacitance; transformers; instruments.

151. Shop Work. (2) II. Mr. MARSH
Prerequisite: Mechanic Arts 150A.
Electric bench work. testing; use of instruments; principles of radio reception; radio construction.
- 160A-160B. Shop Work. (3-3) Yr. Mr. MARSH, Mr. BROCKWAY
Prerequisite: Mechanic Arts 70.
A. Repair of internal combustion engines and automobile units.
B. General garage work.
165. Automobile Laboratory. (3) II. Mr. MARSH
Prerequisite: Mechanic Arts 70.
Analysis of internal combustion engine fuels and lubricating oils.
190. Organization and Administration of Industrial Arts Education. (2)
Second half-year. Assistant Professor MANSFIELD

MILITARY SCIENCE AND TACTICS

- PERRY MILES, Colonel, U. S. Army, Professor of Military Science and Tactics (Chairman).
- GUY G. PALMER, Colonel, U. S. Army, Retired, Professor of Military Science and Tactics, Emeritus.
- FREDERICK B. TERRELL, Major, U. S. Army, Retired, Assistant Professor of Military Science and Tactics.
- CARTER COLLINS, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
- JAMES E. MATTHEWS, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
- CHARLES H. OWENS, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
- HAROLD E. SMYSER, First Lieutenant, U. S. Army, Assistant Professor of Military Science and Tactics.

Letters and Science List.—All undergraduate courses in this department are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

A major in military science and tactics in the College of Letters and Science is not offered in the University of California at Los Angeles. 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. An amount necessary to replace articles not returned by the student will be collected by the Comptroller.

The student who is found by the Medical Examiner to be ineligible for enrollment in military science and tactics may be assigned by the examiner to the individual gymnastic section of Physical Education 3.

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.

Fee for basic course, fifty cents per semester.

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.

Professor MILES, Assistant Professors MATTHEWS, OWENS, COLLINS

†Field, M W, 8, 11, 1. Two hours of field instruction; one hour of class instruction. For class instruction see Schedule.

Instruction in infantry drill, rifle marksmanship, military courtesies, military hygiene and first aid, physical training, scouting and patrolling, and command and leadership.

2A-2B. Basic Military Training. (1½-1½) Yr.

Professor MILES, Assistant Professors OWENS, COLLINS, HEATH

†Field, M W, 8, 11, 1. Two hours of field instruction; one hour of class instruction. For class instruction see Schedule.

Instruction in scouting and patrolling, musketry, combat principles, 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 University of California at Los Angeles and the Professor of military science and tactics, and who executes the following written agreement,

† Each student must enroll for two hours of field instruction and one hour of class instruction each week.

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).

....., 192.....

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 senior and junior classes, respectively.

103A. Advanced Infantry Training. (3) Either half-year.

†Tu Th 8, 11.

Assistant Professor SMYER

Instruction and practice in the duties of officers in connection with the basic course; instruction in military sketching; 37 mm. gun and 3-inch trench mortar.

(See combined section, page 141.)

103B. Advanced Infantry Training. (3) Either-half-year.

†Tu Th, 8, 11.

Assistant Professor MATTHEWS

Instruction and practice in the duties of officers in connection with the basic course; instruction in machine gun drill, theory of fire, direct and indirect fire, barrage firing, and tactical handling in the offense and defense.

(See combined section, page 141.)

104A. Advanced Infantry Training. (3) Either half-year.

†Tu Th, 8, 11.

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, military law, and national defense act.

(See combined section, page 141.)

104B. Advanced Infantry Training. (3) Either half-year.

†Tu Th, 8, 11.

Assistant Professor OWENS

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.

(See combined section, page 141.)

† Each student must also enroll for one hour of class instruction on Friday at 8 or 11, and two hours of drill on Monday and Wednesday at 8, 11, or 1.

A combined section of advanced infantry training (offered either half-year on Friday at 8 or 11 a.m. under Assistant Professor Owens) is required of all members of the advanced courses. Instruction includes duties of infantry officers, combat principles, command and leadership.

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 ($\frac{1}{2}$) unit per week for each course 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.

MUSIC*

FRANCES A. WRIGHT, Associate Professor of Music.

_____, Instructor in Music.

BERTHA W. VAUGHN, Teacher of Voice.

SQUIRE COOP, Lecturer in Music (Chairman).

ARNOLD J. GANTVOORT, Lecturer in Music.

WILLIAM J. KRAFT, Mus.Bac., F.A.G.O., Lecturer in Music.

Letters and Science List.—Courses 1A-1B, 3A-3B, 4A-4B, 9A-9B, 9C-9D, 10A-10B, 10C-10D, 55A-55B, 101A-101B, 105A-105B, 111A-111B are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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 103, 170; Teaching, 6-10 units; Music 112A, 112B; approved courses in Education to total 24 units.

(b) Music 1A-1B, 3A-3B, 4A-4B, 7A-7B, 8A-8B, 55A-55B, 101A-101B, 105A-105B, 109, 111A-111B, 114A-114B.

1A-1B. Solfeggio. (3-3) Yr.

Mr. KRAFT

Theory and practice of reading and writing music.

3A-3B. History of Music. (2-2) Yr. Tu Th, 11.

Mr. COOP

Lectures with illustrations. A chronological survey of the history of music with reference to those events which effect our present musical interests.

4A-4B. Elementary Harmony. (3-3) Yr.

Mr. GANTVOORT

Prerequisite: Music 1A-1B.

7A-7B. Elementary Voice. (1-1) Yr. Tu Th, 9, 10.

Mrs. VAUGHN

8A-8B. Advanced Voice. (1-1) Yr. M F, 9.

Mrs. VAUGHN

9A-9B } Choral Practice. (1-1) Yr. Tu Th, 12.

9C-9D }

Mr. COOP

Open only to vocalists of ability.

10A-10B } Orchestral Practice. (1-1) Yr. M W, 1.

10C-10D }

Mr. COOP

* A major in music is not offered in the College of Letters and Science in the University of California at Los Angeles. Students wishing to satisfy the requirements for a major in music are referred to the Announcement of Courses in the Departments at Berkeley.

- 55A-55B. Advanced Harmony. (3-3) Yr. Mr. GANTVOORT
Prerequisite: Music 4A-4B.
A certain degree of proficiency in piano playing is a prerequisite to junior standing in the Department of Music.
- 101A-101B. Counterpoint. (2-2) Yr. Mr. KRAFT
Prerequisite: Music 55A-55B.
Practice in one of the technical processes of music writing. The association of tone lines independent melodically.
- 105A-105B. Composition. (2-2) Yr. Tu Th, 2. Mr. KRAFT
Prerequisite: Music 55A-55B.
Vocal and instrumental composition in the smaller forms.
109. Conducting (2) II. M W, 12. 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. (3-3) Yr. Mr. COOP
Prerequisite: junior standing.
Introduction to the critique of music.
- 114A-114B. Instrumentation. (2-2) Yr. Mr. KRAFT
Prerequisite: Music 55A-55B.
Orchestra, theory and practice of the instruments.

Music Education

60. Elementary Music Education (2) Either half-year. Associate Professor WRIGHT
A professional subject matter course required of all candidates for the kindergarten-primary and general elementary credentials.
Section K. Kindergarten-Primary.
Section E. General Elementary.
- 112A-112B. Music Education (3-3) Yr. Associate Professor WRIGHT
Prerequisite: junior standing.
Organization and administration of music in elementary and secondary schools.

PHILOSOPHY

CHARLES HENRY RIEBER, Ph.D., Professor of Philosophy and Dean of the College of Letters and Science (Chairman).

JOHN ELOF BOODIN, Ph.D., Professor of Philosophy.

CLIFFORD LESLIE BARRETT, Ph.D., Assistant Professor of Philosophy.

HUGH MILLER, Ph.D., Assistant Professor of Philosophy.

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

*FERDINAND CANNING SCOTT SCHILLER, M.A., D.Sc., F.B.A., Lecturer in Philosophy (Fellow of Corpus Christi College, Oxford University).

Letters and Science List.—All undergraduate courses in this department are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Philosophy 1A-1B and 3A-3B.

The Major:

(a) Each student offering Philosophy as a major study must present 18 units in upper division courses of the department.

(b) This program must include at least two of the following combinations: Philosophy 104 and 106; 112 and 146; 113 and 119; 116 and 117; 136A and 136B; 151 and 152.

(c) All major students must offer Philosophy 199.

(d) The remainder of the 24 units required for the major may be chosen by the student, with the approval of the departmental adviser, from the following courses: Classical Languages 112A-112B, 101, 114; English 121A-121B; Education 121; French 109A-109B; German 105A-105B; History 121A-121B; Mathematics 122A-122B, 124; Physics 121; Political Science 112, 117; Psychology 106A-106B; 108, 110, 112, 145A-145B, 150, 166A-166B, 168; Zoology 100A-100B.

LOWER DIVISION COURSES

1A-1B. Logic. (3-3) Beginning either half-year.

Beginning in September: M W F, 11, Professor RIEBER; beginning in February: Tu Th S, 9, Assistant Professor MILLER.

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.

* In residence second half-year only.

- 3A-3B. History of Philosophy. (3-3) Yr. Two sections beginning in September. Professor BOODIN, Assistant Professor BARRETT
M W F, 9, 12.

This course is intended as an introduction to philosophy. The development of thought will be traced, with an attempt not only to present the systems of major philosophers, but also from this study to discover the importance of central problems in individual and social life and to compare various methods of approach to their solution. The relationships of philosophical to literary and scientific thought in the various periods will be emphasized.

UPPER DIVISION COURSES

Six units of work in either of the lower division courses (Philosophy 1A-1B or 3A-3B) are prerequisite to all upper division courses.

104. Ethics. (3) I. M W F, 10. Assistant Professor BARRETT
Central problems of conduct will be considered from the point of view of the individual and of society. A comparative survey will be made of major systems of ethics in an attempt to discover basic principles of morality.

106. Social Ethics. (3) II. Assistant Professor BARRETT
M W F, 10.
Important historical and current views as to the nature of society will be considered and a study made of the ethical aspects of contemporary social problems.

112. Philosophy of Religion. (3) I. Professor RIEBER
M W F, 2.
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, Mysticism.

113. Philosophical Thought in the Nineteenth Century. (3) II. Assistant Professor MILLER
A survey of the principal movements of nineteenth century thought, culminating in the thought of today.

115. Kant. (3) II. _____
Reading of the *Critique of Pure Reason*, together with explanatory and critical comment on Kant's main position in the fields of religion and ethics.

116. Plato. (3) II. Professor SCHILLER
The Philosophy of Plato will be considered, with special attention to its development in the *Republic*.

117. Aristotle. (2) I. Tu, 3 to 5. Professor BOODIN
Tu, 3, 4.
Aristotle's philosophy and its significance for present thought.

118. Seventeenth Century Philosophy. (2) I. Assistant Professor MILLER
 Tu Th, 11.
 The rise of modern science, and the Cartesian and empirical philosophies based upon its principles.
119. Josiah Royce. (2) II. Professor BOODIN
 Royce's philosophy and its relation to modern idealism.
121. Political Philosophy. (2) I. Assistant Professor BARRETT
 Tu Th, 10.
 A study of the principles of political organization, with special attention to the comparison of representative philosophical theories of the state.
- 136A-136B. Esthetics. (3-3) Yr. M W F, 2. Associate Professor GORDON
 First half-year: Discussion of the standards of taste (including experiments in group judgments), the individual and the 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.
141. Present Tendencies of Thought. (3) I. Assistant Professor MILLER
 M W F, 9.
 The movements of contemporary thought in philosophy, science, and other fields.
146. Literary Expressions of Philosophical Problems. (3) II. Professor RIEBER
 M W F, 2.
 Comparison between philosophical and literary expressions of typical problems of philosophy. A discussion of *idealism*, *realism*, *mysticism*, and other attitudes as expressed in literature.
151. Philosophy of Nature. (3) I. M W F, 11. Professor BOODIN
 An interpretation of evolution and of man's place in the universe.
 Text: Boodin's *Cosmic Evolution*.
152. Metaphysics. (3) II. M W F, 11. Professor BOODIN
 An examination of the chief types of theory of reality and an attempt at an idealistic synthesis.
 Text: Boodin's *A Realistic Universe*.
170. Logic of Voluntarism. (3) II. Professor SCHILLER
 Studies in the logic of Humanism.
199. Contemporary Problems. (2) II. Assistant Professor BARRETT and STAFF
 A conference class on selected problems of philosophy. Limited to majors in philosophy or others who may have the permission of the instructors. This course is required of all major students in the department.

PHYSICAL EDUCATION FOR MEN

WILLIAM H. SPAULDING, A.B., Director of Physical Education for Men (Chairman).

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, Assistant Supervisor of Physical Education for Men.

WILLIAM C. ACKERMAN, Ed.B., Associate in Physical Education for Men.

CECIL B. HOLLINGSWORTH, Ed.B., Associate in Physical Education for Men.

PATRICK MALONEY, Associate in Physical Education for Men.

DONALD K. PARK, A.B., Associate in Physical Education for Men.

ALEXANDER FINLAY, Assistant in Physical Education for Men.

SILAS GIBBS, Ed.B., Assistant in Physical Education for Men.

HARRY TROTTER, Assistant in Physical Education for Men.

PIERCE H. WORKS, A.B., Assistant in Physical Education for Men.

JOHN F. DUFF, Assistant in Fencing.

WILLIAM J. NORRIS, M.D., Physician for Men.

WILLIAM H. LEAKE, M.D., Assistant Physician for Men.

Physical Education 3 is prescribed for all first-year and second-year undergraduate male students who are citizens of the United States and who were under twenty-four years of age at the time of admission to the University. A student claiming exemption because of non-citizenship or age will present to the Recorder a petition on the prescribed form for such exemption. A student whose health requires either exemption or special assignment will report directly to the Medical Examiner. Pending action on his petition, the student will enroll in and regularly attend the required course in physical education.

Letters and Science List.—Courses 1 and 3 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Medical Examination.—(a) Students entering the University for the first time and (b) reentering 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.

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 courses:

* A major in physical education in the College of Letters and Science is not offered at the University of California at Los Angeles. 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.

(a) Education 102, 103, 170; Teaching 6-10 units; approved courses in Education to total 24 units.

(b) Physical Education 29A-B-C-D, 130A-B-C-D, †5, 131, 140, †149, 154, 155A-155B, 156A-156B, †182, †183, †190, †192A-192B.

(c) Chemistry 2A-2B; Physiology 1; Biology 1; Zoology 35.

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.

1. Hygiene and Sanitation. (1) Either half-year.

Th, 8.

Dr. NORRIS, Dr. WARE

*3. Prescribed Physical Education for Freshmen and Sophomores. (½) Either half-year. Assistant Professor COZENS 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. 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.

Assistant Professor COZENS

Required of physical education majors in their third and fourth years of work.

131. Administration of Physical Education. (2) II. Mr. FRAMPTON

Details of the organization of physical training activities, organization and classification of children, planning of school programs, arrangement and construction of equipment.

140. Physical Education Tests and Measurements. (2) II.

Assistant Professor COZENS

Anthropometric measurements, cardiovascular and physiological ratings, physical efficiency and motor ability tests. Common tests used in physical education will be presented and criticized; conditions under which they may be used.

Open only to major students in physical education (men and women) who have senior standing.

† Courses so marked are listed under the Department of Physical Education for Women, and are open to both men and women.

* Full statement of the requirements of this course is given on page 42.

154. Practice and Methods in Teaching Elementary School Activities.
(2) Yr. Mr. FRAMPTON

The technique of activities taught in the elementary school leading up to games of higher organization.

155A-155B. Practice and Methods in Teaching Gymnasium Activities.
(2-2) Yr. Assistant Professor COZENS

Prerequisites: Gymnastics, and boxing or wrestling.

Tactics, free exercises, apparatus, gymnastic dancing, and gymnastic games.

156A-156B. Practice and Methods in Coaching Athletics. (2-2) Yr.
Mr. SPAULDING

Prerequisite: Track, and basket-ball or baseball.

(A) Football and basket-ball. (B) Track and baseball.

PHYSICAL EDUCATION FOR WOMEN

RUTH V. ATKINSON, M.A., Assistant Professor of Physical Education for Women and Director of Women's Gymnasium (Chairman).

LUCILE R. GRUNEWALD, M.A., Assistant Director of Physical Education for Women.

HAZEL J. CUBBERLEY, B.S., Assistant Supervisor of Physical Education for Women.

MARTHA B. DEAN, B.S., Assistant Supervisor of Physical Education for Women.

EDITH R. HARSHBERGER, M.A., Assistant Supervisor of Physical Education for Women.

EMILY D. JAMESON, M.A., Assistant Supervisor of Physical Education for Women.

DIANA ANDERSON, A.B., Associate in Physical Education for Women.

ETHEL SUTTON BRUCE, Associate in Physical Education for Women.

MARJORIE FORCHEMER, M.A., Associate in Physical Education for Women.

BERTHA A. HALL, A.B., Associate in Physical Education for Women.

BERENICE H. HOOPER, B.S., Associate in Physical Education for Women.

EDITH I. HYDE, A.B., Associate in Physical Education for Women.

M. EFFIE SHAMBAUGH, A.B., Associate in Physical Education for Women.

MARION A. SHEPARD, A.B., Associate in Physical Education for Women.

LILLIAN RAY TITCOMB, M.D., Physician for Women.

KATHARINE M. CLOSE, M.D., Lecturer in Hygiene.

RUBY I. MCLINN, R.N., Nurse.

Physical Education 4 is prescribed for all first-year and second-year undergraduate women students who are citizens of the United States and who were under twenty-four years of age at the time of admission to the University. A student claiming exemption because of non-citizenship or age will present to the Recorder a petition on the prescribed form for such exemption. A student whose health requires either exemption or special assignment will report directly to the Medical Examiner. Pending action on her petition, the student will enroll in and regularly attend the required course in physical education.

Letters and Science List.—Courses 2, 4, and 44 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Medical Examination.—New students and reentering students must pass a medical examination. The examiner may assign students to the individual gymnastics section of Physical Education 4.

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 103, 170; Teaching, 6-10 units; approved courses in Education to total 24 units.

(b) Physical Education 5, 50A-B, 62A-B, 63A-B, 64, 65, 70A-B, 72A-B, 73A-B, 75, 76, 121A-121B, 149, 170A-170B, 172A-172B, 180A-180B, 182, 183, 190, 192A-192B.

(c) Chemistry 2A-2B; Biology 1; Zoology 35; Physiology 1. Home Economics 32.

2. Hygiene. (2) Either half-year.

Dr. TITCOMB

14. Prescribed Physical Education for Freshmen and Sophomores. (½) Either half-year.

Assistant Professor ATKINSON and the STAFF

Folk dancing, character dancing, natural dancing, baseball, basketball, archery, hockey, lacrosse, soccer, volleyball, swimming, tennis, individual gymnastics. Sections meet twice weekly; section assignments are made by the department.

Physical Education 4 may be elected by students in junior and senior years.

5. First Aid. (1) I.

Mrs. MOLINN

10A-10B. Theory of Physical Education, with Practice Teaching. (2) Either half-year.

Miss FORCHEMER, Miss HALL, Miss JAMESON, Miss SHEPARD

Required of candidates for General Elementary Teaching Credential 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) Either half-year.

Miss HALL

Required of candidates for Kindergarten-Primary Credential.

14A-14B. Theory of Physical Education, with Practice Teaching. (2) Either half-year.

Miss SHAMBAUGH

Required of candidates for special teaching credentials in art and music. 14B relates particularly to festivals and pageants.

44. Health Education (2) II.

Assistant Professor ATKINSON

A course in positive health for the college woman. Discussions and lectures on "how to find our health assets," the relation of exercise and recreation to positive health; health and personality.

* A major in physical education is not offered in the College of Letters and Science in the University of California at Los Angeles. A group major in physical education and hygiene is offered in the University at Berkeley. Students wishing to satisfy the requirements for this major are referred to the Announcement of Courses in the Departments at Berkeley.

† Full statement of the requirements of this course is given on page 42.

- 50A-50B. Gymnastics. (1-1) Yr. Miss HARSHBERGER
- 62A-62B. Folk Dancing. (1-1) Yr. Miss SHAMBAUGH
- 63A-63B. Natural Dancing. (1-1) Yr. Miss DEAN
64. Character Dancing. (1) I. Miss DEAN
65. Methods and Character Dancing. (1) II.
Prerequisite: course 64. Miss DEAN, Miss SHAMBAUGH
Lectures and practice, study of festival and pageant.
- 72A-72B. Practice in Athletic Activities. (1-1) Yr. Miss CUBBERLEY
- 73A-73B. Practice in Athletic Activities. (1-1) Yr. Miss CUBBERLEY
75. Tennis. (1) I. Mrs. BRUCE
76. Swimming. (1) II. —
104. Club Activities. (1) II. Assistant Professor ATKINSON
The Educational program of the various club organizations, and their contribution to good citizenship. A study of the programs of the Girl Scouts, Camp-Fire Girls, Girl Reserves and similar organizations.
114. Dancing and Pageantry. (1) II. Miss DEANE
A study of the sources of pageantry material with theory and practice in the organization and production of pageants and pantomimes.
- †121A-121B. Theory and Practice in Physical Education. (4-4) Yr.
Miss CUBBERLEY, Miss DEAN, Miss HARSHBERGER
Principles and methods underlying the organization of physical education and hygiene.
- †149. Kinesiology. (3) I. Miss GRUNEWALD
Prerequisite: Zoology 35.
- 170A-170B. Games and Rhythms for the Elementary School. (1-1) Yr.
Miss HALL
- 151A-151B. Theory of Gymnastics. (1-1) Yr.
Miss CUBBERLEY, Miss HARSHBERGER
- †180A-180B. Administration of Health Education and Physical Education. (3-3) Yr. Assistant Professor ATKINSON
- †182. Therapeutic Gymnastics. (3) II. Miss GRUNEWALD
Prerequisite: Physical Education 149.
Study of posture and etiology and treatment of orthopedic conditions.
- †183. Therapeutic Gymnastics. (3) I. Miss GRUNEWALD
Study of anthropometry, massage and treatment of remediable conditions. Two hours of clinic per week.
- †190. Physiology of Exercise. (3) II. Dr. CLOSE
Prerequisite: Physical Education 149 and Physiology 1.
- 192A-192B. Normal Diagnosis. (2-2) Yr. Dr. CLOSE
Prerequisite: Physiology 1.

† Open to men with permission of instructor.

PHYSICS

SAMUEL J. BARNETT, Ph.D., Professor of Physics (Chairman).

JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.

LAURENCE E. DODD, Ph.D., Associate Professor of Physics.

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

VERN O. KNUDSEN, Ph.D., Associate Professor of Physics.

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

J. KAPLAN, Ph.D., Assistant Professor of Physics.

E. L. KINSEY, Ph.D., Assistant Professor of Physics.

ARTHUR H. WARNER, Ph.D., Instructor in Physics.

LEO P. DELSASSO, 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.

Letters and Science List.—All undergraduate courses in physics are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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 except 4A-4B: 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. Prerequisites for 4A-4B are elementary algebra and plane geometry.

1A-1B. General Physics. (3-3) Yr.

Associate Professors ADAMS, DODD, and the STAFF
Lectures, Th, 11; quiz and laboratory, 4 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.

- 10-1D. General Physics. (3-3) Yr.
 Assistant Professor ELLIS, Dr. WARNER, and the STAFF
 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. Associate Professor EDWARDS
 Lectures, M W F, 11.
 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.
 Associate Professor EDWARDS and _____
 Prescribed for pre-medical students; open to others who take
 Physics 2A-2B concurrently.
- 4A-4B. General Physics. (3-3) Yr. Professor BARNETT
 Lectures, M W F, 9. For students desiring a descriptive course,
 without laboratory work. Prerequisites: elementary algebra and plane
 geometry.
5. Magnetism and Electricity. (3) II. 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.
- 105A-105B. Analytic Mechanics. (3-3) Yr. Associate Professor EDWARDS
 The statistics and the dynamics of particles and rigid bodies.
- 107A-107B. Electrical Measurements. (3-3) Yr. Associate Professor KNUDSEN
 Prerequisite: Physics 1C.
 Lectures, student reports and laboratory work on direct and alter-
 nating measuring instruments, alternating circuits, filter circuits,
 and thermionics.
- 108A. Geometrical Optics. (3) II. Associate Professor DODD
 Lectures, demonstrations and laboratory work on geometrical methods
 applied to the optics of mirrors, prisms and lenses.
- 108B. Physical Optics. (3) I. Assistant Professor KAPLAN
 Lectures, demonstrations and laboratory work dealing with diffrac-
 tion, interference, polarization, and their applications.

- 110A-110B. Electricity and Magnetism. (3-3) Yr. Professor BARNETT
The elementary mathematical theory, with a limited number of demonstrations.
111. Introduction to Spectroscopy. (3) II. Assistant Professor ELLIS
Lectures and laboratory.
- 112B. Heat. (3) I. Associate Professor ADAMS
Kinetic theory and thermodynamics.
114. Sound. (3) II. Associate Professor KNUDSEN
Lectures on theory and applications.
121. Modern Physics: Methods, Results and Interpretation. (3) II.
Associate Professor ADAMS
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 A. DYKSTRA, A.B., Professor of Political Science (Chairman).
 *CHARLES GROVE HAINES, Ph.D., Professor of Political Science.
 MALBONE W. GRAHAM, JR., Ph.D., Associate Professor of Political Science.
 ORDEAN ROCKEY, B.Litt., Assistant Professor of Political Science.
 CHARLES H. TITUS, Ph.D., Assistant Professor of Political Science.
 MARSHAL E. DIMOCK, Ph.D., Instructor in Political Science.
 VICTOR H. HARDING, A.B., LL.B., Instructor in Political Science.

- HAROLD C. CALHOUN, A.B., LL.B., Lecturer in Political Science.
 MATTHEW C. LYNCH, B.L., J.D., Lecturer in Political Science.

Letters and Science List.—All undergraduate courses in political science are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—Political Science 3A-3B, or its equivalent and one of the following: Political Science 51A-51B, and 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, or geography. Major programs must include two year-courses and be approved by the departmental adviser.

LOWER DIVISION COURSES

3A-3B. American Government. (3-3) Yr.

Associate Professor GRAHAM, Assistant Professors ROCKEY, TITUS, Dr. DIMOCK, Mr. HARDING, Mr. CALHOUN

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.

This course supplants the former course 1A-1B, and is not open to students who took 1A-1B prior to September, 1928.

Political Science 3A is open to all students. Political Science 3B is open to students who have completed Political Science 3A.

* In residence second half-year only.

12. History of Political Theories. (2) I. Assistant Professor TITUS
Prerequisites: sophomore standing and Political Science 3A-3B.
A study of ancient, medieval and modern political ideas.
- 51A-51B. Introduction to European Governments. (3-3) Yr.
Associate Professor GRAHAM, Dr. DIMOCK
Prerequisites: sophomore standing and Political Science 3A-3B.
A comparative study of the governments of Great Britain and the
Self-governing Dominions, France, Germany, Italy, Switzerland, and
Russia.
52. American Political Parties. (3) II. Professor DYKSTRA
Prerequisites: sophomore standing and Political Science 3A-3B.
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.
- 74A-74B. American State and Local Government. (3-3) Yr.
Mr. HARDING
Prerequisites: sophomore standing and Political Science 3A-3B.
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 3A-3B, or its equivalent, and one of
the following: Political Science 51A-51B, Political Science 52, Political
Science 74A-74B, Economics 1A-1B, History 4A-4B, History 5A-5B, or
History 8A-8B.
110. Principles of Political Science. (3) I. Assistant Professor TITUS
A study of fundamental political concepts including the legal and
theoretical bases of the modern state, the various forms of govern-
ment, and an analysis of the functions of government.
111. The Nature of the State. (3) II. Assistant Professor TITUS
What is the nature of the modern state and how does it differ
from the state of the eighteenth and nineteenth centuries? Both
monistic and pluralistic approaches are included in this study.
Prerequisites: Political Science 110 and permission of the instructor.
- 113A-113B. American Political Theories. (2-2) Yr.
Assistant Professor ROCKEY
A comparative study of the characteristic types of American
political theories of the past, together with a consideration of recent
tendencies in American political thought.
Political Science 113B is open to students who have completed 113A.

125. Foreign Relations of the United States. (2) I.

Associate 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) Either half-year.

Associate Professor GRAHAM, Assistant Professor TITUS

Factors underlying international relations; the modern systems 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.

*133. Introduction to International Law. (2-2) Yr.

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.

154A-154B. European Governments and Political Institutions. (2-2) Yr.

Associate 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.

157A-157B. Constitutional Law. (3-3) Yr.

Professor HAINES, Mr. CALHOUN

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.

162. Municipal Government. (3) I.

Professor 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. (3) II.

Professor DYKSTRA

Prerequisites: Political Science 162.

The mayor; the city departments. the city employees; the civil service; municipal functions.

164. Municipal Problems. (2) I.

Professor DYKSTRA

Admission only with the consent of the instructor.

The regulation of public utilities and other metropolitan problems.

* Not to be given, 1928-29.

172. State and Local Administration. (3) Either half-year.

Professor DYKSTRA, Mr. HARDING

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 cooperation with federal and municipal agencies.

199A-199B. Special Problems in Political Science. (2-2) Yr.

Professor HAINES and the STAFF

Prerequisite: credit for at least eight units of upper division courses in political science, the major part of which is in the field selected for special study. Special permission to register for this course is required.

In this course students will undertake the special study of problems in one of the main fields of political science. The work will be done under the direction of the instructor to whose field belong the problems selected for study.

AMERICAN INSTITUTIONS

101. American Institutions. (2) Either half-year.

Assistant Professor ROCKEY, Dr. DIMOCK, Mr. LYNCH

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 those who have completed Political Science 3A-3B (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.

JURISPRUDENCE

18A-18B. Commercial Law. (3-3) Yr.

Mr. LYNCH

Definitions and elementary principles of law; essentials of the law of contracts, agency, sales, partnership, negotiable instruments and private corporations.

117. Elements of Law. (3) II.

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.

*156. Administrative Law. (3) I.

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.

* Not to be given, 1928-29.

PSYCHOLOGY

SHEPHERD IVORY FRANZ, Ph.D., M.D., LL.D., Professor of Psychology (Chairman).

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.

JOHN E. LIGGETT, Ph.D., Instructor in Psychology.

ALFRED H. JONES, M.A., Associate in Psychology.

FLORENCE MERRILL, A.B., Associate in Psychology.

RUTH SHERMAN TOLMAN, A.B., Associate in Psychology.

Letters and Science List.—All undergraduate courses in this department, except 119, are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

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 103.

Laboratory Fees.—A fee of \$3 is required in courses 106A, 106B, 107A, 107B, 150. A fee of \$1 is required in course 110.

LOWER DIVISION COURSES

*X. The Psychology of Study. (1) Either half-year. Professor MOORE
Sec. 1, Tu, 8; Sec. 2, Th, 8.

1A-1B. General Psychology. (3-3) Either half-year.

1A: two lectures and one hour quiz. 1B: two lectures and one hour quiz.

Associate Professor GORDON, Assistant Professor FISHER and STAFF
Course 1A-1B is prerequisite to all 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.

* Not to be given, 1928-29.

2. Applied Psychology. (2) II. 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-1B is prerequisite to all upper division courses.

- 106A-106B. Experimental Psychology. (3-3). 106A, either half-year; 106B, second half-year only. Professor FRANZ, Dr. LIGGETT

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 reading.

- 107A-107B. Psychological Measurement and the Use of Statistics. (3-3) Yr.

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 education and experimental psychology and group 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. Professor FRANZ

The physiological correlates of mental conditions, with special reference to the sensory, motor, and association processes of the cerebrum.

Lectures, readings, demonstrations, and discussions. Physiology 1, Zoology 1A, or Biology 1 is recommended as preparation, but is not required.

110. Educational Psychology (Experimental). (3) Either half-year.

Associate Professor GORDON

Discussion of special topics pertaining to fundamental educational problems and their applications to educational procedures. Laboratory and clinical or teaching experiments pertaining to the problems of learning, memory, etc., in children and adults.

Two hours lectures, three hours laboratory, outside reading.

112. Child Psychology. (3) Either half-year.

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.
Associate Professor FERNALD
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. 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) I. Dr. LIGGETT
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.
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. Practice in mental testing in the clinics, juvenile courts, and schools is given.
Lectures, readings, clinical demonstrations, testing, and training of special cases.
168. Abnormal Psychology. (3) II. 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.
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 field of psychology: animal, clinical, experimental, physiological, statistical, social, and under the direction of the special instructor in whose field the interest lies.

SPANISH

- CÉSAR BARJA, Doctor en Derecho, Associate Professor of Spanish.
 S. L. MILLARD ROSENBERG, Ph.D., Associate Professor of Spanish.
 LAURENCE DEANE BAILIFF, Ph.D., Assistant Professor of Spanish (Chairman).
 MANUEL PEDRO GONZÁLEZ, Ph.D., Assistant Professor of Spanish.
 ERNEST H. TEMPLIN, Ph.D., Assistant Professor of Spanish.
 W. A. KINCAID, Ph.D., Instructor in Spanish.
 ANNA KRAUSE, Ph.D., Instructor in Spanish.
 FRANK MCKECHNIE, M.A., Associate in Spanish.
 FRANCISCO MONTAU, A.B., Associate in Spanish.
 SYLVIA N. RYAN, M.A., Associate in Spanish.
-
- MARÍA LÓPEZ DE LOWTHER, M.A., Lecturer in Spanish.

Letters and Science List.—All undergraduate courses in Spanish except 190 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

Preparation for the Major.—(1) Spanish A, B, C, D, or four years of high school Spanish, or other equivalent to be tested by examination. (2) A minimum of two years of Latin in the high school. (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.

The Major.—Required: Spanish 106A-106B and 107A-107B. The remaining 12 units may include not more than 6 units of upper division work in either French or Latin, or may be completed from 101, 103, 104, 105, 108, and 110.

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) German. (7) 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 course upon recommendation of the instructor. No credit will be given for duplication of high school work.

A. Elementary Spanish. (5) Either half-year. Dr. KINCAID in charge
 M Tu W Th F, 8, 9, 10, 11, 12, 2.

This course corresponds to the first two years of high school Spanish. It may not be taken for credit by students who have credit for matriculation subject 5e.

- A². Elementary Spanish. (3) I. Assistant Professor **TEMPLIN**
 Tu Th S, 10.
 Open only to students who have had one year of high school Spanish or the equivalent.
- B. Elementary Spanish. Continuation of A. (5) Either half-year.
 M Tu W Th F, 8, 9, 10, 11, 12. Dr. **KINCAID** in charge
 Prerequisite: course A or two years of high school Spanish or Spanish SA in a summer session with satisfactory grade.
- C. Intermediate Spanish. Continuation of B. (3) Either half-year.
 M W F, 8, 3; Tu Th S, 10, 11. Dr. **KRAUSE** in charge
 Prerequisite: course B or three years of high school Spanish or the equivalent.
- D. Intermediate Spanish. Continuation of C. (3) Either half-year.
 M W F, 8, 12, 2. Dr. **KRAUSE** in charge
 Prerequisite: course C or four years of high school Spanish or the equivalent.
- CD. Intermediate Spanish. Continuation of B. (5) I.
 M Tu W Th F, 10, 12. Dr. **KRAUSE** in charge
 Prerequisite: course B or three years of high school Spanish or the equivalent.
- 50A-50B. Conversation and Composition. (3-3) Yr.
 M W F, 9, 11. Dr. **KRAUSE**, Mr. **MONTAU**
 For lower division students who have had the equivalent of course CD or 12 units (4 years) of high school Spanish. Designed especially for freshmen and sophomores who propose to make Spanish their major subject.
55. Grammar Review, Composition, Reading. (5) I. Miss **RYAN**
 M Tu W Th F, 11.
 Prerequisite: same as for course 50A-50B.

UPPER DIVISION COURSES

Prerequisite: 16 units of lower division Spanish or the equivalent.
 Major students who enter the upper division without course 50A-50B or 55 must take 101A-101B; those who have had course 50A-50B or 55 should take 106A-106B in their senior year.

- 101A-101B. Conversation and Composition. (3-3) Yr.
 Assistant Professor **TEMPLIN**, Dr. **KINCAID**, Dr. **KRAUSE**
 M W F, 8, 2.

- 103A-103B. Eighteenth and Nineteenth Century Literature. (3-3) Yr.
Associate Professor ROSENBERG, Assistant Professor BAILIFF
M W F, 9, 2.
Introduction to the eighteenth century followed by a survey of literature to 1890. Lectures and reading.
- *104A-104B. Spanish American Literature. (3-3) Yr. Mrs. LOWTHER
A study of the principal authors of Spanish America. Lectures and reading.
- 105A-105B. Modern Drama. (2-2) Yr. Associate Professor ROSENBERG
Tu Th, 2.
Plays of the nineteenth and twentieth centuries. Lectures, discussions and reports.

PRIMARYLY FOR SENIORS

- 106A-106B. Advanced Composition. (3-3) Yr. Mrs. LOWTHER
Open only to seniors whose major is Spanish.
- 107A-107B. Survey of Spanish Literature to 1700. (3-3) Yr.
M W F, 10. Associate Professor BARJA
Prerequisite: 103A-103B and at least 4 units to be chosen from 105A-105B, 108A-108B, or 110 or their equivalents.
- 108A-108B. Spanish Literature from 1870 to 1900. (3-3) Yr.
M W F, 10. Assistant Professor GONZÁLEZ
Study of masterpieces and reports on outside reading.
110. Modern Prose. (2) I. Tu Th, 11. Associate Professor BARJA
Rapid reading of contemporary writers.
190. The Teaching of Spanish. (2) Either half-year.
Tu Th, 12. Associate Professor ROSENBERG

* Not to be given, 1928-29; probably given 1929-30.

SUBJECT A: ENGLISH COMPOSITION

MARGARET S. CARHART, Ph.D., Assistant Professor of English, Chairman of Committee on Subject A.

SELENA P. INGRAM, M.A., Instructor in Subject A.

HELEN M. RANKIN, A.B., Instructor in Subject A.

THOMAS E. THOMPSON, A.B., Instructor in Subject A.

Fee.—A fee of \$10 is required for the course in Subject A.

Subject A. No credit. Either half-year.

The STAFF

Three hours weekly. Although this course yields no credit, it displaces 2 units on the student's program. Every student who does not pass the examination in Subject A is required to take, in the semester immediately following his failure, the course in Subject A. Sections are limited to thirty students. For further details, see page 41 of this Announcement.

Training in correct writing, including drill in sentence and paragraph construction, diction, punctuation, grammar, and spelling. Weekly compositions and written tests on the text.

TRAINING DEPARTMENT**STAFF IN UNIVERSITY OF CALIFORNIA AT LOS ANGELES
TRAINING SCHOOL**

- CHARLES W. WADDELL**, Ph.D., Director of the Training Schools and Professor of Education.
- ETHEL I. SALISBURY**, M.A., Supervisor of Training and Associate Professor of Elementary Education.
- CORINNE A. SEEDS**, M.A., Principal of the Training School and Assistant Professor of Elementary Education.
- , Supervisor of Training, Junior High Schools.
- BERTHA E. WELLS**, Supervisor of Training, Elementary.
- FRANCES GIDDINGS**, M.A., Supervisor of Training, Kindergarten-Primary.
- HELEN B. KELLER**, Ed.B., Supervisor of Training, Elementary.
- FLORENCE MARY HALLAM**, A.B., Supervisor of Training, Home Economics.
- LAVERNA L. LOSSING**, Supervisor of Training, Music.
- NATALIE WHITE**, M.A., Supervisor of Training, Art.
- LULU M. STEDMAN**, Ed.B., Supervisor of Special Education.
- EDITH HOPE RINGER**, Supervisor of Special Education.
- ELIZABETH BRUENE**, M.A., School Counselor.
- EMMA JANE ROBINSON**, Training Teacher, Sixth Grade.
- HELEN F. BOUTON**, Ed.B., Training Teacher, Fifth Grade.
- BESSIE WINSTON HOYT**, Ph.B., Training Teacher, Fourth Grade.
- GERTRUDE C. MALONEY**, Training Teacher, Third Grade.
- CLAYTON BURROW**, B.S., Training Teacher, Second Grade.
- SALLIE GARRETT**, B.S., Training Teacher, First Grade.
- JANE BERNHARDT**, M.A., Training Teacher, Kindergarten.
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- | | |
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| JESSIE M. FRASER, Principal. | JEAN H. DUKELOW, Third Grade. |
| MARY K. ADAMS, Kindergarten. | NELVA C. POOR, Fourth Grade. |
| RUTH V. ANGELO, First Grade. | EVA DANIELSON, Fifth Grade. |
| —————, Second Grade. | LOIS E. OSBORN, Sixth Grade. |

THE TRAINING SCHOOLS

Practice teaching is provided for all Teachers College students in (1) the University Training School, comprising a nursery school, kindergarten, and the elementary grades; (2) the Lockwood and Dayton Heights elementary schools of Los Angeles city; (3) the LeConte Junior High School; (4) the Bridge Street School; (5) other elementary, junior and senior high schools of Los Angeles.

The work is done under the direction of the Director of Training Schools and a corps of supervisors and training teachers.

PRACTICE TEACHING**Prerequisite:**

1. At least junior standing.
2. Satisfactory scholarship (freedom from probation).
3. Not less than eight units in Education which must include Principles of Education.

Courses:*

- 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)
- 192B. 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. (2)
- M192. Secondary Music Teaching. (3)
- N190. Health and Development Teaching. (4)
- N192. Home Nursing and Hygiene 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.

* All courses offered either half-year.

INDEX

- Absence, leave of, 48.
 Accredited schools, admission from, 28
 Accrediting of schools in California, 23.
 Administrative officers—
 in Berkeley, 8.
 in Los Angeles, 8, 14.
 Admission to freshman standing, 29.
 to advanced standing, 33.
 of special students, 35.
 from foreign countries, 34.
 Advanced standing, 38.
 Agriculture—
 Pre-Agriculture curriculum, 71.
 courses in, 85.
 College of, 12, 18.
 American institutions, course in, 43,
 159.
 Ancient civilizations, courses in, 95.
 Announcement of courses, 77.
 Appointment Secretary, 54.
 Art—
 courses in, 78.
 teaching credential, 75.
 Associated Students, 55.
 Astronomy, courses in, 133.
 Authority of instructors, 43.
 Biology, courses in, 85.
 Board and lodging, 53.
 Botany, courses in, 86.
 Bureau of Occupations, 53.
 Calendar, 5.
 California College of Pharmacy, 18.
 California School of Fine Arts, 18.
 Chemistry—
 College of, 12.
 courses in, 90.
 Pre-Chemistry curriculum, 74.
 Chile Station (Lick Observatory), 18.
 Citrus Experiment Station, 13.
 Civil Engineering—
 College of, 12.
 courses in, 132.
 Pre-Civil Engineering curriculum, 72.
 Classical Languages, 98.
 Classification of courses, 77.
 College Entrance Examination Board, 31.
 Colleges and Departments of the University, 12.
 Commerce—
 College of, 12.
 courses in, 99.
 Pre-Commerce curriculum, 71.
 Commercial subjects, teaching credential
 in, 96.
 Conditions, removal of, 46.
 Correspondence instruction, 56.
 Courses, classification of, 77.
 Degrees, regulations concerning, 49.
 Dentistry—
 College of, 13.
 Pre-Dental Curriculum, 66.
 Departments of the University, 12.
 Discipline, 48.
 Dismissal, honorable, 48.
 for scholarship delinquency, 47.
 Economics, courses in, 96.
 Education—
 School of, 12.
 courses in, 100.
 (See Teachers College.)
 Electrical Engineering—
 College of Mechanics, 12.
 Pre-Mechanical curriculum, 72.
 Employment, 53.
 Engineering—
 Pre-Engineering Curricula, 72.
 scholarship rules, 47.
 English—
 courses in, 105.
 examination in, for foreigners, 84.
 comprehensive examination, 106, 108.
 (See Subject A.)
 Examinations, entrance, 27
 medical, 37.
 intelligence test, 42.
 piano test, 42.
 regulations concerning, 44.
 condition or special, 46.
 Expenses of students, 54.
 Extension Division, 57.
 Faculty, 15.
 Failures and conditions, 46.
 Fees, 50.
 Foreign language—
 credit in, for foreign student, 34.
 for junior certificate, Letters and
 Science, 59, 61.
 for junior certificate, Pre-Commerce,
 71.
 Foreign schools, admission from, 34.
 French, courses in, 109.
 Geography, courses in, 112.
 Geology, courses in, 116.
 German, courses in, 120.
 Government, courses in, 156.
 Government of the University, 11.
 Government, student, 49, 55.
 Grade points, 45.

- Grades of scholarship, 45.
 Graduate instruction not offered, 36.
 Graduate School of Tropical Agriculture, 13.
 Greek, courses in, 94.
 Gymnasium facilities, 52, 55.
 Hastings College of the Law, 13.
 History—
 courses in, 122.
 of the University, 9.
 Home Economics—
 courses in, 125.
 credentials in, 75.
 special vocational curriculum (Smith-Hughes), 125.
 Honorable dismissal, 48.
 Honors, with junior certificate, 65.
 in upper division, 65.
 with degree, 66.
 Hooper Foundation for Medical Research, 13.
 Imperial Valley Experiment Station, 12.
 Incidental fee, 50.
 Intelligence test, 42.
 Junior Certificate in the College of Commerce, 71.
 in the College of Letters and Science, 58.
 honorable mention with, 65.
 Junior High School teaching credential, 74, 101.
 Jurisprudence—
 courses in, 159.
 School of, 12.
 Kindergarten-Primary teaching credential, 74, 100.
 Laboratory fees, 51.
 Languages—
 French, courses in, 109.
 German, courses in, 120.
 Greek, courses in, 94.
 Latin, courses in, 93.
 Spanish, courses in, 163.
 credit in, for a foreign student, 34.
 for admission, 24, 26, 28.
 for junior certificate, Letters and Science, 59, 61.
 Pre-Commerce, 71.
 Late registration, 37, 51.
 Latin, courses, 93.
 Law, Hastings College of the, 13.
 (See Jurisprudence, School of.)
 Leave of absence, 48.
 Letters and Science, College of, 57.
 Letters and Science List of Courses, 64.
 Library, 54.
 Lick Astronomical Department, 13.
 Living accommodations, 53.
 Los Angeles Medical Department, 13.
 Major subjects, in the College of Letters and Science, 62.
 Mathematics, courses in, 129.
 Matriculation examinations, 31.
 Mechanic Arts—
 teaching credentials, 75, 134.
 courses in, 134.
 special vocational curriculum (Smith-Hughes), 134.
 Mechanics—
 College of, 12.
 Pre-Mechanical curriculum, 72.
 courses in, 132.
 Medical examination required, 37.
 Medical facilities, 55.
 Medicine—
 Medical School, 12, 13.
 Pre-Medical curriculum, 68.
 Meteorology, courses in, 113.
 Military Science and Tactics—
 courses in, 138.
 regulations concerning requirement, 42.
 Military uniforms, 51.
 Mineralogy, courses in, 118.
 Mining—
 College of, 12.
 Pre-Mining curriculum, 73.
 Music—
 courses in, 142.
 teaching credential in, 75, 142.
 examination for kindergarten students, 42.
 Non-resident students, tuition fee for, 50.
 Normal school graduates, admission of, 33.
 Occupations, Bureau of, 53.
 Officers, administrative, 8, 14.
 faculty, 15.
 Organization of the University, 11.
 Paleontology, courses in, 87, 119.
 Pharmacy, California College of, 13.
 Philosophy, courses in, 144.
 Physical Education—
 requirements, 42.
 courses in, 147, 150.
 teaching credential, 75, 147, 150.
 Physics, courses in, 153.
 Physiology, courses in, 88.
 Political Science, courses in, 156.
 Practice teaching, 167.
 Pre-Dental curriculum, 66.
 Pre-Medical curriculum, 68.
 Probation, 39, 47.
 Psychology, courses in, 160.
 Public Speaking, courses in, 108.
 Refund, of fees, 52.
 Regents, 6.
 Registration, 37.
 Regulations concerning students, 37.
 Residence requirement, 50.
 Scholarships, 53.

- Scholarship, grades of, 45.
minimum requirements, 47.
- Sciences, see under the various departments.
for the junior certificate, in Letters and Science, 59.
in Pre-Commerce, 71.
- Scripps Institution of Oceanography, 18.
- Self-support of students, 58.
- Senior residence requirements, 49, 62.
- Smith-Hughes course—
in Home Economics, 75, 125.
in Mechanic Arts, 75, 134.
- Spanish, courses in, 163.
- Special examinations, 46.
- Special students, 85, 38.
- State Board Teaching Credentials, 49.
- Status of students, 38.
- Student self-government, 49, 55.
- Study-lists, limits, 39.
- Subject A, requirement in, 41.
course in, 166.
- Summer Session, 56.
- Surveying camp, 72, 132.
- Teachers College, 18, 74.
- Teachers colleges, admission from, 33.
- Teaching credentials (see also under Teachers College departments), 49, 74.
- Teaching experience, credit for, 34.
- Training School, 22, 167.
- Tuition, for non-residents of California, 50.
- Uniforms, military, 51.
- Units of work and credit, 39.
- University Farm, 18.
- Vaccination required, 37.
- Year-courses, for junior certificate, 59.
- Zoology, courses in, 88.

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