

# University of California Bulletin

FOURTH SERIES. Vol. IV, No. 1

ANNOUNCEMENT  
OF THE  
UNIVERSITY OF CALIFORNIA,  
SOUTHERN BRANCH  
FOR THE  
ACADEMIC YEAR, 1922-23

JULY, 1922

PUBLISHED BY THE  
SOUTHERN BRANCH  
UNIVERSITY OF CALIFORNIA  
LOS ANGELES  
For Sale at the Students' Book Stores,  
Berkeley and Los Angeles  
PRICE, 20 CENTS

**Administrative Bulletins of the University of California**  
**Southern Branch**  
**1922-23**

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**CIRCULARS OF INFORMATION**

For copies of this Announcement address the *Recorder, Southern Branch, University of California, Los Angeles*. Price, 20 cents; sent by mail, 25 cents.

For the Announcement of the University of California Summer Session in Los Angeles apply to the Summer Session Office, 816 Hill Street Theater Building, Los Angeles.

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

For the following circulars of information concerning the several colleges and departments of the University apply to the *University of California Press, Berkeley, California*:

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

The Annual Announcement of Courses of Instruction in the Academic Departments. Price, 25 cents; by mail, 30 cents.

The Announcement of the Graduate Division.

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

Specimen entrance examination papers.

The Annual Announcement of the School of Education.

The Annual Announcement of the School of Jurisprudence.

The Announcements of the Summer Sessions. Published annually in January.

The Catalogue of Officers and Students. Published in September and February. Price, 25 cents; by mail, 28 cents.

The Monthly Meteorological Synopsis of Berkeley.

The Annual Register. Price, 25 cents.

The Annual Report of the President.

*(Continued on third page of cover)*

UNIVERSITY OF CALIFORNIA

ANNOUNCEMENT

OF THE

UNIVERSITY OF CALIFORNIA  
SOUTHERN BRANCH

FOR THE

ACADEMIC YEAR, 1922-23

SOUTHERN BRANCH  
UNIVERSITY OF CALIFORNIA  
LOS ANGELES.  
1922

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

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

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

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

### **HOW TO REACH THE SOUTHERN BRANCH**

The Southern Branch is reached by two yellow-car lines and one red-car line:

1. Heliotrope Drive Line (yellow car). Leave car at Melrose avenue and Heliotrope drive.
2. Santa Monica Boulevard Line (red car). Leave car at either Vermont avenue or Berendo street.
3. Temple Street Line (yellow car). Leave car at Normal avenue.

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## CALENDAR, 1922-23

1922

August 21, Monday	Applications for admission and recommendations issued by the principals of accredited schools to be filed with the Recorder on or before this date.
August 29, Tuesday	} Registration of new students from 8:30 a.m. to 4:30 p.m.
August 30, Wednesday	
August 31, Thursday	
August 29, Tuesday to September 2, Saturday	} Physical examinations of new students.
August 29, Tuesday	Subject A examination (8:30 a.m.).
August 29, Tuesday	General intelligence test (2:00 p.m.).
September 1, Friday	Registration of old students from 8:30 a.m. to 4:30 p.m. Students who are re-entering will register on this date.
September 5, Tuesday	Instruction begins (8:00 a.m.).
September 9, Saturday	Admission Day (holiday).
September 25, Monday	Last day for filing applications and programmes in candidacy for junior and teachers' certificates to be received January, 1923.
October 14, Saturday	Last day of first mid-term period.
November 25, Saturday	Last day of second mid-term period.
November 30, Thursday	} Thanksgiving recess.
December 1, Friday	
December 2, Saturday	
December 18, Monday to January 1, Monday	} Christmas recess.

1923

January 8, Monday	Applications for admission in January to be filed on or before this date.
January 15, Monday to January 20, Saturday	} Mid-year examinations.
January 20, Saturday	Semester closes.
January 20, Saturday	Subject A examination (8:30 a.m.).
January 20, Saturday	General intelligence test (2:00 p.m.).
January 22, Monday January 23, Tuesday	} Registration of students for courses of the second half-year.
January 24, Wednesday	Instruction begins (8:00 a.m.).
February 3, Saturday	Last day for filing applications and programmes in candidacy for junior and teachers' certificates to be received in June, 1923.
March 3, Saturday	Last day of first mid-term period.
March 15, Thursday	Applications for University Scholarships to be filed by this date.
March 23, Friday	Charter Day. Assembly (11:00 a.m.).
March 26, Monday to March 31, Saturday	} Spring recess.
April 21, Saturday	Last day of second mid-term period.
May 19, Saturday	At Home Day.
May 21, Monday to May 26, Saturday	} Final examinations.
May 29, Tuesday	Class Day.
May 30, Wednesday	Memorial Day (holiday).
June 1, Friday	The Fourth Southern Branch Commencement.
June 2, Saturday	Semester closes.

**REGENTS OF THE UNIVERSITY**

NOTE—The regular meetings of the Regents are held at 2 p. m. on the second Tuesday of each month, except July, and on the day before Commencement, at such places as may from time to time be determined, ordinarily at the California School of Fine Arts, California and Mason streets, San Francisco. The Los Angeles office of the Regents is in Room 831, Pacific Finance Building, Los Angeles.

**REGENTS EX OFFICIO**

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Governor of California and President of  
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Sacramento

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Lieutenant-Governor of California  
Sacramento (276 Post st, San Francisco)

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

**WILL C. WOOD**  
State Superintendent of Public Instruc-  
tion  
Sacramento

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President of the State Agricultural  
Society  
Care, Kern County Land Co., Bakersfield

**BYRON MAUEY**  
President of the Mechanics' Institute  
807 Phelan bldg, San Francisco

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President of the Alumni Association  
910 I. N. Van Nuys bldg,  
Los Angeles

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

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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.

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14 Sansome st, San Francisco

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**PHILIP ERNEST BOWLES, Ph.B. (1922)**  
American National Bank, San Francisco

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41 First st, San Francisco

**CHARLES ADOLPH RAMM, B.S., M.A.,  
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1100 Franklin st, San Francisco

**EDWARD AUGUSTUS DICKSON, B.L. (1926)**  
510 Lucerne blvd, Los Angeles

**JAMES MILLS (1926)**  
Hamilton City

**CHESTER HARVEY ROWELL, Ph.B. (1936)**  
Care, State Railroad Commission, Flood  
bldg, San Francisco

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Francisco

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501 West Sixth st, Los Angeles

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



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Land Agent  
220 California Hall, Berkeley

Calmur John Struble, A.B., J.D.  
Assistant Comptroller, and Assistant  
Secretary of the Regents  
220 California Hall, Berkeley

Mortimer Fleishhacker  
Treasurer  
Anglo-California Trust Company, San  
Francisco

James M. Mannon, Jr., LL.B.  
Attorney  
1300 Balfour bldg, San Francisco

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FOR THE YEAR 1922-23\*

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*Endowments:*

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*Engineering*

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*Executive Committee:*

This committee consists of the chairmen  
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*Wilderding School:*

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

**ADMINISTRATIVE OFFICERS****IN BERKELEY***President Emeritus of the University:*

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26 Library

*President of the University:*

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217 California Hall

*Executive Secretary to the President:*

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217 California Hall

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

**Robert Gordon Sproul**  
220 California Hall

*Assistant Comptroller and Assistant Secretary of the Regents:*

**Calmar John Struble**  
220 California Hall

*Recorder of the Faculties:*

**James Sutton**  
204 California Hall

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

**Ernest Carroll Moore**  
103 Millspaugh Hall

*Recorder of the Southern Branch:*

**Lewis Adams Maverick**  
101A Millspaugh Hall

*Dean of the Summer Session in Los Angeles:*

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816 Hill Street Theatre Building

*\*Medical Department:*

**Dean: George H. Kress**  
245 Bradbury Building

*Extension Division—*

*Representative in Southern California:*  
**C. H. Rieber**  
817 Hill Street Theatre Building

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

## I. HISTORY

### A. 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), and David Prescott Barrows (1919-).

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.

## B. THE SOUTHERN BRANCH

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

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

By an act of the Legislature which became effective July 24, 1919, the school became the Southern Branch of the University of California. The Regents of the University assumed control of the grounds, buildings and equipment, and Dr. Moore was appointed Director.

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


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

## II. ORGANIZATION AND ADMINISTRATION

The University of California is an integral part of the public educational system of the State. Through aid from the State and the United States, and by private gifts, it furnishes instruction in literature and in science, and in the professions of engineering, art, law, medicine, dentistry, and pharmacy. The instruction in all the colleges is open to all qualified persons, without distinction of sex. The Constitution of the State provides for the perpetuation of the University, with all its departments.

The government of the University is entrusted to a corporation styled THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, consisting of the Governor, the Lieutenant-Governor, the Speaker of the Assembly, the State Superintendent of Public Instruction, the President of the State Board of Agriculture, the President of the Mechanics' Institute of San Francisco, the President of the Alumni Association, and the President of the University, as members *ex officio*, and sixteen other regents appointed by the Governor and approved by the State Senate. The internal management of the University is in the hands of the President and the Academic Senate, which is composed of the faculties of the University.

The Southern Branch is administered by the Director, who is the administrative head, appointed by the Regents on the recommendation of the President of the University.



**III. DEPARTMENTS OF THE UNIVERSITY****I. IN BERKELEY****The Colleges of**

Letters and Science,

Commerce,

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

Mechanics,

Mining,

Civil Engineering,

Chemistry.

**The Schools of**

Architecture,

Education,

Jurisprudence,

Medicine (first and second years).

**The University Extension Division.****The Summer Session.****The California Museum of Vertebrate Zoology.****The Museum of Paleontology.****II. AT MOUNT HAMILTON****The Lick Astronomical Department (Lick Observatory).****III. AT SANTIAGO, CHILE****Lick Observatory, Chile Station.**

IV. IN SAN FRANCISCO

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

V. IN LOS ANGELES

The Southern Branch of the University.  
The Teachers College,  
The Junior College.  
Los Angeles Medical Department (graduate instruction only).  
The Summer Session.  
The University Extension Division.

VI. AT DAVIS

Branch of the College of Agriculture.

VII. AT RIVERSIDE

The Citrus Experiment Station and Graduate School of Tropical Agriculture.

VIII. AT LA JOLLA

The Scripps Institution for Biological Research.

IX. AT SWANTON

The Summer School of Surveying.

## IV. OFFICERS AND FACULTY

## ADMINISTRATIVE OFFICERS

DAVID PRESCOTT BARROWS, Ph.D., LL.D., President of the University.

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

Advisory Administrative Board, Southern Branch, University of California: ERNEST CARROLL MOORE, Ph.D., LL.D., Chairman; BALDWIN M. WOODS, Ph.D.; MONROE E. DEUTSCH, Ph.D.; The Comptroller of the University.

- CLOYD HECK MARVIN, Ph.D., <sup>Asst Director</sup> Dean in the Southern Branch and Associate Professor of Commerce.

- CHARLES H. RIEBER, Ph.D., Dean in the Southern Branch and Professor of Philosophy

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- E. E. BECKMAN, Executive Secretary to the Director.

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- ELIZABETH P. STUBTEVANT, Assistant Librarian.

- BEATRICE M. HOLLOWAY, Assistant Librarian.

- ANNA K. FOSSLER, Assistant Librarian.

- Marvin Lloyd Darsie, M.A., Dean of Teachers College, and Ass't prof. of Education.



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- 2 | BENNETT MILLS ALLEN, Ph.D., Associate Professor of Biology.
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- 2 | HENRY RAYMOND BRUSH, Ph.D., Associate Professor of Romance Languages.
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- 2 | KATHERINE COLLINS, M.A., Associate in English.
- 2 | SQUIRE COOP, Lecturer in Music.
- | F. M. COUCH, Lecturer in Credits and Collections.

\* Absent on leave, 1922-23.

<sup>1</sup> In residence second semester only.

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- 2 | JOHN E. CREED, Major, U. S. A., Assistant Professor of Military Science and Tactics.
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- 2 | MARVIN L. DARSIE, M.A., Assistant Professor of Education. <sup>Dean, T.C.</sup>
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- 2 | KATE GORDON, Ph.D., Lecturer in Psychology.
- \*AUSTIN K. GRAY, M.A., Assistant Professor of English.
- 2 | LUCILE R. GRUNEWALD, B.S., Associate in Physical Education for Women.
- 2 | BERTHA HALL, Associate in Physical Education for Women.
- FLORENCE M. HALLAM, A.B., Associate in Home Economics.
- 2 | EDITH R. HARSEBERGER, A.B., Associate in Physical Education for Women.
- 2 | BESSIE E. HAZEN, Instructor in Fine Arts.
- MORRIS JOSEPH HERBERT, Major, U. S. A. (Retired), Assistant Professor of Military Science and Tactics.
- KATHARINE HERSEY, B.S., Associate in Physical Education for Women.

\* Absent on leave, 1922-23.

## Officers and Faculty

17

- 2 | PERCY H. HOUSTON, Ph.D., Assistant Professor of English.
- 2 | ALICE HUBARD, Associate in French and Spanish.
- 2 | MERRITT YERKES HUGHES, Ph.D., Assistant Professor of English.
- 2 | ALICE O. HUNNEWELL, Instructor in English.
- 2 | GUY H. HUNT, C.E., Instructor in Applied Mathematics.
- \*SIGURD BERNHARD HUSTVEDT, Ph.D., Assistant Professor of English.
- 2 | GLENN JAMES, Ph.D., Assistant Professor of Mathematics.
- 2 | EMILY D. JAMESON, A.B., Associate in Physical Education for Women.
- 2 | MAUDE E. JENKINS, B.S., Associate in Home Economics.
- 2 | ADRIAN D. KELLER, Associate in Mechanic Arts.
- 2 | VIERLING KERSEY, M.A., Lecturer in Part-Time Education.
- 2 | FRANK J. KLINGBERG, Ph.D., Associate Professor of History.
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- 2 | L. K. KOONTZ, Ph.D., Instructor in History.
- 2 | WILLIAM J. KRAFT, Mus.Bac., Lecturer in Music.
- 2 | ANNA KRAUSE, A.M., Associate in Spanish.
- 2 | MELVA LATHAM, A.B., Assistant Professor of History.
- 2 | ELIZABETH LATHROP, Associate in Home Economics.
- 2 | C. A. LEDEUC, M.B.A., Ph.D., Assistant Professor of Accounting.
- 2 | FREDERICK C. LEONARD, Ph.D., Instructor in Astronomy.
- 2 | EVELYN STARR LESLIE, A.M., Associate in French. *ms*
- 2 | MADELEINE L. LETESSIER, A.B., Associate in French.
- 2 | JOSEPH B. LOCKEY, Ph.D., Assistant Professor of History.
- 2 | LAWRENCE C. LOCKLEY, M.A., Associate in English.
- 2 | MARIA LOPÉZ DE LOWTHER, B.S., Lecturer in Spanish.
- \*PAULINE LYNCH, Associate in Home Economics.
- 2 | GEORGE M. MCBRIDE, Ph.D., Lecturer in Geography.
- 2 | MYRTA LISLE MCCLELLAN, B.S., Assistant Professor of Geography.
- 2 | MARSHALL FRANCIS MCCOMB, A.B., LL.B., Lecturer in Business Law.
- 2 | ARTHUR PATCH MCKINLAY, Ph.D., Assistant Professor of Latin.
- 2 | KATHERINE L. MCLAUGHLIN, M.A., Associate Professor of Education.
- 2 | DONALD MACKAY, A.B., Instructor in Philosophy.
- 2 | HARRIET MACKENZIE, M.A., Instructor in English.
- \*AGNES E. MACPHERSON, Associate in Home Economics.
- 2 | HAROLD WILLIAM MANSFIELD, Assistant Professor of Mechanic Arts.
- 2 | CHARLES A. MARSH, B.S., Assistant Professor of Argumentation.
- 2 | JAMES WILLARD MARSH, Associate in Mechanic Arts.
- 2 | CHARLES E. MARTIN, Ph.D., Assistant Professor of Government.
- CLOYD HECK MARVIN, Ph.D., <sup>Asst. Director</sup> Dean in the Southern Branch and Associate Professor of Commerce.
- 2 | LEWIS ADAMS MAVERICK, M.A., Recorder and Lecturer in Vocational Education.

\* Absent on leave, 1922-23.

- 1 2 RUSSELL W. MILLAR, Ph.D., Instructor in Chemistry.
  - 2 | LOYE HOLMES MILLER, Ph.D., Associate Professor of Biology.
  - 2 | ERNEST CARROLL MOORE, Ph.D., LL.D., Director of the Southern Branch and Professor of Education.
  - 2 | WILLIAM CONGER MORGAN, Ph.D., Professor of Chemistry.
  - 2 | ELMER S. NELSON, M.A., Associate in Commerce.
  - 2 | OLIVE NEWCOMB, Associate in Industrial Arts.
  - 2 | HOWARD S. NOBLE, A.B., M.B.A., Assistant Professor of Accounting.
  - 2 | FRANK E. OLDER, B.S., Assistant Professor of the Teaching of Agriculture.
  - 2 | GUY G. PALMER, Colonel, U. S. A., Retired, Professor of Military Science, and Tactics.
  - 2 | JOHN CARL PARRISH, Ph.D., Assistant Professor of History.
  - 2 | L. E. PEARSON, M.A., Associate in English.
  - 2 | JOHN B. PHILLIPS,, Associate in Mechanic Arts.
  - 2 | ESTELLA B. PLOUGH, Associate in Commercial Practice.
  - 2 | EDWIN MOORE RANKIN, Ph.D., Lecturer in Greek.
  - 2 | CHARLES H. RIEBER, Ph.D., Dean in the Southern Branch and Professor of Philosophy
  - 2 | G. ROSS ROBERTSON, Ph.D., Instructor in Chemistry.
  - 2 | CLARENCE HALL ROBISON, Ph.D., Assistant Professor of Education.
  - 2 | S. L. MILLARD ROSENBERG, Ph.D., Assistant Professor of Spanish.
  - | ETHEL I. SALISBURY, M.A., Associate Professor of Elementary Education.
  - 2 | BENJAMIN N. SCHIEWE, Associate in Mechanic Arts.
  - 2 | EFFIE SHAMBAUGH, Associate in Physical Education for Women.
  - 2 | MARION SHEPARD, A.B., Associate in Physical Education for Women.
  - 2 | GEORGE E. F. SHEERWOOD, M.A., Associate Professor of Mathematics.
  - 2 | HARRY M. SHOWMAN, E.M., M.A., Assistant Professor of Mathematics.
  - | BIRDIE KIRK SMITH, Associate in Fine Arts.
  - 2 | WILLIAM A. SMITH, Ph.D., Assistant Professor of Education.
  - 2 | LOUISE P. SOOY, Assistant Professor of Fine Arts.
  - 2 | VERNON SPENCER, Assistant Professor of Music.
  - 2 | O. L. SPONSER, Ph.D., Instructor in Botany.
  - 2 | HOSMER W. STONE, Ph.D., Instructor in Chemistry.
  - | NELLIE B. SULLIVAN, A.B., Instructor in Psychology.
  - 2 | FLORENCE E. SUTTON, Associate in Physical Education for Women.
  - 2 | INA THACH, Associate in Physical Education for Women.
  - 2 | EVALYN THOMAS, A.B., B.L.I., Instructor in English.
  - 2 | BERTHA C. VAUGHN, Teacher of Voice.
  - 2 | FREDERICK P. VICKEY, M.S., Assistant Professor of Geology.
  - | CHARLES WILKIN WADDLE, Ph.D., Supervisor of Training and Professor of Education.
- 01 154  
 Evelyn Menden. Art.  
 Alfred. E. Longueil. Ph.D. English.  
 Louis C. Valentine. A.B. English.

- \*BERTHA A. WARDELL, Associate in Physical Education for Women.
- 2 | ARTHUR H. WARNER, A.B., B.S., Associate in Physics.
- 2 | NATALIE WHITE, Associate in Industrial Arts.
- 2 | BELLE H. WHITICE, Associate in Industrial Arts.
- 2 | ALFRED R. WHITMAN, Ph.D., Instructor in Geology.
- 1 | EDWARD T. WILLIAMS, M.A., LL.D., Agassiz Professor of Oriental Languages and Literature (Berkeley).
- 2 | FLORENCE A. WILSON, A.B., B.S., Associate in Home Economics.
- 2 | FREDERICK P. WOELLNER, Ph.D., Lecturer in Education.
- 2 | EUPHEMIA R. WORTHINGTON, Ph.D., Instructor in Mathematics.
- 2 | FRANCES A. WRIGHT, Associate Professor of Public School Music.

## STAFF OF TRAINING INSTRUCTION

- ELLEN LYNCH ASHTON, Training Teacher Sixth Grade, Dayton Heights.
- MYETLE L. BURGESS, A.B., Principal and Assistant Supervisor of Training, Dayton Heights.
- BETH HOUSTON BENNING, Training Teacher Sixth Grade, Lockwood.
- 2 | ERNA BRENNEMAN, Training Teacher in Home Economics, Southern Branch.
- 2 | ETHEL BRITTO, A.B., Training Teacher First Grade, Southern Branch.
- 2 | NIÑO BROWN, Training Teacher Eighth Grade, Lockwood.
- MARGARET ROSE CARNES, Training Teacher First Grade, Dayton Heights.
- 2 | GERTRUDE W. CERP, Training Teacher in French, Southern Branch.
- SERENA P. CHRISTENSEN, Training Teacher Seventh Grade, Lockwood.
- 1 | FLORENCE CHURTON, Assistant Supervisor of Home Economics Training.
- 2 | MARGARET M. CAMPBELL, M.A., Training Teacher in Mathematics, Southern Branch.
- \*MADELINE CROWELL, B.S., Training Teacher in Home Economics, Southern Branch.
- 1 | MARY E. DOUGLASS, M.A., Training Teacher Kindergarten, Southern Branch.
- ELSIE C. DOBBINS, Training Teacher Second Grade, Dayton Heights.
- JEANNETTE FERMAN, Training Teacher Primary Adjustment Room, Dayton Heights.
- JANET FREEZE, Librarian, Southern Branch.
- 2 | BARBARA GREENWOOD, Training Teacher Kindergarten, Southern Branch.
- 2 | FRANCES GIDDINGS, A.B., Acting Assistant Supervisor of Training, Southern Branch.
- FLORENCE M. HALLAM, A.B., Associate in Home Economics.
- BESS HOLDZKOM, Training Teacher First Grade, Lockwood.
- MARY FRANCES HOLLINS, Training Teacher in Home Economics, LeConte Junior High School.

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\* Absent on leave, 1922-23.

<sup>1</sup> In residence first semester only, 1922-23.

- JOHN A. HOWELL, Assistant Training Teacher in Physical Education, Southern Branch.
- ALICE HUBARD, Training Teacher in Spanish, Southern Branch.
- 2 | MABEL C. JACKSON, M.A., Training Teacher in English, Southern Branch.
- 2 | KATHARINE KAHLEY, A.B., Training Teacher in Social Sciences, Southern Branch.
- HELEN B. KELLER, Training Teacher of Adjustment Room, Southern Branch.
- 2 | BLANCHE KELLS, Training Teacher in Physical Education, Southern Branch.
- ELMER R. KING, Training Teacher in Printing, Southern Branch.
- ETHEL B. LOWBY, Training Teacher Fifth Grade, Dayton Heights.
- GERTRUDE MALONEY, Training Teacher Fourth Grade, Lockwood.
- JOHN G. MILLER, Supervisor of Classes for the Training of Trade and Industrial Teachers.
- JESSICA M. PARKS, Training Teacher Second Grade, Lockwood.
- KATHERINE PARRISH, Training Teacher Third Grade, Lockwood.
- 2 | CARLYLE F. PIERSON, Training Teacher of Manual Arts, Southern Branch.
- 2 | EDITH HOPE RINGER, Training Teacher Third Grade, Southern Branch.
- 2 | EMMA J. ROBINSON, Training Teacher Sixth Grade, Southern Branch.
- 2 | EDNA LEE ROOF, Training Teacher in Physical Education, Lockwood and Dayton Heights.
- ESTELLE ROYER, Training Teacher Kindergarten, Dayton Heights.
- AUGUSTA N. SADLER, Assistant Supervisor of Training and Principal, Lockwood.
- ETHEL I. SALISBURY, M.A., Assistant Supervisor of Training and Associate Professor of Elementary Education.
- ADELIA ADAMS SAMUELS, Training Teacher First Grade, Southern Branch.
- SUSIE K. SANDERSON, Training Teacher Non-English Speaking Class, Bridge Street.
- 2 | ALMA BARNETT SAWYER, M.A., Assistant Supervisor of Training.
- 2 | CORINNE A. SEEDS, B.S., Training Teacher Fourth Grade, Southern Branch.
- 2 | KATHERINE SPIERS, M.A., Assistant Supervisor of Training.
- | LULU M. STEDMAN, Training Teacher Fifth Grade and Opportunity Room, Southern Branch.
- LAVINIA A. STINSON, Training Teacher in Home Economics, LeConte Junior High School.
- 2 | EDITH WALLOP SWARTS, Training Teacher Second Grade, Southern Branch.
- LEILA E. STORMZAND, B.Ph., Training Teacher Fifth Grade, Lckwood.
- GRACE W. TINGLEY, Training Teacher Fourth Grade, Dayton Heights.

ELLEN TOY, Training Teacher Third Grade, Dayton Heights.

-1 THOMAS E. THOMPSON, A.B., Vice-Principal of Junior High School and Assistant Supervisor of Training.

- CHARLES WILKIN WADDLE, Ph.D., Professor of Education and Supervisor of Training.

-2 BERTHA E. WELLS, Assistant Supervisor of Training.

ELIZABETH WHITCOMB, Training Teacher Kindergarten, Lockwood.

S. EDNA WILLIAMS, Training Teacher First Grade, Dayton Heights.

#### STAFF OF REHABILITATION INSTRUCTION

- ROBERT K. BAIRD, Rehabilitation Instructor in Electricity.

-2 FOSS R. BROCKWAY, Associate in Mechanic Arts and Rehabilitation Instructor in Auto Mechanics.

- SPURGEON CROSBY, Rehabilitation Instructor in Machine Shop.

- WILLIAM DEMOCELIN, Rehabilitation Instructor in Sign Painting.

— — —, Rehabilitation Instructor in Salesmanship.

- FRED R. HOLCOMB, Rehabilitation Instructor in Showcard Writing.

- E. J. KASENBACH, Rehabilitation Instructor in Commerce.

-2 A. D. KELLER, Rehabilitation Instructor in Woodwork.

- HAROLD WILLIAM MANSFIELD, Supervisor of Rehabilitation Work and Assistant Professor of Mechanic Arts.

-2 JAMES WILLARD MARSH, Associate in Mechanic Arts and Rehabilitation Instructor in Electricity.

- CLOYD HECK MARVIN, Ph.D., Dean in the Southern Branch and Associate Professor of Commerce.

-2 WILLIAM J. MASAK, Rehabilitation Instructor in Mechanical Drafting.

- L. M. MURPHY, Rehabilitation Instructor in Commercial Art.

- H. CARLETON NEWTON, Rehabilitation Instructor in Structural Engineering.

- HOWARD S. NOBLE, A.B., M.B.A., Assistant Professor of Accounting.

- ALGOT NORDSTROM, Rehabilitation Instructor in Commercial Art.

-2 JOHN B. PHILLIPS, Associate in Mechanic Arts and Rehabilitation Instructor in Machine Shop.

- WILLIAM B. RHOADS, Rehabilitation Instructor in Commerce.

-2 BENJAMIN N. SCHIEWE, Associate in Mechanic Arts and Rehabilitation Instructor in Mechanical Engineering.

- W. S. SHIRES, Rehabilitation Instructor in Commercial Practice.

-2 C. A. TRUESDELL, Rehabilitation Instructor in Architecture.

- LOUIS WOJTKOWSKI, Rehabilitation Instructor in Storage Battery.

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## ASSISTANTS

- 2 | MIGUEL BASOCO, Assistant in Mathematics.
- HELEN W. BROCK, Assistant in Art.
- LEO P. DELSASSO, Assistant in Physics.
- PAUL FRAMPTON, Assistant in Physical Education for Men.
- RUTH G. PERSONS, Assistant in Zoology.
- SILAS GIBBS, Assistant in Commerce.
- HARRY TROTTER, Assistant in Physical Education for Men.
- JOHN D. ELDER, Assistant in Physics.
- 2 | WALTER S. SWAN, Assistant in Architecture.
- ROYAL STOTT, Assistant in Shop Work.
- ELIZABETH BOYNTON, Library Assistant.
- SARAH L. PATTERSON, Library Assistant.
- EMILY E. TYRRELL, Library Assistant.
- MILDRED WEBER, Library Assistant.



## V. ADMISSIONS

### INTRODUCTORY

Candidates recommended in accordance with the following provisions are admitted to the Southern Branch and enrolled in the curricula of their choice. It will be seen, however, that some of these curricula cannot be completed in the University in the normal period (four years for the degree A.B. or B.S.) unless the candidate during his high school course has completed such specific prerequisites as may underlie the University work. The provisions follow:

#### ADMISSION FROM ACCREDITED SCHOOLS IN CALIFORNIA

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

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

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

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

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

**ADMISSION FROM OTHER SCHOOLS****FROM CALIFORNIA SCHOOLS NOT ACCREDITED**

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

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

(a) Advanced English and History (in addition to United States History), any 2 units.

(b) Mathematics (intermediate algebra and trigonometry), 1½ units.

(c) Foreign languages, 3 units in one, or 2 units in each of two.

(d) Additional advanced science, 2 units.

**FROM APPROVED HIGH SCHOOLS IN OTHER STATES**

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

**MATRICULATION EXAMINATIONS**

Applicants who plan to enter by examination may take the examinations conducted, in June of each year in Los Angeles and other cities of California, by the College Entrance Examination Board. The Southern Branch does not conduct matriculation examinations. Examinations are held at Berkeley in August and January of each year. A list of preparatory subjects, with the amount of matriculation credit assigned to each, will be found in the Admission Circular. Apply to the *Recorder of the Faculties, Berkeley*.

**COLLEGE ENTRANCE EXAMINATION BOARD**

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

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

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

If the application is received sufficiently early, the examination fee will be \$9 for candidates examined in the United States or Canada and \$20 for candidates examined elsewhere. The fee, which must accompany the application, should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

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

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

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon payment of \$9 in addition to the usual fee.

A list of the places at which examinations are to be held by the board in June, 1923, will be published about March 1. Requests that the exam-

inations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

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

### ADMISSION ON TEACHERS' DIPLOMAS

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

### PREPARATORY WORK REQUIRED AND RECOMMENDED

#### THE HIGH SCHOOL PROGRAMME

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

*Subject A: English Composition.*—All undergraduate intrants are, immediately following their admission, required to take a written examination in Subject A: English Composition. Students who fail to make a satisfactory showing in this test are required to take a special course in English composition without university credit. Tuition fee, \$10.

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

*Mathematics.*—If possible, provision should be made in the high school programme for two years of work in mathematics, namely, elementary algebra and plane geometry. Instruction in these subjects—credit for both of which is required for any degree in the University of California—will not be provided in the Southern Branch in courses of resident instruction in or after August, 1924.

#### PREPARATION FOR THE VARIOUS CURRICULA

A curriculum is understood to be either a technical or a specialized course of studies; it may be begun in the Southern Branch and continued in the colleges at Berkeley or, in the case of the Teachers College, completed at the Southern Branch.

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

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

The terms "required" and "recommended" are to be interpreted as follows:

*Required:* Subjects without which the student will not be able to enter all the courses in the regular curriculum. The omission of required subjects at matriculation will usually result in delaying graduation.

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

The numerals in parentheses represent units of high school work. A standard secondary unit is the measure of a subject pursued throughout the school year of from 36 to 40 weeks, constituting approximately one-quarter of a full year's work.

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

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

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

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

*Recommended:* foreign languages, geography.

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

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

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

**Art.** See DRAWING AND ART.

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

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

**Commerce:** (A) leading to the baccalaureate degree in the TEACHERS COLLEGE or recommendation for certification.

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

*Recommended:* modern foreign language.

(B) leading to the junior certificate in the COLLEGE OF LETTERS AND SCIENCE, economics major.

*Recommended:* foreign language.

(C) leading to the degree of Bachelor of Science in the COLLEGE OF COMMERCE.

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

*Recommended:* additional mathematics; natural sciences; modern foreign language.

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

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

#### **Drawing and Art.**

(A) **Art:** leading to the baccalaureate degree in the TEACHERS COLLEGE or recommendation for certification.

*Recommended:* freehand drawing (1).

(B) **Engineering Drawing:** leading to the degree of Bachelor of Arts.

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

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

(C) **Graphic Art:** leading to the degree of Bachelor of Arts.

*Recommended:* freehand drawing (1).

**Economics.** See COMMERCE.

**Education:** (A) leading to the baccalaureate degree in the TEACHERS COLLEGE or recommendation for certification.

*Recommended:* mathematics (2); modern foreign language (2).

(B) leading to the degree of Bachelor of Arts.

*Recommended:* foreign language.

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

*Required:* plane geometry (1); elementary algebra (1); algebraic theory (½); trigonometry (½); physics (1); chemistry (1); geometrical drawing (1).

*Recommended:* advanced algebraic theory, including quadratics (½); freehand drawing (1); foreign language (2). The omission of any part of the work recommended in mathematics and drawing will almost invariably make it necessary for the student to devote more than four years to the completion of the work required for the degree of Bachelor of Science.

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

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

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

*Required:* same as for ENGINEERING.

*Recommended:* same as for ENGINEERING.

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

*Recommended:* foreign language.

**Home Economics:** leading to the baccalaureate degree in the TEACHERS COLLEGE or recommendation for certification.

*Recommended:* chemistry (1); mathematics (2); domestic science (1); modern language (1).

**Household Art:** leading to the degree of Bachelor of Arts.

*Required:* Chemistry (1).

*Recommended:* freehand drawing (1); botany (1); domestic science (2); mechanical drawing (1); foreign language, preferably French or German (2-4).

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

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

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



**Languages: (Classic) Latin Greek:** leading to the degree of Bachelor of Arts.

*Required:* Latin (2).

*Recommended:* Latin (4); Greek (3); ancient history (1). To delay advanced Latin until the University is reached will make any progress in this study difficult.

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

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

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

*Recommended:* physics (1) or chemistry (1); Latin (2); United States History (1) and English History (1).

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

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

*Recommended:* reading knowledge of French and German.

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

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

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

**Mechanic Arts:** leading to the baccalaureate degree in the TEACHERS COLLEGE or recommendation for certification.

*Required:* physics (1); chemistry (1); mathematics (2).

*Recommended:* modern foreign language (2); solid geometry ( $\frac{1}{2}$ ); free-hand drawing (1).

**Medicine:** leading to the degree of Bachelor of Arts in the COLLEGE OF LETTERS AND SCIENCE in four years and to the degree of Doctor of Medicine in the MEDICAL SCHOOL in four additional years; the fourth or senior year in the COLLEGE OF LETTERS AND SCIENCE consisting of the first year of the five-year curriculum in the MEDICAL SCHOOL.

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

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

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

*Recommended:* military science ( $\frac{1}{2}$ ) physical education; elementary algebra (1); plane geometry (1); physics (1); French, German, or Spanish (3), or history (3).

**Music:** (A) leading to the baccalaureate degree in the TEACHERS COLLEGE or to recommendation for certification.

*Required:* sight singing (1); algebra (1); plane geometry (1); ability to play the piano (for further information, apply to the chairman of the Department of Music).

*Recommended:* modern foreign language (2).

(B) leading to the degree of Bachelor of Arts.

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

**Nursing:** leading to the degree of Bachelor of Science, at the end of a five-year course, including two years' training in the UNIVERSITY OF CALIFORNIA SCHOOL OF NURSING in San Francisco.

*Required:* elementary algebra (1); plane geometry (1); chemistry (1); and either physics or trigonometry.

*Recommended:* foreign language.

**Pharmacy:** (A) leading to the degree of Ph.G. (Graduate in Pharmacy) at the end of a course of two years in the CALIFORNIA COLLEGE OF PHARMACY.

*Required:* graduation from an accredited high school or its educational equivalent.

(B) leading to the degree of Ph.C. (Pharmaceutical Chemist) at the end of a course of three years in the CALIFORNIA COLLEGE OF PHARMACY.

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

(C) leading to the degree of Phar.B. (Bachelor of Pharmacy) at the end of a course of four years in the CALIFORNIA COLLEGE OF PHARMACY.

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

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

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

**Physical Education:** (A) leading to the baccalaureate degree in the TEACHERS COLLEGE or recommendation for certification.

*Required:* chemistry (1).

*Recommended:* modern foreign language (2); mathematics (2).

(B) leading to the degree of Bachelor of Arts.

*Recommended:* foreign language, chemistry, physics, mathematics.

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

*Recommended:* foreign language.

**Psychology** (see Philosophy and Psychology).

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

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

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

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

*Required:* same as for ENGINEERING.

*Recommended:* same as for ENGINEERING.

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

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

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

*Recommended:* see English.

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

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

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

**ADMISSION WITH ADVANCED STANDING****FROM OTHER COLLEGES AND UNIVERSITIES**

Advanced standing in the Teachers College or the Junior College of the Southern Branch may be given applicants on the basis of certificates from other colleges and universities upon the approval of the certificates by the proper committee. A form of statement of the work which may be used for such certificates will be furnished on application to the *Recorder of the Southern Branch, Los Angeles*. It may be filled out by the applicant himself, but should be duly certified by the proper officer of the institution in which the work was done. There should also be submitted some credential showing in detail the basis upon which the applicant was matriculated in the institution from which he comes and the preparatory subjects for which matriculation credit was given. These documents should be filed with the Recorder of the Southern Branch in order that they may be placed before the Admissions Committee for an estimate of their value in terms of the requirements of the University of California. The committee, acting on behalf of the faculty, is empowered to reject the certificates, in whole or in part, and to require examination in any or all of the subjects offered.

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

**FROM SCHOOLS AND COLLEGES IN FOREIGN COUNTRIES**

Graduates of approved schools and colleges in foreign countries may be admitted only if their command of English is sufficient to permit them to profit by university instruction. This ability will be tested by an oral and written examination set by the Admissions Committee. A circular concerning the rules of the Admissions Committee in the matter of assignment of credit in languages to foreign students may be obtained from the *Recorder of the Southern Branch, Los Angeles*.

**SURPLUS MATRICULATION CREDIT**

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

## VI. CURRICULA

### A. THE TEACHERS COLLEGE

#### INTRODUCTORY

The curricula in the Teachers College are designed to meet the needs of the following types of students:

- A. Students who are preparing to teach in the kindergarten and primary grades.
- B. Students who are preparing to teach in the elementary grades.
- C. Students who are preparing to specialize in elementary departmental work in art, music, home economics, physical education, English, history, arithmetic, geography, or penmanship.
- D. Students who are preparing to do practical work in kindergarten-primary or elementary administration and supervision.
- E. Students who are preparing to teach in the junior high schools.
- F. Students who are preparing to obtain the secondary special certificate in art, commerce, home economics, mechanic arts, music, or physical education.\*

#### REQUIREMENTS FOR GRADUATION FROM THE TEACHERS COLLEGE

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

- I. Admission to the Teachers College.
- II. Completion of a total of 128 units of credit, inclusive of physical education, hygiene, and military science.
- III. Presentation of a certificate of physical health and fitness from the Southern Branch medical examiners.
- IV. Recommendation of the departments in which the principal and secondary sequences of work are taken, or of the responsible authorities as to the student's fitness for teaching.

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\* It is not the purpose of the Teachers College to offer the work necessary to complete the requirements of the general high school certificate.

*Announcement of the Southern Branch*

## V. Satisfactory completion of the following sequences of work:

## (a) General Sequences:

- (1) Subject A; (2) Psychology X (1 unit); (3) Military Science 1A-1B, 2A-2B (6 units), *men*; (4) Physical Education 1 (1 unit), *men*; Physical Education 2 (3 units), *women*; (5) Physical Education 1A-B-C-D-15A-B-C-D ( $\frac{1}{2}$  unit each semester) (2 units), *men*; Physical Education 10 and 11 (4 units), *women*; Physical Education 53A-B-C-D, 61A-B-C-D, 71A-B, 73A-B-C-D, 74A-B-C-D, 75A-B-C-D ( $\frac{1}{2}$  unit each semester for first two years) (2 units), *women*; (6) Psychology 2 (3 units) and election of one of the following: Psychology 16, 26, 27, 32 (3 units); (7) Social Sciences (12 units)—Commerce 1A (3 units), Political Science 8 (3 units), Elective sequence (6 units); (8) Biological Sciences (6 units), Elective sequence; (9) Physical Sciences (8 units), Elective sequence; (10) English (6 units), Elective sequence. Total 48 units.

## (b) Departmental Sequences: Approximately 40 units. Sequences principal and secondary shall be selected from courses offered in the following departments:

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

The sequences elected shall be approved by the Dean. It is expected that the student shall have selected approximately 16 units of departmental sequences in his freshman and sophomore years and that the junior and senior years must include at least 20 units in advanced courses. The student must choose two fields each not less than 8 units, or three fields each not less than 5 units. The satisfactory completion of this requirement guarantees to the recipient of the Bachelors degree in the Teachers College full graduate standing in the University of California.

## (c) Professional Sequences: Professional sequences, principal and secondary (totaling 40 units), are prescribed as follows:

**Principal Sequences:**

- (1) Laboratory practice in teaching (10 units), (2) Psychology 30 (3 units), (3) Education 40 (3 units), Education 14 (2 units), Education 11 (3 units), Education 42 (3 units), Education 65 (3 units).

**Secondary Sequences:** Differentiating professional courses (13 units).

**NOTE.**—Students entering the Teachers College without two years of mathematics (one year algebra and one year geometry) and two years of one foreign language must complete as a part of the freshman and sophomore requirements one year (6 units) of mathematics and one year (10 units) of a foreign language.

**CREDIT FOR TEACHING EXPERIENCE**

1. No consideration will be given for teaching experience at the time the candidate with advanced standing registers.
2. After the candidate for the kindergarten-primary, the elementary, or the special subject certificate has engaged in practice teaching long enough to satisfy the Supervisor of Practice Teaching of his ability, he may apply for advanced standing on the basis of his teaching experience. Upon such application and the recommendation of the Supervisor of Practice Teaching either,
  - (a) The candidate may receive five units' credit in lieu of the second practice teaching assignment. This credit, however, shall not apply toward the degree—or,
  - (b) The candidate may substitute for the second teaching assignment such other courses as the adviser may sanction.
3. Applicants for the junior high school certificate will receive such teaching credit as is allowed by the regulations of the State Board of Education. This credit, however, shall not apply toward the degree.

**DEGREES AND CERTIFICATES****THE DEGREE**

Registrants in the Teachers College receive upon graduation a baccalaureate degree. In addition, upon fulfilling the requirements of the Teachers College for a baccalaureate degree they are entitled to recommendation to the State and county authorities for appropriate teaching certification.

**THE TEACHER'S CERTIFICATE**

Upon fulfillment of the appropriate curricula outlined in the following pages students will be recommended by the Teachers College for certificates which are issued by city and county boards, as well as by the State Board of Education in accordance with the provisions of the

Political Code of California, Section 1519a; Section 1771, Subdivision 3; Section 1775, Subdivision 1, and Section 1792. The Southern Branch of the University of California is empowered, under the provisions of Section 1507, Subsection 3, of the Political Code, and in accordance with rules laid down by the State Board of Education, to make recommendations for teachers' certificates valid in this State, in each of the following grades: (1) Kindergarten-Primary, (2) Elementary, (3) Junior High School, (4) Elementary Special, (5) Secondary Special in Art, Commerce, Home Economics, Mechanic Arts, Music, and Physical Education. Temporary preliminary certificates are also issued, valid for practice teaching without salary in specified public school grades and subjects. No student teacher is permitted to teach in any public school without a preliminary certificate.

The conditions under which certificates are granted are as follows:

1. The Kindergarten-Primary Certificate. (Valid in any public kindergarten or in the first grade of any elementary school of the State.)
  - (a) The completion of the Kindergarten-Primary curriculum.
2. The Elementary Teacher's Certificate. (Valid in the eight grades of the elementary schools.)
  - (a) The completion of any of the elementary curricula.
3. The Junior High School Teacher's Certificate. (Valid in grades seven, eight, and nine when these are organized as junior high schools.)
  - (a) The completion of the elementary curriculum and thereafter of 30 additional semester hours of Junior College or Teachers College work, at least 22 semester hours of which must be in two of the following subjects: English, mathematics, French, Spanish, Latin, social sciences, physical sciences, biological sciences.
  - (b) The completion of not less than 15 units of professional training by holders of baccalaureate degrees.
4. Elementary Special Certificate. (Valid for special subjects only in the eight grades of the elementary schools.)
  - (a) The completion of the three-year teachers' curriculum in preparation of elementary teachers in one of the following special fields: Household Arts, Manual and Fine Arts, Music.
5. Secondary Special Certificate. (Valid for special subjects in high schools.)
  - (a) The completion of the four-year teachers' curriculum in preparation of secondary teachers of one of the following special types: Art, Commerce, Household Arts, Mechanic Arts, Music, Physical Education.



### KINDERGARTEN-PRIMARY TRAINING CURRICULA

#### THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND RECOMMENDATION FOR THE KINDERGARTEN-PRIMARY TEACHING CREDENTIAL

*For admission to this curriculum the applicant must show ability to play simple melodies, songs, and marches upon the piano.*

#### FRESHMAN YEAR

##### First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Botany 1 (Fundamentals of Botany) .....	3
Commerce 1A (Principles of Economics) .....	3
Commerce 18A (Penmanship) .....	2
English 1A (Advanced Composition) .....	3
Physical Education 2 (Hygiene) .....	3
Recreation (2 hours per week), <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>15<math>\frac{1}{2}</math></b>

##### Second Semester

Course	Units
English 30 (American Literature) .....	3
Geography 1A (Fundamentals of Modern Geography) .....	3
Political Science 8 (American Government) .....	3
Zoology 12 (Nature Study) .....	3
Physical Education 12A (Physical Education) .....	2
Minor Departmental Sequence .....	2
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>16<math>\frac{1}{2}</math></b>

#### SOPHOMORE YEAR

##### First Semester

Course	Units
History 4A (Social and Political History of Modern Europe) .....	3
Philosophy 1A (Logic) .....	3
Principal Departmental Sequence (selected) .....	5
Psychology 2 (General Psychology) .....	3
Physical Education 12B (Physical Education) .....	2
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>16<math>\frac{1}{2}</math></b>

## Announcement of the Southern Branch

Second Semester		Units
Course		
History 4B (Social and Political History of Modern Europe)	.....	3
Geography 15 (Geography of California)	.....	3
Philosophy 1B (Logic)	.....	3
Principal Departmental Sequence (continued)	.....	4
Psychology 30 (Educational Psychology)	.....	3
Recreation, <i>women</i>	.....	$\frac{1}{2}$
<b>Total</b>	.....	<b>16<math>\frac{1}{2}</math></b>

## JUNIOR YEAR

First Semester		Units
Course		
Art 51A (Fine and Industrial Arts Education)	.....	2
Education 21 (Introductory Kindergarten-Primary Education)	.....	3
Education 27 (Principles of Kindergarten-Primary Reading and Number)	.....	3
Primary Departmental Sequence	.....	5
Public Speaking 15A (Children's Literature)	.....	3
<b>Total</b>	.....	<b>16</b>

## Second Semester

Course		Units
Art 51B (Fine and Industrial Arts Education)	.....	2
Education 24 (Kindergarten-Primary Curricula and Methods)	.....	3
Music 61 (Kindergarten-Primary Music)	.....	3
Primary Departmental Sequence	.....	5
Public Speaking 15B (The Art of Story Telling)	.....	3
<b>Total</b>	.....	<b>16</b>

## SENIOR YEAR

First Semester		Units
Course		
Education 26 (History of Kindergarten-Primary Education)	.....	3
Education 40 (The Administration of Public Education)	.....	3
History 11 (Social Studies in the Kindergarten-Primary Grades)	.....	2
English 56A (History of English Literature)	.....	3
Primary Departmental Sequence	.....	5
<b>Total</b>	.....	<b>16</b>

Second Semester	
Course	Units
Primary Departmental Sequence .....	5
Teaching K90A (Kindergarten-Primary Teaching) .....	5
Teaching K90B (Kindergarten-Primary Teaching) .....	5
Total .....	15
Grand total .....	128

### KINDERGARTEN-PRIMARY TRAINING CURRICULA—(Continued)

#### THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE KINDERGARTEN-PRIMARY TEACHING CREDENTIAL

In addition to the degree curriculum the Teachers College offers a certification curriculum, meeting the minimum requirements of the State Board of Education, leading to recommendation for Kindergarten-Primary school certification. *The taking of this curriculum permits the candidates to be certified upon the completion of 76 units of work, after which it is possible for them to teach for a temporary period.* They may return for the completion of their degree curriculum at any time within a period of five years, and full credit will be given for the certification curriculum when applied on the degree curriculum. If the student fails to return to the institution for the completion of his work after five years, his candidacy for the degree automatically lapses. If he returns after his candidacy has lapsed, the work previously taken will be evaluated upon the basis of the requirements in effect at the time of his return. Students may undertake this course only upon the consent of the Dean.

*For admission to this curriculum the applicant must show ability to play simple melodies, songs, and marches upon the piano.*

#### FRESHMAN YEAR

First Semester	
Course	Units
Subject A (English Composition) .....	—
Psychology X (The Psychology of Study) .....	1
Botany 1 (Fundamentals of Botany) .....	3
Commerce 1A (Principles of Economics) .....	3
Commerce 18A (Penmanship) .....	2
English 1A (Advanced Composition) .....	3
Physical Education 2 (Hygiene) .....	3
Recreation (2 hours per week), <i>women</i> .....	$\frac{1}{2}$
Total .....	15 $\frac{1}{2}$

## Announcement of the Southern Branch

Second Semester		Units
Course		
Geography 1A (Fundamentals of Modern Geography) ....		3
Political Science 8 (American Government) .....		3
Psychology 2 (General Psychology) .....		3
Zoology 12 (Nature Study) .....		3
Physical Education 12A (Physical Education) .....		2
Recreation, <i>women</i> .....		$\frac{1}{2}$
<b>Total</b> .....		<b>14<math>\frac{1}{2}</math></b>

## SOPHOMORE YEAR

First Semester		Units
Course		
Art 51A (Fine and Industrial Arts Education) .....		2
Education 21 (Introductory Kindergarten-Primary Education) .....		3
Education 27 (Principles of Kindergarten-Primary Reading and Number) .....		3
Music 61 (Kindergarten-Primary Music) .....		3
Physical Education 12B (Physical Education) .....		2
Public Speaking 15A (Children's Literature) .....		3
Recreation, <i>women</i> .....		$\frac{1}{2}$
<b>Total</b> .....		<b>16<math>\frac{1}{2}</math></b>

Second Semester		Units
Course		
Art 51B (Fine and Industrial Arts Education) .....		2
Education 24 (Kindergarten-Primary Curricula and Methods) .....		3
Education 40 (The Administration of Public Education) .....		3
History 11 (Social Studies in Kindergarten-Primary Grades) .....		2
Public Speaking 15B (The Art of Story Telling) .....		3
Elective .....		3
Recreation, <i>women</i> .....		$\frac{1}{2}$
<b>Total</b> .....		<b>16<math>\frac{1}{2}</math></b>

## JUNIOR YEAR

First Semester		Units
Course		
Teaching K90A (Kindergarten-Primary Teaching) .....		5
Teaching KP90B (Kindergarten-Primary Teaching) .....		5
Elective .....		5
<b>Total</b> .....		<b>15</b>
<b>Grand total</b> .....		<b>78</b>

## ELEMENTARY SCHOOL TRAINING CURRICULA

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND  
RECOMMENDATION FOR THE ELEMENTARY SCHOOL  
TEACHING CREDENTIAL

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	—
Psychology X (The Psychology of Study) .....	1
Commerce 1A (Principles of Economics) .....	3
Commerce 18A (Penmanship) .....	2
English 1A (Advanced Composition) .....	3
History 7A (History of the United States) .....	3
Zoology 10 (General Biology) or Botany 1 (Fundamentals of Botany) .....	3
Military Science 1A (Basic Course), <i>men</i> .....	1½
Physical Education, <i>men</i> .....	½
Recreation (2 hours per week), <i>women</i> .....	½
Total .....	(M)17-(W)15½

## Second Semester

Course	Units
Geography 1A (Fundamentals of Modern Geography) ...	3
History 7B (History of the United States) .....	3
Psychology 2 (General Psychology) .....	3
Physiology 10 (Physiology) or Zoology 12 (Nature Study) .....	3
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Physical Education, <i>men</i> .....	½
Military Science 12 (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
Total .....	(M)15-(W)15½

## SOPHOMORE YEAR

## First Semester

Course	Units
English 12 (Reading and the Teaching of English) .....	3
Mathematics 17 (Arithmetic for Teachers) .....	3
Psychology 16 (Experimental Psychology), or Psychology 32 (Psychology of Elementary School Subjects) .....	3
Departmental Sequences, Principal and Secondary .....	5
Physical Education, <i>men</i> .....	½
Physical Education 10 (Physical Education), <i>women</i> .....	2
Military Science 2A (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
Total .....	(M)16-(W)16½

## Announcement of the Southern Branch

Second Semester		
Course		Units
Departmental Sequences, Principal and Secondary .....		6
Education 11 (Principles of Teaching) .....		3
Geography 15 (Geography of California) .....		2
Political Science 8 (American Government) .....		3
Physical Education, <i>men</i> .....		½
Physical Education 11 (Physical Education), <i>women</i> .....		2
Military Science 2B (Basic Course), <i>men</i> .....		1½
Recreation, <i>women</i> .....		½
<b>Total</b> .....	<b>(M) 16-(W) 16½</b>	

## JUNIOR YEAR

First Semester		
Course		Units
Departmental Sequences, Principal and Secondary, chosen after conference with departmental adviser .....		7-10
Principal Professional Sequence—		
Psychology 30 (Educational Psychology) .....		3
Secondary Professional Sequence, one of the following groups—		
<i>a.</i> Administration and Supervision—		
Education 60A (Elementary School Supervision) .....		3
<i>b.</i> Adjustment and Opportunity Work, with accelerated or other atypical children—		
Psychology 16 (Experimental Psychology), if not already taken, otherwise		
Psychology 28 (Mental Tests and Measurements) .....		3
<i>c.</i> Americanization—		
Education 62 (Americanization) .....		3
Education 75 (Educational Sociology) .....		3
<i>d.</i> Elementary School Subjects methods courses .....		—
<i>e.</i> Rural Education—		
Education 55 (Rural Education) .....		2
Education 75 (Educational Sociology) .....		3
<i>f.</i> Vocational and Part-time Education—		
Education 75 (Educational Sociology) .....		3
Education 65 (Vocational Education) .....		3
<b>Total</b> .....	<b>16</b>	

Second Semester		Units
Course		
Departmental Sequences, Principal and Secondary, chosen after conference with departmental adviser .....		5-6
Secondary Professional Sequence—		
<i>a.</i> Administration and Supervision—		
Education 60B (Elementary School Supervision)	3	
Education 86 (Educational Measurements and Statistics) .....	3	
Psychology 32 (Psychology of Elementary School Subjects) .....	3	
<i>b.</i> Adjustment and Opportunity Work—		
Psychology 32 (Psychology of Elementary School Subjects) .....	3	
<i>c.</i> Americanization—elective .....	—	
<i>d.</i> Elementary School Subjects—		
Methods courses .....	—	
<i>e.</i> Rural Education—		
<i>f.</i> Vocational and Part-time Education—		
Education 66 (Vocational and Educational Guidance) .....	3	
Education 86 (Educational Measurement and Statistics)	3	
Education 56 (Rural School Supervision) .....	2	
Total .....		16

## SENIOR YEAR

First Semester		Units
Course		
Departmental Sequences, Principal and Secondary, chosen after conference with departmental adviser .....		5-6
Principal Professional Sequence—		
Teaching E90A (Elementary Teaching) .....	5	
Education 65 (Vocational Education) .....	3	
Secondary Professional Sequence, one of the following—		
<i>a.</i> Administration and Supervision—		
Education 95 (Supervision of Teaching) .....	2	
<i>b.</i> Adjustment and Opportunity Work—		
Education, elective.		
Psychology 84A (Clinical Psychology) .....	3	
<i>c.</i> Americanization—		
Education, elective.		
<i>d.</i> Elementary School Subjects—		
Education 95 (Supervision of Teaching) .....	2	
<i>e.</i> Rural Education—		
Electives .....	—	
<i>f.</i> Vocational and Part-time Education—		
Education 64A (Part-time Education) .....	2	
Elective .....	3	
Total .....		16

Course	Second Semester	Units
Departmental Sequences .....		5
Principal Professional Sequence—		
Teaching E90B (Elementary Teaching) .....		5
Education 40 (The Administration of Public Education) .....		3
Secondary Professional Sequence, one of the following—		
a. Administration and Supervision—		
Education 76 (Comparative Study of Elementary Education) .....		3
Education 90 (Philosophy of Education) .....		3
b. Adjustment and Opportunity Work—		
Psychology 84B (Clinical Psychology) .....		3
c. Americanization—		
Philosophy 90 (Philosophy of Education) .....		3
d. Elementary School Subjects—		
Philosophy 90 (Philosophy of Education) .....		3
e. Rural Education—		
Philosophy 90 (Philosophy of Education) .....		3
f. Vocational and Part-time Education—		
Education 64B (Part-time Education) .....		2
Elective .....		3
<b>Total</b> .....		<b>16</b>
<b>Grand total</b> .....		<b>128</b>

### ELEMENTARY SCHOOL TRAINING CURRICULA—(Continued)

#### THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE ELEMENTARY SCHOOL TEACHING CREDENTIAL

In addition to the degree curriculum the Teachers College offers a certification curriculum meeting the minimum requirements of the State Board of Education, leading to recommendation for elementary school certification. *The taking of this curriculum permits the candidates to be certified upon the completion of 76 units of work, after which it is possible for them to teach for a temporary period.* They may return for the completion of their degree curriculum at any time within a period of five years, and full credit will be given for the certification curriculum when applied on the degree curriculum. If the student fails to return to the institution for the completion of his work after five years, his candidacy for the degree automatically lapses. If he returns after his candidacy has lapsed the work previously taken will be evaluated upon the basis of the requirements in effect at the time of his return. Students may undertake this course only upon the consent of the Dean.



## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	—
Psychology X (The Psychology of Study) .....	1
Botany 1 (Fundamentals of Botany) or Zoology 10 (General Biology) .....	3
Commerce 1A (Principles of Economics) .....	3
Commerce 18A (Penmanship) .....	2
English 1A (Advanced Composition) .....	3
History 7A or 7B (History of the United States) .....	3
Military Science 1A (Basic Course), <i>men</i> .....	1½
Physical Education, <i>men</i> .....	½
Recreation (2 hours per week), <i>women</i> .....	½
<b>Total</b> .....	<b>(M)17—(W)15½</b>

## Second Semester

Course	Units
Geography 1A (Fundamentals of Modern Geography) ....	3
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Physiology 10 (Physiology) or Zoology 12 (Nature Study)	3
Political Science 8 (American Government) .....	3
Psychology 2 (General Psychology) .....	3
Military Science 1B (Basic Course), <i>men</i> .....	1½
Physical Education, <i>men</i> .....	½
Recreation, <i>women</i> .....	½
<b>Total</b> .....	<b>(M)15—(W)15½</b>

## SOPHOMORE YEAR

## First Semester

Course	Units
Art 52A (Fine and Industrial Arts Education) .....	2
Education 11 (Principles of Teaching) .....	3
Education 14 (Civic Education) .....	2
English 12 (Reading and the Teaching of English) .....	3
Physical Education 10 (Physical Education), <i>women</i> .....	2
Psychology 16 (Experimental Psychology) or Psychology 32 (The Psychology of Elementary School Subjects)	3
Military Science 2B (Basic Course), <i>men</i> .....	1½
Physical Education, <i>men</i> .....	½
Recreation, <i>women</i> .....	½
<b>Total</b> .....	<b>(M)15½—(W)15½</b>

## Announcement of the Southern Branch

Second Semester		Units
Course		
Education 42 (Educational Measurement and Diagnosis)		3
Mathematics 17 (Arithmetic for Teachers)		3
Music 60 (Teachers' Course in Music)		2
Physical Education 11 (Physical Education), <i>women</i>		2
Teaching E90A (Elementary Teaching)		5
Military Science 2B (Basic Course), <i>women</i>		1½
Physical Education, <i>men</i>		½
Recreation, <i>women</i>		½
Total	(M) 15½—(W) 15½	

## JUNIOR YEAR

## First Semester

Education 40 (The Administration of Public Education)	3
Elective (M) 5, (W)	6
Teaching E90B (Elementary Teaching)	5
Total	(M) 13—(W) 14
Grand total	76

## ELEMENTARY FINE ARTS TRAINING CURRICULUM

THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE  
ELEMENTARY SPECIAL TEACHING CREDENTIAL IN FINE ARTS

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition)	—
Psychology X (The Psychology of Study)	1
Art A (Freehand Drawing)	2
Art 1A (Art Appreciation and History)	2
Art 2A (Lettering)	1
Art 6A (Design)	2
Art 8A (Stage Craft)	1
Psychology 2 (General Psychology)	3
Physical Education 1 (Hygiene), <i>men</i>	1
Physical Education 2 (Hygiene), <i>women</i>	3
Physical Education, <i>men</i>	½
Military Science 1A (Basic Course), <i>men</i>	1½
Recreation (2 hours per week), <i>women</i>	½
Total	(M) 15—(W) 15½

## Second Semester

Course	Units
Art B (Freehand Drawing) .....	1
Art 1B (Art Appreciation and History) .....	2
Art 3A (Costume Appreciation), <i>women</i> .....	1
Art 6B (Design) .....	2
Art 17 (House Furnishing) .....	1
English 1A (Advanced Composition) .....	3
Psychology 26 (Esthetics) .....	3
Physical Education, <i>men</i> .....	½
Physical Education 10 (Physical Education), <i>women</i> .....	2
Military Science 1B (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
<b>Total</b> .....	<b>(M)14-(W)15½</b>

## SOPHOMORE YEAR

## First Semester

Course	Units
Art 7A (Sketching) .....	1
Art 8A (Stage Craft) .....	1
Art 12A (Design) .....	2
Art 34A (Drawing from Figure) .....	1
Education 11 (Principles of Teaching) .....	3
Minor Departmental Sequence .....	2
Minor Technical Sequence .....	4
Physical Education, <i>men</i> .....	½
Physical Education 11 (Physical Education), <i>women</i> .....	2
Military Science 2A (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
<b>Total</b> .....	<b>(M)16-(W)16½</b>

## Second Semester

Course	Units
Art 5 (Elementary Illustration) .....	2
Art 12B (Design) .....	2
Education 14 (Civic Education) .....	2
Minor Departmental Sequence .....	4
Minor Technical Sequence .....	2
Psychology 30 (Educational Psychology) .....	3
Physical Education, <i>men</i> .....	½
Military Science 2B (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
<b>Total</b> .....	<b>(M)17-(W)15½</b>

*Announcement of the Southern Branch*

**JUNIOR YEAR**

**First Semester**

Course	Units
Art 58A (Textile Decoration) .....	1
Art 60A (Principles of Art Education) .....	3
Art 62 (Posters) .....	1
Art 68 (Stage Craft) .....	1
Art 75A (Advanced Illustration) .....	2
Art Teaching A90A (Elementary Fine Arts Teaching) ...	5
Minor Technical Sequence .....	4
Total .....	17

**Second Semester**

Course	Units
Art 60B (Principles of Art Education) .....	3
Art Teaching A90B (Elementary Fine Arts Teaching) ....	5
Education 40 (The Administration of Public Education)	3
Minor Technical Sequence .....	6
Total .....	17
Grand total .....	96

**ELEMENTARY INDUSTRIAL ARTS TRAINING CURRICULUM**

THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE  
ELEMENTARY SPECIAL TEACHING CREDENTIAL IN  
INDUSTRIAL ARTS

**FRESHMAN YEAR**

**First Semester**

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Art A (Freehand Drawing) .....	2
Art 1A (Art Appreciation and History) .....	2
Art 6A (Design) .....	2
Art 8A (Stage Craft) .....	1
Art 9 (Elementary Construction) .....	2
Psychology 2 (General Psychology) .....	3
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Physical Education, <i>men</i> .....	½
Military Science 1A (Basic Course), <i>men</i> .....	1½
Recreation (2 hours per week), <i>women</i> .....	½
Total .....	(M)16-(W)16½

Second Semester		Units
Course		
Art B (Freehand Drawing) .....		1
Art 1B (Art Appreciation and History) .....		2
Art 3A (Costume Appreciation and History), <i>women</i> .....		1
Art 6B (Design) .....		2
Art 17 (House Furnishing) .....		1
English 1A (Advanced Composition) .....		3
Psychology 26 (Esthetics) .....		3
Physical Education, <i>men</i> .....		1½
Physical Education 10 (Physical Education), <i>women</i> .....		2
Military Science 1B (Basic Course), <i>men</i> .....		1½
Recreation, <i>women</i> .....		½
Total .....	(M)14-(W)15½	

## SOPHOMORE YEAR

First Semester		Units
Course		
Art 2A (Lettering) .....		1
Art 7A (Sketching) .....		1
Art 8B (Stage Craft) .....		1
Art 12A (Design) .....		2
Art 21A (Pottery) .....		2
Art 29A (Bookbinding) .....		2
Minor Departmental Sequence .....		2
Education 11 (Principles of Teaching) .....		3
Physical Education, <i>men</i> .....		1½
Physical Education 11 (Physical Education), <i>women</i> .....		2
Military Science 2A (Basic Course), <i>men</i> .....		1½
Recreation, <i>women</i> .....		½
Total .....	(M)16-(W)16½	

Second Semester		Units
Course		
Art 12B (Design) .....		2
Art 21B (Pottery) .....		2
Art 29B (Bookbinding) .....		2
Education 14 (Civic Education) .....		2
Psychology 30 (Educational Psychology) .....		3
Minor Departmental Sequence .....		4
Physical Education, <i>men</i> .....		1½
Military Science 2B (Basic Course), <i>men</i> .....		1½
Recreation, <i>women</i> .....		½
Total .....	(M)17-(W)15½	

## Announcement of the Southern Branch

## JUNIOR YEAR

First Semester		
Course		Units
Art 39A (Weaving) .....		2
Art 49 (Basketry) .....		2
Art 58A (Textile Decoration) .....		1
Art 60A (Principles of Art Education) .....		3
Art 68 (Stage Craft) .....		1
Art 69A (Leather) .....		2
Teaching A90c (Elementary Industrial Arts Teaching) .....		5
<b>Total</b> .....		<b>16</b>
Second Semester		
Course		Units
Art 39B (Weaving) .....		2
Art 60B (Principles of Art Education) .....		3
Education 40 (The Administration of Public Education) .....		3
Minor Technical Sequence .....		4
Teaching A90d (Elementary Industrial Arts Teaching) .....		5
<b>Total</b> .....		<b>17</b>
<b>Grand total</b> .....		<b>96</b>

**ELEMENTARY HOME ECONOMICS TRAINING CURRICULUM**

THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE  
ELEMENTARY SPECIAL TEACHING CREDENTIAL IN  
HOME ECONOMICS

## FRESHMAN YEAR

First Semester		
Course		Units
Subject A (English Composition) .....		-
Psychology X (The Psychology of Study) .....		1
Chemistry 2A (General Chemistry) .....		4
Commerce 1A (Principles of Economics) .....		3
English 1A (Advanced Composition) .....		3
Home Economics 22 (Home Economics Objectives) .....		2
Physical Education 2 (Hygiene), <i>women</i> .....		3
Recreation (2 hours per week), <i>women</i> .....		$\frac{1}{2}$
<b>Total</b> .....		<b>16<math>\frac{1}{2}</math></b>

Second Semester		Units
Course		
Art 6A (Design) .....		2
Chemistry 2B (General Chemistry) .....		4
History 7B (History of the United States) .....		3
Home Economics 11A (Elementary Food) .....		3
Psychology 2 (General Psychology) .....		3
Physical Education 10 (Physical Education), <i>women</i> .....		2
Recreation, <i>women</i> .....		½
<b>Total</b> .....		<b>17½</b>

## SOPHOMORE YEAR

First Semester		Units
Course		
Art 13A (Costume Appreciation and Design) .....		2
Chemistry 10 (Organic and Food Chemistry) .....		4
Home Economics 11B (Elementary Food) .....		3
Home Economics 1A (Textiles and Clothing) .....		3
Zoology 10 (General Biology) .....		3
Physical Education 11 (Physical Education), <i>women</i> .....		2
Recreation, <i>women</i> .....		½
<b>Total</b> .....		<b>17½</b>

Second Semester		Units
Course		
Education 11 (Principles of Teaching) .....		3
Home Economics 1B (Elementary Dressmaking) .....		3
Home Economics 33 (Elementary Dietetics) .....		3
Home Economics 47A (Development of Home Economics Education) .....		3
Physiology 10 (Physiology and Personal Hygiene) .....		3
Recreation, <i>women</i> .....		½
<b>Total</b> .....		<b>15½</b>

## JUNIOR YEAR

First Semester		Units
Course		
Home Economics 47B (Principles of Home Economics Teaching) .....		2
Home Economics 69 (Household Administration) .....		3
Home Economics 75 (Advanced Dressmaking) .....		3
Physics 11 (General Physics) .....		3
Psychology 26 (Esthetics) .....		3
Teaching H90A (Elementary Home Economics Teaching) .....		2
<b>Total</b> .....		<b>16</b>

Second Semester		
Course		Units
Art 26 (House Design and Furnishing) .....		2
Bacteriology 1 (General Bacteriology) .....		3
Education 40 (The Administration of Public Education) .....		3
Political Science 8 (American Government) .....		3
Teaching H90B-H91A (Elementary and Junior High School Home Economics Teachings) .....		4
<b>Total</b> .....		<b>15</b>
<b>Grand total</b> .....		<b>98</b>

### ELEMENTARY MUSIC TRAINING CURRICULUM

#### THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE ELEMENTARY SPECIAL TEACHING CREDENTIAL IN MUSIC

##### FRESHMAN YEAR

##### First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Commerce 1A (Principles of Economics) .....	3
History 7C (History of the United States Since 1868) .....	2
Music 5A (Voice) .....	1
Music 9A (Melodic Dictation) .....	2
Music 8A (Piano Ensemble) .....	1
Psychology 2 (General Psychology) .....	3
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Military Science 1A (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation (2 hours per week), <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>(M)16-(W)16<math>\frac{1}{2}</math></b>

##### Second Semester

Course	Units
Mathematics A (Elementary Algebra) .....	3
Music 5B (Voice) .....	1
Music 8B (Piano Ensemble) .....	1
Music 9B (Melodic Dictation) .....	2
Political Science 8 (American Government) .....	3
Psychology 26 (Esthetics) .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Physical Education 10 (Physical Education), <i>women</i> .....	2
Military Science 1B (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>(M)15-(W)15<math>\frac{1}{2}</math></b>



## SOPHOMORE YEAR

## First Semester

Course	Units
Mathematics B (Elementary Plane Geometry) .....	3
Music 4A (Harmony) .....	3
Music 12A (Music Education) .....	3
Music 35A (Music Supervision) .....	2
Zoology 10 (General Biology) .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Physical Education 11 (Physical Education), <i>women</i> .....	2
Military Science 2A (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>(M)16-(W)16<math>\frac{1}{2}</math></b>

## Second Semester

Course	Units
English 1A (Advanced Composition) .....	3
Music 4B (Harmony) .....	3
Music 12B (Music Education) .....	3
Music 35B (Music Supervision) .....	1
Physics 12 (The Physical Basis of Music) .....	2
Zoology 12 (Nature Study) .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Military Science 2B (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>(M)17-(W)15<math>\frac{1}{2}</math></b>

## JUNIOR YEAR

## First Semester

Course	Units
Education 14 (Civic Education) .....	2
Music 3A (Music Literature) .....	2
Music 6A (Voice) .....	1
Music 33A (Form and Analysis) .....	2
Music 55A (Composition) .....	2
Music 59A (Conducting) .....	1
Psychology 30 (Educational Psychology) .....	3
Teaching M90A (Elementary Music Teaching) .....	3
<b>Total</b> .....	<b>16</b>

Second Semester	
Course	Units
Education 40 (The Administration of Public Education)	3
Education 78 (Principles of Secondary Education)	3
Music 3B (Music Literature)	2
Music 6B (Voice)	1
Music 33B (Form and Analysis)	2
Music 55B (Composition)	2
Music 59B (Conducting)	1
Teaching M90B (Elementary Music Teaching)	2
<b>Total</b>	<b>16</b>
<b>Grand total</b>	<b>96</b>

### JUNIOR HIGH SCHOOL TRAINING CURRICULUM

#### THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND RECOMMENDATION FOR THE JUNIOR HIGH SCHOOL TEACHING CREDENTIAL

#### FRESHMAN YEAR

#### First Semester

Course	Units
Subject A (English Composition)	—
English 1A (Advanced Composition)	3
Psychology X (The Psychology of Study)	1
Social Science—	
Commerce 1A (Principles of Economics)	3
Biological Science, any one—	
Botany 1 (Fundamentals of Botany)	3
Botany 2A (General Botany)	4
Zoology 1A (General Zoology)	5
Zoology 10 (General Biology)	3-3-5
Physical Science, any one or two—	
Astronomy 1 (Elements of Astronomy)	3
Chemistry 2A (General Chemistry)	4
Mathematics 1 (Advanced Algebra)	3
Philosophy 1A (Logic)	3
Physics 2A (General Physics)	3-3-4
Physical Education, <i>men</i>	½
Recreation (2 hours per week), <i>women</i>	½
Physical Education 1 (Hygiene), <i>men</i>	1
Physical Education 2 (Hygiene), <i>women</i>	3
Military Science 1A (Basic Course), <i>men</i>	1½
<b>Total varying between</b>	<b>15-16½</b>

Second Semester		
Course		Units
English or Public Speaking (electives) .....		3
Psychology 2 (General Psychology) .....		3
Social Science—		
Political Science 8 (American Government) .....		3
Biological Science, any one, appropriately following election made in first semester—		
Botany 2B (General Botany) .....		4
Physiology 10 (Physiology) .....		3
Zoology 1B (General Zoology) .....		5
Zoology 12 (Nature Study) .....		3 3-5
Physical Science, any one, appropriately following elec- tion made in first semester—		
Astronomy 1 (Elements of Astronomy) .....		3
Chemistry 2B (General Chemistry) .....		4
Mathematics C (Trigonometry) .....		3
Mathematics 12 (Elementary Algebra) .....		3
Philosophy 1B (Logic) .....		3
Philosophy 4 (Introduction to Philosophy) .....		2
Physics 2B (General Physics) .....		3 2-4
Recreation, <i>women</i> .....		$\frac{1}{2}$
Physical Education 10 (Physical Education), <i>women</i> .....		2
Physical Education, <i>men</i> .....		$\frac{1}{2}$
Military Science 1B (Basic Course), <i>men</i> .....		1 $\frac{1}{2}$
Total varying between .....		15-16 $\frac{1}{2}$

## SOPHOMORE YEAR

First Semester		
Course		Units
Departmental Sequences, chosen after conference with adviser .....		4-8
General Sequences—		
Psychology 16 (Experimental Psychology) or Psy- chology 32 (Psychology of Elementary School Subjects) .....		3
Social Science—		
History 7A (History of the United States) .....		3
Completion of other general sequences .....		0-4
Physical Education, <i>men</i> .....		$\frac{1}{2}$
Physical Education 11 (Physical Education), <i>women</i> .....		2
Military Science 2A (Basic Course), <i>men</i> .....		1 $\frac{1}{2}$
Recreation, <i>women</i> .....		$\frac{1}{2}$
Total approximately .....		16

*Announcement of the Southern Branch*

Course	Second Semester	Units
Departmental Sequences, chosen after conference with adviser .....		8-10
Professional Sequence—		
Education 14 (Civic Education) .....		2
General Sequences—		
Social Science—		
History 7B (History of the United States) .....		3
Physical Education, <i>men</i> .....		½
Military Science 2B (Basic Course), <i>men</i> .....		1½
Recreation, <i>women</i> .....		½
<b>Total, approximately</b> .....		<b>16</b>

**JUNIOR YEAR**

Course	First Semester	Units
Departmental Sequences .....		7
Primary Professional Sequences—		
Education 42 (Educational Measurements) .....		3
Education 50 (Elementary Education). See departmental announcement .....		3
Psychology 30 (Educational Psychology) .....		3
<b>Total</b> .....		<b>16</b>

**Second Semester**

Course	Units
Departmental Sequences .....	4-8
Primary Professional Sequences—	
Education 40 (The Administration of Public Education) .....	3
Electives in Education or Psychology .....	3
Secondary Professional Sequences—	
Teaching of Junior High School Subjects (at least two courses to be completed before graduation)—	
Education 69 (The Teaching of General Science in the Junior High Schools) .....	2
French 90 (Course for Teachers) .....	2
History 77 (Social Sciences for Junior High Schools) .....	2
Mathematics 74 (The Teaching of Junior High School Mathematics) .....	2
Spanish 90 (Course for Teachers) .....	2
<b>Total</b> .....	<b>16</b>

## SENIOR YEAR

First Semester		Units
Course		
Departmental Sequences .....		2-3
<b>Primary Professional Sequences—</b>		
Education 65 (Vocational Education) .....		3
Education 80A (Junior High School) .....		3
Teaching J91A (Junior High School Teaching) .....		5
<b>Secondary Professional Sequences—</b>		
Teaching of Junior High School Subjects (at least two courses, corresponding to the chosen academic sequences)—		
English 61 (Junior High School English) .....	2	
French 90 (Course for Teachers) .....	2	
History 77 (Social Science for Junior High Schools) .....	2	
Spanish 90 (Course for Teachers) .....	2	2-4
<b>Total</b> .....		<b>16</b>

Second Semester		Units
Course		
Departmental Sequences .....		6-10
<b>Primary Professional Sequences—</b>		
Education 80B (The Junior High School) .....	3	
Elective in Education or Psychology .....	3	
Teaching J91B (Junior High School Teaching) .....	5	
Secondary Professional Sequence (if not already completed) .....		5
<b>Total</b> .....		<b>16</b>
<b>Grand total</b> .....		<b>128</b>

## SECONDARY SPECIAL ART TRAINING CURRICULUM

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND  
TO RECOMMENDATION FOR THE SECONDARY SPECIAL TEACHING  
CREDENTIAL IN ART

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Art 1A (Art Appreciation and History) .....	2
Botany 1 (Fundamentals of Botany) or Zoology 10 (General Biology) .....	3
Commerce 1A (Principles of Economics) .....	3
Psychology 2 (General Psychology) .....	3
Physical Education, <i>men</i> .....	½
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Military Science 1A (Basic Course), <i>men</i> .....	1½
Recreation (2 hours per week) .....	½
Total .....	(M)15-(W)15½

## Second Semester

Course	Units
Art 1B (Art Appreciation and History) .....	2
English 1A (Advanced Composition) .....	3
Physiology 10 (Physiology) or Zoology 12 (Nature Study)	3
Political Science 8 (American Government) .....	3
Psychology 26 (Esthetics) .....	3
Physical Education, <i>men</i> .....	½
Physical Education 10 (Physical Education), <i>women</i> .....	2
Military Science 1B (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
Total .....	(M)16-(W)16½

## SOPHOMORE YEAR

## First Semester

Course	Units
Art A (Freehand Drawing) .....	2
Art 6A (Design) .....	2
Art 8A (Stage Craft) .....	1
English 30 (American Literature) .....	3
History 51 (Renaissance) .....	3
Philosophy 1A (Logic) .....	3
Physical Education, <i>men</i> .....	½
Physical Education 11 (Physical Education), <i>women</i> .....	2
Military Science 2A (Basic Course), <i>men</i> .....	1½
Recreation, <i>women</i> .....	½
Total .....	(M)16-(W)16½

Second Semester		Units
Course		
Art B (Freehand Drawing) .....		1
Art 3A (Costume Appreciation and History), <i>women</i> .....		1
Art 6B (Design) .....		2
Education 14 (Civic Education) .....		2
Geography 1A (Fundamentals of Modern Geography) .....		3
History 12 (The Development of Ancient Civilizations) .....		3
Philosophy 1B (Logic) .....		3
Physical Education, <i>men</i> .....		$\frac{1}{2}$
Military Science 2B (Basic Course), <i>men</i> .....		$1\frac{1}{2}$
Recreation, <i>women</i> .....		$\frac{1}{2}$
<b>Total</b> .....	(M)16-(W)15 $\frac{1}{2}$	

## JUNIOR YEAR

First Semester		Units
Course		
Art 2A (Lettering) .....		1
Art 8B (Stage Craft) .....		1
Art 12A (Design) .....		2
Art 34A (Drawing from Figure) .....		1
Art 60A (Principles of Art Education) .....		3
Minor Departmental Sequence or Minor Technical Sequence		4
Teaching A92A or A92C (Secondary Fine, or Industrial, Arts Teaching) .....		3
<b>Total</b> .....		15

Second Semester		Units
Course		
Art 5 (Elementary Illustration) .....		2
Art 12B (Design) .....		2
Art 60B (Principles of Art Education) .....		3
Teaching A92B or A92D (Secondary Fine, or Industrial, Arts Teaching) .....		3
Minor Departmental Sequence or Minor Technical Sequence .....		4
Psychology 30 (Educational Psychology) .....		3
<b>Total</b> .....		17

## Announcement of the Southern Branch

## SENIOR YEAR

## First Semester

Course	Units
Art 7A (Sketching) .....	1
Art 58A (Textile Decoration) .....	1
Art 62 (Posters) .....	1
Art 68 (Stage Craft) .....	1
Art 75A (Advanced Illustration) .....	2
Minor Departmental Sequence or Minor Technical Sequence	.7
Education 78 (Principles of Secondary Education) .....	3
<b>Total</b> .....	<b>16</b>

## Second Semester

Course	Units
Art 17 (House Furnishing) .....	1
Teaching A92A-B-C-D (Secondary Fine, or Industrial, Arts Teaching) .....	3
Minor Departmental Sequence or Minor Technical Sequence	10
Education 40 (The Administration of Public Education) .....	3
<b>Total</b> .....	<b>17</b>
<b>Grand Total</b> .....	<b>128</b>

## SECONDARY SPECIAL COMMERCE TRAINING CURRICULUM

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND TO RECOMMENDATION FOR THE SECONDARY SPECIAL TEACHING CREDENTIAL IN COMMERCE

*Business Experience: Students entering upon the following curriculum should have had successful business experience. Special assignments in placement training under supervision will fulfill this requirement.*

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	—
Psychology X (The Psychology of Study) .....	1
Botany 1 (Fundamentals of Botany) .....	3
Commerce 1A (Principles of Economics) .....	3
English 1A (Advanced Composition) .....	3
Psychology 2 (General Psychology) .....	3
Physical Education 2 (Hygiene), women .....	3
Physical Education 1 (Hygiene), men .....	1
Physical Education, men .....	$\frac{1}{2}$
Military Science 1A (Basic Course), men .....	$1\frac{1}{2}$
Recreation (2 hours per week), women .....	$\frac{1}{2}$
<b>Total</b> .....	<b>(M)16-(W)16<math>\frac{1}{2}</math></b>



Second Semester		Units
Course		
Commerce 1B (Principles of Economics) .....		3
English 10 (English in Business Practice) .....		3
Mathematics 1 (Advanced Algebra), or Philosophy 1B (Logic) .....		3
Psychology 30 (Educational Psychology) .....		3
Zoology 10 (General Biology) .....		3
Physical Education, <i>men</i> .....		$\frac{1}{2}$
Physical Education 10 (Physical Education), <i>women</i> .....		2
Military Science 1B (Basic Course), <i>men</i> .....		$1\frac{1}{2}$
Recreation, <i>women</i> .....		$\frac{1}{2}$
Total .....	(M)17-(W)17 $\frac{1}{2}$	

## SOPHOMORE YEAR

First Semester		Units
Course		
Commerce 14A (Accounting Principles) .....		3
Commerce 18A (Penmanship) .....		2
Geography 4 (Introduction to Economic Geography) .....		3
Jurisprudence 10A (Elementary Law) .....		3
Mathematics 2 (Mathematical Theory of Investment), or Philosophy 1A (Logic) .....		3
Physical Education, <i>men</i> .....		$\frac{1}{2}$
Physical Education 11 (Physical Education), <i>women</i> .....		2
Military Science 2A (Basic Course), <i>men</i> .....		$1\frac{1}{2}$
Recreation, <i>women</i> .....		$\frac{1}{2}$
Total .....	(M)16-(W)16 $\frac{1}{2}$	

Second Semester		Units
Course		
Commerce 14B (Accounting Principles) .....		3
Commerce 16A (Typing) .....		2
Commerce 18B (Penmanship) .....		2
Geography 5 (Geography of International Trade) .....		3
Jurisprudence 10B (Elementary Law) .....		3
Mathematics 18 (Business Mathematics) .....		2
Physical Education, <i>men</i> .....		$\frac{1}{2}$
Military Science 2B (Basic Course), <i>men</i> .....		$1\frac{1}{2}$
Recreation, <i>women</i> .....		$\frac{1}{2}$
Total .....	(M)17-(W)15 $\frac{1}{2}$	

*Announcement of the Southern Branch***JUNIOR YEAR****First Semester**

Course	Units
Commerce 16B (Typing) .....	2
Commerce 17A (Shorthand), Commerce 50A (Intermediate Accounting), Commerce 54A (Principles of Marketing), Commerce 57 (Ocean Transportation), or Commerce 59A (Principles of International Commerce)....	3
Commerce 24 (Office Organization, Administration and Procedure) .....	2
Commerce 51A (Elements of Money and Banking) .....	3
Jurisprudence 18A (Commercial Law) .....	2
Psychology 30 (Educational Psychology) .....	3
<b>Total</b> .....	<b>15</b>

**Second Semester**

Course	Units
Commerce 17B (Shorthand), Commerce 50B (Intermediate Accounting), Commerce 54B (Principles of Marketing), Commerce 58 (Railroad Transportation), or Commerce 59B (Principles of International Commerce)	3
Commerce 51B (Elements of Money and Banking) .....	3
History 76 (The Industrial History of the United States)	2
Jurisprudence 18B (Commercial Law) .....	2
Teaching C92A (Secondary Teaching in Commerce) .....	5
<b>Total</b> .....	<b>15</b>

**SENIOR YEAR****First Semester**

Course	Units
Commerce 55 (Psychology of Salesmanship), Commerce 75 (Cost Accounting), Commerce 78 (Problems of Retail Merchandising), Commerce 80 (Foreign Exchange and Foreign Investment), or Jurisprudence 38A (Advanced Commercial Law) (2) .....	3
Commerce 96 (Organization and Administration of Commercial Education) .....	3
Commerce 99A (Business Organization and Administration) .....	3
Education 14 (Civic Education) .....	2
Teaching C92B (Secondary Teaching in Commerce) .....	5
<b>Total</b> .....	<b>16</b>

Second Semester	
Course	Units
Commerce 56 (Advertising Practice), Commerce 76 (Auditing), Commerce 65 (Methods and Practices in Foreign Trade), or Jurisprudence 38B (Advanced Commercial Law (2)) .....	3
Commerce 90 (Thesis) .....	2
Commerce 95 (Part-Time Work) .....	2
Commerce 97 (Curricula and Methods in Commercial Education) .....	3
Commerce 99B (Business Organization and Administration) .....	3
Education 40 (The Administration of Public Education) .....	3
<b>Total</b> .....	<b>16</b>
<b>Grand total</b> .....	<b>128</b>

## SECONDARY SPECIAL HOME ECONOMICS TRAINING CURRICULUM

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND TO RECOMMENDATION FOR THE SECONDARY SPECIAL TEACHING CREDENTIAL IN HOME ECONOMICS

### FRESHMAN YEAR

#### First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Chemistry 2A (General Chemistry) .....	4
Commerce 1A (Principles of Economics) .....	3
English 1A (Advanced Composition) .....	3
Home Economics 22 (Home Economics Objectives) .....	2
Physical Education 2 (Hygiene), <i>women</i> .....	3
Recreation (2 hours per week), <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>16<math>\frac{1}{2}</math></b>

#### Second Semester

Course	Units
Art 6A (Design) .....	2
Chemistry 2B (General Chemistry) .....	4
History 7B (History of The United States) .....	3
Home Economics 11A (Elementary Food) .....	3
Psychology 2 (General Psychology) .....	3
Physical Education 10 (Physical Education), <i>women</i> .....	2
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>17<math>\frac{1}{2}</math></b>

## Announcement of the Southern Branch

## SOPHOMORE YEAR

## First Semester

Course	Units
Art 13A (Costume Appreciation and Design) .....	2
Chemistry 10 (Organic and Food Chemistry) .....	4
Home Economics 11B (Elementary Food) .....	3
Home Economics 1A (Textiles and Clothing) .....	3
Zoology 10 (General Biology) .....	3
Physical Education 11 (Physical Education), <i>women</i> .....	2
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>17<math>\frac{1}{2}</math></b>

## Second Semester

Course	Units
Education 11 (Principles of Teaching) .....	3
Home Economics 1B (Elementary Dressmaking) .....	3
Home Economics 33 (Elementary Dietetics) .....	3
Home Economics 47A (Development of Home Economics Education) .....	3
Physiology 10 (Physiology and Personal Hygiene) .....	3
Recreation, <i>women</i> .....	$\frac{1}{2}$
<b>Total</b> .....	<b>15<math>\frac{1}{2}</math></b>

## JUNIOR YEAR

## First Semester

Course	Units
Home Economics 47B (Principles of Home Economics Teaching) .....	2
Home Economics 69 (Household Administration) .....	3
Home Economics 75 (Advanced Dressmaking) .....	3
Physics 11 (General Physics) .....	3
Psychology 26 (Esthetics) .....	3
Teaching H90A (Elementary Home Economics Teaching) .....	2
<b>Total</b> .....	<b>16</b>

## Second Semester

Course	Units
Art 26 (House Design and Furnishing) .....	2
Bacteriology 1 (General Bacteriology) .....	3
Education 40 (The Administration of Public Education) .....	3
Political Science 8 (American Government) .....	3
Teaching H90B-H91A (Elementary and Junior High School Home Economics Teaching) .....	4
<b>Total</b> .....	<b>15</b>

## SENIOR YEAR

## First Semester

Course	Units
Chemistry 57 (Biological Chemistry), or Home Economics 58 (Food and Nutrition) .....	4
Education 14 (Civic Education) .....	2
English, elective .....	3
Home Economics 70 (Home and Community) .....	3
Psychology 30 (Educational Psychology) .....	3
<b>Total</b> .....	<b>15</b>

## Second Semester

Course	Units
Commerce 54B (Principles of Marketing) .....	3
Home Economics 66 (Millinery) .....	2
Home Economics 59 (Food Problems), or Home Economics 85 (Advanced Dietetics), or Home Economics 83 (Experimental Cookery), or Home Economics 79 (Clothing Problems) .....	6
Teaching H92A-H92B (Secondary Home Economics Teaching) .....	4
<b>Total</b> .....	<b>15</b>
<b>Grand total</b> .....	<b>128</b>

### SECONDARY SPECIAL MECHANIC ARTS TRAINING CURRICULUM

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND TO RECOMMENDATION FOR THE SECONDARY SPECIAL TEACHING CREDENTIAL IN MECHANIC ARTS

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Engineering Drawing C (Instrumental Drawing) .....	2
Mathematics 1 (Advanced Algebra) .....	3
Mechanical Engineering 8A (Shop Work, Pattern Making) .....	2
Physics 1A (General Physics) .....	3
Psychology 2 (General Psychology) .....	3
Physical Education, men .....	$\frac{1}{2}$
Physical Education 1 (Hygiene), men .....	1
Military Science 1A (Basic Course), men .....	$1\frac{1}{2}$
<b>Total</b> .....	<b>17</b>

## Announcement of the Southern Branch

Second Semester		Units
Course		
English 1A (Advanced Composition) .....		3
Mathematics C (Trigonometry) .....		3
Mechanic Arts 10A (Shop Work, Woodwork) .....		3
Physics 1B (General Physics) .....		3
Psychology 30 (Educational Psychology) .....		3
Physical Education, <i>men</i> .....		½
Military Science 1B (Basic Course), <i>men</i> .....		1½
<b>Total</b> .....		<b>17</b>

## SOPHOMORE YEAR

First Semester		Units
Course		
Chemistry 1A (General Chemistry) .....		5
Commerce 1A (Principles of Economics) .....		3
Mechanical Engineering 2 (Descriptive Geometry) .....		3
Mechanical Engineering 9A (Shop Work, Iron) .....		2
Physical Education, <i>men</i> .....		½
Military Science 2A (Basic Course), <i>men</i> .....		1½
<b>Total</b> .....		<b>15</b>

Second Semester		Units
Course		
Chemistry 1B (General Chemistry) .....		5
Commerce 1B (Principles of Economics) .....		3
Mechanic Arts 4 (Architectural Drawing) or Mechanical Engineering 6 (Machine Design) (5) .....		3
Mechanic Arts 62A (Auto Mechanics) .....		3
Physical Education, <i>men</i> .....		½
Military Science 2B (Basic Course), <i>men</i> .....		1½
<b>Total</b> .....		<b>16</b>

## JUNIOR YEAR

First Semester		Units
Course		
Botany 1 (General Botany) .....		3
Mechanic Arts 50A (Applied Electricity) .....		3
Mechanic Arts 52A (Applied Mechanics) .....		3
Mechanic Arts 75A (Shop Work) .....		3
Mechanical Engineering 7 (Automotive Construction) ..		2
Psychology 30 (Educational Psychology) .....		3
<b>Total</b> .....		<b>17</b>

Second Semester		
Course		Units
Education 14 (Civic Education) .....		2
Mechanic Arts 50B (Applied Electricity) .....		3
Mechanic Arts 52B (Applied Mechanics) .....		3
Mechanic Arts 75B (Shop Work) .....		3
Teaching MA92A (Secondary Mechanic Arts Teaching) .....		5
<b>Total</b> .....		<b>16</b>

## SENIOR YEAR

First Semester		
Course		Units
Commerce 99A (Business Organization and Administration) .....		3
Education 65 (Vocational Education) .....		3
Mechanic Arts 90 (The Organization and Administration of Industrial Education) .....		2
Teaching MA92B (Secondary Mechanic Arts Teaching) .....		5
Elective (Shop Work) .....		3
<b>Total</b> .....		<b>16</b>

Second Semester		
Course		Units
Commerce 99B (Business Organization and Administration) .....		3
Education 40 (The Administration of Public Education) .....		3
Education 66 (Vocational and Educational Guidance) .....		3
Mechanic Arts 91 (Curriculum and Methods in Industrial Education) .....		2
Zoology 10 (General Biology) .....		3
<b>Total</b> .....		<b>14</b>
<b>Grand total</b> .....		<b>128</b>

## SECONDARY SPECIAL MUSIC TRAINING CURRICULUM

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND  
TO RECOMMENDATION FOR THE SECONDARY SPECIAL TEACHING  
CREDENTIAL IN MUSIC

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Commerce 1A (Principles of Economics) .....	3
History 7C (History of the United States Since 1868) ...	2
Music 5A (Voice) .....	1
Music 8A (Piano Ensemble) .....	1
Music 9A (Melodic Dictation) .....	2
Psychology 2 (General Psychology) .....	3
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Military Science 1A (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation (2 hours per week), <i>women</i> .....	$\frac{1}{2}$
Total .....	(M)16-(W)16 $\frac{1}{2}$

## Second Semester

Course	Units
Mathematics A (Elementary Algebra) .....	3
Music 5B (Voice) .....	1
Music 8B (Piano Ensemble) .....	1
Music 9B (Melodic Dictation) .....	2
Political Science 8 (American Government) .....	3
Psychology 26 (Esthetics) .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Physical Education 10 (Physical Education), <i>women</i> ...	2
Military Science 1B (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation, <i>women</i> .....	$\frac{1}{2}$
Total .....	(M)15-(W)15 $\frac{1}{2}$

## SOPHOMORE YEAR

## First Semester

Course	Units
Mathematics B (Elementary Plane Geometry) .....	3
Music 4A (Harmony) .....	3
Music 12A (Music Education) .....	3
Music 35A (Music Supervision) .....	2
Zoology 10 (General Biology) .....	3
Physical Education, <i>men</i> .....	$\frac{1}{2}$
Physical Education 11 (Physical Education), <i>women</i> ...	2
Military Science 2A (Basic Course), <i>men</i> .....	$1\frac{1}{2}$
Recreation, <i>women</i> .....	$\frac{1}{2}$
Total .....	(M)16-(W)16 $\frac{1}{2}$



Second Semester		Units
Course		
English 1A (Advanced Composition) .....		3
Music 4B (Harmony) .....		3
Music 12B (Music Education) .....		3
Music 35B (Music Supervision) .....		1
Physics 12 (The Physical Basis of Music) .....		2
Zoology 12 (Nature Study) .....		3
Physical Education, <i>men</i> .....		½
Military Science 2B (Basic Course), <i>men</i> .....		1½
Recreation, <i>women</i> .....		½
<b>Total</b> .....	(M)17-(W)15½	

### JUNIOR YEAR

First Semester		Units
Course		
Education 14 (Civic Education) .....		2
Music 3A (Music Literature) .....		2
Music 6A (Voice) .....		1
Music 33A (Form and Analysis) .....		2
Music 55A (Composition) .....		2
Music 59A (Conducting) .....		1
Psychology 30 (Educational Psychology) .....		3
Teaching M90A (Elementary Music Teaching) .....		3
<b>Total</b> .....		16

Second Semester		Units
Course		
Education 40. (The Administration of Public Education) .....		3
Education 78 (Principles of Secondary Education) .....		3
Music 3B (Music Literature) .....		2
Music 6B (Voice) .....		1
Music 33B (Form and Analysis) .....		2
Music 55B (Composition) .....		2
Music 59B (Conducting) .....		1
Teaching M90B (Elementary Music Teaching) .....		2
<b>Total</b> .....		16

## Announcement of the Southern Branch

## SENIOR YEAR

## First Semester

Course	Units
English 56A (History of English Literature) .....	3
Music 36 (Music Supervision) .....	3
Music 75A (Composition) .....	2
Music 83A (Music Literature) .....	2
Music 85A (Advanced Piano) .....	2
Public Speaking 1A (Elements of Public Speaking) .....	3
Teaching M91 (Junior High School Music Teaching) ....	1
<b>Total</b> .....	<b>16</b>

## Second Semester

Course	Units
English 56B (History of English Literature) .....	3
Music 75B (Composition) .....	2
Music 83B (Music Literature) .....	2
Music 85B (Advanced Piano) .....	2
Public Speaking 1B (Elements of Public Speaking) .....	3
Teaching M92 (Secondary Music Teaching) .....	4
<b>Total</b> .....	<b>16</b>
<b>Grand total</b> .....	<b>128</b>

### SECONDARY SPECIAL PHYSICAL EDUCATION TRAINING CURRICULUM

THE FOUR-YEAR CURRICULUM LEADING TO THE BACCALAUREATE DEGREE AND TO RECOMMENDATION FOR THE SECONDARY SPECIAL TEACHING CREDENTIAL IN PHYSICAL EDUCATION

## FRESHMAN YEAR

## First Semester

Course	Units
Subject A (English Composition) .....	-
Psychology X (The Psychology of Study) .....	1
Chemistry 2A (General Chemistry) .....	4
English 1A (Advanced Composition) .....	3
Physical Education 1 (Hygiene), <i>men</i> .....	1
Physical Education 2 (Hygiene), <i>women</i> .....	3
Psychology 2 (General Psychology) .....	3
Military Science 1A (Basic Course), <i>men</i> .....	1½
Physical Education Practice, <i>women</i> .....	2½
Physical Education Practice, <i>men</i> .....	1½
<b>Total</b> .....	<b>(M)15-(W)16½</b>

## Second Semester

Course	Units
Chemistry 2B (General Chemistry) .....	4
Education 14 (Civic Education) .....	2
English 1B (Advanced Composition) .....	3
Physical Education 4 (History of Physical Education) ..	2
Psychology 30 (Educational Psychology) .....	3
Military Science 1B (Basic Course), <i>men</i> .....	1½
Physical Education Practice, <i>women</i> .....	2½
Physical Education Practice, <i>men</i> .....	1½
Total .....	(M)17-(W)16½

## SOPHOMORE YEAR

## First Semester

Course	Units
Commerce 1A (Principles of Economics) .....	3
Education 11 (Principles of Teaching) .....	3
Education 75 (Educational Sociology) .....	3
Zoology 1A (General Zoology) .....	5
Military Science 2A (Basic Course), <i>men</i> .....	1½
Physical Education Practice, <i>women</i> .....	2½
Physical Education Practice, <i>men</i> .....	1½
Total .....	(M)17-(W)16½

## Second Semester

Course	Units
Physical Education 21A (Special Methods), <i>women</i> .....	2
Physical Education 58 (Child Development) .....	2
Physical Education 70 (Theories of Play) .....	2
Political Science 8 (American Government) .....	3
Zoology 35 (General Human Anatomy) .....	5
Military Science 2B (Basic Course), <i>men</i> .....	1½
Physical Education Practice, <i>women</i> .....	2½
Physical Education Practice, <i>men</i> .....	1½
Total .....	(M)15-(W)16½

## JUNIOR YEAR

## First Semester

Course	Units
Education 65 (Vocational Education) .....	3
History 2A (History of England and Greater Britain) ..	2
Physical Education 49 (Kinesiology) .....	2
Physical Education 55A (Methods and Practice in Gymnasium Activities), <i>men</i> .....	2
Physiology 1 (General Human Physiology) .....	3
Teaching P90 (Elementary Physical Education Teaching)	2
Physical Education Practice, <i>women</i> .....	2½
Physical Education Practice, <i>men</i> .....	1½
Total .....	(M)15½-(W)14½

## Announcement of the Southern Branch

Second Semester		Units
Course		
History 2B (History of England and Greater Britain) ....		2
Physical Education 5 (Hygiene) .....		1
Physical Education 21B (Special Methods), <i>women</i> .....		2
Physical Education 55B (Methods and Practice in Teaching Elementary School Sports), <i>men</i> .....		2
Physical Education 80 (Principles of Physical Education) .....		3
Physical Education 90 (Physiology) .....		3
Teaching P92A (Secondary Physical Education Teaching)		3
Physical Education Practice, <i>women</i> .....		2½
Physical Education Practice, <i>men</i> .....		1½
Total .....	(M)15½-(W)16½	

## SENIOR YEAR

First Semester		Units
Course		
Physical Education 56A (Methods and Practice in Coaching Athletics) .....		2
Physical Education 82A (Therapeutic Gymnastics) .....		3
Physical Education 85 (The Administration of Physical Education) .....		3
Physical Education 90B (Physiology) .....		3
Physical Education 92A (Normal Diagnosis) .....		3
Teaching P92B (Secondary Physical Education Teaching)		2
Physical Education Practice, <i>women</i> .....		2½
Physical Education Practice, <i>men</i> .....		1½
Total .....	(M)17½-(W)16½	

Second Semester		Units
Course		
Education 40 (The Administration of Public Education)		3
Physical Education 56B (Methods and Practice in Coaching Athletics) .....		2
Physical Education 82B (Therapeutic Gymnastics) .....		3
Physical Education 92B (Normal Diagnosis) .....		3
Teaching P92c (Secondary Physical Education Teaching)		3
Physical Education Practice, <i>women</i> .....		2½
Physical Education Practice, <i>men</i> .....		1½
Total .....	(M)15½-(W)14½	
Grand total .....	128	

### VOCATIONAL SPECIAL HOME ECONOMICS TRAINING CURRICULUM

THE SHORT CURRICULUM LEADING TO RECOMMENDATION FOR THE SPECIAL  
TEACHING CREDENTIAL IN VOCATIONAL HOME ECONOMICS

#### FRESHMAN YEAR

##### First Semester

Course	Units
Art 6A (Design) .....	2
Chemistry 2A (General Chemistry) .....	4
Commerce 1A (Principles of Economics) .....	3
English 1A (Advanced Composition) .....	3
Physiology 10 (Physiology and Personal Hygiene) .....	3
Psychology 2 (General Psychology) .....	3
<b>Total</b> .....	<b>18</b>

##### Second Semester

Course	Units
Art 26 (House Design and Furnishing) .....	2
Chemistry 2B (General Chemistry) .....	4
Education 11 (Principles of Teaching) .....	3
Home Economics 1A (Textiles and Clothing) .....	3
Home Economics 11A (Elementary Food) .....	3
Political Science 8 (American Government) .....	3
<b>Total</b> .....	<b>18</b>

#### SOPHOMORE YEAR

##### First Semester

Course	Units
Chemistry 10 (Organic and Food Chemistry) .....	4
Home Economics 66 (Millinery) .....	2
Home Economics 47A (Development of Home Economics Education) .....	3
Physical Education 2 (Hygiene) .....	3
Teaching H90A (Elementary Home Economics Teaching) .....	2
Physics 11 (General Physics) .....	3
<b>Total</b> .....	<b>17</b>

##### Second Semester

Course	Units
Bacteriology 1 (General Bacteriology) .....	3
Education 40 (The Administration of Public Education) .....	3
Home Economics 2 (The Study of Dress) .....	3
Home Economics 33 (Elementary Dietetics) .....	3
Home Economics 43 (Household Administration) .....	2
Teaching H92A-H92B (Secondary Home Economics Teaching) .....	4
<b>Total</b> .....	<b>18</b>
<b>Grand total</b> .....	<b>71</b>

## B. THE JUNIOR COLLEGE

### INTRODUCTORY

The curricula in the Junior College are designed to meet the needs of those students who are preparing to enter the junior and senior years in the departments of instruction at the University of California, at Berkeley, or at other collegiate institutions.\*

### THE JUNIOR CERTIFICATE

Registrants in the Junior College will receive upon the completion of the first two years' work a certificate to which their entrance credits and completed college credits entitle them. This certificate marks the transition to the junior and senior years.

In 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 junior and senior years, will make an effort to establish a basis for a breadth of culture and a mental perspective that will aid him in reaching sound judgments. The junior certificate requirements were designed to provide in some degree for the accomplishment of this purpose, without unduly limiting the student's opportunity to satisfy his special tastes and preferences.

Certain courses taken in the high school are accepted as fulfilling in part or in whole some of these junior certificate requirements. It is desirable that the student should so arrange his high school programme as to reduce the required work in the fields of foreign language, mathematics, and natural science. By so doing he makes his programme more flexible, gives himself a greater freedom of choice, and prepares himself to pass more quickly into advanced work or into new fields of study. In no case, however, does the satisfaction of junior certificate requirements in the high school reduce the minimum amount of work required in the Southern Branch for the junior certificate.

The degree requirement of 124 units is calculated on the assumption that the student will normally take 64 units of work in the freshman and sophomore years, including the prescribed work in military science and physical education and hygiene, and 60 units in the junior and senior

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\* For information concerning the work of the junior and senior years in the various schools and colleges of the University consult Section IX of this Announcement.

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

(a) *General University requirements.*

†Subject A.

Military, 6 units (men).

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

Physical Education, 2 units.

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

(c) *Mathematics.* Elementary algebra and geometry.

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

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

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

Astronomy 1.

Bacteriology 1\*.

Botany 2A\*-2B\*.

Chemistry 1A\*-1B, 5\*, 6A\*-6B\*, 8A-8B.

Geology 1A, 1B, 2C-2D (Geography 2C), 6\*.

Mineralogy 1A\*-1B\*, 2AB.

Paleontology 1.

Physics 2A-2B, 3A\*-3B\*.

Zoology 1A\*-1B\*, 10.

To obtain the junior certificate after May, 1923, the student's work in natural science must have included at least one course in laboratory science. Any of the courses marked with an asterisk in the above list will be accepted in fulfillment of this requirement. Courses with but one unit of laboratory science are not accepted as fulfilling this requirement and are not marked above, unless they have as prerequisite a course that also requires one unit of laboratory work.

† An examination in Subject A: English Composition is required of all intrants at the time of their first registration in the Southern Branch. See page 136.

(e) *Additional.* At least 9 units (a year sequence plus enough to make up at least 9 units) from one of the following groups and at least a year course in each of two others:

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

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

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

*Group 1—English and Public Speaking*

*Year course:* English 1A-1B; Public Speaking 1A-1B.

*9-unit option:* a year sequence plus 3 units from the following:

English 4A, B, F, 56A, 56B.

Public Speaking 2A, 2B, 5A, 5B, 10A, 10B.

*Group 2—Foreign Languages*

*Year course:*

French: any two consecutive courses of A, B, C, D, 5, 10A-10B, (*French 101A-101B*) 29A-29B (*French 109A-109B*).

German: any two consecutive courses of A, B, CD, or SC-SD.

Greek: 1AB-2AB, 41A-41B (*Greek 101*).

Latin: any year sequence from the following: C, D, 1, 5, 12 (*Latin 102*), 16 (*Latin 106*). Two years of high school Latin are accepted as the equivalent of a year course.

Spanish: any two consecutive courses of A, B, C, D, 51A-51B (*Spanish 101A-101B*).

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



*Group 3—Mathematics*

*Year course:* any two consecutive courses of C, 3A-3B.

*9-unit option:* any 9 units selected from C, 3A-3B, 4A-4B. High school plane trigonometry (2e) and plane analytic geometry (2f) will each count for 2 units.

*Group 4—History, Economics, Political Science*

*Year course:* History 4A-4B, 8A-8B, 76 (*Economics 11*).

Commerce 1A-1B (*Economics 1A-1B*).

Political Science 1A-1B.

*9-unit option:* a year sequence plus 3 units from the following:

History 4A-4B, 8A-8B, 76 (*Economics 11*).

Commerce 1A-1B (*Economics 1A-1B*).

Political Science 1A-1B.

*Group 5—Philosophy*

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

*9-unit option:* a year course plus enough to make 9 units, selected from the following: Philosophy 1A-1B, 3A-3B, 4A-4B.

*Summer Session Courses.* Some of the courses offered in the summer sessions are equivalent to courses offered in the fall and spring sessions, and these will be accepted in fulfilling requirements (b), (c), or (d). Students are advised to complete requirement (e) in the fall or spring sessions. A year course within the meaning of requirement (e) is not to be considered as a stated number of units, but as a subject of serious study throughout an entire academic year. Students who purpose applying any of the work offered in summer terms in satisfaction of the requirement of a year course for requirement (e) must have their programmes specially approved in advance by the Dean of the College.

*University Extension.* 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 to students who attain at least second or B grade in 45 units. A student who gains honorable mention is thereby considered eligible for the honors status.

*Specialized undergraduate departments.* For specialized undergraduate curricula consult Section IX of this Announcement.

## VII. ANNOUNCEMENT OF COURSES

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

1. Courses designated by a double number (i.e., Commerce 1A-1B) are continued through two successive semesters. In registering for the course the student will use the first number for the first semester, and the other number for the second semester. At the end of each semester a final report will be made by the instructor. The student may discontinue the course at the end of the first semester with final credit for the work completed.

2. The credit value of each course in semester units is indicated by a numeral in parentheses following the title.

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

4. The numbering system in this Announcement (except as regards the courses offered in the freshman and sophomore years) is not the same as that used in the announcement of the schools and colleges of the University at Berkeley. Ordinarily, courses numbered from 1 to 49 will be taken in the freshman and sophomore years of the Junior College or the Teachers College, and courses numbered from 50 to 99 in the junior and senior years of the Teachers College.

5. Whenever Southern Branch courses equivalent to courses given at Berkeley are offered by a department other than the department by which they are offered there (or under another number in the same department) two means of designation are employed:

(a) A sub-caption under the department heading; thus—Paleontology 1 will be found in the Department of Biology.

(b) An italicized title enclosed in parentheses immediately following the course description; thus—Geography 5, Introduction to Economic Geography (*Economics 5A*).

6. Only courses marked "Credit" followed by the capital letters A or B may be counted toward certification recommendations or degree requirements. The meaning of the credit letters is as follows: -

A. Courses which may be counted toward freshman and sophomore credit in the Junior College—approved as the equivalent of lower division courses in the departments at Berkeley. For the present these courses alone receive full credit toward the bachelor's degree in the colleges of Letters and Science, Commerce, Agriculture, Mechanics, Mining, Civil Engineering, Chemistry, and the Schools of Architecture, Education, Jurisprudence, and Medicine in Berkeley.

B. Courses which may be counted toward the bachelor's degree in the Teachers College and toward appropriate recommendations for teaching.

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

## ART

- NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts.
- HELEN CLARK CHANDLER, Assistant Professor of Fine Arts.
- LOUISE P. SOOY, Assistant Professor of Fine Arts.
- ANNA P. BROOKS, A.B., B.S., Instructor in Fine Arts.
- BESSIE E. HAZEN, Instructor in Fine Arts.
- ANNITA DELANO, Associate in Fine Arts.
- BIRDIE KIRK SMITH, Associate in Fine Arts.
- CLARA S. BARTRAM, Associate in Fine Arts.
- BELLE H. WHITICE, Associate in Industrial Arts.
- OLIVE NEWCOMB, Associate in Industrial Arts.
- NATALIE WHITE, Associate in Industrial Arts.
- HELEN W. BROCK, Assistant in Art.

-Miss Mondon  
-Miss Forbes

*Laboratory Fees.*—The fee required for courses B, 29A, 29B, 34A, 51A, 51B, 52B, 58A, 58B, 69A, 69B, 79B is 50 cents; for courses 8A, 8B, 68, 98A, 98B, it is \$1; for courses 21A, 21B, 39A, 39B, it is \$2; for course 34B it is \$4.50; for course 44 it is \$6.

## PREPARATION FOR THE MAJOR

Required: A, 1A, 1B, 6A, 6B, 12A, 34B.

- A. Freehand Drawing (*Graphic Art A*). (2) I. ✓ (Credit A, B)

SMITH, HAZEN, ~~Mondon~~

- B. Freehand Drawing. (1) II. ✓ (Credit A, B)

BROOKS Mondon

- 1A-1B. Art Appreciation and History (*Graphic Art 1A-B-C*). (2-2) ✓ (I-II) (II)  
(Credit A, B)

GERE

- 2A. Lettering. (1) I. ✓ (Credit A, B)

SMITH Whitice

Study and appreciation of lettering as a part of the subject of design. Study of alphabets and quick, accurate writing for commercial uses.

- 2B. Lettering. (2) II. ✓ (Credit A, B)

SMITH Mondon

Prerequisite: Art 2A.

## Announcement of the Southern Branch

- ✓ - 3A-3B. Costume Appreciation and History. (1-2) ~~Fr. II~~ (Credit B) <sup>Hazen</sup> SOOY  
Discussion and demonstration of costume and its relation to the individual. Lectures on historical costume.
- ✓ - 5. Elementary Illustration. (2) II. ✓ (Credit B) CHANDLER
- ✓ - 6A-6B. Design (*Graphic Art 6A-6B*). (2-2) ~~Fr.~~ (Credit A, B) <sup>(I-II)(II)</sup> <sup>white white</sup> BROOKS, HAZEN <sup>mon</sup>  
Study of the foundation of all composition, spacing, massing and color harmony.
- ✓ - 7A. Sketching. (1) I. ✓ (Credit B) <sup>Chandler, Bartram</sup> LANDSCAPE. ~~SMITH, HAZEN~~
- ✓ - 7B. Sketching. (2) II. ✓ (Credit B) CHANDLER  
Landscape.
- ✓ - 8A-8B. Stage Craft. (1-1) ~~Fr. I~~ (Credit B) DELANO, HAZEN, SMITH <sup>mon</sup>  
Making of working drawings and miniature sets. Construction and painting of stage setting. Study of processes used in decorating and making costumes.
- ✓ - 9. Elementary Construction. (2) I. ✓ (Credit B) WHITE
- 12A-12B. Design (*Graphic Art 12A-12B*). (2-2) ~~Fr.~~ <sup>(I-II)(II)</sup> (Credit A, B) DELANO  
Imaginative and industrial design.
- 13A-13B. Costume Appreciation and Design. (2-2) ~~Fr. II~~ (Credit B) HAZEN <sup>Soy</sup>  
For home economics students. Appreciative study of costume and original designing.
- ~~16. House Design. (2) I. (Credit B) HAZEN, GERE~~
- ✓ - 17. House Furnishing <sup>(I)</sup> II. ✓ (Credit B) HAZEN, GERE <sup>Bartram</sup>  
Including history of furniture.
- ✓ - 19. Art Appreciation and History (*Graphic Art 19*). (2) I. ✓ (Credit A, B) GERE
- ✓ - 21A-21B. Pottery. (2-2) ~~Fr.~~ <sup>(I-II)(II)</sup> (Credit B) NEWCOMB  
Hand building and glazing. Use of potter's wheel, making of molds and casting.

- 26. House Design and Furnishing. (2) I. ✓ (Credit B) ~~HARRIS, GERE~~  
For home economics students.
- 29A-29B. Bookbinding. (2-2) ~~Yr.~~ (Credit B) ~~(I-II)~~ ~~I-I~~ WHITICE
- ✓ 31A. ~~Drawing from Figure. (1) I. (Credit A, B) CHANDLER-Smith~~  
~~Imaginative figure drawing.~~
- 34B. Drawing from Costumed Model. (2) II. ✓ (Credit A, B) ~~SMITH Forbes~~
- ✓ 39A-39B. Weaving. (2-2) Yr. ✓ (Credit B) WHITE  
History of weaving and study of materials used. Tapestry and pattern weaving.
- 44. Life Class. (3) II. ✓ (Credit B) ~~SMITH Forbes~~
- ~~49. Basketry. (2) I. (Credit B) WHITICE~~
- 51A-51B. Fine and Industrial Arts Education for Kindergarten-Primary Teachers. (2-2) ~~Yr.~~ (Credit B) BARTRAM, WHITICE, ~~NEWCOMB~~  
*51A (2-2) I - (2) II*  
*51B (2 1/2 - 1/2) II*
- 52A-~~52B~~ Fine and Industrial Arts Education for Elementary Teachers. (2-2) ~~Yr.~~ (Credit B) ~~(I-II) Bartram, Hazen, The Staff~~
- 56A-~~56B~~ Interior Decoration. (2-2) ~~Yr.~~ ~~I~~ (Credit B) ~~Bartram~~  
Practical Designing of articles used in the home.
- 58A. Textile Decoration. (1) I. ✓ (Credit B) DELANO  
Block printing, batik and tied dyeing.
- 58B. Textile Decoration. (2) II. ✓ (Credit B) DELANO  
Block printing, batik and tied dyeing.
- 59. Advanced Pottery. (2) ~~I~~ (Credit B) NEWCOMB  
Study of glazes. Stacking kiln and firing.
- ✓ - 60A-60B. Principles of Art Education. (3-3) Yr. ✓ (Credit B)  
~~The Staff Brooks~~
- ✓ - 61A-~~61B~~ The Organization and Administration of Art Education. (3-2) ~~Yr.~~ ~~I~~ (Credit B) ~~BROOKS, BARTRAM~~ ~~Staff~~
- ✓ - 62. Poster Design. (1) I. ✓ (Credit A, B) SMITH

- ✓ — 66A-66B. Advanced Landscape Painting. (2-2) Yr. ✓ (Credit B) CHANDLER
- ✓ — 68. Stage Craft. (1) I. ✓ (Credit B) SOOY  
Principles of art studied through the medium of the stage, plus the technical knowledge necessary to produce pantomimes, pageants, etc.
- ✓ — 69A-69B. Leather. (2-2) Yr. (Credit B) (I II) (II) WHITICE
- ✓ — 72A-72B. Design. (2-2) Yr. ✓ (Credit A, B) DELANO  
Advanced imaginative and industrial design.
- ✓ — 75A-75B. Advanced Illustration. (2-2) Yr. I (Credit B) CHANDLER
- ✓ — 83A-83B. Costume Design. (2-2) Yr. ✓ (Credit B) SOOY  
Designing of costumes for modern use, also for pageants, pantomimes and plays.
- ✓ — 84A-84B. Commercial Drawing. (2-2) Yr. ✓ (Credit B) CHANDLER  
Study of the mediums, pen and ink, pencil, and water-color.
- ✓ — 86A-86B. Interior Decoration. (2-2) Yr. ✓ (Credit B) SOOY  
Composition and color harmony. Perspective drawings in various mediums.
- ~~89. Bookbinding. (2) II. (Credit B) WHITICE~~
- ✓ — 92A-93B. Commercial Design. (2-2) Yr. II (Credit B) SOOY  
Course in composition plus technical requirements in advertising.
- ✓ — 98A-98B. Clay Modeling. (2-2) Yr. ✓ (Credit B) NEWCOMB

## BIOLOGY

- LOYE HOLMES MILLER, Ph.D., Associate Professor of Biology.
- BENNET MILLS ALLEN, Ph.D., Associate Professor of Biology.
- FRANK E. OLDER, B.S., Assistant Professor of the Teaching of Agriculture.
- SARAH ROGERS ATSAT, M.S., Instructor in Biology.
- PIRIE DAVIDSON, M.A., Instructor in Zoology.
- FREDERICK M. ESSIG, Ph.D., Instructor in Botany.
- O. L. SPONSLER, Ph.D., Instructor in Botany.
- RUTH G. PERSONS, Assistant in Zoology.

*Laboratory Fees.*—The fee for Bacteriology 1, Botany 2A, 2B, Physiology 1, is \$3.50; for Zoology 1A, 1B, 4, a deposit of \$5 is required, of which a maximum of \$2 is returnable.

## Agriculture

## Pomology

1. ~~General Horticulture.~~ (3) ~~Either semester.~~ (Credit A, B) ~~OLDER~~  
Lectures, three hours; laboratory, two hours.

## Agricultural Education

- ✓ 10. Elements of Agriculture. (3) ~~Either semester.~~ (Credit B) ~~OLDER~~  
Lectures, two hours; laboratory, two hours.  
(2+3) I - (3) II

- ~~15. Advanced Agriculture and School Gardening.~~ (3) I. (Credit B)  
~~OLDER~~

Prerequisite: Agricultural Education 10.

## Bacteriology

- ✓ 1. General Bacteriology. (3) II. (Credit A, B) ~~ESSIG~~

## Botany

- ✓ 1. Fundamentals of Botany. (3) ~~Either sem.~~ (Credit A, B) ~~ESSIG, SPONSLER~~
- ✓ 2A-2B. General Botany. (4-4) Yr. (Credit A, B) ~~ESSIG, SPONSLER~~  
Lectures, two hours; laboratory, six hours.

\* Absent on leave, 1922-23.

*Paleontology*

- ✓ - 1. General Paleontology. (3) II. ✓ (Credit A, B)  
Three Saturday field trips required.

MILLER

*Physiology*

- ✓ - 1. General Human Physiology. (3) II. ✓ (Credit A, B)  
Lectures, two hours; laboratory, three hours.  
Prerequisite: Chemistry 2A-2B.

*Atsath*

10. ~~Physiology and Personal Hygiene.~~ (3) ~~Either semester.~~ (Credit B)  
~~Lectures, two hours; laboratory, three hours.~~

*Zoology*

- ✓ - 1A-1B. General Zoology. (5-5) Yr. ✓ (Credit A, B)

ALLEN, DAVIDSON, and Assistant

Lectures, three hours; laboratory, six hours. One field trip required.

- ✓ - 4. Microscopical Technique. (2) II. <sup>Either sem.</sup> (Credit A)

DAVIDSON

Laboratory, six hours.

Prerequisite: elementary chemistry and Zoology 1A.

- ✓ - \*10. General Biology. (3) II (Credit A, B)

DAVIDSON

- ✓ - 12. Nature Study. (3) Either semester. ✓ (Credit B)

MILLER, *u*

14. ~~Zoology of the Higher Vertebrates.~~ (2) II. (Credit A)

MILLER

~~Lectures, two hours; laboratory, two hours.~~

- ✓ - \*15. Organic Evolution. (2) H. L. (Credit A, B)

-MILLER

- ✓ - 35. General Human Anatomy. (5) ~~Either semester.~~ II (Credit A, B)

Lectures, three hours; laboratory, six hours.

Prerequisite: Zoology 1A.

*Atsath*

\* A student may not receive credit for both Zoology 10 and Zoology 15.



## CHEMISTRY

- WILLIAM CONGER MORGAN, Ph.D., Professor of Chemistry.
- WILLIAM R. CROWELL, Ph.D., Assistant Professor of Chemistry.
- G. ROSS ROBERTSON, Ph.D., Instructor in Chemistry.
- HOSMER W. STONE, Ph.D., Instructor in Chemistry.
- MAX S. DUNN, Ph.D., Instructor in Chemistry.
- RUSSELL W. MILLAR, Ph.D., Instructor in Chemistry.
- G. N. SCOFFIELD, Assistant in Chemistry.

*Laboratory Fees.*—The deposit required for courses 2A, 2B, is \$12, of which the maximum returnable is \$5; for courses 10, 57, the fee is \$13, of which the maximum returnable is \$6; for courses 5, 6A, 6B, it is \$17, of which the maximum returnable is \$5; for courses 1A, 1B, it is \$17.50, of which the maximum returnable is \$5; for course 9, it is \$28, of which the maximum returnable is \$10.

## PREPARATION FOR THE MAJOR

Required: Chemistry 1A-1B (10); Physics 1A-1B, or 2A-2B (6); Mathematics 3A-3B (6); French or German.

- 1A-1B. General Chemistry. (5-5) ~~5~~. (Credit A, B) (I-II) (II) *millar*  
MORGAN and STAFF

Lectures or recitations, three hours; laboratory, six hours.

Required for Colleges of Engineering, Chemistry, Agriculture, and of premedical students and chemistry majors.

Prerequisite: high school chemistry or physics, and trigonometry.

- 2A-2B. General Chemistry. (4-4) ~~4~~ (I-II) (II) *Stone*  
STONE and STAFF

Lectures or recitations, three hours; laboratory, three hours.

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.

No prerequisite; high school chemistry recommended.

- ✓ — 5. Quantitative Analysis. (3) ~~Either semester I.~~ <sup>II</sup> (Credit A, B) CROWELL  
 A course in gravimetric and volumetric analysis, shorter than 6A-6B.  
 Required of petroleum engineers and of sanitary and municipal engineers.  
 Prerequisite: Chemistry 1A-1B.
- ✓ — 6A-6B. Quantitative Analysis. (3-3) Yr. ✓ (Credit A, B) CROWELL  
 Required of economic geologists and College of Chemistry students.  
 Prerequisite: Chemistry 1A-1B.
- ✓ — 8A-8B. Elementary Organic Lectures. (3-3) Yr. ✓ (Credit A) MORGAN  
 The first half of this course is required of premedical students, sanitary and municipal engineers, petroleum engineers, and College of Chemistry students.  
 Prerequisite: Chemistry 1A-1B, or 2A-2B.
- ✓ — 9. Elementary Organic Laboratory. (3) II. ✓ (Credit A) ROBERTSON  
 Required of petroleum engineers, premedicals, and College of Chemistry students.  
 Prerequisite: Chemistry 8A.
- ✓ — 10. Organic and Food Chemistry. (4) I. ✓ (Credit B) ROBERTSON  
 Lectures or recitations, three hours; laboratory, three hours.  
 Required of home economics majors.  
 Prerequisite: Chemistry 1A-1B, or 2A-2B.
- ~~57. Biological Chemistry. (4) II. (Credit B) DUNN  
 Lectures or recitations, three hours; laboratory, three hours.  
 Required of fourth-year home economics students.  
 Prerequisite: Chemistry 8A and 9, or 10.~~

## CLASSICAL LANGUAGES

- ARTHUR PATCH MCKINLAY, Ph.D., Assistant Professor of Latin.
- EDWIN MOORE RANKIN, Ph.D., Lecturer in Greek.

## PREPARATION FOR THE MAJOR

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

Recommended: as much work as may be possible in Greek, ancient history, French, or German.

*Greek*

- ✓ - 1AB-2AB. Beginning Greek, Attic Prose, and Homer. (5-5) Yr. ✓  
(Credit A, B) ~~MCKINLAY~~, RANKIN
- ~~40A-40B. Prose Composition. (1-1) Yr. (Credit A, B) MCKINLAY~~
- ✓ - 41A-41B. Introduction to Plato; Euthyphro, Apology, Crito, Selections from the Phaedo (*Greek 101*). (3-3) Yr. ✓ (Credit A, B) MCKINLAY

*Latin*

- ✓ - C. Third Year Latin: Ciceronian Prose. (3) I. ✓ (Credit A, B)  
MCKINLAY  
Open to those who have two years of high school Latin.
- ✓ - D. Fourth Year Latin: Augustan Poetry. (3) II. ✓ (Credit A, B)  
MCKINLAY
- ✓ - 1. Cicero: De Senectute and Pliny's Letters. (3) I. ✓ (Credit A, B)  
MCKINLAY  
Open to those who have had four years of high school Latin.
- ✓ - 3A-3B. Latin Prose Composition. (1-1) Yr. ✓ (Credit A, B) MCKINLAY  
This course may be taken in successive years for credit.
- ✓ - 5. Horace: Odes and Epodes. (3) II. ✓ (Credit A, B) MCKINLAY  
This course follows Latin 1.
- ✓ - 12. Catullus and Livy (*Latin 102*). (3) I. ✓ (Credit A, B) MCKINLAY  
Prerequisite: Latin 5.
- ✓ - 16. Tacitus and Plautus (*Latin 106*). (3) II. ✓ (Credit A, B) MCKINLAY  
Prerequisite: Latin 12.

Development of Ancient Civilizations. See History 12.

## COMMERCE

- CLOYD HECK MARVIN, Ph.D., Associate Professor of Commerce.  
 -HOWARD S. NOBLE, A.B., M.B.A., Assistant Professor of Accounting.  
 -C. A. LEDEUC, M.B.A., Ph.D., Assistant Professor of Accounting.  
 -ELMER S. NELSON, M.A., Associate in Commerce.  
 -EVA M. ALLEN, Associate in Commercial Practice.  
 -ESTELLA B. PLOUGH, Associate in Commercial Practice.  
~~F. M. COUCH, Lecturer in Credits and Collections.~~  
~~SILAS GIBBS, Assistant in Commerce.~~

Fees.—A fee of \$2.50 will be charged for 14A, 14B, 16A, 16B.

## PREPARATION FOR THE MAJOR

Required: (Economics course) Commerce 1A-1B; History 2A-2B, 3A-3B; Political Science 1A-1B.

Required: (Secondary Teachers' course) Commerce 1A-1B, 14A-14B, 16A-16B, 18A-18B.

- ✓ - 1A-1B. Principles of Economics (*Economics 1A-1B*). (3-3) Yr. ~~(I II) (II)~~  
 (Credit A, B) Nelson MADDEN and STAFF
- ✓ - 14A-14B. Accounting Principles (*Economics 14A-14B*). (3-3) Yr. ~~(I II) (II)~~  
 (Credit A, B) NOBLE, ~~LEDEUC~~
- ✓ - 16A-16B. Typing. (2-2) Yr. ~~Either sem.~~  
 (Credit B) ALLEN
- ✓ - 17A-17B. Shorthand. (3-3) Yr. (Credit B) ALLEN
- ✓ - 18A-18B. Penmanship. (2-2) Yr. (Credit B) ~~Either sem.~~ PLOUGH
- ~~24. Office Organization, Administration, and Procedure. (2) II.  
 (Credit C)~~
- ✓ - 31. Elementary Statistics. (2) I. (Credit B) ~~LEDEUC~~ NOBLE
- ✓ - 50A-50B. Intermediate Accounting. (3-3) Yr. (Credit B)  
~~NOBLE, LEDEUC~~
- ✓ - 51A-51B. Elements of Money and Banking. (3-3) Yr. (Credit B)  
 NELSON
- 54A-54B. Principles of Marketing. (3-2) Yr. ~~II~~ (Credit B) ~~MADDEN~~ L. ED
- 55. Psychology of Salesmanship. (3) I. (Credit B) —
- 56. Advertising Practice. (3) II. (Credit B) —
- 57. Ocean Transportation. (3) I. (Credit B) NELSON

<del>58. Railroad Transportation. (3) II. (Credit B)</del>	NELSON
<del>59A-59B. Principles of International Commerce. (3-3) Yr. (Credit B)</del>	NELSON
<del>65. Methods and Practices in Foreign Trade. (3) II. (Credit B)</del>	NELSON
<del>67. Credits and Collections. (1) I. (Credit B)</del>	COUCH
<del>70. Business Statistics. (2) II. (Credit B)</del>	NOBLE
<del>75. Cost Accounting. (3) I. (Credit B)</del>	NOBLE, LEDEUC
<del>76. Auditing. (3) II. (Credit B)</del>	NOBLE, LEDEUC
<del>*78. Problems of Retail Merchandising. (3) I. (Credit B)</del>	—
<del>80. Foreign Exchange and Foreign Investments. (3) I. (Credit B)</del>	NELSON
<del>*81A-81B. Corporation Finance and Investments. (2-2) Yr. (Credit B)</del>	MARVIN
<del>90. Thesis. (2) Either semester. (Credit B)</del>	The STAFF
<del>*93. Latin American Trade. (3) I. (Credit B)</del>	NELSON
<del>*94. Oriental Trade. (3) II. (Credit B)</del>	NELSON
<del>95. Part-Time Work. Either semester. (Credit B)</del>	The STAFF
Units to be arranged.	
<del>96. Organization and Administration of Commercial Education. (3) I. (Credit B)</del>	MARVIN and STAFF
<del>97. Curricula and Methods in Commercial Education. (3) II. (Credit B)</del>	MARVIN and STAFF
<del>99A-99B. Business Organization and Administration. (3-3) Yr. (Credit A, B)</del>	<del>Noble MARVIN</del>

### Courses in Other Departments

~~Economic History (History 76).~~

~~Economic Geography (Geography 4, 5, 73, 74).~~

~~Commercial Law (Jurisprudence [under Political Science] 10A-10B, 18A-18B, 38A-38B).~~

~~Business English (English 1c).~~

~~Commercial Spanish (Spanish 6).~~

~~Business Mathematics (Mathematics 2, 18).~~

\* Not to be given 1922-23.

## EDUCATION

- ERNEST CARROLL MOORE, Ph.D., LL.D., Director of the Southern Branch and Professor of Education.
- \*JOHN ADAMS, M.A., LL.D., Professor of Education, University of London, Lecturer in Education.
- MARVIN L. DARSIE, M.A., Assistant Professor of Education. + Dean of T.C.
- CHARLES WILKIN WADDLE, Ph.D., Supervisor of Training and Professor of Education.
- KATHERINE L. McLAUGHLIN, M.A., Associate Professor of Education.
- ETHEL I. SALISBURY, M.A., Associate Professor of Elementary Education.
- WILLIAM A. SMITH, Ph.D., Assistant Professor of Education.
- CLARENCE HALL ROBISON, Ph.D., Assistant Professor of Education.
- \*FREDERICK P. WOELLNER, Ph.D., Lecturer in Education.
- HARVEY L. EBY, A.B., Lecturer in Education.
- LEWIS ADAMS MAVERICK, M.A., Lecturer in Vocational Education.
- VIERLING, KERSEY, M.A., Lecturer in Part-Time Education.

- ✓ ← 11. Principles of Teaching. (3) <sup>(3) I - (2) II</sup> Either semester. (Credit B)  
ROBISON, EBY, WOELLNER

Prerequisite: Psychology 2.

- ✓ - 14. Civic Education. (2) Either semester. (Credit B) WOELLNER

- ✓ - 21. Introductory Kindergarten-Primary Education. (3) ~~E~~ (Credit B)  
*Either sem.* McLAUGHLIN

- ✓ - 24. Kindergarten-Primary Curricula and Methods. (3) ~~E~~ (Credit B)  
*Either sem.* McLAUGHLIN

Prerequisite: Psychology 2.

- ~~20. History of Kindergarten and Primary Education. (3) I. (Credit B)~~  
McLAUGHLIN

- ✓ ~~27. Principles of Kindergarten-Primary Reading and Number. (3) I.~~  
(Credit B) *McLaughlin*

- ~~28. Kindergarten-Primary Plays, Games, and Stories. (3) I.~~  
(Credit B)

~~Especially designed for Smith-Hughes students.~~

- ✓ - 40. The Administration of Public Education (with special reference to California). (3) Either semester. (Credit B) SMITH

\*In residence second semester only, 1922-23.

42. Educational Measurement and Diagnosis. (3) Either semester. ✓  
Credit B) DARSIE
- ~~50. Elementary Education. (3) Either semester. (Credit B) ROBISON~~  
A course designed especially for those candidates for the junior high school certificate whose previous training has been academic rather than professional.
- ~~51. Comparative Study of Primary Education. (3) I. (Credit B)~~  
MCLAUGHLIN
- ~~53. Kindergarten-Primary Supervision. (3) II. (Credit B)~~  
MCLAUGHLIN
55. Rural Education. (2) I. (Credit B) ~~Either sem.~~ EBY
56. Rural School Supervision. (2) II. ✓(Credit B) EBY
- ~~60a-60b. Elementary School Supervision. (3-3) Yr. (Credit B)~~  
ROBISON
62. Amerization. (3) ~~Either semester.~~ III (Credit B) WOELLNER
- ~~64a-64b. Part-time Education. (2-2) Yr. (Credit B)~~  
KERSEY
65. Vocational Education. (3) I. ✓(Credit B) MAVERICK
66. Vocational and Educational Guidance. (3) II. ✓(Credit B) MAVERICK
- ~~\*69. The Teaching of General Science in Junior High Schools. (2) II.~~  
(Credit B)
75. Educational Sociology. (3) ~~Either semester.~~ I (Credit B) DARSIE
78. Principles of Secondary Education. (3) Either semester. ✓(Credit B)  
SMITH
- 80A-80B. The Junior High School. (3-3) Yr. ✓(Credit B) SMITH
82. Newer Developments of Educational Theory and Practice. (2) II. ✓  
(Credit B) ADAMS
84. The Psychology of the School Class. (2) II. ✓(Credit B) ADAMS
- ~~85. Some Phases of the History of Modern Education. (2) II. ADAMS~~  
(Credit B)
86. Educational Measurement and Statistics. (3) II. ✓(Credit B)  
Prerequisite: 42. DARSIE
- ~~\*89. History of Education. (3) I. (Credit B)~~  
MOORE
95. Supervision of Teaching. (2) I. ✓(Credit B) WADDLE  
Open to principals, supervisors, training teachers and those preparing for supervision.  
Prerequisite: two or more years of teaching experience.  
Philosophy of Education (*see Philosophy and Psychology*).

## ENGLISH

- FREDERIC T. BLANCHARD, Ph.D., Associate Professor of English.
- HERBERT F. ALLEN, Ph.D., Assistant Professor of English.
- \*AUSTIN K. GRAY, M.A., Assistant Professor of English.
- \*SIGURD BERNHARD HUSTVEDT, Ph.D., Assistant Professor of English.
- LLEWELLYN BUELL, Ph.D., Assistant Professor of English.
- PERCY H. HOUSTON, Ph.D., Assistant Professor of English.
- MERRITT YERKES HUGHES, Ph.D., Assistant Professor of English.
- CHARLES A. MARSH, B.S., Assistant Professor of Argumentation.
- ALICE O. HUNNEWELL, Instructor in English.
- EVALYN THOMAS, A.B., B.L.I., Instructor in English.
- MARGARET S. CARHART, Ph.D., Instructor in English.
- HARRIET MACKENZIE, M.A., Instructor in English.
- LILLY B. CAMPBELL, Ph.D., Instructor in English.
- CARL S. DOWNES, Ph.D., Instructor in English.
- KATHERINE COLLINS, M.A., Associate in English.
- LAWRENCE C. LOCKLEY, M.A., Associate in English.
- L. E. PEARSON, M.A., Associate in English.
- Louis C. Valentine, A.B.
- Alfred A. Longueil, Ph.D.

## EXAMINATION IN SUBJECT A

(A) Intrants (both the Junior College and the Teachers College students are required to take the examination in Subject A. Page 136.

(B) Students who do not receive a passing grade must continue to take the examination (at the beginning of each semester) until they have passed it. A passing grade in Subject A is prerequisite to the junior certificate. Page 136.

## PREPARATION FOR THE MAJOR

Required for the English major: 12 units which must include either English 1A-1B or Public Speaking 1A-1B.

Required for Public Speaking major: Public Speaking 1A-1B (or English 1A-1B), 2A-2B, 5A-5B.

✓ 1A-1B. Advanced Composition. (3) Either semester. ✓ (Credit A, B) *et al*

BLANCHARD, ALLEN, CARHART, LOCKLEY, COLLINS,  
BUELL, HOUSTON, HUGHES.

Open to all students who have received a passing grade in Subject A.

\* Absent on leave, 1922-23.



- ✓ 10. English in Business Practice. (3) II. ✓ (Credit A, B) *Lockley*
- ✓ 4A-4B. Great Books. (1-1) Yr. ✓ (Credit A, B) BLANCHARD  
This course is given in series, each of which may be taken once.
- ✓ 6A-B-C-D. Frequent Writing. (3) ~~Either semester.~~ (Credit A, B) *campbell, longue*  
*6A B II*  
*6C D II*  
ALLEN, BUELL, HOUSTON, HUGHES  
For at least six weeks daily one-page themes; appointments for individual criticism. Limited to 15 students.
- ~~7A. Narration. (3) I. (Credit A, B) BLANCHARD~~  
For at least six weeks daily one-page themes; appointments for individual criticism. Limited to 15 students.
- ✓ *12A-12B*  
12. Reading, and the Teaching of English. ~~(3) Either semester.~~ *3 in I 2 in II*  
(Credit B) HUNNEWELL, ~~WUELLEN,~~ MACKENZIE
- ✓ 14. Literature for the Middle Grades. (3) II. ✓ (Credit B) MACKENZIE
- ✓ 17B. Shakespeare (*English 117B*). (3) ~~II~~ I ✓ (Credit A, B)  
BLANCHARD, —
- ~~18. Milton (*English 118*). (3) II. (Credit A, B)~~
- ✓ 21A-21B. Nineteenth Century Poetry (*English 121A-121B*). (3-3) Yr. ✓  
(Credit A, B) BLANCHARD, ALLEN  
Either semester may be taken separately.
- ✓ 21G-21H. Nineteenth Century Prose (*English 121G-121H*). (3-3) Yr. ✓  
Credit A, B) *Houston*  
Either semester may be taken separately.
- ✓ 22. Introduction to Poetry. (3) ~~Either semester~~ II (Credit A, B) *allen*
- ✓ 23. Introduction to the Drama. (3) ~~Either semester~~ II (Credit A, B) *Buell*
- ✓ ~~25F-25G.~~ 25F-25G. The English Novel (*English 125F-125G*). (3-3) ~~I~~ II  
(Credit A, B) BLANCHARD  
Either semester may be taken separately.
- ✓ 30. American Literature (*English 130*). (3) Either semester ✓  
(Credit A, B) *Dwaine Hughes* ~~BLANCHARD,~~ CARHART
- ✓ 56A-56B. History of English Literature. (3-3) Yr. (Credit A, B) *(I II) (II)*  
*campbell, Buell, longue*  
ALLEN *Carhart*
- ✓ 61. Junior High School English. (2) I. ✓ (Credit B) MACKENZIE

## Public Speaking

- ✓ - 1A-1B. Elements of Public Speaking. (3-3) Yr. <sup>(II) I</sup> (Credit A, B) MARSH
- ✓ - 2A-2B. The Fundamentals of Expression and Interpretation. (3-3) Yr. (Credit A, B) *Either sem -* HUNNEWELL, THOMAS
- ✓ - 5A-5B. Principles of Argumentation. (3-3) Yr. <sup>I</sup> (Credit A, B) MARSH  
Prerequisite: Public Speaking 1A-1B or English 1A-1B and the consent of the instructor.
- ✓ - 10A-10B. Dramatic Interpretation. (3-3) Yr. <sup>✓</sup> (Credit A, B) THOMAS
- ~~15A. Children's Literature. (3) I. (Credit B) GREENWOOD~~
- ✓ - 15B. The Art of Story Telling. (3) <sup>H.</sup> (Credit B) HUNNEWELL  
*Either sem.*

## GEOGRAPHY

- MYRTA LISLE MCCLELLAN, B.S., Assistant Professor of Geography.  
 -FORD ASHMAN CARPENTER, LL.D., D.Sc., Lecturer in Meteorology.  
 -GEORGE M. MCBRIDE, Ph.D., Lecturer in Geography.  
 -RUTH E. BAUGH, A.B., Associate in Geography.

*Williams*

## PREPARATION FOR THE MAJOR

Required: Geography 1A, 1B, 1C, 2C.

- ✓ — 1A. Fundamentals of Modern Geography. (3) Either semester. ✓  
 (Credit A, B) BAUGH, MCCLELLAN *McBride*
- ~~1B. Elementary Meteorology. (3) II. (Credit A, B) BAUGH, MCCLELLAN~~
- ✓ — 3. Applied Meteorology. (3) I. ✓ (Credit A, B) CARPENTER
- ✓ — 4. Introduction to Economic Geography (*Economics 3A*). (3) I. ✓  
 (Credit A, B) MCCLELLAN, MCBRIDE
- ✓ — 5. The Geography of International Trade. (3) II. ✓ (Credit A, B) *McBride*  
 MCCLELLAN
- ~~13. General Climatology (*Geography 113*). (3) II. (Credit A, B)  
 MCBRIDE~~
- ✓ — 15. Geography of California (*Geography 115*). (2) Either semester. ✓  
 (Credit A, B) ~~BAUGH, MCCLELLAN~~
- ~~56A. Geography of North America (*Geography 116A*). (3) II. BAUGH~~  
 (Credit A, B)
- ~~56B. Geography of Europe (*Geography 116B*). (3) I. Credit A, B)  
 BAUGH~~
- ~~56C. Geography of Latin America. (3) I. (Credit A, B) MCBRIDE~~
- ✓ — 56E. Geography of China (*Geography 116E*). (3) I. ✓ (Credit A, B)  
 WILLIAMS
- ✓ — 68. Geographic Influences in American History. (3) II. ✓ (Credit A, B)  
 MCBRIDE
- ✓ — 69. The Teaching of Geography. (3) Either semester. ~~III~~ (Credit B)  
 MCCLELLAN
- ~~73. Economic Geography of South America. (3) I. (Credit B)  
 MCCLELLAN~~
- ~~74. Economic Geography of the Orient. (3) II. (Credit B) MCCLELLAN~~

\* Not to be given 1922-23.

## GEOLOGY AND MINERALOGY

-FREDERICK P. VICKERY, M.S., Assistant Professor of Geology.

-ALFRED R. WHITMAN, Ph.D., Instructor in Geology.

Laboratory Fees: Mineralogy 1A, 1B, \$5; 2AB, \$2.50.

*Ruth E. Baugh*

## PREPARATION FOR THE MAJOR

Required: Chemistry 1A-1B; Physics 2A-2B; Mathematics C; Civil Engineering 1A, 1B; Geology 1A, 1B; Mineralogy 1A, 1B; Art A, and Engineering Drawing C.

Recommended: French and German, Chemistry 5.

## Geology

- ✓ - 1A. General Geology: Dynamical and Structural. (3) Either semester. ✓  
 (Credit A, B) VICKERY  
 Three recitations per week and four field trips (half-day) per semester. Sections limited to 40 students.  
 Prerequisite: chemistry and physics.
- ✓ - 1B. General Geology: Historical. (2) Either semester. ✓ (Credit A, B)  
 Prerequisite: Geology 1A or Biology 4. VICKERY
- ✓ - 1C. Elementary Physiography (*Geography 1C*). (3) Either semester. ✓  
 (Credit A) VICKERY *Baugh*
- 2C-2D. Map and Field Study of Physiography (*Geography 2C*). (1-1) Ya  
 (Credit A) (I II) (4) VICKERY
- ✓ - 5. General Geology: Field Work: Dynamical and Structural. (1) Either semester. ✓ (Credit A) VICKERY  
 May be taken after or concurrently with Geology 1A. Field excursions and reports.
6. General Geology: Laboratory and Field Work: Historical. (2) II.  
 (Credit A) WHITMAN  
 May be taken after or concurrently with 1B.

## Mineralogy

- ✓ - 1A-1B. Determinative Laboratory. (2-2) Yr. ✓ (Credit A) WHITMAN  
 Prerequisite: Chemistry 1A-1B.
- ✓ - 2AB. Crystallography and Crystallographic Laboratory. (3) II. ✓ WHITMAN  
 (Credit A)

## GERMAN

WILLIAM DIAMOND, Ph.D., Instructor in German.

## PREPARATION FOR THE MAJOR

Required: German A-B (10) and C-D (6).

Recommended: Latin, French, History 4A-4B.

✓ — A. Elementary German. (5) I. <sup>II</sup> (Credit A, B) DIAMOND

The 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 the high school will receive two units of credit in addition to their matriculation credit.

✓ — B. Elementary German. Continuation of A. (5) II. ✓ (Credit A, B)

DIAMOND

Prerequisite: German A or two years of high school German.

✓ — A<sup>2</sup>-B<sup>2</sup>. Elementary German. (3-3) Yr. ✓ (Credit A, B) DIAMOND

Exclusively for students looking toward work in medicine or engineering or along general scientific lines.

✓ — C-D. Intermediate German. Continuation of B. (3-3) Yr. ✓ (Credit A, B)

DIAMOND

Conducted in German. Furnishes the regular preparation for the junior and senior courses.

Prerequisite: German B or three years of high school German.

✓ — ~~SC-SD~~ Introduction to Technical Reading. (3-3) ~~Yr.~~ ✓ (Credit A)

DIAMOND

Intended for scientific and professional students.

Prerequisite: German A-B, A<sup>2</sup>-B<sup>2</sup> or the equivalent in high school German.

~~9A-9B. Outlines of the History of German Literature. (3-3) Yr. (Credit A)~~

DIAMOND

Designed to afford some understanding of the more important movements of German literature and their significance. It is primarily intended for students working in English and the Romanic languages. A knowledge of German is helpful but not obligatory.

## HISTORY

- FRANK J. KLINGBERG, Ph.D., Associate Professor of History.
- MELVA LATHAM, A.B., Assistant Professor of History.
- JOHN CARL PARRISH, Ph.D., Assistant Professor of History.
- JOSEPH B. LOCKEY, Ph.D., Assistant Professor of History.
- LUCY M. GAINES, M.A., Instructor in History.
- L. K. KOONTZ, Ph.D., Instructor in History.

*Edwin M. Rankin*

## PREPARATION FOR THE MAJOR

Required: any three-unit year course in History.

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

- ✓ - 2A-2B. History of England and Greater Britain. (2-2) Yr. ✓ (Credit A, B)  
KLINGBERG, KOONTZ
- ✓ - 4A-4B. Social and Political History of Modern Europe. (3-3) Yr. ✓ (Credit A, B)  
KLINGBERG, KOONTZ
- ✓ - 7A-7B. History of the United States. (3-3) Yr. ✓ (Credit A, B) *staff*  
GAINES, LATHAM, PARRISH  
First semester, to 1837. Second semester, to the present time.
- ✓ - 7c. History of the United States Since 1868 (*History 174B*). (2) ~~Either~~ *I*  
semester. (Credit A, B) PARRISH
- ✓ - 8A-8B. The History of the Americas. (3-3) Yr. ~~(I, II, III)~~ (Credit A, B) LOCKEY
- ✓ - 11. Social Studies in the Kindergarten-Primary Grades. (2) Either semester. *2*  
(Credit B) LATHAM  
Treats of sources of material, curricula now in use, and projects.  
Prerequisite: Psychology 2.
- ✓ - 51. The Renaissance. (3) I. ✓ (Credit A, B) KLINGBERG
- ✓ - 53. The French Revolution. (3) II. ✓ (Credit A, B) KLINGBERG
- ✓ - 12. The Development of Ancient Civilizations. (3) ✓ Either semester. ✓  
(Credit B) RANKIN
- ✓ - 38. Contemporary History. ~~(2)~~ *II* Either semester. (Credit B) GAINES

- ✓ 39. Pacific Coast History. (2) ~~Either semester~~ I (Credit B) GAINES
- ✓ 76. The Industrial History of the United States. (2) Either semester. ✓  
(Credit A, B) LATHAM
- 77. The Social Sciences for Junior High Schools. (2) II (Credit B)  
LATHAM
- ~~79. The Teaching of History in the Elementary School. (2) Either semester.  
(Credit B) LATHAM~~
- 81A-81B. The History of the Westward Movement. (3-3) Yr. ~~4~~ (Credit  
A, B) PARISH  
(A) Settlement of the Mississippi Valley.  
(B) Migration Across the Plains and Mountains to the Pacific.
- 83A-83B. The Expansion of Europe Since the Fifteenth Century. (2-2) Yr. ✓  
(Credit A, B) KLINGBERG, ~~KOENIG~~

## HOME ECONOMICS

- ISABEL BEVIER, Ph.M., D.Sc., Lecturer in Home Economics.
- BERNICE ALLEN, B.S., Ed.B., M.A., Instructor in Home Economics.
- FLORENCE CHURTON, Lecturer in Home Economics.
- \*AGNES E. MACPHERSON, Associate in Home Economics.
- ORABEL CHILTON, B.S., Associate in Home Economics.
- MAUD D. EVANS, Associate in Home Economics.
- ELIZABETH LATHROP, Associate in Home Economics.
- FLORENCE A. WILSON, A.B., B.S., Associate in Home Economics.
- \*PAULINE LYNCH, Associate in Home Economics.
- FLORENCE M. HALLAM, A.B., Associate in Home Economics.
- MAUDE E. JENKINS, B.S., Associate in Home Economics.

*Laboratory Fees:* The fee required for courses 1A, 1B, 2, 69, 79 is \$1; for courses 59, 85 is \$1.50; for courses 11A, 11B, 33, 59, 83 is \$2.75.

- ✓ \* 1A. Textiles and Clothing (*Household Art 1A*). (3) ~~Either semester.~~ *I II*  
(Credit A, B) WILSON  
Study of textile fibers and principles of simple garment construction.
- ✓ — 1B. Elementary Dressmaking (*Household Art 1B*). (3) Either semester.  
(Credit A, B) WILSON  
Prerequisite: Home Economics 1A.
- 2. The Study of Dress. (3) ~~I.~~ (Credit B) LATHROP  
Open only to vocational students.  
Prerequisite: Home Economics 1A.
- ✓ — 11A. Elementary Food (*Household Science 1A*). (3) ~~Either semester.~~ *II*  
(Credit A, B) ALLEN, EVANS, JENKINS  
Food principles, selection and preparation.
- ✓ — 11B. Elementary Food (*Household Science 1B*). (3) ~~Either semester.~~ *I*  
(Credit A, B) ALLEN  
Economic aspects and service of meals.  
Prerequisite: Chemistry 2A, Home Economics 11A.

\* Absent on leave, 1922-23.

• 11A not the same as 1A of 1921-22 but the same as 58 of 1921-22



Announcement of Courses

103

- ✓ — 22. Home Economics Objectives. (2) <sup>Either sem</sup> (Credit B) *Jenkins*  
Required of freshmen. STAFF
- ✓ — 24. Home Economics Projects in Education. (3) Either semester. EVANS  
(Credit B)  
Prerequisite: Education 11.  
For general professional and Kindergarten-Primary students.
- ✓ — 33. Elementary Dietetics. (3) ~~II~~ <sup>Either sem</sup> (Credit B) CHILTON  
Principles of diet applied to individuals, the family and other groups.  
Prerequisite: Chemistry 10, Biology 10 to parallel or to precede.
- ~~43. Household Administration. (2) I. (Credit B) MACPHERSON  
For vocational students.  
Prerequisite: Chemistry 2A, Commerce 1A.~~
- ~~46. Home Economics Education. (4) I. (Credit B)  
Combination of 47A and 47B. For vocational students.  
Prerequisite: Education 11.~~
- ✓ — 47A. Development of Home Economics Education. (3) Either semester. ✓  
(Credit B) *Bevier*  
Prerequisite: Education 11.
- ✓ — 47B. Principles of Home Economics Teaching. (2) Either semester. ✓  
(Credit B) ~~MACPHERSON~~ *Churton*  
Study of typical courses and their presentation.  
Prerequisite: Home Economics 47A.
- ✓ — 58. Food and Nutrition. (4) I. ✓ (Credit B) *Wilson, Chilton*  
Application of scientific discoveries in relation to principles of nutri-  
tion. Recent literature. ALLEN  
Prerequisite: senior standing.
- ✓ — 59. Food Problems. (3) II. ✓ (Credit B) ~~CHILTON~~ *Allen*  
Special problems in food with review of literature of the subject.  
Prerequisite: senior standing.
- ✓ — 66. Millinery. (2) Either semester. ✓ (Credit B) LATHROP

## Announcement of the Southern Branch

- ✓ - 69. Household Administration. (3) II. (Credit B) *Allen*  
~~MACPHERSON~~  
 Economic organization and administration of the activities of the home.

Prerequisite: Chemistry 2A, Physics 11, Commerce 1A.

- ✓ - 70. Home and Community. (3) I. (Credit B) *Allen*  
~~Macpherson~~  
 Home and family life as modified by present social and civic demands.  
 Prerequisite: senior standing.

- ✓ - 75. Advanced Dressmaking. (3) II (Credit B)  
 Prerequisite: Home Economics 1B.

LATHROP

- ✓ - 79. Clothing Problems. (3) I (Credit B) *Lathrop*  
~~Wilson~~  
 Special problems in clothing with review of literature.  
 Prerequisite: senior standing.

- 83. Experimental Cookery. (3) I. (Credit B)  
 Prerequisite: senior standing.

ALLEN

- ~~85. Advanced Dietetics. (3) II. (Credit B) *Chilton*~~  
~~Prerequisite: Home Economics 33; Chemistry 7 or Home Economics 58.~~

### MATHEMATICS

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

*Benjamin N. Schieve*

**Fees:** The fee required for Civil Engineering 1FA, 1FB is \$5; for 3 a minimum of \$20.

#### PREPARATION FOR THE MAJOR

Required: Mathematics A-C, 1, 3A-3B, 4A-4B, 6.

Recommended: physics, astronomy, French, German.

✓ - A. Elementary Algebra. (3) I. ✓ (Credit A, B) WORTHINGTON  
Equivalent to a high school course in algebra.

✓ - B. Elementary Plane Geometry. (3) II. *Either sem.* (Credit A, B) WORTHINGTON *James*  
Equivalent to a high school course in plane geometry. *William Schieve*

✓ - C. Trigonometry. (3) *Either semester.* ✓ (Credit A, B)  
*James Hunt, LEONARD, DAUS*  
Prerequisite: elementary algebra and geometry.

✓ - F. Spherical Trigonometry. (1) I. *Either sem.* (Credit A, B) ~~SHERWOOD~~ *Staff*  
Prerequisite: plane trigonometry and solid geometry.

✓ - 1. Advanced Algebra. (3) *Either semester.* ✓ (Credit A, B) *Staff*  
~~GLAZIER, LEONARD, BASOCO~~

✓ - 1C. Advanced Algebra. (3) *Either semester.* ✓ (Credit A, B) *DAUS Staff*  
For students requiring more drill than Mathematics 1 affords.

- ✓ 2. Mathematical Theory of Investment. (3) Either semester. (Credit A, B)  
~~SHOWMAN, SHERWOOD~~ *James*
- Prerequisite: Mathematics 1.
- ✓ 3A-3B. Plane Analytic Geometry and Differential Calculus. (3-3) ~~Yr. (II)~~ *II*  
 (Credit A, B) ~~DAUS~~ *DAUS*
- Prerequisite: plane and solid geometry, plane trigonometry and at least one and one-half years of algebra.
- ✓ 3C. Differential and Integral Calculus. (5) I. (Credit A, B) *James Glazier*  
~~WORTHINGTON, DAUS~~
- For students beginning calculus in the second year.
- ✓ 4A-4B. Solid Analytic Geometry and Integral Calculus. (3-3) Yr.  
 (Credit A, B) *Worthington* ~~GLAZIER~~
- Prerequisite: Mathematics 3A-3B.
- ✓ 4C. Solid Analytic Geometry and Integral Calculus. (4) II. WORTHINGTON  
 (Credit A, B)
- This course with 3C is the equivalent of Mathematics 3B, 4A, and 4B.
- ✓ 6. Introduction to Projective Geometry. (3) II. (Credit A, B) *Daus*  
~~GLAZIER~~
- ✓ 17. Arithmetic for Teachers. (3) Either semester. (Credit B)  
 GLAZIER, COLLIER, WORTHINGTON
- ✓ 18. Business Mathematics. (2) ~~Yr.~~ *Either sem.* (Credit B) *Collier* HUNT
- ✓ 70A-70B. Advanced Calculus (*Mathematics 110A-110B*). (2-2) Yr.  
 (Credit A) SHERWOOD
- ✓ 74. The Teaching of Junior High School Mathematics. (2) II. (Credit B)  
 COLLIER

## Civil Engineering

- ✓ 11A-11B. Plane Surveying Lectures. (2-2) Yr. (Credit A)  
 SHOWMAN, HUNT
- Prerequisite: plane trigonometry and geometrical drawing.
- ✓ 11FA-11FB. Plane Surveying: Field Practice. (1-1) Yr. (Credit A)  
 SHOWMAN, HUNT *Practical*
- To be taken in conjunction with Civil Engineering 11A-11B.
- ✓ 15A-B Analytic Mechanics (3) yr. Credit A *Showman*  
 ✓ 15C (4) I *Showman*

- ✓ 8. Summer Class in Plane Surveying. (3) (Credit A) ~~SHOWMAN, HUNT~~  
 Four weeks. ✓  
 Prerequisite: Civil Engineering 1FA-1FB.
- ✓ 8. The Materials of Engineering Construction. (2) II. ✓ (Credit A) HUNT  
 Prerequisite: sophomore standing.

*Astronomy*

- ✓ 1. Elements of Astronomy. (3) Either semester. ✓ (Credit A) LEONARD
- ✓ 3. Surveyors' Course in Practical Astronomy. (1) II. ✓ (Credit A)  
 LEONARD  
 Prerequisite: plane trigonometry, solid geometry, Civil Engineering 1LA, registration in Civil Engineering 1LB.

✓ 11 — 3 units ✓ Credit A - Leonard

## MECHANIC ARTS

- HAROLD WILLIAM MANSFIELD, Assistant Professor of Mechanic Arts.
- JOHN B. PHILLIPS, Associate in Mechanic Arts.
- JAMES WILLARD MARSH, Associate in Mechanic Arts.
- FOSS R. BROCKWAY, Associate in Mechanic Arts.
- ADRIAN D. KELLER, Associate in Mechanic Arts.
- BENJAMIN N. SCHIEWE, Associate in Mechanic Arts.
- WALTER S. SWAN, Assistant in Architecture.

*C. Mansfield*

*Laboratory Fees.*—The deposit required for Mechanical Engineering 7, 8A, 8B, 9A, 9B, Mechanic Arts 10A, 10B, 24A, 24B, 51A, 51B, 60A, 61, 62A, 62B, 75A, 75B, 76A, 76B is \$3.

## Architecture

- ✓ — 5A-5B. Architecture. (3-3) Yr. (Credit A)

History and classic orders.

Includes *Architecture 5A-5B* (1-1) and *Architecture 11* (3).

*Truesdell*

- ~~6A-6B. Architecture. (3-3) Yr. (Credit A)~~

~~Water color, pen and ink, modeling.~~

~~Includes *Architecture 12A-12B* (1-1), *13A-13B* (1-1), *14A-14B* (1-1).~~

## Engineering Drawing

- ✓ — C. Instrumental Drawing. (2) II (Credit A, B)

SCHIEWE

- ✓ — D. Engineering Drawing. (2) II + III (Credit A, B)

SCHIEWE

- ~~9. Lettering. (2) I. (Credit A, B)~~

SCHIEWE

- ~~10. Lettering. (2) II. (Credit A, B)~~

SCHIEWE

## Mechanical Engineering

- ✓ — 2. Descriptive Geometry. ~~3~~ <sup>2</sup> Either semester. (Credit A, B) SCHIEWE

- ✓ — 6. Machine Design. (5) Either semester. (Credit A, B)

~~MANSFIELD~~, SCHIEWE

Principles of mechanism and elements of machine drawing.

- ✓ — 1. Heat Engines (3) II

*Schiewe*

Announcement of Courses

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- ✓ 7. Automotive Construction. (2) <sup>(2 or 3)</sup> Either semester. ✓ (Credit A, B) BROOKWAY
- ✓ 8A-8B. Shop Work. (2-2) Yr. <sup>(Either sem.)</sup> (Credit A, B) KELLER  
 Pattern making and foundry practice.
- ✓ 9A-9B. Shop Work. (2-2) Yr. (Credit A, B) (I II)-(II) PHILLIPS  
 Machine work in iron.

~~10. Automotive Laboratory. (3) Either semester. (Credit A, B) MARSH~~

Mechanic Arts

- ✓ 4. Architectural Drawing. (3) <sup>Either sem.</sup> (Credit B) *Messell*
- ✓ 10A-10B. Shop Work. (3-3) Yr. ✓ (Credit B) KELLER  
 Woodwork.
- ✓ 24A-24B. Shop Work. (3-3) Yr. <sup>(I)</sup> (Credit B) KELLER  
 Pattern making and molding.
- ✓ 50A-50B. Applied Electricity. (3-3) Yr. (Credit B) (I)-(I-II) MARSH
- ✓ 51A-51B. Applied Electricity. (3-3) Yr. <sup>(II)</sup> (Credit B) MARSH  
 Storage battery and bench work.

- ✓ 52A-52B. Applied Mechanics. (3-3) Yr. (Credit B) (I II)(II) *Swan* SCHNEWE
- ~~60A-60B. Shop Work. (3-3) Yr. (Credit B) KELLER~~  
 Foundry practice.

- ~~61. Shop Work. (3) Either semester. (Credit B) PHILLIPS~~
- ~~62A-62B. Auto Mechanics. (3-3) Yr. (Credit B) BROCKWAY~~
- ~~65A-65B. Manual Arts for Junior High Schools. (3-3) Yr. (Credit B) MANSFIELD, PIERSON~~

- ~~75A-75B. Shop Work. (3-3) Yr. (Credit B) PHILLIPS~~  
 Elementary machine shop practice.

- ✓ 76A-76B. Shop Work. (3-3) Yr. (Credit B) II PHILLIPS  
 Advanced shop practice.

- ✓ 90. Organization and Administration of Industrial Education. (2) II ✓ (Credit B) MANSFIELD and STAFF

- ~~91. Curriculum and Methods in Industrial Education. (2) II (Credit B) MANSFIELD and STAFF~~

**MILITARY SCIENCE AND TACTICS**

- GUY G. PALMER, Colonel, U. S. Army, Retired, Professor of Military Science and Tactics.
- JOHN E. CREED, Major, U. S. A., Assistant Professor of Military Science and Tactics.
- MORRIS JOSEPH HERBERT, Major, U. S. A., Retired, Assistant Professor of Military Science and Tactics.
- LEIGH BELL, Captain, U. S. A., Assistant Professor of Military Science and Tactics.
- WILSON G. BINGHAM, Captain, U. S. A., Assistant Professor of Military Science and Tactics.
- MARVIN B. DURRETTE, First Lieutenant, U. S. A., Assistant Professor of Military Science and Tactics.

The courses in military training are those prescribed by the War Department for infantry units of the senior division of the Reserve Officers' Training Corps. The United States furnishes arms, equipment, uniforms and some text books for the use of the students belonging to such units. The University, being responsible for text books and uniforms furnished by the United States, requires the students to deposit with the Comptroller \$20 to cover the cost of the text books and uniforms issued to them. This deposit must be made before the student files his study list; it is refunded at the close of the academic year or upon the student's withdrawal, provided the student then returns in good condition all articles issued to him. An amount necessary to replace articles not returned by the student will be retained by the Comptroller.\*

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 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.

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\* Students who are members of the National Guard or of the United States Naval Reserve Force are authorized to wear their guard or naval uniform in their military training at the University, and, upon application to the Supply Officer at the Military Science Building, may be excused from paying the deposit for uniform. Such students will pay a deposit of \$3 to cover cost of text books issued to them.



Students who complete the advanced course are also eligible for a commission by the Governor of the State of California in the University Cadets.

The courses are divided into two groups: the basic course and the advanced course.

*Basic Course*

The basic courses are prescribed for all first-year and second-year undergraduate male students who are citizens of the United States, able-bodied and under twenty-four years of age at the time of admission to the University. A first-year or second-year student claiming exemption because of non-citizenship, physical disability or age will present to the Department of Military Science and Tactics a petition on the prescribed form for such exemption. Pending action on his petition the student will enroll in and enter the courses prescribed for his year.

Students who have received previous military training in a junior unit of the R.O.T.C., and who have not qualified for commissions in the Officers' Reserve Corps will receive credit therefor not to exceed the first year's instruction of the basic course. Application for this credit 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. The character of this recommendation will have weight in determining the credit to be given. When a student receives credit for the whole first-year basic course he will be enrolled in the second-year basic course in his freshman year.

1A-1B. Basic Infantry Training. (1½-1½) Yr. (Credit A, B)

PALMER, CREED, BELL, BINGHAM, DURRETTE

Instruction in infantry drill, rifle marksmanship, scouting and patrolling, physical training and military courtesy.

2A-2B. Basic Infantry Training. (1½-1½) Yr. (Credit A, B)

PALMER, CREED, BELL, BINGHAM, DURRETTE

Instruction in map reading and military sketching, infantry weapons, musketry, command and leadership, and military hygiene.

*Advanced Course*

The advanced courses are 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 president of the institution and the professor of military science and tactics, and who executes the following written agreement, will be entitled, while not subsisted in kind, to a commutation of subsistence fixed by the Secretary of War in accordance with law (about \$120 per year).

....., 192.....  
 In consideration of commutation of subsistence to be furnished me in accordance with law, I hereby agree to continue in the Reserve Officers' Training Corps during the remainder of my course in.....

....., to devote five  
 (Institution)  
 hours per week during such period to the military training prescribed, and to pursue the courses of camp training during such period prescribed by the Secretary of War.

.....  
 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 the students at the rate prescribed for privates of the Regular Army.

Cadet officers and, so far as practicable, sergeants of the unit will be appointed from members of the junior and senior classes.

✓ — 53A-53B. Advanced Infantry Training (*Military Science 103A-103B*).

(3-3) Yr. ✓ (Credit B) ~~PALMER, CREED, BELL, BINGHAM, DUNNETT~~

Instruction and practice in the duties of officers in connection with basic courses; instruction in field engineering, military law, rules of land warfare, command and leadership, machine guns, 37 mm. guns and light mortars.

✓ — 54A-54B. Advanced Infantry Training (*Military Science 104A-104B*).

(3-3) Yr. ✓ (Credit B) ~~PALMER, CREED, BELL, BINGHAM, DUNNETT~~

Instruction and practice in the duties of officers in connection with basic courses; instruction in tactics, military history, administration, and command and leadership.

The Basic R.O.T.C. Camp may be attended by students who are members of the basic course at the completion of either the first or the second year. Attendance is voluntary. Students who attend receive credit from the University of one-half of a University unit for each week of the duration of the camp, normally six weeks.

## MUSIC

- FRANCES A. WRIGHT, Associate Professor of Public School Music.
- VERNON SPENCER, Assistant Professor of Music.
- \*MABEL BARNHART, Associate in Music.
- WILLIAM J. KRAFT, Mus. Bac., Lecturer in Music.
- SQUIRE COOP, Lecturer in Music.
- BERTHA C. VAUGHN, Teacher of Voice.

- ✓ 1A-1B. Choral Practice. (1-1) Yr. ✓ (Credit A, B) KRAFT  
All students who sing are eligible.
- ✓ 2A-2B. Orchestra Practice. (1-1) Yr. ✓ (Credit A, B) KRAFT, COOP  
All students who play an orchestral instrument are eligible.
- ✓ 3A-3B. Music Literature. (2-2) Yr. ✓ (Credit A, B) KRAFT  
A general survey of the development of music.
- ✓ 4A-4B. Harmony. (3-3) Yr. ✓ (Credit A, B) SPENCER, COOP
- ✓ 5A-5B. Voice. (1-1) Yr. ✓ (Credit B) VAUGHN  
Tone production; repertoire.
- ✓ 6A-6B. Voice. (1-1) Yr. ✓ (Credit B) VAUGHN  
Vocal ensemble.  
Prerequisite: Music 5A-5B.
- ~~7A-7B. Orchestral Instruments. (1-1) Yr. (Credit B) COOP  
Elementary technique.~~
- ✓ 8A-8B. Piano Ensemble. (1-1) Yr. ✓ (Credit A, B) COOP  
Four and eight hand piano arrangements of symphonic music.
- ✓ 9A-9B. Melodic Dictation. (2-2) Yr. ✓ (Credit A, B) ~~SPENCER, KRAFT~~ COOP  
One, two, and three part songs.
- ~~11A-11B. Band Practice. (1-1) Yr. (Credit A, B) \_\_\_\_\_~~
- ✓ 12A-12B. Music Education. (3-3) Yr. ✓ (Credit B) WRIGHT  
Principles and practice of music teaching.

\* Absent on leave, 1922-23.

## Announcement of the Southern Branch

- ~~15A-15B. Piano. (2-2) Yr. (Credit B)~~ SPENCER
- ✓ 33A-33B. Form and Analysis. (2-2) Yr. (Credit B) *Kraft*  
 Designs of the simple and compound forms; methods of structural *COOP*  
 treatment.
- ✓ ~~35A-35B. Music Supervision. (2-1) Yr. (Credit B)~~ *(1-2 3) (1-2 3)* WRIGHT
- ✓ 36. Music Supervision. (3) ~~Either semester~~ I (Credit B) WRIGHT
- ✓ 41. Musicianship. (Units *(2 to 3)* to be arranged) (Credit B) *Either sem,* WRIGHT and *Spencer*
- ✓ 55A-55B. Composition. (2-2) Yr. (Credit B) SPENCER
- ✓ 59A-59B. Conducting. (1-1) Yr. (Credit B) KRAFT
- ✓ 60. Teachers' Course in Music. (2) Either semester. (Credit B) WRIGHT  
 Open only to candidates for elementary teachers' certification.
- ✓ 61. Kindergarten-Primary Music. (3) II. (Credit B) WRIGHT
- ✓ 75A-75B. Composition. (2-2) Yr. (Credit B) ~~SPENCER, COOP~~
- ✓ 83A-83B. Music Literature. (2-2) Yr. I (Credit B) KRAFT
- ✓ 85A-85B. Piano. (2-2) Yr. (Credit B) SPENCER  
 Advanced piano literature.

## PHILOSOPHY AND PSYCHOLOGY

- CHARLES H. RIEBER, Ph.D., Professor of Philosophy.
- GRACE M. FERNALD, Ph.D., Associate Professor of Psychology.
- S. CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.
- DONALD MACKAY, A.B., Instructor in Philosophy.
- NELLIE B. SULLIVAN, A.B., Instructor in Psychology.
- KATE GORDON, Ph.D., Lecturer in Psychology.

*D 2 c more*

*Philosophy*

- 1A. Deductive Logic. (3) ~~I~~ <sup>either sem</sup> (Credit A, B) RIEBER
- 1B. Inductive Logic. (3) II. (Credit A, B) RIEBER
- 3A-3B. History of Philosophy. (3-3) Yr. (Credit A, B) RIEBER, MACKAY
- 4A-4B. Introduction to Philosophy. (3) Yr. (Credit A, B) ~~MOORE, MACKAY~~
- 24A-24B. Ethics (*Philosophy 104A-104B*). (2-2) Yr. (Credit A, B) MACKAY
- 26. Plato (*Philosophy 116*). (3) I. (Credit A, B) RIEBER
- 27A-27B. Modern Philosophy (*Philosophy 107A-107B*). (2-2) Yr. (Credit A, B) MACKAY
- 29. The Philosophy of Education. (3) II. (Credit B) ~~MOORE~~

*Psychology*

- X. The Psychology of Study. (1) I. (Credit A, B) MOORE and STAFF  
Required during the first term of attendance of all students except those of advanced standing.

- 2. General Psychology. (3) Either semester. (Credit A, B) *Fisher Mackay*  
GORDON, SULLIVAN

Sensation and perception, movement and reaction; habit, attention, memory. Descriptive and dynamic aspects. Experiments and demonstrations, reading, lectures. This is a basic course, prerequisite to all courses in education, special methods, and other courses in Psychology except Psychology X.

✓ — 16. Experimental Psychology. (3) Either semester. ✓ (Credit B) FISHER

✓ — 26. Esthetics (*Philosophy 136A*). (3) ~~I~~ <sup>Either sem.</sup> (Credit A, B) GORDON  
Psychology of emotion and imagination, with discussion of the origin of art and of the psychological aspects of the several arts.

✓ — 28. Mental Tests and Measurements. (3) ~~Either semester.~~ <sup>I</sup> (Credit B)  
~~FISHER, FERNALD~~

A study of the standard intelligence tests; statistical method; the application of the results of these tests to school problems.

✓ — 30. Educational Psychology (*Psychology 110*). (3) ~~I~~ <sup>Either sem</sup> (Credit B)  
FERNALD

The fundamental principles of modern psychology as related to education. In so far as possible the facts of the learning process will be demonstrated by work with children.

✓ — 32. The Psychology of Elementary School Subjects. (3) II. ✓ (Credit B)  
FERNALD

An analysis is made of the psychological processes involved in learning to write, read, solve problems in mathematics, grasp the meaning of history, geography, natural science, and other elementary school subjects. Emphasis is placed on the application of psychological principles to educational method.

✓ — 60. Psychological Experiment. (1) Either semester. ✓ (Credit B) FISHER

✓ — 83. Advanced Psychology (*Psychology 133*). (3) Either semester. ✓  
(Credit A, B) ~~FERNALD, FISHER~~

Conditions and character of attention, memory, learning, imagination; suggestion, curiosity, imitation. The will and its influencing factors; types of personality in their descriptive and developmental aspects. Readings, reports, discussions, experiments, lectures.

✓ — 84A-84B. Clinical Psychology (*Psychology 143A-143B*). (3-2) ~~I~~ <sup>II</sup> ~~FERNALD, GORDON~~ <sup>Adams</sup>  
(Credit A, B)

A study of the problems connected with the atypical child, including the discussion of mental deficiency, genius, delinquency. Special emphasis is placed on the methods by which such children may be developed to a maximum of efficiency.

**PHYSICAL EDUCATION FOR MEN**

- FREDERICK W. COZENS, M.A., Assistant Professor of Physical Education.
  - ALBERT W. DOWDEN, A.B., Associate in Physical Education.
  - JAMES J. CLINE, A.B., Associate in Physical Education.
  - HARRY TROTTER, Assistant in Physical Education.
  - PAUL FRAMPTON, Assistant in Physical Education.
- 
- WILLIAM J. NORRIS, M.D., Physician for Men.
  - E. R. WARE, M.D., Assistant Physician for Men.

**PREPARATION FOR THE MAJOR**

Required: Physical Education 1AB, 7AB, 8AB, 10BD; Chemistry 2A-2B; Biology 11A.

**PRELIMINARY STATEMENT**

*Gymnasium Suit Fee.*—All male students unless excused from physical education by formal petition are required to pay a gymnasium suit fee of \$5 at the time of 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. The department provides for the laundry of suits.

*Medical Examination.*—All students entering or re-entering the Southern Branch are required to pass a medical examination. Men showing abnormality of bodily conformation or physical defects of any sort are classed as "special" and are given individual work and advice based upon the data of the medical and physical examinations.

*Physical Tests.*—Male students in the Junior College taking required physical education must pass a series of practical physical tests (see announcement on bulletin board in the Men's Gymnasium). Intrants are classified for their prescribed work on the basis of posture and physical efficiency, determined through tests of health, strength, endurance, agility, ability to swim and skill in self-defense. Men qualified for the athletic division may take regular work in any type of sport offered in a particular semester. Men failing so to qualify but not found defective in any essentials of health or bodily conformation will be assigned to work adapted to their special needs. The aim of the department is to promote men as quickly as possible into the athletic division.

## Announcement of the Southern Branch

**Requirements.**—Students are required to take two hours per week for four semesters ( $\frac{1}{2}$  unit credit per semester).

**Majors in the Teachers' College.**—Men whose major is physical education should consult the suggested schedules for Physical Education under the heading Curricula—The Teachers College in this announcement.

Notices concerning all phases of the work of the department will be posted on the bulletin board of the Men's Gymnasium and should be read carefully by all.

- ✓ 1. Hygiene. (1) Either semester. (Credit A, B) NORRIS
- ✓ 1A-B-C-D. Gymnastics. ( $\frac{1}{2}$ ) <sup>AC F BDE</sup> ~~Either semester.~~ (Credit A, B) FRAMPTON *staff*
- ✓ 2A-B-C-D. Special Gymnastics. ( $\frac{1}{2}$ ) <sup>AI BI</sup> ~~Either semester.~~ (Credit A, B)  
Corrective gymnastics. DOWDEN *staff*
- ✓ 3A-B-C-D. Track. ( $\frac{1}{2}$ ) ~~Either semester.~~ (Credit A, B) TROTTER
- ✓ 4A-B. Baseball. ( $\frac{1}{2}$ ) II. (Credit A, B) COZENS  
Open to men enrolled on the Varsity or Freshman squads.
- ✓ 5A-B-C-D. Basket-ball. ( $\frac{1}{2}$ ) <sup>ACI BDI</sup> ~~Either semester.~~ (Credit A, B) DOWDEN  
Men must have passed physical tests in order to enroll in this work.
- ✓ 6A-B-C-D. Tennis. ( $\frac{1}{2}$ ) <sup>ACI BDI</sup> ~~Either semester.~~ (Credit A, B) —  
All men enrolled in tennis must pass the tests of the department.
- ✓ 7A-B-C-D. Boxing. ( $\frac{1}{2}$ ) <sup>ACI BDI</sup> ~~Either semester.~~ (Credit A, B) DOWDEN, CLINE
- ✓ 8A-B-C-D. Wrestling. ( $\frac{1}{2}$ ) <sup>AI BI</sup> ~~Either semester.~~ (Credit A, B) CLINE
- ✓ 10B-A. Swimming. ( $\frac{1}{2}$ ) II. (Credit A, B) DOWDEN
- ✓ 13A-C. American Football. ( $\frac{1}{2}$ ) I. (Credit A, B) DOWDEN, TROTTER  
Open to men enrolled on the Varsity or Freshman squads.
- ~~14A-B-C-D. Class Games. ( $\frac{1}{2}$ ) Either semester. (Credit A, B)~~
- ✓ 15A-B-C-D. Handball. ( $\frac{1}{2}$ ) Either semester. (Credit A, B) COZENS  
Open to fourth semester men who have passed tests.  
Tournaments under supervision. Classes limited to 16 men.



Announcement of Courses

~~16A-B-C~~ Recreation. (1) <sup>I</sup> Either semester. (Credit B) COZENS

~~22A-22B. Practice in Physical Training Activities. (1-1) Yr. (Credit B) COZENS~~

~~29A-B-C-D. Practice in Athletic Activities. (1-1) Yr. (Credit B) COZENS~~  
 Required of physical education majors in their first and second years of work.

~~30A-B-C-D. Practice in Athletic Activities. (1-1) Yr. (Credit B) COZENS~~  
 Required of physical education majors in their third and fourth years of work.

~~50A-55B. Methods and Practice in Teaching Gymnasium Activities and Elementary School Sports. (2-2) Yr. (Credit B) DOWDEN~~  
 Prerequisite: A, 7A, 8A.

~~56A-56B. Methods and Practice in Coaching Athletics. (2-2) Yr. (Credit B) COZENS, DOWDEN~~  
 Prerequisite: 3A, 4A, 5A, 13A, 31AB.

70. Theories of Play, School and Playground Games. (2) II. COZENS (Credit B)

\* Not to be given, 1922-23.

*for new freshmen*

*49 Kinesiology (2) I Miss Jameson*

*92A-B Normal Diagnosis (3-3) Yr. Dr. Close*

*82A-B Therapeutic Gymnastics (3-3) Yr. Miss Gennet*

### PHYSICAL EDUCATION FOR WOMEN

- GERTRUDE K. COLBY, B.S., Director of Physical Education.
- LUCILE R. GRUNEWALD, B.S., Associate in Physical Education.
- KATHARINE HERSEY, B.S., Associate in Physical Education.
- EMILY D. JAMESON, A.B., Associate in Physical Education.
- EDITH R. HARSHBERGER, A.B., Associate in Physical Education.
- \*BERTHA A. WARDELL, Associate in Physical Education.
- FLORENCE E. SUTTON, Associate in Physical Education.
- CORA E. ECKERT, M.A., Associate in Physical Education.
- DOROTHY S. GIBLING, A.B., Associate in Physical Education.
- BERTHA HALL, Associate in Physical Education.
- EFFIE SHAMBAUGH, Associate in Physical Education.
- MARION SHEPARD, A.B., Associate in Physical Education.
- HELEN BARR, B.S., Associate in Physical Education.
- INA THACH, Associate in Physical Education.
- KATHERINE CLOSE, M.D., Lecturer in Hygiene.

- LILLIAN RAY TITCOMB, M.D., Physician for Women.
- RUBY I. MCLEAN, R.N., Nurse.

2. Hygiene. (3) <sup>(2 or 3)</sup> Either semester. ✓ (Credit A, B) TITCOMB

~~4. History of Physical Education. (2) II. (Credit B) HERSEY~~

5. Hygiene. (1) II. ✓ (Credit A, B) MCLEAN

First Aid.

Prerequisite: Biology 35.

~~9. Hygiene. (2) II. (Credit A, B) MCLEAN~~

Home care of the sick.

10. Physical Education. (2) Either semester. ✓ (Credit B) *Shepard*  
HERSEY, JAMESON, ECKERT, GIBLING

11. Physical Education. (2) Either semester. ✓ (Credit B) *Shepard*  
HERSEY, JAMESON, ECKERT, GIBLING

\* Absent on leave, 1922-23.

10 C. Dancing for art students (2) II Colby Thach

Announcement of Courses

✓ -12A-12B. Physical Education. (2-2) Yr. (Credit B) ~~HENRY, JAMESON~~ <sup>Hall</sup>  
Kindergarten-Primary Courses.

✓ -21A-21B. Special Methods. (2-2) Yr. II (Credit B) ~~JAMESON~~ <sup>JAMESON</sup>  
~~THACH~~

✓ -49. Kinesiology. (2) I. (Credit B) ~~men + Women~~ JAMESON

✓ -52A-52B. Prescribed Courses for Freshmen. (1-1) Yr. (Credit A) ~~Staff~~ <sup>Staff</sup>  
HARSHBERGER, SHEPARD, SHAMBAUGH, JENKINS

Required of all students not enrolled in 53A-53B, during the first year.

\* 52A (1) II ~~Staff~~ <sup>Staff</sup>

✓ -52C-52D. Prescribed Courses for Sophomores. (1-1) Yr. (Credit A) ~~Staff~~ <sup>Staff</sup>  
HARSHBERGER, THACH, HALL, JENKINS

\* 52C (1) II ~~Staff~~ <sup>Staff</sup>  
Required of all students not enrolled in 53C-53D during their second year.

✓ -53A-53B. Corrective or Restrictive Gymnastics. (1-1) Yr. (Credit A, B) ~~Staff~~ <sup>Staff</sup>  
GRUNEWALD, JAMESON

Required instead of courses 52A-52B of first-year students whose medical and physical examination indicates the need of corrective or restrictive exercises.

✓ -53C-53D. Corrective or Restrictive Gymnastics. (1-1) Yr. (Credit A, B) ~~Staff~~ <sup>Staff</sup>  
GRUNEWALD

Required instead of courses 52C-52D of second-year students whose medical and physical examination indicates the need of corrective or restrictive exercises.

✓ -58. Child Development. (2) II. (Credit B) ~~HEBBER~~ <sup>Hall</sup>  
Prerequisite: Psychology 2.

✓ -60A-60B. Folk Dancing. (1-1) Yr. (Credit A, B) ~~THACH~~ <sup>Colby, Robert</sup>

✓ -60C-60D. Folk Dancing. (1-1) Yr. (Credit A, B) ~~THACH~~ <sup>Colby, Robert</sup>

✓ -61A-61B. Dancing. (1-1) Yr. (Credit A, B) ~~THACH~~ <sup>Colby, Robert</sup>

✓ -61C-61D. Dancing. (1-1) Yr. (Credit A, B) ~~THACH~~ <sup>Colby, Robert</sup>

✓ -62A-62B. Dancing. (1-1) Yr. (Credit A, B) ~~THACH~~ <sup>Colby, Robert</sup>

✓ -62C-62D. Dancing. (1-1) Yr. (Credit A, B) ~~THACH~~ <sup>Colby, Robert</sup>

\* 62CD Dancing (1) II Colby

- x 65A-65B. Gymnastics. (1-1) <sup>1st</sup> Yr. (Credit A, B) *Shambaugh*  
HARSHBERGER, JAMESON, GIBLING, HALL
- ~~65C-65D. Gymnastics. (1-1) <sup>2nd</sup> Yr. (Credit A, B)  
HARSHBERGER, JAMESON, GIBLING, HALL~~
- x 66A-66B. Gymnastics. (1-1) Yr. (Credit A, B)  
HARSHBERGER, JAMESON, GIBLING, HALL
- x 70A-70B. Plays and Games. (1-1) <sup>(I)(II)</sup> Yr. (Credit B) GRUNEWALD, HALL
- x 71A-B-C-D. Athletics. (1) Either semester. (Credit B) *staff*  
x 71AB (1) I-II *Shambaugh, Kelle*  
GIBLING, HALL, SHAMBAUGH, SHEPARD
- x 72AB <sup>(1)</sup>  
~~72A-B-C-D. Athletics. (1) Either semester. (Credit B)  
GIBLING, HALL, SHAMBAUGH, SHEPARD~~
- x 73AB <sup>(1)</sup>  
~~73A-B-C-D. Athletics. (1) Either semester. (Credit B) *Bar*  
GIBLING, HALL, SHAMBAUGH, SHEPARD~~
- x 74CD <sup>(1)</sup>  
~~74A-B-C-D. Athletics. (1) Either semester. (Credit B) *Bar*  
GIBLING, HALL, SHAMBAUGH, SHEPARD~~
- x 75 ~~75A-B-C-D~~ Tennis. (1) Either semester. (Credit B) *Bar* SUTTON  
*Shambaugh*
- x 80. Principles of Physical Education. (3) II. (Credit B) COLBY  
Prerequisite: Psychology 2.
- x 82A-82B. Therapeutic Gymnastics. (3-3) Yr. (Credit A, B) GRUNEWALD  
Prerequisite: 49.
- ~~85. The Administration of Physical Education. (3) I. (Credit B)  
Prerequisite: 21A-21B. COLBY, GRUNEWALD~~
- x 90A-90B. Physiology. (3-3) Yr. (Credit B) CLOSE  
Prerequisite: Biology 10, Chemistry 2A, or equivalent.
- x 92A <sup>92B</sup> ~~92A-92B~~ Normal Diagnosis. (1-1) <sup>(1-1)</sup> Yr. (Credit B) CLOSE  
Prerequisite: 90A.

x 70 Theory of Play, School and Playground Games  
(2) II *Coyne*  
*men two men*

## PHYSICS

- JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.
- LAURENCE ELLSWORTH DODD, Ph.D., Assistant Professor of Physics.
- HIRAM W. EDWARDS, Ph.D., Assistant Professor of Physics.
- V. O. KNUDSEN, Ph.D., Instructor in Physics.
- ARTHUR H. WARNER, A.B., B.S., Associate in Physics.
- LEO P. DELSASSO, Assistant in Physics.
- JOHN D. ELDER, Assistant in Physics.
- Pooler, Fred. L. B.S.

*Laboratory Fees.*—The fee for each course consisting wholly or in part of laboratory work is \$4 per semester.

## PREPARATION FOR THE MAJOR

Required: Physics 1A-1B, 4A-4B, or 2A-2B, 3C-3D; Mathematics 3C-3B; Chemistry 1A-1B.

Recommended: French and German.

✓ 1A-1B. General Physics. (3-3) Yr. (Credit A) ADAMS and ~~STAFF~~  
Mechanics, sound, and heat. For students in engineering, and architecture only.

✓ 2A-2B. General Physics. (3-3) Yr. (Credit A, B) EDWARDS, ~~KNUDSEN~~  
Mechanics, sound, heat, light, electricity. For pre-medical students, open to other students who are taking Physics 3A-3B.

✓ 3A-3B. Physical Measurements. (1-1) Yr. (Credit A) EDWARDS, ~~KNUDSEN~~  
Prescribed for premedical students and open to other students who are taking Physics 2A-2B.

✓ 4A-4B. General Physics. (3-3) Yr. (Credit A, B) ADAMS, DODD  
Electricity and Light. Intended primarily for students in Engineering.

Prerequisite: Physics 1A-1B.

✓ - 5 (a) II ✓

Warner

- ✓ 11. General Physics. (3) I. ✓ (Credit B) DODD  
Mechanics, sound, heat, light, electricity, with special attention to applications of physics in the household. Intended primarily for students in home economics.
- ✓ 12. The Physical Basis of Music. (2) II. ✓ (Credit B) DODD  
Lectures, experimental demonstrations.

## POLITICAL SCIENCE

- CHARLES E. MARTIN, Ph.D., Assistant Professor of Government.
- <sup>1</sup>EDWARD T. WILLIAMS, M.A., LL.D., Agassiz Professor, Oriental Languages and Literature (Berkeley).
- MARSHALL FRANCIS MCCOMB, A.B., LL.B., Lecturer in Business Law.
- \*JAMES ROY DOUGLAS, Ph.D., Lecturer in Public Administration.
- CLARENCE A. DYKSTRA, B.A., Lecturer in Government.
- WILLIAM H. GEORGE, Ph.D., Instructor in Government.

*Joseph M. Rokey*

## PREPARATION FOR THE MAJOR

Students who desire to make political science their major subject must take Political Science 1A-1B and Commerce 1A-1B or six units of history.

- 1A-1B. Government. (3-3) Yr. (Credit A, B) MARTIN, GEORGE
- 1C. The Principles and Problems of Politics (*Political Science 101*). (3) I. (Credit A, B) GEORGE
- 4. The Government of Dependencies. (3) I. (Credit A, B) MARTIN
- 5A-5B. Foreign Relations of the United States. (3-3) Yr. (Credit A, B) MARTIN, WILLIAMS
- 8. American Government. (3) Either semester. (Credit B) ~~MARTIN~~ <sup>Dykstra</sup>  
No prerequisite. Intended primarily for students in the Teachers College.
- 9. American Political Parties and Party Issues (*Political Science 109*). (3) I. (Credit A, B) DYKSTRA
- ~~10A. The Government of Cities (*Political Science 110A*). (3) II. (Credit A, B) DYKSTRA~~
- ~~10B. Municipal Administration (*Political Science 110B*). (2) I. (Credit A, B) DOUGLAS~~

<sup>1</sup> In residence first semester only, 1922-23.

\* Absent on leave, 1922-23.

† Not to be given, 1922-23.

- ✓ 12. State Government (*Political Science 112*). (3) II. ✓ (Credit A, B)  
DYKSTRA
- ✓ 15A-15B. Principles and Law of Public Administration. (2-2) Yr. ✓  
(Credit A, B) *McLain* MARTIN
- ✓ 18. American Government. (3) ~~Either semester~~ ✓ (Credit A)  
Prerequisite: Political Science 1A-1B. ~~MARTIN~~ DYKSTRA
- ~~20A-20B. Formation and Development of the American Constitutional Sys-  
tem. (2-2) Yr. (Credit A, B)~~
- ✓ 25. The Problems of Democracy. (3) II. ✓ (Credit A, B) *George*  
~~MARTIN and STAFF~~
- ~~31A-31B. Evolution of Government and Political Ideas (*Political Science*  
*131A-131B*). (3-3) Yr. (Credit A, B) GEORGE~~
- 40A-40B. Latin American Governments and Political Institutions. (2) Yr. ✓  
(Credit A, B) LOCKEY

*Jurisprudence*

- ✓ 10A-10B. Elementary Law. (3-3) Yr. ✓ (Credit A, B) McCOMB
- ✓ 18A-18B. Commercial Law. (2-2) Yr. ✓ (Credit A, B) McCOMB
- ✓ 30A-30B. International Law (*Jurisprudence 103A-103B*). (3-3) Yr. ✓  
(Credit A, B) MARTIN
- ~~38A-38B. Advanced Commercial Law (*Jurisprudence 118A-118B*). (2-2)  
Yr. (Credit A, B) McCOMB~~
- ~~42. Constitutional Law. (3) II. (Credit A, B) MARTIN~~



## ROMANIC LANGUAGES

- HENRY RAYMOND BRUSH, Ph.D., Associate Professor of Romance Languages.
- S. L. MILLARD ROSENBERG, Ph.D., Assistant Professor of Spanish.
- ALEXANDER GREEN FITE, Ph.D., Assistant Professor of French.
- N. H. CLEMENT, A.M., Assistant Professor of Romance Languages.
- MARÍA LÓPEZ DE LOWTHER, B.S., Lecturer in Spanish.
- A. G. W. CERF, M.A., Litt.D., Honorary Lecturer in French.
- FREDERICK E. BECKMAN, Ph.D., Associate in French and Spanish.
- ANNA KRAUSE, A.M., Associate in Spanish.
- MADELEINE L. LETESSIER, A.B., Associate in French.
- ALICE HUBARD, Associate in French and Spanish.
- EVELYN STARR LESLIE, A.M., Associate in French.

## French

## PREPARATION FOR THE MAJOR

Required: 16 to 19 units in freshman and sophomore courses.

Recommended: Latin, Greek, English, philosophy, History 4A-4B.

- A. Elementary French. (5) Either semester. ✓ (Credit A, B) The STAFF  
Students who pass in this course after having had one year of French in high school will receive two units in addition to their matriculation credit.
- B. Elementary French. (5) Either semester. ✓ (Credit A, B) The STAFF  
A continuation of A.  
Prerequisite: French A or two years of high school French.
- C. Intermediate French. (3) Either semester. ✓ (Credit A, B) *staff*  
FITE, CLEMENT, LESSLIE, BECKMAN, LETESSIER  
Prerequisite: French B or three years of high school French.
- D. Intermediate French. (3) Either semester. ✓ (Credit A, B) *staff*  
FITE, CLEMENT, LESSLIE, BECKMAN, LETESSIER  
Prerequisite: French C or four years of high school French.
- 5. Advanced French. (3) Either semester. ✓ (Credit A, B) CLEMENT, FITE *Bunch*  
Advanced reading course in modern French novel and drama.

- ✓ 6. Scientific and Technical French. (3) Second semester. (Credit A)

BRUSH

Prerequisite: French A, B or equivalent in high school French.

- ✓ — 10A-10B. Oral and Written Composition (*French 101A-101B*) (3-3) ~~Yr. I~~  
(Credit A, B) *Clement* ~~LEDESCHER~~

- ✓ — 29A-29B. A Survey of French Literature and Culture (*French 109A-109B*).  
(3-3) Yr. (Credit A, B) BRUSH

90. ~~Course for Teachers. (2) Either semester. (Credit B) BRUSH, FITE~~  
Prerequisite: 16 units of freshman and sophomore work, or equivalent, and French 10A-10B.

### Spanish

#### PREPARATION FOR THE MAJOR

Required: 16 to 19 units in freshman and sophomore courses.

Recommended: Latin, History 4A-4B or History of Spain and Spanish Colonies, English, a modern language.

- ✓ — A. Elementary Spanish. (5) Either semester. (Credit A, B) The STAFF  
Students who complete this course after one year of high school Spanish will receive two units in addition to matriculation credit.
- ✓ — B. Elementary Spanish. (5) (Credit A, B) *Either sem.* The STAFF  
A continuation of A.  
Prerequisite: Spanish A or two years of high school Spanish.
- ✓ — C. Intermediate Spanish. (3) Either semester. (Credit A, B) *staff*  
ROSENBERG, LOWTHER, BECKMAN  
A continuation of B.  
Prerequisite: Spanish B or a special examination.
- ✓ — D. Intermediate Spanish. (3) Either semester. (Credit A, B) *staff*  
ROSENBERG, LOWTHER, BECKMAN  
A continuation of C.  
Prerequisite: Spanish C or four years of high school Spanish or a special examination.

- ✓<sup>\*</sup> 5A-5B. Elementary Conversation and Composition. (2-2) Yr. (Credit A, B)  
 LOWTHER  
 A course to supplement C-D in the practical use of the language.  
 Prerequisite: Spanish B or the equivalent in high school Spanish.
- ✓ 6. Commercial Spanish. (2) ~~Either semester~~ II (Credit A, B) BECKMAN  
 Intended primarily for students in the Department of Commerce.  
 No credit will be given toward the junior certificate for other than  
 Commerce students.  
 Prerequisite: Spanish C or the equivalent in high school Spanish.
- ~~10A. Modern Spanish Lyrics - 1st sem. Rosenberg (2)~~
- ✓ 51A-51B. Conversation and Composition (*Spanish 101A-101B*). (3-3) Yr.  
 (Credit A, B) (LOWTHER)  
 A review of Spanish grammar with emphasis on historical develop-  
 ment.  
 Prerequisite: Spanish D, 5A-5B.
- ✓ 53A-53B. Nineteenth Century Literature (*Spanish 103A-103B*). (3-3) Yr. ~~(I-II)~~ (I-II)  
 (Credit A, B) ROSENBERG, ~~KRAUSS~~  
 A general survey of the chief movements of the century.  
 Prerequisite: Spanish D, 5A-5B.
- ✓ 90. Course for Teachers. (2) Either semester. (Credit B)  
 ROSENBERG, ~~LOWTHER~~  
 Prerequisite: Spanish 51A-51B, 53A-53B.

x 5A+B duplicated by 50A+B (1924-25)  
 (not a duplicate of 5A+B (20-21)  
 (20-22))

**TRAINING DEPARTMENT****STAFF IN SOUTHERN BRANCH TRAINING SCHOOL**

- CHARLES WILKIN WADDLE, Ph.D., Supervisor of Training and Professor of Education.
- THOMAS E. THOMPSON, A.B., Assistant Supervisor of Training and Vice-Principal of the Junior High School.
- ETHEL I. SALISBURY, M.A., Assistant Supervisor of Training and Associate Professor of Elementary Education.
- BERTHA E. WELLS, Assistant Supervisor of Training.
- KATHERINE SPIERS, M.A., Assistant Supervisor of Training.
- ALMA BARNETT SAWYER, M.A., Assistant Supervisor of Training.
- FRANCES GIDDINGS, A.B., Acting Assistant Supervisor of Training.
- JOHN G. MILLER, Supervisor of Classes for the Training of Trade and Industrial Teachers.
- MARGARET M. CAMPBELL, M.A., Training Teacher in Mathematics.
- KATHERINE KAHLEY, A.B., Training Teacher in Social Sciences.
- MABEL C. JACKSON, M.A., Training Teacher in English.
- ERNA M. BRENNEMAN, Training Teacher in Home Economics.
- \* MADELINE CROWELL, B.S., Training Teacher in Home Economics.
- CARLYLE F. PIERSON, Training Teacher of Manual Arts, Southern Branch.
- EMMA J. ROBINSON, Training Teacher, Sixth Grade.
- LULU M. STEDMAN, Training Teacher, Fifth Grade and Opportunity Room.
- CORRINE A. SEEDS, B.S., Training Teacher, Fourth Grade.
- EDITH HOPE RINGER, Training Teacher, Third Grade.
- EDITH WALLOP SWARTS, Training Teacher, Second Grade.
- ETHEL BRITTO, A.B., Training Teacher, First Grade.
- ADELIA ADAMS SAMUELS, Training Teacher, First Grade.
- BARBARA GREENWOOD, Training Teacher, Kindergarten.
- MARY E. DOUGLASS, M.A., Training Teacher, Kindergarten.
- HELEN B. KELLER, Training Teacher, Adjustment Room.
- BLANCHE KELLS, Training Teacher in Physical Education.
- \* JOHN A. HOWELL, Assistant Training Teacher in Physical Education.
- GERTRUDE W. CERF, Training Teacher in French.
- ALICE HUBARD, Training Teacher in Spanish.
- ELMER B. KING, Training Teacher in Printing.
- JANET FREEZE, Librarian.

\* Absent on leave, 1922-23.

STAFF IN CITY TRAINING SCHOOLS

- ← CHARLES WILKIN WADDLE, Ph.D., Supervisor of Training and Professor of Education.
- BERTHA E. WELLS, Assistant Supervisor of Training.
- KATHERINE SPIERS, M.A., Assistant Supervisor of Training.
- MYRTLE L. BURGESS, A.B., Assistant Supervisor of Training and Principal Dayton Heights.
- AUGUSTA N. SADLER, Assistant Supervisor of Training and Principal Lockwood.
- NIÑO BROWN, Training Teacher Eighth Grade, Lockwood.
- SERENA P. CHRISTENSEN, Training Teacher Seventh Grade, Lockwood.
- ELLEN LYNCH ASHTON, Training Teacher Sixth Grade, Dayton Heights.
- BETH HOUSTON BENNING, Training Teacher Sixth Grade, Lockwood.
- ETHEL B. LOWRY, Training Teacher Fifth Grade, Dayton Heights.
- LEILA E. STORMZAND, B.Ph., Training Teacher Fifth Grade, Lockwood.
- GRACE W. TINGLEY, Training Teacher Fourth Grade, Dayton Heights.
- GEBTRUDE MALONEY, Training Teacher Fourth Grade, Lockwood.
- ELLEN TOY, Training Teacher Third Grade, Dayton Heights.
- KATHERINE PARRISH, Training Teacher Third Grade, Lockwood.
- ELSIE C. DOBBINS, Training Teacher Second Grade, Dayton Heights.
- JESSICA M. PARKS, Training Teacher Second Grade, Lockwood.
- MARGARET ROSE CARNES, Training Teacher First Grade, Dayton Heights.
- BESS HOLDZKOM, Training Teacher, First Grade, Lockwood.
- S. EDNA WILLIAMS, Training Teacher First Grade, Dayton Heights.
- ELIZABETH WHITCOMB, Training Teacher Kindergarten, Lockwood.
- ESTELLE ROYER, Training Teacher Kindergarten, Dayton Heights.
- JEANNETTE FERMAN, Training Teacher Primary Adjustment Room, Dayton Heights.
- EDNA LEE ROOF, Training Teacher Physical Education, Lockwood and Dayton Heights.
- MARY FRANCES HOLLINS, Training Teacher Home Economics, LeConte Junior High.
- LAVINIA STINSON, Training Teacher Home Economics, LeConte Junior High.
- SUSIE K. SANDERSON, Training Teacher Non-English Speaking Class, Bridge Street.

**THE TRAINING SCHOOL\***

The Southern Branch Training School comprises a kindergarten, the six elementary grades, and the three years (7-9) of the junior high school. Pupils are admitted upon the same terms as to Los Angeles city schools.

An opportunity room affords to children of superior ability a chance to complete the work of the middle grades in less than the usual time with a fuller and richer curriculum than that of the ordinary grades.

An adjustment room is also maintained in which children of the middle grades who have normal mentality but special difficulties receive such individual instruction as may be necessary.

**TEACHING REQUIREMENTS**

Ten semester hours of practice teaching are required of all candidates for recommendation for the elementary teacher's certificate except those who may be partially credited on account of teaching experience. No student is recommended for this certificate without having satisfactorily completed at least five semester hours of practice teaching in one of the training schools.

For the number of units of teaching required in special courses consult the schedules under the section Curricula.

All students, except those who enter with second-year standing, must have had a course in the subject or subjects they are to teach before receiving the first assignment and must have reached full second-year standing. Teaching 10A (five hours) is regularly taken in the first semester of the second year; Teaching 10B (five hours) in the last semester of the course.

Secondary practice teaching, in special subjects, is provided for in the high schools of Los Angeles city, under the supervision of the departments of the Southern Branch.

In addition to regular grade work, opportunities for elective teaching are afforded in adjustment rooms, in Americanization classes, in playground work, etc.

Weekly conferences under the direction of training teachers and supervisors are required in connection with each teaching assignment in the training schools.

A high standard of work is required of students in teaching. Those who are unable to attain a reasonably high standard may be denied recommendation for certification.

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\* In addition to the Southern Branch Training School, portions of two Los Angeles city schools are utilized as supplementary training schools.

To qualify for recommendation for the elementary teacher's certificate the candidate must have attained at least 10 of the necessary grade points or quality units in practice teaching courses.

In each of the special courses the same proportionate number of credit points or quality units in teaching must have been attained before the student will be recommended for the special teaching certificate.

#### ASSEMBLIES

All candidates for teachers' certificates are required to attend a series of assemblies during the last semester preceding the completion of any teachers' course. These assemblies, which are in charge of the Supervisor of Training, have to do with the student's relationship to the institution, to the Appointment Secretary, to public school officials, and with other matters of importance to prospective teachers.

#### TRAINING COURSES\*

##### *I. Kindergarten-Primary Teaching*

✓ K90A. Kindergarten-Primary Teaching. (5) Either semester.

✓ K90B. Kindergarten-Primary Teaching. (5) Either semester.

##### *II. Elementary Teaching*

✓ E90A. Elementary Teaching. (5) Either semester.

✓ E90B. Elementary Teaching. (5) Either semester.

##### *III. Junior High School Teaching*

✓ J91A. Junior High School Teaching. (5) Either semester.

✓ J91B. Junior High School Teaching. (5) Either semester.

##### *IV. Fine and Industrial Arts Teaching*

✓ A90A. Elementary Fine Arts Teaching. (3) Either semester.

✓ A90B. Elementary Fine Arts Teaching. (3) Either semester.

✓ A90C. Elementary Industrial Arts Teaching. (3) Either semester.

✓ A90D. Elementary Industrial Arts Teaching. (3) Either semester.

✓ A92A. Secondary Fine Arts Teaching. (3) Either semester.

✓ A92B. Secondary Fine Arts Teaching. (3) Either semester.

✓ A92C. Secondary Industrial Arts Teaching. (3) Either semester.

✓ A92D. Secondary Industrial Arts Teaching. (3) Either semester.

\* Credit B.

*V. Commerce Teaching*

- ✓ C92A. Secondary Commerce Teaching. (5) Either semester.
- ✓ C92B. Secondary Commerce Teaching. (5) Either semester.

*VI. Home Economics Teaching*

- ✓ H90A. Elementary Home Economics Teaching. (2) Either semester.
- ✓ H90B. Elementary Home Economics Teaching. (2) Either semester.
- ✓ H91A. Junior High School Home Economics Teaching. (2) Either semester.
- ✓ H92A. Secondary Home Economics Teaching. (2) Either semester.
- ✓ H92B. Secondary Home Economics Teaching. (2) Either semester.

*VII. Mechanic Arts Teaching*

- ✓ MA92A. Secondary Mechanic Arts Teaching. (5) Either semester.
- ✓ MA92B. Secondary Mechanic Arts Teaching. (5) Either semester.

*VIII. Music Teaching*

- ✓ M90A. Elementary Music Teaching. (3) Either semester.
- ✓ M90B. Elementary Music Teaching. (2) Either semester.
- ✓ M91. Junior High School Music Teaching. (1) Either semester.
- ✓ M92. Secondary Music Teaching. (4) Either semester.

*IX. Physical Education Teaching*

- ✓ P90. Elementary Physical Education Teaching. (2) Either semester.
- ✓ P92A. Secondary Physical Education Teaching. (3) Either semester.
- ✓ P92B. Secondary Physical Education Teaching. (2) Either semester.
- ✓ P92C. Secondary Physical Education Teaching. (3) Either semester.



## VIII. GENERAL INFORMATION

### REGULATIONS CONCERNING STUDENTS

#### REGISTRATION

Each student registers in the Southern Branch on days appointed for this purpose, at the beginning of each semester.

When the student first places his name on the Southern Branch rolls the procedure is called "matriculation." Registration covers the following steps: (1) Filling out application and receiving in exchange a card entitling applicant to status as a student; (2) paying fees; (3) enrolling in the proper courses in the approved manner.

#### SUBJECT A: ENGLISH COMPOSITION

All intrants to the Southern Branch must, at the time of their first registration, present themselves for examination in Subject A: English Composition.

(1) Students who pass Subject A are not required, but are advised, to continue their training in oral and written composition. (2) All students must pass Subject A examination. (3) No student who has not passed Subject A will be admitted to any University course in oral or written composition. (4) Intrants who fail to present themselves for the examination at the time appointed must pay a fee of \$5 when they enter the examination for the first time. (5) For students who enter with advanced standing Subject A is a requirement for junior standing. (6) Failure in the examination does not prevent admission to the Southern Branch. (7) The examination will be given at the Southern Branch, at the opening of the fall and spring sessions.

The examination will be composed, set, and judged under the direction of the Committee on Subject A, and the requirements and penalties will be enforced by the Deans and other proper authorities of the colleges. Students who fail to make a satisfactory showing in this test are required to take a special course in English composition without university credit. Tuition fee, \$10.

#### ATTENDANCE

Absences from class exercises are not allowed except upon presentation of valid excuse to the offices of the Deans.

**MILITARY SCIENCE, PHYSICAL EDUCATION, AND HYGIENE**

All undergraduate students shall, upon admission to the Southern Branch, report immediately to the proper officers for enrollment in military Science (men), physical education (men and women), and hygiene (men and women), following the Freshman Circular or the announcements which may be posted on the bulletin boards. A deposit (\$30) must be paid at once to the Comptroller of the University to cover the cost of the uniform and textbook to be used in military courses. A deposit of \$5 must also be made for the use of the standard University gymnasium suit. Students shall list these courses upon their study cards with other University courses.

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

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

In case a student subject to these requirements shall enroll in the prescribed course or courses and thereafter (without authority) shall fail to appear for this work, his study card shall be immediately withdrawn; and he can be reinstated only by petition to the proper authority.

Vaccination at the time of entering, or proof of successful recent vaccination, is required of all students.

**GRADES OF SCHOLARSHIP**

Beginning August, 1921, the results of examinations, together with term work when a record of the latter is kept, will for all undergraduate students be ranked and reported to the Recorder in six grades: A, excellent; B, good; C, average; D, barely passed; E, conditioned; F, failure.\* "Incomplete" (Inc.) indicates that the student has been passing in his work but through illness or other unavoidable cause has failed to perform certain of the allotted tasks or has been absent from the required examination.

\* An additional passing grade, P, may be given in certain stated courses where the individual work of the student cannot be determined with accuracy.

**GRADE POINTS**

To qualify for the bachelor's degree and teaching credentials in the Teachers College or for the bachelor's degree in the College of Letters and Science, in or after May, 1923, the candidate must have attained at least as many grade points as he has attained units of credit in work undertaken by him in and after August, 1921.

The grades A, B, and C (for this purpose P is figured as C) carry with them grade points. A gives three grade points, B two grade points, C one grade point. Grade D is a passing grade and gives the student credit in the course but no grade point.

Grades B, C, and D may not be raised by any process of examination or even of repeating the work.

When a student repeats a course in which he has received an F he may receive any grade the instructor approves, and this grade will carry full grade points.

A student wishing to receive a junior certificate or any teaching credential from the Southern Branch must have a clear record; that is, there must remain on his record no incomplete, E, or F, unless specific approval is obtained from the Deans. Even in case a student transfers from one college or special curriculum to another this provision must stand.

**UNITS OF WORK AND CREDIT**

Both matriculation and University work are measured in "units." A "unit of registration" is one hour of a student's time at the University weekly, during one half-year, in lecture or recitation, together with the time necessary in preparation therefor, or a longer time in laboratory or other exercises not requiring preparation. Credit for 120 or more units, distributed according to the requirements of the college in which the student is enrolled, is necessary for a degree.

## STUDY-LIST LIMITS

(a) *Letters and Science.*—Beginning August, 1921, students in the College of Letters and Science may present study lists aggregating from 12 to 16 units per semester without special permission as to quantity of work. During the first semester in residence at the Southern Branch no undergraduate student will be permitted to take more than 16 units of work.\* After one semester of regular residence (i.e., with a study list of at least 12 units), permission may be granted, on petition to the Scholarship Committee, to take not over 18 units per semester, provided the student has attained an average of at least two grade points per unit for the preceding semester. Prescribed courses in military science, physical education, and hygiene, and repeated courses are to be counted in making study-list totals. Even if, because of difficulty in making the desirable courses total the exact limit, a student is permitted to carry a study list slightly greater than the limits here set, or if a student transfers from another college where a greater study-list total is permitted or required, the credit towards the A.B. degree will be limited strictly according to this rule. Regular students with deficiencies will be limited to 16 units, including repeated work.

(b) *Teachers College.*—The requirements for the College of Letters and Science are changed in only one particular for the College of Commerce and the Teachers College, namely, the student may present study lists aggregating from 12 to 17 units. The 18-unit maximum limit on petition by students having an average of two grade points per unit is unchanged. Regular students with deficiencies will be limited to 16 units, including repeated work.

*Courses Taken Outside the Southern Branch.*—If a student is carrying on studies elsewhere, the total of his work must come within the limits above defined. The responsibility for meeting this requirement lies directly with the student, who should give full information to his adviser and the Recorder. If credit toward a certificate or a college degree is expected, the student should notify the Recorder at the beginning of any such outside course.

*Students' 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. Withdrawal from, or neglect of, any course entered on the study list, or a change in programme without the formal permission of

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\* Attendance in the summer session does not give standing as an "old student."

the Deans of the colleges, renders the student liable to enforced withdrawal from the Southern Branch, or other appropriate disciplinary action.

#### LEAVE OF ABSENCE AND HONORABLE DISMISSAL

*Prolonged leave of absence* must be sought by written petition to the office of the Dean.

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

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

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

#### EXAMINATIONS

*Examinations.*—At the end of each semester regulations require that there shall be an examination covering the term's work for each class. The final grade for the class is based in part upon the daily work and in part upon this examination.

*Re-examination.*—Should a student receive a condition or an incomplete in a course and find it necessary to take a re-examination, he may do this without charge provided that he take the examination with the regular class which next repeats that course. Should he, however, take the examination at any other time he must pay a fee of \$5 for the special examination. In any case, permission to take the examination must be received from the Recorder's Office.

#### STANDARD OF SCHOLARSHIP REQUIRED

Every student is required each half-year, either (1) to pass in at least ten units of duly registered work, or (2) to pass with grade A, B, or C in courses aggregating at least eight units of duly registered work,

or (3) if taking less than eight units, to pass with grade A, B, or C in all courses in which he is registered. Any student who fails to satisfy this requirement will be dropped from the rolls (disqualified). Independently of these requirements, any student who neglects any part of the work for which he is registered (regardless of the number of units passed) may be disqualified by faculty action.

Any student so disqualified may be reinstated after an interval of at least a half-year, for reasons satisfactory to the Committee on Disqualified Students. The case of each disqualified student is handled individually, and the student must not assume that any particular method he may elect will be acceptable. It is necessary for any disqualified student who proposes ever to return to the Southern Branch to communicate without delay with this Committee through the Recorder in order that the question of reinstatement may be considered and that the student may arrange his studies during the interval of disqualification so that they will meet the Committee's requirements.

A student who receives a grade of E or F in any course during a given semester is considered as deficient and is, therefore, "limited" in the programme which he may take during the following semester. Deficiencies in Military Science and Physical Education have the same effect as deficiencies in other subjects.

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

#### FEEES AND CONTINGENT EXPENSES

Tuition in the Academic Colleges in Berkeley and Los Angeles is free to residents of the state. A tuition fee of \$75 per half-year is charged to non-residents.

An incidental fee of \$12.50 per half-year is payable by every student before his study card is filed. This fee covers expenses other than the cost of instruction and entitles students to the use of the gymnasium, tennis courts, lockers, baths, soap, towels, washrooms, etc.; consultation, medical advice, or first aid treatment; 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. One half of the amount of this fee is returned to

students who leave the University during the first semester before September 15, or during the second semester before February 15.

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

*The military uniform and text book deposit* is \$20, payable by every student subject to military training before his study card is filed. Military training is prescribed for all first and second year undergraduate male students who are citizens of the United States, able-bodied and under twenty-four years of age at admission to the University. The United States furnishes uniforms and some text books for the use of students receiving military training, and the University requires the student to deposit with the Comptroller an amount necessary to cover the cost of the articles issued to him. The deposit is refunded at the close of the academic year, or upon the student's withdrawal from the University, provided the student then returns in good condition all articles issued to him. The amount necessary to replace articles not returned by the student will be retained by the Comptroller.

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

*The ordinary yearly expenses* (including personal expenses) of a student in the academic departments would probably be at least \$675.

### SCHOLARSHIPS

The University of California annually allots to the Southern Branch ten scholarships, each of which carries with it approximately from \$100 to \$150 and is issued for a single year. Application must be made before March 15 of the year preceding that for which the scholarship is desired. The Scholarship Committee reviews all cases and decides upon the ten applicants who are deemed the most deserving.

**MISCELLANEOUS****MAINTENANCE****LIVING ACCOMMODATIONS**

The cost of board and lodging in boarding houses near the Southern Branch is from \$40 to \$55 a month. For students living in housekeeping rooms and boarding themselves the expenses may be reduced to as low as from \$30 to \$40 a month, but this plan is not generally recommended. Student apartments for two rent at from \$35 to \$75 a month. 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. Rents near the campus for unfurnished apartments, housing four or more persons, range from \$65 up.

There are no dormitories maintained by the Southern Branch. Lists of approved boarding and rooming places are published at the opening of every session. No woman is permitted to complete her registration unless her living accommodations are first approved by the Dean of Women.

Lists of boarding and rooming places and further advice concerning living accommodations may be obtained at the office of the Dean of Women, Millspaugh Hall, or from the Information Clerk.

**THE CAFETERIA**

A cafeteria is maintained by the Southern Branch. It is located on the northern part of the campus, the attractive building having been especially designed for cafeteria service. An effort is made to meet the needs of students, both those rooming in the vicinity and those living at home, by serving not only luncheon but also breakfast and dinner.

**EMPLOYMENT**

Women students desiring employment should apply at the office of the Dean of Women, Millspaugh Hall, between 10 a.m. and 12 m. 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 a month. Opportunities also exist for obtaining employment on an hourly basis.

Men students desiring employment should apply to Professor Mansfield, Mechanic Arts Hall.



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.

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 intelligently it is necessary that the Appointment Secretary have detailed information concerning the vacancies to be filled. The Secretary makes every endeavor to assist graduates to obtain positions of the kind for which they are best fitted. Students are urged to make occasional calls at the office of the Appointment Secretary throughout their entire course. There is no expense to the school officials or to graduates for the service rendered by this office.

Little can be done for students who are not actually on the ground to negotiate for themselves. It is usually so difficult for a stranger to obtain remunerative employment from the start that, in general, no one should come to Los Angeles expecting to become self-supporting through the University course, without having on hand sufficient funds to cover the expense of the first half-year.

## LIBRARY, GYMNASIUM, INFIRMARY

### THE LIBRARY

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

The Library is open daily, save Sundays. From Monday to Friday, inclusive, the hours are from 7:45 a.m. to 5:30 p.m.; Saturday, from 7:45 a.m. to 1:30 p.m. The Library contains about 40,000 volumes and 10,000 pamphlets. About 5000 books are added annually. The Library subscribes for the leading periodicals, professional and general. In addition there are about 7000 bound volumes of the literary and educational magazines.

A Library Handbook, containing rules and regulations and general information regarding the Library, has been issued for general distribution.

**GYMNASIUM AND ATHLETIC FACILITIES***For Men*

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

*For Women*

The Women's Gymnasium is well equipped. Besides a main hall, 60 × 80 feet, there are class rooms, a corrective room, rest rooms, shower and dressing room accommodations. Nearby are two outdoor basketball courts and an athletic field, 200 × 300 feet.

**THE INFIRMARY**

The Southern Branch maintains on the campus, for the care of emergencies, an infirmary, with a physician and a trained nurse in charge. Students are entitled to medical consultation and advice. Every student receives a physical examination.

**MUSICAL EVENTS**

Five musical events are given during the year.

The Christmas Concert consists of a University community programme of Christmas carols, in which the historical expression of the Christmas thought is given by the University Choral Club.

At the Spring Concert an oratorio is performed by the University Choral Club, assisted by local artists as soloists.

The Children's Music Festival is a co-operative project of the music classes of the elementary and junior high school children of the Training School.

A series of Senior Piano Recitals is given by the fourth-year students.

The Original Composition Programme is a public demonstration of the work of the year in music composition.

## STUDENT SELF-GOVERNMENT

## THE ASSOCIATED STUDENTS

The Southern Branch has student self-government. There is a complete organization, the Associated Students, that administers and controls all extra-curriculum activities. This organization has an executive council of twelve members, composed of a president, vice-president, six commissioners, and three representatives at large. Each of the commissioners has supervision over a definite field, such as debating, athletics, or finance. The council raises and administers all the finances necessary to carry on the work.

The University Affairs Committee, composed of seven members, passes on all cases of misconduct among the students. The Director of the Southern Branch has the power of veto over all actions of the students.

## PUBLICATIONS

The *Cub Californian* and "The Southern Campus" are the official publications of the students of the Southern Branch.

The *Cub Californian*, the student paper, is published weekly. The *Cub* 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 yearbook. It contains a complete record of the college life of the year, and is edited, managed, and financed by the students.

## CO-OPERATIVE STORE

The Students' Co-operative Store was opened by the students of the Normal School in 1916, with the purpose of supplying a wide range of needed commodities at the lowest possible cost. Under the ownership of the Associated Students of the Southern Branch it has grown proportionately to the other campus activities.

## SUMMER SESSIONS

The Summer Sessions of six weeks are 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 sessions who are desirous of shortening their college courses, or who have been unable, because of crowded conditions, to get subjects which they need. Any adult of good moral character, considered by the faculty to be of suffi-

cient maturity and intelligence to profit by attendance upon the exercises of the session, may be admitted to the Summer Sessions. The courses of instruction are mainly of University grade, and credit toward University degrees may be given to students who comply with such conditions of work and examinations as may be imposed by the instructors in charge.

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

The Announcements of the Summer Sessions are issued in January of each year and may be obtained by addressing the Dean of the Summer Sessions, Berkeley, or the representative of the Summer Session in Los Angeles, 816 Hill Street Theatre Building, Los Angeles.

Summer Sessions are conducted at the seat of the University in Berkeley and at the Southern Branch in Los Angeles. In addition, the Inter-session of six weeks has been organized in Berkeley, and immediately precedes the Summer Session.

#### UNIVERSITY EXTENSION DIVISION

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

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IX

**UNIVERSITY REGULATIONS  
CONCERNING UNDERGRADUATE WORK**

UNIVERSITY OF CALIFORNIA

EXCERPTS FROM THE  
CIRCULAR OF INFORMATION  
CONCERNING THE  
ACADEMIC DEPARTMENTS  
AT BERKELEY

AUGUST, 1922

UNIVERSITY OF CALIFORNIA PRESS  
BERKELEY, CALIFORNIA

1922



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## UNDERGRADUATE CURRICULA

There are established at Berkeley seven colleges, in each of which there is an undergraduate curriculum of four years, leading directly, under conditions hereinafter stated, to a bachelor's degree, as follows:

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

The Colleges of Applied Science

to the degree of Bachelor of Science:  
 in the College of Commerce;  
 in the College of Agriculture—in any one of the following: agricultural science, agronomy, animal industries, forestry, horticulture, landscape gardening;  
 in the College of Mechanics—(1) in mechanical engineering, or (2) in electrical engineering, or (3) in marine engineering and naval architecture, or (4) in aerodynamics;  
 in the College of Mining—(1) in mining, or (2) in metallurgy, or (3) in economic geology, or (4) in petroleum engineering;  
 in the College of Civil Engineering—(1) in railroad engineering, or (2) in sanitary engineering, or (3) in irrigation engineering;  
 in the College of Chemistry—(1) in chemistry, or (2) in chemical technology.

There are permitted, in addition, courses at large and partial courses, not leading directly to any degree, but through each of which, by compliance with the conditions upon which it is conferred, a degree is possibly obtainable.

The University has no preparatory department.

## PROFESSIONAL CURRICULA

At Berkeley also are the Schools of

Architecture, leading to the degree of Graduate in Architecture;  
 Education, leading to the degree of Doctor of Education and to the Certificate of Completion of the Teacher-training Curriculum.  
 Jurisprudence, leading to the degree of Juris Doctor;  
 Medicine, first year and part of the second year of the five-year curriculum leading to M.D. (the remainder of the work is given in San Francisco);

And the curricula in

Public Health—three curricula, each leading to the degree of Graduate in Public Health; two of these are given wholly at Berkeley and the third (for candidates for M.D. and Gr.P.H.) is in part at Berkeley and in part in San Francisco;  
 Home Economics, leading to the degree of Bachelor of Arts in the College of Letters and Science, with a major subject in Household Art or in Household Science.

The work of the Medical School (except that of the first year and part of the second year, as above), of the California College of Pharmacy, of

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

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

#### GRADUATE COURSES

In the curricula named above there are provided graduate courses leading to advanced degrees.

#### STATUS OF STUDENTS

In respect to status, students are classified as graduate and undergraduate, and undergraduates as regular students, students at large, and partial course students, the last being further classified as special students and limited students.

*Graduate students* are such graduates of the University of California or of other universities, colleges, or like institutions as may be authorized to pursue advanced or special studies under the direction of a faculty. Such students may or may not be candidates for degrees.

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

*Students at large* are undergraduates devoting to their studies the full time required of regular students but pursuing purely elective courses. Students at large are subject to all regulations imposed on regular students, except the requirements for a degree, unless otherwise provided.

*Special students.* See page 28.

*Limited students* are partial course students to whom, for adequate reasons, less work is permitted, or assigned, than is required of regular students.

*Students at large, special students, and limited students, by virtue of their status, are not candidates for any degree.*

**ADMISSION WITH ADVANCED STANDING****ADMISSION FROM OTHER COLLEGES AND UNIVERSITIES**

Applicants may be given advanced standing in the University of California on the basis of certificates from other colleges and universities, upon the approval of the certificates by the proper committee. A form of statement of university work, which may be used for such certificates, will be furnished on application to the Recorder of the Faculties. It may be filled out by the applicant himself, but should be duly certified by the proper officer of the institution in which the work was done. There should also be submitted some credentials showing *in detail* the basis upon which the applicant was matriculated in the institution from which he comes and the preparatory subjects for which matriculation credit was given. These documents should be filed with the Recorder of the Faculties, in order that they may be placed before the Board of Admissions, for an estimate of their value in terms of the requirements of the University of California. The board, acting on behalf of the faculties, is empowered to reject the certificates, in whole or in part, and to require examination in any or all of the subjects offered.

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

**ADMISSION FROM NORMAL SCHOOLS OR STATE TEACHERS COLLEGES**

A student in a state teachers college or normal school, who plans to enter the University of California, should arrange his programme with special reference to the degree requirements of the college in which he expects to take his bachelor's degree.

In the College of Letters and Science and in the College of Commerce, the junior certificate requirements consist largely of courses specifically prescribed in the fields of foreign languages, laboratory science, etc., and allow only a limited amount of free elective time. The premedical curriculum and the curricula of the colleges of engineering and agriculture include a number of prescribed courses in subjects which ordinarily are not represented in a state teachers college.

The University regulations, however, provide that a student admitted to the University from a normal school or a state teachers college who is also a graduate (with university recommendation) of an accredited high school, may be allowed junior standing for two years' work and senior standing for three years' work, whenever it appears that the work which has been done is substantially the equivalent of the work required by the University of California in the college or curriculum selected.

The foregoing allowance of credit is conditioned upon the presentation by the applicant of satisfactory recommendations both from the high school and from the normal school or state teachers college.

Graduates of California State normal schools or of other normal schools of equal rank who become candidates for the certificate of completion of the teacher-training curriculum may be exempted from the additional half-year of residence required beyond the bachelor's degree.

Credentials from high schools and normal schools of states other than California are evaluated in accordance with this general plan. The applicant must in every such case submit the detailed record of his high school and later studies in order that the Board of Admissions may be satisfied that the applicant has met the California requirements both as to selection of his studies and as to scholarship standing. Blank forms for statement of the applicant's studies may be obtained from the Recorder of the Faculties on request.

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

Graduates of approved schools and colleges in China, Japan, India, and other Oriental countries may be admitted only if their command of English is sufficient to permit them to profit by university instruction. This will be tested by an oral and written examination set by the Board of Admissions.

#### SURPLUS MATRICULATION CREDIT

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

#### ADMISSION OF SPECIAL STUDENTS

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

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

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

The graduates of accredited high schools are not admitted as special students, but are expected to qualify for regular undergraduate standing in accordance with the usual rules. Such students may, with the approval of the proper study-list officer, pursue strictly elective or limited programmes, if they do not desire to become candidates for degrees.

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

Entrance examinations in the subjects of fundamental importance for the work proposed will be assigned in practically all cases. Special students will seldom be able to undertake the work of the engineering and professional schools until they have had all or nearly all of the prerequisite subjects.

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

Instruction is not offered in such essential preparatory subjects as elementary English, elementary algebra, plane geometry, United States history, elementary Latin and Caesar, and, save in the Summer Session, algebraic theory, elementary chemistry, and elementary physics.

Before applying for admission, then, the applicant should see that he is prepared in these whenever they are prerequisite to work he may wish to do in the University.

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

The administration of special students is in the hands of the Board of Admissions. Prospective applicants should communicate with this Board through the Recorder of the Faculties, who will furnish forms for application for admission and for transcript of high school record.

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

In general, admission to the University can be completed only by personal conference with the University Examiner, and when necessary with the departments, schools, or colleges concerned.

**ADMISSION TO GRADUATE STANDING**

Graduates of the institutions constituting the Association of American Universities and of many other institutions are admitted to the Graduate Division upon presentation of their Bachelor's diploma at the office of the Recorder of the Faculties. Graduates of institutions not in the accepted list of the University may be admitted to the Graduate Division with the approval of the Dean of the Graduate Division after an evaluation of their certified college records by the University Examiner. Admission to the Graduate Division does not of itself imply admission to candidacy for a higher degree.

The grade of work which graduate students may elect and their standing as candidates for degrees will depend upon the extent and character of their undergraduate courses. If the preliminary training of candidates has not been sufficient to qualify them for strictly graduate work, they must pursue such undergraduate courses as may be suited to their needs. For the conditions under which the advanced degrees may be obtained and for the graduate courses in the various departments of instruction leading to advanced degrees see the latest ANNOUNCEMENT OF THE GRADUATE DIVISION, to be obtained on application to the Dean of the Graduate Division.

**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 students' 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 substantially the junior certificate requirements, but will not be held strictly to the time distribution of requirements.

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 programme as to reduce the required work in the fields of foreign language, mathematics, and natural science. This makes his programme 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 amount of work required in the University for the junior certificate (60) or for the degree (124).

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

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\* See also Study-Lists Regulations below.



(a) *General University requirements.*†

Subject A.‡

Military, 6 units (men).

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

Physical Education, 2 units.

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

(c) *Mathematics.* Elementary Algebra and Geometry. After May, 1923, courses in these subjects will not be given in the regular sessions of the University, but for the academic year 1922-23 they will be given for students who have not completed this requirement in the high school.

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

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

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

Astronomy 1, 2A-2B\*, 4, 5, 11.

Bacteriology 1\*.

Botany 1A-1B, 2A\*-2B.

Chemistry 1A\*-1B\*, 5\*, 6A\*-6B\*, 8.

Geography 1C, 2C.

Geology 1A, 1B, 6\*.

Mineralogy 1A\*-1B\*, 2AB.

Paleontology 1.

Physics 2A-2B, 3A-3B\*, or 3C\*-3D\*.

Physiology 1\*, 2\*.

Zoology 1A\*-1B\*, 10.

To obtain the junior certificate after May, 1923, the students work in natural science must have included at least one course in laboratory science. Any of the courses marked with an asterisk in the above list will be accepted in fulfillment of this requirement. Courses with but one unit of laboratory science are not accepted as fulfilling this requirement and are not marked above, unless they have as prerequisite a course that also requires one unit of laboratory work.

† For information concerning exemptions from these requirements apply to the Recorder of the Faculties.

‡ An examination in Subject A (English Composition) is required of all intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties, in later pages of this circular.

(e) *Additional.* At least 9 units (a year sequence plus enough to make up at least 9 units) from one of the following groups and at least a year course in each of two others:

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

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

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

*Group 1—English and Public Speaking*

*Year course:* English 1A-1B; Public Speaking 1A-1B.

*9-unit option:* a year sequence plus 3 units from the following:

English 4A, B, C, D, E, or F, 51A, 51B, 52A, 52B, 53A, 53B, 56A, 56B.

Public Speaking 2A, 2B, 5A, 5B, 10A, 10B.

*Group 2—Foreign Languages*

*Year course:*

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

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

Greek: 1A-1B; 2A-2B; 1AB-2AB; or 101, 102.

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

Latin: any year sequence from the following: C, D, LA-LB; 1, 5, 102, 106. Two years of high school Latin are accepted as the equivalent of a year course.

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

Sanskrit: 101A-101B.

Semitic Languages 21A-21B.

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

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

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

#### *Group 3—Mathematics*

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

*9-unit option:* any 9 units selected from C, 5, 9, 3A, 3B, 4A, 4B, 8. High school plane trigonometry (2e) and plane analytic geometry (2f) will each count for 2 units.

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

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

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

Political Science 1A-1B.

*9-unit option:* a year sequence plus 3 units from the following:

History 4A-4B, 8A-8B.

Economics 1A-1B, 10, 11.

Political Science 1A-1B, 2.

#### *Group 5—Philosophy*

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

*9-unit option:* a year course plus enough to make 9 units, selected from the following: Philosophy 1A-1B, 3A-3B, 4A-4B.

*Intersession and Summer Session Courses.* Some of the courses offered in the summer sessions are equivalent to courses offered in the fall and spring sessions, and these will be accepted in fulfilling requirements (b), (c), or (d). Students are advised to complete requirement (e) in the fall or spring sessions. A year course within the meaning of requirement (e) is not to be considered as a stated number of units, but as a subject of serious study throughout an entire academic year. Two summer sessions or one summer session and one intersession are accepted as the equivalent of one half-year of residence for the degree of A.B.; but the amount of credit (the number of units) that may be completed during two summer

sessions or one summer session and one intersession will not exceed three-fourths of the amount that could be completed during a single fall or spring session. Students who purpose applying any of the work offered in summer terms in satisfaction of the requirement of a year-course for requirement (e) must have their programmes specially approved in advance by the Dean of the College.

*University Extension.* 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 to students who attain at least second or B grade in 45 units. A student who gains honorable mention is thereby considered eligible for the honors status in the upper division.

#### UPPER DIVISION

Only those students who have been granted the junior certificate, signifying their completion of lower division requirements, will be registered in the upper division.

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

1. The total number of units in college courses in the lower and upper divisions offered for the degree must be *at least* 124.
2. To receive the A.B. degree in and after May, 1923, the student must attain at least as many grade points as units in all work undertaken in the University in and after August, 1921.
3. At least 54 units of college work must be completed after the receipt of the junior certificate.
4. At least 36 units of work done in the upper division must be in upper division or graduate courses in the following departments or subjects:

Agriculture  
 Anatomy, M  
 Anthropology, M  
 Architecture, M  
 Astronomy, M  
 Bacteriology (in Department of Bacteriology and Experimental Pathology), M  
 Biochemistry (in Department of Biochemistry and Pharmacology), M  
 Botany, M  
 Chemistry, M  
 Civil Engineering  
 Economics, M

Education, M  
 English, M  
 French M  
 General Literature, M  
 Geography, M  
 Geological Sciences, M  
 German, M  
 Graphic Art (in Department of Drawing and Art), M  
 Greek, M  
 History, M  
 Household Art, M  
 Household Science, M  
 Hygiene (for major see Public Health Curriculum)

Irrigation	Oriental Languages, M
Italian, M	Philosophy, M
Jurisprudence (for major see School of Jurisprudence)	Physical Education for Men
Latin, M	Physical Education for Women
Library Practice	Physics, M
Mathematics, M	Physiology, M
Mechanical and Electrical Engi- neering	Political Science, M
Medical Sciences (for major see curriculum of the first year of the Medical School)	Psychology, M
Military Science	Public Health*
Mining and Metallurgy	Public Speaking, M
Music, M	Sanskrit, M
	Semitic Languages, M
	Slavic Languages, M
	Spanish, M
	Zoology, M

5. Candidates for graduation in December, 1922, must take at least 12 of the required upper division units in a single department or subject exclusive of courses in Agriculture, Civil, Mechanical and Electrical Engineering, General Literature, Irrigation, Library Practice, Mining, and Metallurgy. The choice of the 12 units must be approved by the department concerned.

6. Candidates for graduation in and after May, 1923, must complete a major of 24 upper division units according to the rules given below.

7. The final or senior year, including at least 24 units, must be taken in resident courses of instruction at this University. This work can most satisfactorily be done during the fall and spring (not summer) sessions. No student will be recommended for the degree of Bachelor of Arts who has not been registered during the final semester of his undergraduate course in the College of Letters and Science. See below under study-lists regulations.

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

A major consists of a substantial group of coördinated upper division courses. The 24 upper division units required in the major for the A.B. degree may represent courses in one or more departments. If the greater part of the major work is in one department, this is known as the major department. If the major is a curriculum of courses from two or more departments, no one of which represents the greater part of the work involved, the major may be known as a group major, and its administration be in the hands of a committee instead of a department, as, for example, General Literature. If one year of an acceptable professional curriculum is offered by the student as part of his programme for the

\* Students who desire to follow a programme in public health should consult the Dean of the College of Letters and Science as to the choice of a group major in this subject.

A.B. degree, this is considered to fulfill the requirement of the major, for example, the first year of the Medical School or of the School of Jurisprudence. In no case, however, will it be counted as more than 32 units toward the A.B. degree.

Majors may be offered for the A.B. degree in any of the subjects or departments listed above with the designation M (under requirement 4 for the A.B. degree). The general outline of the content of these majors may be found in the respective department announcements in the publication entitled Announcement of Courses. The details of the programme must be approved by a representative of the department chosen. It is recognized that suitable programmes may be prepared that are not included in any of the published announcements. A student may, therefore, with the advice and approval of a member or members of the faculty, present a plan for a major or group major to the Executive Committee. If this meets the committee's approval, the committee will designate a member of the faculty to take charge of the student's special major and approve his upper division study-lists and the final completion of the major.

Special attention is called to the courses listed as preparation for or prerequisite to 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 in one department will be counted towards the A.B. degree.

See further under Regulations for Study-Lists, below.

#### REGULATIONS FOR STUDY-LISTS

*Study-List Limits.*—Students in the College of Letters and Science may present study-lists aggregating from 12 to 16 units per semester without special permission as to quantity of work. During the first semester in residence at the University no undergraduate student will be permitted to take more than 16 units of work. After one term of regular residence (i.e., with a study-list of at least 12 units) permission may be granted to take not more than 18 units per semester, provided the student has attained an average of at least 2 grade points per unit for the preceding semester. Prescribed courses in military science, physical education, and hygiene, and repeated courses are to be counted in making study-list totals. Even if, because of difficulty in making the desirable courses total the exact limit, a student is permitted to carry a study-list slightly greater than the limits here set, or if a student transfers from another college where a greater study-list total is permitted or required, the credit towards the A.B. degree will be limited strictly according to this rule.

*Limited Status.*—Students may be accepted as of limited status (below 12 units per semester) only on account of poor health or of regular outside occupation. The study-list must receive the approval of the dean. The privilege of limited status may be withdrawn any time at the discretion of the dean or of the Executive Committee.

*Students' Responsibility.*—The presentation of a study-list by a student and its acceptance by the college evidences an obligation on the part of the student faithfully to perform the designated work to the best of his ability. Withdrawal from, or neglect of, any course entered on the study-list, or a change in programme without the formal permission of the dean of the college, renders the student liable to enforced withdrawal from the University, or other appropriate disciplinary action.

*Approval of Study-Lists.*—All study-lists must be approved by a faculty adviser before they will be accepted at the Recorder's Office.

*Special Regulations for Lower Division Study-Lists.*—Each lower division student at the time of registration will be assigned to a collegiate adviser and his study-list must be approved by the particular adviser to whom he has been assigned, unless his adviser is changed by authority of the Dean of the College. In addition, all cards totaling more than 16 units or less than 12 units must be presented at the office of the Dean of the College for approval of the study-list total.

A student in the lower division may each semester designate his intended major. This will make it possible for his adviser to advise him concerning prerequisites for the major. The student may, however, seek such advice from his proposed major department or committee.

*Special Regulations for Upper Division Study-Lists.*—Each upper division student must designate his major or group major on his study-list card, he must register with his major department, or committee in charge of the group major, and his study-list must be approved (as to its relation to his major programme) by a representative of the major department or group major committee before it will be accepted by the Recorder of the Faculties. In addition, all cards totaling more than 16 or less than 12 units must be presented at the office of the Dean of the College for approval of the study-list total.

A change in the major may be made only by permission of the Dean of the College and of the department to which the student petitions to transfer. Notice that such change has been authorized will be sent by the Recorder to the departments concerned.

Students who fail in the lower division to attain an average of 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.

Each major department is expected to send to the Dean of the College from time to time lists of students who, in the opinion of the department, cannot profitably continue as major students in the department, together with a statement of the basis for such opinion and of the probable causes for the students' lack of success. In such cases the Executive Committee of the college may, with the approval of the department concerned, permit a change in the major, or may, with the approval of the President of the University, require the students to withdraw from the college.

Students who take all of their upper division work in the University of California must take at least 6 units in their major (at least 3 units each semester) during their last or senior year.

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

#### REMOVAL OF DEFICIENCIES

Students with deficiencies on their records will not be recommended for the A.B. degree. Courses not required by the curriculum for graduation may be dropped from the student's record upon formal petition to the faculty. In the consideration of such petitions the following procedure will be adhered to:

1. If the course in question be one for which an alternative course may be offered under the rules in fulfillment of a stated requirement, the course may be cancelled and an approved substitute may be accepted.

2. If the course in question be an elective, the student's petition to cancel the course from the record may be granted, provided that, after the deficiency has been incurred, the student shall have completed two semesters of work without further deficiency, and with credit for grade points equal in number to the number of units completed during those semesters.

A senior who has incurred a deficiency in the second half of the junior year or in the first half of the senior year may cancel a deficient course, on formal petition, after at least one semester of creditable work as defined in the preceding paragraph.

3. A student transferred to this college from another college or curriculum may, upon petition, be permitted to drop from the record courses of a professional or technical character not regarded by the faculty of the College of Letters and Science as an essential part of the student's programme for A.B.

4. Courses in which deficiencies were incurred during the academic year 1918-19 (the S.A.T.C. period) may, upon petition, be dropped from the record irrespective of the nature of the courses.



*Status of Courses in Professional Curricula.*—Certain designated professional curricula (as in the first year of the Medical School, or the first year in the School of Jurisprudence) are accepted as constituting a year's work towards the A.B. degree. If such be offered in lieu of a major in Letters and Science, all of the courses required or included as a part of the student's programme in that curriculum become required courses for the degree.

#### CANDIDACY FOR HONORS

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

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

After the first half of the junior year the Committee on Candidates for Honors will, upon the recommendation of the several departments, decide what students shall remain in the honors group and what students shall be promoted to the honors group. In determining these matters the committee will consider not only the student's work in the department of his major but his entire record.

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

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

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

## COLLEGE OF COMMERCE

### UNDERGRADUATE CURRICULUM

The course leads to the degree of Bachelor of Science and is mainly devoted to elementary and technical studies as a broad preparation for business life. While some specialization is provided for in the senior year, those who wish to prepare for some particular commercial career are advised to extend their course beyond the usual four years. Courses have been outlined as a preparation for the work of the certified public accountant, for the actuary, for the consular service, for banking, advertising, foreign trade, shipping, for the real estate business, and for railroading. Graduation from this college requires the completion of 124 units of college credit (with 124 grade points), of which 64 units constitute the amount required in the University for the junior certificate.

The requirements for the junior certificate are as follows:

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

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

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\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

*Undergraduate Departments (Berkeley)*

<b>History or Political Science:</b>	<b>Units</b>
History 4A-4B, or History 8A-8B, or Political Science 1A-1B, or any combination of the foregoing courses	6
<b>Geography:</b>	
Geography 1A (Fundamentals of Modern Geography) and Economics 3A (Introduction to Economic Geography)	6
<b>Natural Sciences</b> .....	9
<b>Mathematics:</b>	
Mathematics B (Plane Geometry) .....	3
Mathematics 1 (Advanced Algebra) .....	3
Mathematics 2 (Mathematical Theory of Investment)	3
<b>Economics:</b>	
Economics 1A-1B .....	6
Military Science, Physical Education, Hygiene .....	9
Electives .....	19
<b>Total</b> .....	<b>64</b>

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

The prerequisite to Mathematics 2 is Mathematics 1 or two years of high school algebra and trigonometry. For Mathematics 1 elementary algebra is necessary and at least a first course in algebraic theory is strongly recommended. (Algebraic theory will not be given at the University after August, 1923, except in the Summer Session. This course with elementary algebra and plane geometry should be taken in high school.)

Students will normally complete their junior certificate requirements during their freshman and sophomore years. Such students must remain in the University four additional semesters before receiving their degrees. Undergraduates who do not accomplish their junior certificate requirements in two years and who therefore are compelled to complete the prescribed lower division work in their fifth or in some subsequent semester must remain nine semesters in the University instead of the usual eight before receiving their degrees.

The requirements for graduation, in addition to those for the junior certificate, may be summarized as follows:

	<b>Units</b>
Technical subjects .....	31
Commercial Law .....	10
Electives .....	19
<b>Total</b> .....	<b>60</b>

Students may not include in their 19 units of upper division electives any of the courses prescribed for the junior certificate.

The technical subjects are distributed as follows:

	Units
(a) Ten units specifically required of all students, namely:	
Statistics (Economics 140) .....	4
Accounting (Economics 14A) .....	3
Economic History (Economics 10 or 11) .....	3

(b) Twelve units covering at least four different subjects in applied economics other than the above, such as money, banking, insurance, transportation, tariff, finance, labor, trade, business organization, etc.

(c) Nine units of advanced work in some one of the subjects begun under provisions (a) and (b) above.

Where the arrangement of courses is such as to make it possible the additional specific requirements for graduation (in excess of those required for the junior certificate) may be satisfied by work done before taking the junior certificate, thus increasing the opportunity for specialized elective work in the upper division.

*Honors.*—Students whose work has been of marked excellence will receive honors at graduation in the College of Commerce.

#### COLLEGE OF AGRICULTURE†

The prospective student should consult the requirements and recommendations for matriculation, as stated on page 22. *Failure to take the proper subjects in high school may delay graduation.*

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

#### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE

(1) Four years of residence. (The senior year must be spent in this university.)

(2) One hundred and thirty semester units of university work (with 130 grade points), in addition to matriculation and in addition to Subject

† The statements in pages 43-46 refer to the curricula in the College of Agriculture other than in Forest Utilization. For the curriculum in Forest Utilization see page 47.

A\*. These 130 units must be chosen in accordance with the provisions set forth hereinafter. Ordinarily at least 76 units will be completed during the freshman and sophomore years, 6 units during the six weeks' summer practice course, and at least 48 units during the junior and senior years.

(3) Including work presented for matriculation,† all students must have completed—ordinarily before the end of the sophomore year—English, 12 units; mathematics, including trigonometry, 10½ units; physics, 3 units; history or economics, 9 units.

(4) A summer course in special work connected with the proposed major subject. This course is taken before or immediately following the junior year as may be arranged by the adviser in the major subject concerned. The course is six weeks in length; credit, 6 units. Information concerning the summer practice work may be obtained from the major subject adviser.

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

Military Science .....	2 years
Physical Education .....	2 years
Hygiene .....	½ year
Botany, General College Botany.....	1 year
Chemistry, General College Chemistry....	1 year
‡Drawing (Instrumental) .....	½ year
Geology .....	½ year
‡Mathematics (Trigonometry) .....	½ year
Zoology .....	½ year

And at least two of the following four subjects, according to the requirements of the major subject chosen by the student:

Plant Nutrition .....	½ year
Bacteriology .....	½ year
Genetics .....	½ year
Soil Technology .....	½ year

(6) Among the 48 or more units normally taken in the junior and senior years there must be 36 units in upper division courses (i.e., those numbered 100 to 199), at least 26 units of which must be in the Department of Agriculture.

\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

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

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

(7) Each student should select a major subject not later than the middle of the sophomore year. There are seven major subjects in the College of Agriculture: agricultural science, agronomy, animal industries, forestry, horticulture, landscape gardening, and rural social economics. In each major subject certain prescribed courses\* will be required in addition to the general college requirements (Nos. 1-6) listed above. These are:

I. *Agricultural Science*.—Plant Nutrition 1; Bacteriology 1; Botany 5; Genetics 1; Chemistry 5 or 6A-6B or 8 and 9; at least one upper division course in botany, zoology, or chemistry, and at least 12 units of upper division work in one of the divisions of agricultural science (entomology and parasitology, genetics, fruit products, nutrition, plant nutrition, plant pathology, soil technology).

II. *Agronomy*.—Plant Nutrition 1 and 2; Bacteriology 1 or Dairy Industry 2 (Davis); Botany 5; Civil Engineering 1E or Irrigation Practice 1B (Davis); Soil Technology 1; Farm Management 118; Irrigation 113 or Irrigation Practice 2A (Davis); Irrigation Practice 120; 3 units each of upper division work in animal husbandry, pomology, and farm mechanics; and 7 upper division units in agronomy, including Agronomy 130.

III. *Animal Industries*.—Bacteriology 1 and 26 units of upper division courses in animal husbandry, farm mechanics, dairy industry, poultry husbandry, veterinary science.

IV. *Forestry (general course)*.—Civil Engineering 1A-1B; 6 units of college economics; Forestry 1, 10, 14, 20; 22 units of upper division courses in forestry; 4 units upper division work in agriculture or forestry; 10 units upper division work in correlated subjects. For Forest Utilization see Announcement of Courses in Forestry.

V. *Horticulture*.—Farm Mechanics 101 or 103 and 104; Civil Engineering 1E or Irrigation Practice 1B (Davis); Entomology 124; Irrigation 113 or Irrigation Practice 2A (Davis); Irrigation Practice 120; Plant Pathology 120; Pomology 2A-2B (Davis), or 101, 103. At least 6 units of economics, political science, or rural institutions. At least two of the following courses: Botany 7; Citriculture 101; Fruit Products 112; Olericulture 103 or 104; Pomology 106, 120; Viticulture 116; Landscape Gardening 101.

VI. *Landscape Gardening*.—Architecture 1, 2, 3; Soil Technology 1; Genetics 1; Civil Engineering 1E and 28 units upper division work in landscape gardening, including a thesis.

VII. *Rural Social Economics*.—Rural Institutions 1, 2 (Davis); 3 units each of upper division work in agronomy, farm mechanics, animal husbandry, irrigation practice, and pomology.

\* Courses given at Davis are so designated.

## FRESHMAN AND SOPHOMORE YEARS

During the freshman and sophomore years the following schedule will normally be followed. Examples of programmes at Berkeley only are given herein. College requirements for graduation are the same whether the student registers at Berkeley or at the Branch of the College of Agriculture at Davis. See the Prospectus of the College of Agriculture to be obtained from the Dean of the College of Agriculture, University of California, Berkeley.

## EXAMPLE OF PROGRAMME

## FRESHMAN YEAR

<i>First Half-year</i>	Units	<i>Second Half-year</i>	Units
Military Science 1A.....	1½	Military Science 1B.....	1½
Physical Education.....	½	Physical Education.....	½
Hygiene I, Military Hygiene.....	1	Botany 2B, General Botany.....	4
Botany 2A, General Botany.....	4	Chemistry 1B, General Chemistry.....	5
Chemistry 1A, General Chemistry.....	5	Drawing C, Instrumental Drawing.....	2
Mathematics C, Trigonometry.....	3	Elective.....	6
Elective.....	4		
	<hr/>		<hr/>
	19		19

## SOPHOMORE YEAR

<i>First Half-year</i>		<i>Second Half-year</i>	
Military Science 2A.....	1½	Military Science 2B.....	1½
Physical Education.....	½	Physical Education.....	½
*Plant Nutrition 1.....	3	*Bacteriology 1.....	4
*Plant Nutrition 2.....	2	*Genetics 1, General Principles.....	4
Geology 1A, General Geology.....	3	*Soil Technology 1.....	4
Zoology 1A, General Zoology.....	5	Elective.....	5
Elective.....	4		
	<hr/>		<hr/>
	19		19

## JUNIOR AND SENIOR YEARS

The schedule for the junior and senior years is determined by the major subject requirements, as listed above, supplemented by optional courses selected by the student with the advice and consent of the major subject adviser.

## APPROVAL OF STUDY-LISTS AND THESES

The study-lists of freshmen and sophomores must bear the written approval of a member of the Lower Division Advisory Committee if the student has not yet chosen his major subject; of the major subject adviser if the student has chosen his major. Study-lists must then be countersigned by the Secretary of the College of Agriculture.

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

\* Not required for all students. Major subject advisers should be consulted.

The study-lists of juniors and seniors must first be endorsed by the major subject adviser and then be countersigned by the Director of Resident Instruction of the College of Agriculture.

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

#### STUDY-LISTS LIMITS

Regular freshmen and sophomores who are free from deficiencies in their university work may register for not more than 19 units of new work. Juniors and seniors are limited to 18 units of new work. Regular students with deficiencies will be limited to 16 units, including repeated work. Students with deficiencies taking the prescribed courses in physical education, hygiene, or military science may, with the approval of the study-lists committee, add these courses to the maxima as stated herein.

#### CURRICULUM IN FOREST UTILIZATION

Matriculation requirements are the same as for the curricula in engineering. See Admission to the University: Requirements and Recommendations for the various curricula. The requirement for the degree B.S. (in addition to matriculation) is 130 semester units distributed as indicated below. To qualify for the degree B.S. in the College of Agriculture, Curriculum in Forest Utilization, in or after May, 1923, the candidate must have attained at least as many grade points or quality units as he has attained time units or quantity units in all work undertaken by him in the University of California in and after August, 1921.

#### LOWER DIVISION

<i>Freshman Year</i>	<i>Sophomore Year</i>
*Subject A.....	Military 2A-2B.....
Military 1A-1B.....	Phys. Ed. 10-12, Gymnasium.....
Phys. Educ. 1A-1B, Gym.....	Math. 4A-4B, Int. Calculus.....
Hygiene 1.....	Phys. 4A-4B, General.....
Math. 3A-3B, Diff. Calculus.....	Mech. 2, Descript. Geom.....
Phys. 1A-1B, General.....	Mech. 1, Steam Eng.....
C. E. 1A-1B, Surveying.....	Forestry 14, Wood Tech.....
Chem. 1A-1B.....	Forestry 20, Protection.....
Elective.....	Forestry 10, Mensuration.....
	Elective.....
17 19	11 11
	3 3
	3 3
	3
	3
	3
	2
	3
	7
	19 18

\* An examination in Subject A: English Composition is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.



## UPPER DIVISION

The upper division programme must include 57 units distributed as follows:

Forestry 99A, 99B (summer field practice following sophomore year .....	10 units
Upper division courses in forestry .....	27
Upper division courses correlated with forestry .....	12
Electives .....	8
<hr/>	
Total required for B.S. ....	180 units

Study-lists of students in Forest Utilization must be approved by the study-lists officer of the Division of Forestry, and also by the Director of Resident Instruction or the Secretary of the College of Agriculture.

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

## COLLEGES OF ENGINEERING

*Matriculation Requirements*.—See pages 15, 23.

*Advanced Standing*.—For general directions see page 27.

Students entering any one of the engineering colleges from the Southern Branch of the University, or from a Junior College, or from any other collegiate institution cannot complete the course in less than four years unless they come prepared in the basic subjects of the freshman year: Mathematics 3A-3B, Physics 1A-1B, Chemistry 1A-1B, Civil Engineering 1A-1B (Surveying), Physical Education, Hygiene, and Military Science.

Students who have completed these subjects in approved institutions will be admitted to sophomore standing. Those who have had no opportunity to take surveying, but who have completed the other courses enumerated and in addition the sophomore courses Mathematics 4A-4B or Physics 4A-4B, will likewise be admitted to sophomore standing.

COLLEGE OF MECHANICS—UNDERGRADUATE CURRICULA

Matriculation Requirements, see pages 15, 23; Advanced Standing, pages 27, 48; Honors, page 74 (in Circular of Information).

FRESHMAN	JUNIOR	SENIOR	
*Subject A..... 1 1	Mech. 102A-102B.... 3 3	Thesis, 114A-114B... 2 2	
Mil. 1A-1B..... 1 1	Mech. 105A-105B.... 3 3	Dept. Electives..... 16 16	
Phys. Educ. 1A-1B 1 1	Math. 110A-110B.... 2 2	18 18	
Hygiene 1..... 1	E. E. 110A-110B.... 2 2	<i>Dept. electives to be chosen from the following under supervision of S. L. Com'ee.</i>	
Math. 3A-3B..... 3 3	E. E. 110C..... 2 2	Mech. 103A-103B.... 3 3	
Chem. 1A-1B..... 5 5	C. E. 108A-108B.... 3 2	Mech. 104A-104B.... 2 2	
Phys. 1A-1B..... 3 3	Electives..... 5 5	Mech. 104C-104D.... 1 1	
C. E. 1A-1B..... 3 3		Mech. 107..... 2	
M. E. 18(Summer) (3) †	18 19	Mech. 109..... 2	
Elective..... 1 2		Mech. 115A-115B.... 3 3	
18 18		Mech. 117A-117B.... 2 2	
	<i>Electives to be chosen from the following under supervision of Study-List Committees.</i>	Mech. 119A-119B.... 2 2	
*An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination: Saturday, August 19, 1922, 2 p.m. For further regulations concerning subject A, see General Regulations of the Faculties.	Mech. 106B..... 2	Mech. 121A-121B.... 3 3	
†Three units of the shop work requirement must be taken in the Intercession or Summer Session. (6 weeks, 4 days of 6 hours each; 144 hours). Credit 3 units.	Mech. 107..... 2	E. E. 111A-111B.... 4 4	
	Phys. 107A-107B.... 3 3	E. E. 111C-111D.... 3 3	
	C. E. 107A..... 2	E. E. 119A-119B.... 3 3	
	N. Arch 101AB..... 2 2	N. Arch. 107A-107B 2 2	
	N. Arch 102AB..... 2 2	N. Arch. 108A-108B 2 2	
		Mar. Eng. 103AB.... 2 2	
	<i>Normal arrangement of electives:</i>	Mar. Eng. 104AB.... 2 2	
	MECHANICAL		
	Mech. 106B..... 2	MECHANICAL	
	Mech. 107..... 2	Mech. 103A-103B.... 3 3	
	C. E. 107A..... 2	Mech. 104B..... 2	
	Free electives..... 3 1	Mech. 115A..... 3	
	5 5	Mech. 117A-117B.... 2 2	
		Mech. 119A-119B.... 2 2	
		Mech. 121A..... 3	
		Free electives..... 3 7	
		16 16	
	ELECTRICAL	ELECTRICAL	
	Phys. 107A-107B.... 3 3	Mech. 103A-103B.... 3 3	
	Mech. 106B..... 2	Mech. 104B..... 2	
	C. E. 107A..... 2	Mech. 107..... 2	
	5 5	Mech. 109..... 2	
		E. E. 111A-111B.... 4 4	
		E. E. 111C-111D.... 3 3	
		Free electives..... 4 2	
		16 16	
	MARINE ENG. & NAV. ARCH.	MARINE ENG. & NAV. ARCH.	
	Mech. 107..... 2	Mech. 103A..... 3	
	N. Arch 101AB..... 2 2	Mech. 104A..... 2	
	N. Arch 102AB..... 2 2	Mech. 109..... 2	
	6 4	Mech. 117A-117B.... 2 2	
		C. E. 107A..... 2	
		Mar. Eng. 103AB.... 2 2	
		Mar. Eng. 104AB.... 2 2	
		N. Arch. 107AB..... 2 2	
		N. Arch. 108AB..... 2 2	
		Free electives..... 3	
		17 15	
**Students who intend to specialize in marine engineering and naval architecture substitute Naval Architecture 10, 11 for Mech. 6A.			
†May be any two of 8A, 8B, 9A, 9B.			

## COLLEGE OF MINING—UNDERGRADUATE CURRICULA

*Matriculation Requirements, see pages 15, 23; Advanced Standing, pages 27, 48; Honors, page 74 (in Circular of Information).*

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

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

FRESHMAN	JUNIOR	SENIOR
†Subject A..... .. Mil. 1A-1B..... 1 1 1 Phys. Educ. 1A-1B..... 1 1 Hygiene 1..... 1 Math 3A-3B..... 3 3 Chem. 1A-1B..... 5 5 C. E. 1A-1B..... 3 3 Phys. 1A-1B..... 3 3 Mining 5..... 2 C. E. 3A (s. s.)..... (3) <hr style="width: 100%;"/> 17 18	Mech. 102A-102B, or Phys. 105A-105B..... 3 3 Mining 103-113..... 2 1 <hr style="width: 100%;"/> <p style="text-align: center;">MINING</p> Metall. 104A..... 3 .. Metall. 102..... 2 Mineral. 103..... 2 Geol. 103..... 3 .. C. E. 108A..... 3 .. C. E. 107A..... 2 Elec. Eng. 100Ac- 100Bd..... 3 3 Geol. 102A-102B..... 2 2 Elective..... 2 <hr style="width: 100%;"/> 19 17	Mining 107..... 3 .. Geol. 102c..... .. 3 Thesis or Summer Work... 2 2 <hr style="width: 100%;"/> <p style="text-align: center;">MINING</p> Mining 105..... .. 3 Mining 101..... .. 3 Mining 109..... .. 2 Metall. 108A-108... 2 2 Metall. 110A..... 2 .. Mech. 103A or C. E. 110..... 3 .. Juris. 216..... 1 .. Mining 111A-111B.. 4 3 <hr style="width: 100%;"/> 17 18
<p style="text-align: center;">SOPHOMORE</p> Mil 2A-2B..... 1 1 1 Phys Educ. 1C-1D.. 1 1 Math. 4A-4B..... 3 3 Phys. 4A-4B..... 3 3 Mineral. 1A-1B..... 2 2 Mineral. 2A..... 3 Mech. 2..... 3 Geol. 1A..... 3 .. <hr style="width: 100%;"/> <p style="text-align: center;">MINING</p> Metall. 2..... .. 3 Mining 1A, 1B..... 3 .. Mech. 1..... 3 .. <hr style="width: 100%;"/> 19 19	<p style="text-align: center;">METALLURGY</p> Metall. 104A-104B.. 3 2 Metall. 102..... .. 2 Chemistry 110..... 3 Geology 103..... 3 .. Elec. Eng. 100Ac- 100Bd..... 3 3 Civil Eng. 108A..... 3 .. Elective..... 1 3 <hr style="width: 100%;"/> 18 17	<p style="text-align: center;">METALLURGY</p> Metall. 108A-108B.. 2 2 Metall. 110A-110B.. 2 2 Metall. 112..... 2 .. Metall. 106..... .. 2 Metall. 116..... 2 .. Mining 101..... .. 3 Mining 109..... .. 2 Mech. 103A or C. E. 110..... 3 .. Elective..... 2 2 <hr style="width: 100%;"/> 18 18
<p style="text-align: center;">METALLURGY</p> Chem. 6A, Met. 2 .. 3 3 Mech. 1..... 3 .. <hr style="width: 100%;"/> 19 19	<p style="text-align: center;">ECONOMIC GEOLOGY</p> Geol. 102A-102B..... 2 2 Geol. 104A-104B..... 3 3 Geol. 103..... 4 .. Geol. 1B..... .. 2 Metall. 104A..... 3 .. Metall. 102..... .. 2 Mineral. 103..... .. 2 Chem. 110..... .. 3 <hr style="width: 100%;"/> 17 18	<p style="text-align: center;">ECONOMIC GEOLOGY</p> Geol. 102B-116..... 2 2 Geol. 107..... .. 2 Geol. 209..... .. 2 Mining 101..... .. 3 Mineral. 104 or 105-107..... 2 2 Metall. 108A..... 2 .. Juris. 216..... 1 .. Elective..... 6 2 <hr style="width: 100%;"/> 18 18
<p style="text-align: center;">ECONOMIC GEOLOGY</p> C. em. -6B..... 3 3 Lec n ..... 3 .. <hr style="width: 100%;"/> 19 19	<p style="text-align: center;">PETROLEUM ENGINEERING</p> Geol. 102A-102B..... 2 2 Geol. 103AB-6..... 3 2 Elec. Eng. 100Ac- 100Bd..... 3 3 C. E. 108A..... 3 .. Geol. 1B..... .. 2 Chemistry 110..... 3 Petrol. Eng. 127..... 1 .. Elective..... .. 2 <hr style="width: 100%;"/> 17 18	<p style="text-align: center;">PETROLEUM ENGINEERING</p> Petrol. 115-119..... 2 2 Petrol. 123..... .. 2 Petrol. 125..... 1 .. Geol. 102B-116..... 2 2 Mech. 1..... 3 .. Mech. 103A or C. E. 110..... 3 .. Metall. 106..... .. 2 Chem. 141-140B... 2 2 Elective..... .. 3 <hr style="width: 100%;"/> 18 18

† An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

COLLEGE OF CIVIL ENGINEERING—UNDERGRADUATE CURRICULA

Matriculation Requirements, see pages 15, 23; Advanced Standing, pages 27, 48; Honors, page 74 (in Circular of Information).

FRESHMAN	JUNIOR	SENIOR
†Subject A..... .. 2 Mil. 1A-1B..... 1 1/2 Phys. Educ. 1A-1B..... 1 1/2 Hygiene 1..... 1 Math. 3A-3B..... 3 3 Physics 1A-1B..... 3 3 Chem. 1A-1B..... 5 5 C. E. 1A-1B..... 3 3 C. E. 3 (s. s.)..... (3) Elective..... .. 2 <hr/> 17 18	Mech. 102A-102B.... 3 3 C. E. 108A-108B.... 3 2 C. E. 107A..... .. 3 C. E. 110..... .. 3 .. C. E. 102..... .. 3 .. C. E. 108B..... .. 1 Met. 106**..... .. 2 C. E. 103 (s. s.)..... (3)  RAILROAD C. E. 102C..... .. 1 C. E. 105..... .. 2 Astron. 107..... .. 2 .. E. E. 100ABCD..... 3 3 Elective..... .. 1 1 <hr/> 18 18  SANITARY AND MUNICIPAL Zool. 109..... .. 1 C. E. 106..... .. 2 .. C. E. 111A..... .. 2 Chem. 5..... .. 3 .. Elective..... .. 1 4 <hr/> 18 18  IRRIGATION Irrig. 102A..... .. 2 Irrig. 103..... .. 2 .. E. E. 100ABCD..... 3 3 Elective..... .. 1 2 <hr/> 18 18	C. E. 107C-107D.... 3 3 C. E. 113..... .. 2 .. C. E. 119 Thesis.... 2 2 C. E. 108C..... .. 2 .. C. E. 114..... .. 3  RAILROAD C. E. 104A-104B.... 3 3 Astron. 114..... .. 3 .. C. E. 109A-111A.... 2 2 Elective..... .. 1 5 <hr/> 18 18  SANITARY AND MUNICIPAL Mech. 1..... .. 3 .. C. E. 123..... .. 3 .. C. E. 109A..... .. 2 .. C. E. 109B..... .. 2 C. E. 111B..... .. 2 .. C. E. 126..... .. 2 Mech. Eng. 103B... .. 3 Elective..... .. 2 <hr/> 19 17  IRRIGATION Irrig. 102B..... .. 2 .. Irrig. 101..... .. 2 Irrig. 112..... .. 2 .. Irrig. 104..... .. 2 Mech. Eng. 103B... .. 3 C. E. 109A-111A.... 2 2 Elective..... .. 3 1 <hr/> 18 18
†An examination in Subject A: English Composition is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination: Saturday, August 19, 1922, 2 p. m. For further regulations concerning Subject A, see General Regulations of the Faculty.		
SOPHOMORE Mil. 2A-2B..... 1 1/2 Phys. Educ. 1C-1D.. 1 1/2 Math. 4A-4B..... 3 3 Mech. 2..... .. 3 Astron. 3..... .. 1 C. E. 8..... .. 2 Physics 4A-4B..... 3 3 Geol. 1A..... .. 3 ..		
RAILROAD AND IRRIGATION Mech. 1..... .. 3 .. Min'l. 1A-1B, or... } Mech. 8A-8B, or... } 2 2 Mech. 9A-9B..... } Mech. 6A..... .. 3 2 Elective..... .. 3 2 <hr/> 19 18		
SANITARY AND MUNICIPAL Chem. 8..... .. 3 .. C. E. 25..... .. 2 .. Bacteriology 1..... .. 4 Elective..... .. 3 .. <hr/> 19 18		

† Any 4 units in this group may be elected. \*\* Economics 1A, 3 units, first half-year, or English 10, 3 units, either half-year, may be taken as an alternative for Met. 106.

## COLLEGE OF CHEMISTRY

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

*Electives.*—The total number of units required for graduation is 136 (with 136 grade points). Of the elective units, 35 must be approved electives in chemistry or allied subjects; the remainder are free electives, but may not include the preparatory subjects listed above. Study-lists must be submitted for approval to Professor O'Neill.

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

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

FRESHMAN	
*Subject A.....	.....
Mil. 1A-1B.....	1½ 1½
Phys. Educ. 1A-1B.....	½ ½
Hygiene I.....	1
Math. 3A-3B.....	3 3
Phys. 1A-1B.....	3 3
Chem. 1A-1B.....	5 5
German A-B.....	3 3
Elective.....	2
	17 18

SOPHOMORE	
Mil. 2A-2B.....	1½ 1½
Phys. Educ. 1C-1D.....	½ ½
Math. 4A-4B.....	3 3
Phys. 4A-4B.....	3 3
Chem. 6A-6B.....	3 3
Chem. 8.....	3
Chem. 9, 100.....	3 3
Chem. 110.....	3 3
	17 17

JUNIOR		Pass Grp.		Hnr. Grp.	
Chem. 111.....	4	4	.....	4	.....
Chem. 114B.....	.....	3	.....	3	.....
Chem. 116B.....	.....	3	.....	3	.....
Chem. 120.....	3	.....	3	.....	3
Chem. 122.....	2	.....	2	.....	2
Electives.....	13	13	10	10	10
	17	18	17	18	18

SENIOR	
Electives.....	17 15
Candidates for honors at graduation are required to complete at least 4 units of Chemistry 180.	

*Choice of Electives.*—All students are expected to choose their electives in accordance with some comprehensive plan. They may specialize in pure chemistry, or divide their work between chemistry and any related field, such as physics, biochemistry, mineralogy and geology, metallurgy, agricultural chemistry, etc., and will be advised by the Study Lists Committee. All students, at the beginning of the junior year, are required to submit a complete plan of their proposed work in the junior and senior years. With the approval of the Study-Lists Committee, this plan may be modified later.

Students who expect to specialize in chemical technology are strongly recommended to choose their electives in substantial accordance with the following schedule:

FRESHMAN	
Mech. 8B.....	2
JUNIOR	
Mech. 2A.....	3
Mech. 6A.....	5
Mech. 102A-102B.....	3 3
C. E. 108A.....	3
	9 8

SENIOR	
Chem. 141, 145.....	5
Chem. 140A-140B.....	2 2
Mech. 103A.....	3
Mech. 105A-105B.....	3 2
Mech. 117A-117B.....	2 2
E. E. 100A-100B.....	2 2
E. E. 100C-100D.....	1 1
	18 9

\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

**CURRICULUM FOR NURSES**

In November, 1917, the Academic Senate established a curriculum for the training of nurses and appointed a committee to administer the curriculum. The curriculum is designed to meet the need for scientifically trained women to fill administrative and teaching positions in schools of nursing and to go into the many branches of public health work.

The curriculum is one of five years. It leads to the B.S. degree and a certificate in nursing. The first two and a half years\* are spent in the departments at Berkeley, then two years at the University Hospital School of Nursing in San Francisco, and the final half-year again in the departments at Berkeley.

The course as prescribed by the University of California follows:

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

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

A minimum programme of 80 units must be completed in the first two and a half years.

The Junior Certificate requirement in the College of Letters and Science must be met at the end of two years, during which period the student's study card is subject to the approval of that college. The following special subjects must be included in the work of the first two and a half years:

Chemistry 1A-1B .....	10
Anatomy 102 (General Human Anatomy) .....	3
Bacteriology 1 (General Bacteriology and Microbiology) .....	4
Household Science 102 (Food and Dietetics) .....	5
Hygiene 2 (Essentials of Personal and Public Hygiene) .....	2
Hygiene 3 (Elementary Epidemiology) .....	3
Physiology 1 (Introductory Human Physiology) .....	5
Zoology 1A (General Zoology) .....	5
Economics 1A-1B (Principles of Economics) .....	6
Economics 180 (The Control of Poverty) .....	3
Economics 181 (Care of Dependents) .....	3
Psychology 2A (General Psychology) .....	3

\* Students entering this curriculum may find it necessary to remain for three years in the departments at Berkeley in order to complete the special requirements as well as the requirements for the Junior Certificate. Such students will complete a minimum programme of 92 units (including 18 upper division units) in the departments at Berkeley and will receive the bachelor's degree after completing the additional years at the School of Nursing.

The following schedule indicates sequence and arrangement of courses during the first two and a half years. It presupposes that the student who enters will have met all or almost all of the language requirements (b) for the Junior Certificate (see p. 32). Otherwise there will be difficulty in meeting the Junior Certificate requirements along with those of the Nursing School.

<i>First Year</i>		<i>Second Year</i>	
	Units		Units
Phys. Educ.....	1 1	*Economics 180, 181.....	3 3
*Chemistry 1A-1B.....	5 5	*Hygiene 3.....	3
*Hygiene 2.....	2 ...	*Zoology 1A.....	5 ...
*†Economics 1A-1B.....	3 3	Physical Education.....	1 1
‡Language.....	5 5	*Anatomy 102.....	3 3
Elective.....	2	‡English 1A-1B.....	3 3
	15‡ 15‡	*Bacteriology 1.....	4
		Elective.....	5 ...
			16‡ 16‡
<i>Third Year (First Half-year)</i>			
*Household Science 102.....	5		
*Physiology 1.....	5		
*Psychology 2A.....	3		
Elective.....	3		
			16

The student in this curriculum should plan to spend ten weeks' preparatory period at the School of Nursing during the summer vacation following her first year at the University. This will not only afford the student an opportunity to learn whether she cares to continue the study of nursing, but it will enable the faculty to judge of her qualifications for the profession of nursing.

#### COURSE AT THE SCHOOL OF NURSING

The two years at the School of Nursing, involving fifty weeks each year, are spent in practice nursing and in lectures and laboratory work in special medical and nursing subjects. See the Announcement of the School of Nursing for particulars.

#### COURSE FOR THE FINAL HALF-YEAR AT THE UNIVERSITY

A programme of 16 units, including 9 units of upper division work, will be arranged with reference to the branch of nursing which the student expects to enter.

\* Required for admission to School of Nursing.

† Economics 1A-1B will count both as a required course for School of Nursing and as a year course for the Junior Certificate.

‡ Probable subjects for the Junior Certificate requirements in Letters and Science. Instead of English 1A-1B in the third and fourth semesters, the student may elect any other year course in groups 1, 3, or 5, as on pages 33 and 34 herein.



**PUBLIC HEALTH NURSING CURRICULUM**

*Admission Requirements.*—The applicant must satisfy the University requirements for admission either as regular or as special student. In addition she must be a graduate of an acceptable school of nursing and must have fulfilled the legal requirements for the practice of her profession. She must pass a satisfactory oral examination and must submit acceptable credentials and references.

The curriculum is one year in length and leads to a Certificate in Public Health Nursing. Further details will be given in a separate leaflet to be obtained from the Recorder of the Faculties.

SCHOOL OF ARCHITECTURE

The requirements for admission to the technical course in architecture are the junior certificate in the College of Letters and Science and the following specific courses at the University. The matriculation requirements are set forth in earlier pages of this circular. If the course is to be completed in six years, these courses must be completed in the lower division: Mathematics 3A-3B, 4A-4B; Graphic Art 14 (two semesters), 127; Physics 1A-1B; Architecture 1, 2, 3, 5A-5B, 11, 12A-12B, 13A-13B.

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

	Third Year	
	1st	2d
	half-year	half-year
	Units	Units
Architecture 101A-101B...	3	3
Architecture 5A-5B.....	1	1
Architecture 105A-105B.....	1	1
Architecture 106A-106B.....	1	1
Architecture 12A-12B.....	1	1
Architecture 13A.....	1	..
Architecture 14A-14B.....	1	1
Architecture 107.....	2	..
Civil Engineering 117.....	..	3
Civil Engineering 118A-118B.....	3	3
Graphic Art 128A-128B ...	2	2
	<hr/>	<hr/>
	16	16

Fourth Year		
Architecture 102A-102B...	4	4
Architecture 5B-5F.....	1	1
Architecture 105E-105F.....	1	1
Architecture 106C-106D.....	1	1
Architecture 12A-12B.....	1	1
Architecture 14A-14B.....	1	1
Architecture 108A-108B...	3	3
Civil Engineering 107E-107F.....	3	3
Civil Engineering 108F....	..	1
	<hr/>	<hr/>
	15	16

First Graduate Year		
	1st	2d
	half-year	half-year
	Units	Units
Architecture 203A-203B...	4	4
Architecture 206E-206F...	1	1
Architecture 209A-209B...	..	2
Architecture 209A-209B...	2	2
Civil Engineering 1A.....	3	..
Civil Engineering 116.....	..	1
Elective.....	2 or 3	2 or 3
	<hr/>	<hr/>
	12 or 13	12 or 13

Second Graduate Year		
Architecture 204.....	6	..
Architecture 216.....	..	3
Elective.....	6	4
	<hr/>	<hr/>
	12	12

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

The requirement for entrance to the School of Architecture (as distinguished from the Department of Architecture) is the A.B. degree with a major in architecture or the equivalent of this. The degree of Graduate in Architecture is conferred upon students in the School of Architecture who shall have remained in residence at least two years after obtaining the A.B. degree and who shall have satisfactorily completed the following courses of study:

*Undergraduate Departments (Berkeley)*

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

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

Architecture 1, 2, 3, 107; Graphic Art 14, 127, 128AB.

Electives.

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

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

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

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

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

First Grade .....	4 values
Second Grade .....	2

24 values required.

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

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

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

First Grade .....	4 values
Second Grade .....	2

24 values required.

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

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

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

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

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

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

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

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

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

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

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

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

Total, 168 values required.

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

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

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

## THE SCHOOL OF EDUCATION

*Purpose.*—The term "School of Education" designates the professional courses intended:

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

*Admission.*—To be admitted to the School of Education students must have junior standing and must normally have completed the requirements for the Junior Certificate.

*Length of Professional Courses.*—The minimum time requirement for the completion of the teacher-training curriculum is three years; for the higher professional degree, four years. Seniors and graduates applying for admission to the School of Education will be credited with one and two years respectively, subject to the foregoing requirements. For certain exemptions see the regulations of the State Board of Education.

For further information concerning the School of Education see the annual announcement of the school, to be obtained from the University of California Press, Berkeley.

## SCHOOL OF JURISPRUDENCE

The following persons will be admitted to the school without examination as candidates for the degree of Juris Doctor:

A. To the three-year curriculum:

- (1) Graduates of the University of California holding the degree A.B. or B.S., and holders of equivalent degrees from other colleges and universities of approved standing;
- (2) Students of the University of California who have attained at least senior standing in the College of Letters and Science or (in special cases) in the College of Commerce.

B. To the four-year curriculum:

Students eligible to the three-year curriculum and students of the University of California who have attained at least junior standing in the College of Letters and Science.

For further information see the annual announcement of the school, to be obtained from the University of California Press, Berkeley.

## MEDICAL SCHOOL

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

For those who enter the Medical School in or after August, 1923, senior standing in the College of Letters and Science requires the attainment of the Junior Certificate (see this circular, under College of Letters and Science) and the subsequent completion of at least 30 units of work, of which 18 shall normally be in upper division courses. The total number of college units presented must be at least 94. On the completion of the first year's work in the Medical School the degree of A.B., College of Letters and Science, will be granted.

In addition to the above general requirements, the student must give evidence of sufficient training in physics, chemistry, biology, English literature and composition to enable him to pursue with profit the curriculum of the school and must possess a reading knowledge of French or German. The following courses now offered represent the minimum of satisfactory preparation in the subjects named (numbers refer to the Announcement of Courses for 1922-23): English 1A-1B (6 units); Chemistry 1A-1B, 8, 9; Physics 2A-2B and 3A-3B; Zoology 1A-1B. Ten units credit in French or German will be accepted as fulfilling the requirement of a reading knowledge in these subjects.

By a resolution of the Academic Senate the faculty of the Medical School is authorized to refuse admission to applicants with a low record in the required academic subjects. Owing to limited accommodations in the Medical School, the enrollment in each class is at present limited to sixty students, who are chosen largely on the basis of their scholarship records in academic or medical work.

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

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

## PRE-MEDICAL CURRICULUM—THREE YEARS

The following tabulated curriculum represents the most satisfactory arrangement of work to meet the medical prerequisite courses, as prescribed for those entering the Medical School in or after August, 1923. The student should, however, make certain that his course is so arranged as to satisfy the junior certificate and other requirements of the College of Letters and Science so that his entrance to the Medical School and the attainment of his A.B. and M.D. may not be delayed. 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 (algebra and plane geometry); chemistry, one year; physics, one year; foreign language (French or German), two years. The junior certificate requirements will be more easily met if foreign language study has been pursued four years in the high school.

## MEDICAL SCHOOL—PRE-MEDICAL CURRICULUM

	<i>First Year</i>	Units first- half	Units second- half	Total units
*Subject A (examination in English expression).....	.....	.....	.....	.....
Military training.....	.....	1½	1½	.....
Physical Education.....	.....	½	½	.....
Hygiene lectures.....	.....	2 or 1	.....	.....
General Inorganic Chemistry and Qualitative Analysis, with laboratory (Chemistry 1A-1B).....	.....	5	5	.....
English 1A-1B.....	.....	3	3	.....
†Electives.....	.....	4 or 5	6	.....
		16	16	32

*Second Year*

NOTE.—To complete the junior certificate requirements by the end of the second year it may be necessary to postpone Chemistry 8, 9, or Zoology 1A-1B until the junior year.

Military training.....	1½	1½	.....
Physical Education.....	½	½	.....
Elements of Organic Chemistry (8).....	3	.....	.....
Elements of Organic Chemistry laboratory (9).....	3	.....	.....
General Zoology, including Embryology (1A-1B).....	5	5	.....
†Electives.....	3	9	.....
	16	16	32

*Third Year*

General Physics 2A-2B.....	3	3	.....
Physics 3A-3B, Physical measurement laboratory.....	1	1	.....
Electives.....	11	10	.....
	15	15	30
			94

\* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. Date of next examination, Saturday, August 19, 1922, 2 p.m. For further regulations concerning Subject A see General Regulations of the Faculties.

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

**MEDICAL CURRICULUM—FIVE YEARS**

In the fifth or intern year the student is required to act as intern in an approved hospital or as special worker in a department of the Medical School. By arrangement with the department concerned, qualified students may take their year of laboratory work after any half-year of the medical course.

For further information see the annual announcement of the Medical School, to be obtained from the Dean's Office at the Medical School, Parnassus, and Third avenues, San Francisco.

**CURRICULA IN PUBLIC HEALTH**

For the curricula in public health (leading to an appropriate bachelor's degree and to the advanced degree of Graduate in Public Health) see the Announcement of the Graduate Division, to be obtained from the Dean of the Graduate Division, 209 California Hall, Berkeley, California.



**CIRCULARS OF INFORMATION—(Continued)**

The Annual Register. Sent by mail by the *University of California Press, Berkeley*, for \$1.00.

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

For the following, apply to the proper Dean or Registrar:

The Circular of the California School of Fine Arts, in San Francisco.

The Annual Announcements of the Hastings College of the Law, the Medical School, the College of Dentistry, and the California College of Pharmacy, in San Francisco; the Los Angeles Medical Department, in Los Angeles.

For the following, apply to the *Dean of the College of Agriculture, Berkeley, California*:

The Prospectus of the College of Agriculture. General information concerning the College of Agriculture at Berkeley, Davis, Riverside and elsewhere; its organization, requirements for admission, degrees, etc.

The Announcement of Courses in Forestry.

The Annual Announcement of Farmers' Short Courses.

The Annual Report of the College of Agriculture and the Agricultural Experiment Station.

The Bulletins and Circulars of the Agricultural Experiment Station.

A circular containing detailed information concerning the scientific publications of the University, with prices, will be sent on application to the *Manager of the University of California Press*. The separate numbers of the several series appear at irregular intervals, making, however, uniform volumes.

**UNIVERSITY OF CALIFORNIA BULLETIN**

**Southern Branch**

**A SERIES IN THE ADMINISTRATIVE BULLETINS  
OF THE UNIVERSITY OF CALIFORNIA**

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**Issued quarterly in July, October, January, and April**