San Diego State College

Announcement of Courses

1928-1929

June, 1928

CALIFORNIA STATE PRINTING OFFICE
SACRAMENTO, 1928
The Educational Quarterly

BULLETIN OF THE

State Teachers College of San Diego

Volume Sixteen JUNE, 1928 No. 2

STATE TEACHERS COLLEGE OF SAN DIEGO
Administered Through
DIVISION OF NORMAL AND SPECIAL SCHOOLS
OF THE
STATE DEPARTMENT OF EDUCATION

WM. JOHN COOPER - Superintendent of Public Instruction
SAM H. COHN - Deputy Director of Education

ex officio Director of Education

STATE BOARD OF EDUCATION

CHARLES ALBERT ADAMS - Humboldt Bank Building, San Francisco
ALLEN T. ARCHER - 215 West 6th street, Los Angeles
MRS. MINNIE BRADFORD - 3401 I Street, Sacramento
E. P. CLARKE - Riverside
MRS. MARY ROBERTS COolidge - Dwight Way Eud, Berkeley
GORDON GRAY - San Diego
MRS. IRENE HEINEMAN - 1838 North Kenmore, Hollywood
C. L. McLANE (President) - 1627 Van Ness Avenue, Fresno
MRS. DAISIE L. SHORT - 1010 Harvard Road, Oakland
MRS. AMY S. STEINHART - 2409 Steiner Street, San Francisco

OFFICERS

EDWARD L. HARDY - President
IRVING E. OUTCALT - Vice President
ARTHUR G. PETERSON - Dean of Liberal Arts
WILLIS E. JOHNSON - Dean of Education
MRS. ADA HUGHES COLDWELL - Dean of Women
CHARLES H. LEONARD - Acting Dean of Men
MARGUERITE V. JOHNSON - Registrar
MAY ESTELLA MORROW - Assistant Registrar
GEORGIN A. AMSDEN - Faculty Secretary
MRS. CHARLOTTE B. ROBINSON - Librarian
WINIFRED WOODS - Assistant Librarian
GENEVIEVE KELLY - Assistant Librarian
P. W. VAN HORNE - Business Secretary
MARY IRWIN - Assistant Secretary
C. L. FISKE - Superintendent of Buildings
MAARTEN ROTH - Superintendent of Grounds
A. L. SEELIG - Superintendent of Heating and Electrical Equipment

Published Quarterly by the State Teachers College of San Diego,
SAN DIEGO, CALIFORNIA

Entered as second-class matter, April 15, 1913, at the post office, San Diego California,
under the act of August 24, 1912

2-59218
FACULTY

EDWARD L. HARDY, President. School Administration. B.L. University of Wisconsin; M.A. University of Chicago; study of European secondary schools, 1908-1909; Principal San Diego High School, 1906-1910. (Appointed September 1, 1910.)

IRVING E. OUTFALT, Vice President and Professor of English. Student, University of Illinois; A.B. Stanford University; M.A., Stanford University; graduate student, Stanford University; Head Department of English, San Diego High School; travel in Europe, 1910-1911; research work, Stanford University, 1921-1922. (Appointed September 1, 1912.)

ARTHUR G. PETERSON, Dean of Liberal Arts, ex officio in general charge of lower division studies. Economics and Sociology. A.B., College of the Pacific; M.A., Stanford University; Vice Principal San Diego High School and Director of Junior College, 1919, 1920, 1921. (Appointed September 1, 1921.)

WILLIS E. JOHNSON, Dean of Department of Education. Professor of Education. Graduate of State Normal School, St. Cloud, Minnesota; Ph.B., A.M., Illinois Wesleyan University; A.B., A.M., Ph.D., University of Minnesota; Sc.D., South Dakota State College; LL.D., Dakota Wesleyan University. Taught in rural, village and city schools, state normal school and university. President of State normal schools at Ellendale, North Dakota, and Aberdeen, South Dakota, and of South Dakota State College, Brookings. Member of staffs of the educational surveys of Virginia and Alabama. (Appointed April 1, 1924.)

MRS. ADA HUGHES COLDWELL, Dean of Women. Student Hopkins Art School, San Francisco; Special Study in Europe; Grade Teacher, Almaden, California, six years; Student California Medical College, San Francisco; Licensed Pharmacist, State of California; special study, Columbia University; Head of Home Economics Department, University of Montana; Summer Session, 1915. (Appointed Head of Home Economics Department September, 1907; Appointed Dean of Women June, 1915.)

GEORGIA C. AMBROSE, Assistant Professor of Commerce. Gregg School, Chicago; special secretarial training in various institutions; University of California summer sessions and extension division work; Teacher in University of California summer school, 1918; traveling representative and secretary for the Federal Board for Vocational Education, France, World War; in charge of Stereographic Division, Department of Personnel, American Red Cross Headquarters, Paris, World War; Secretary, Standard Life and Accident Insurance Company, Detroit, Michigan; Assistant editor and reporter, Ypsilanti, Michigan, Daily Press; Instructor, San Diego High School, 1920-1924. (Appointed September 1, 1925.)

VIVIAN M. ARMERGOD, Assistant, Training School, A.B., State Teachers College, San Jose; professional study, Stanford University; Teacher, San Jose public schools two and one-half years. (Appointed September, 1926.)

J. W. ALT, Principal of the Training School and Associate Professor of Education. Undergraduate work at Miami University and Valparaiso University; B.S. Graduate work at the University of Iowa and the University of South Dakota, M.A. Superintendent of city schools twelve years; conductor and instructor in teachers institutes; professor of Education at Southern State Teachers College, Springfield, South Dakota, 1922-1924. (Appointed September 1, 1925.)

RUTH G. BAGLEY, Assistant Professor of English. A.B., University of Michigan; A.M., University of California; graduate study, University of Illinois and Columbia University; Head Department of English, State Normal School, Oshkosh, Wisconsin; Instructor, San Diego Junior College, 1919-1921. (Appointed September 1, 1921.)

O. W. BAIRD, Associate Professor of Physics. A.B., University of Wisconsin; M.A., University of California; graduate study, University of Minnesota. (Appointed September 1, 1921.)

FRED BURDEKMAN, Assistant Professor of Music. B.S., Columbia University, 1914; B.Mus., Columbia, 1915. Teacher of music, Boys High School, Brooklyn, N. Y., 1916-1919; Instructor, Columbia, 1917-1919; head of violin department, University of Illinois, 1920-1921; assistant professor of music, University of North Dakota, 1921-1924; professor of music and director of the Conservatory, College of Puget Sound, Tacoma, Washington, 1924-1927. Teacher of violin, organ, theory, and appreciation; chorus, orchestra, and band director; church organist and choir director since 1914, First Baptist Church, San Diego, 1928. (Appointed May, 1927.)
MRS. GERTHEA SUMPTION BELL, Associate Professor of Education, Tests and Measurements, A.B., Indiana University; M.A., Stanford University; graduate Indiana State Normal School; research work, Clark University; Assistant in Education and Director of Practice Teaching, University of Montana; Instructor, School of Education, Indiana University. (Appointed August 1, 1916.)

MARY BENTON, Assistant Professor of Art. Student at Rosemont School, Lawrenceville; at Chicago Art Institute; at New York School of Art; at Teachers College, Columbia University; pupil of W. J. Whittemore, miniature painter, and of Sara Butterworth, craftsman.

ELIZABETH MCFEELY BROWN, Assistant Professor of French. Ph.B., M.A., Ph.D., University of Chicago, A.B. in French; Francophone, Ecole des Hautes Etudes, Paris, France; Assistant in French Department, University of Chicago, 1918-1925; Head of French Department, Rockford College, 1922-1923; Head of Department of French, Extension Division, University of California, 1924-1925. (Appointed September 1, 1925.)

LESLEE P. BROWN, Associate Professor of Spanish. A.B., Yale University; M.A., Yale University, 1913-1915; Instructor in Harvard University, 1916-1918; Instructor in University of North Carolina, 1917-1918; Instructor in University of Chicago, 1919-1925. (Appointed July 1, 1922.)

M. EUGENIO BROWN, Assistant Professor of Education. Student, University of Illinois, one year; Teacher in Illinois high schools, two years; Supervisor of Schools, Illinois and West Virginia, three years; Instructor in University of Illinois, one year; graduate student, University of Southern California, one year, Southern California, six years, San Diego, two and one-half years. (Appointed January 1, 1925.)

VINNIE B. CLARK, Assistant Professor of Geography. A.B., University of Wisconsin, 1913-1914; Assistant in Geography, University of Wisconsin, 1915; graduate student, University of Mexico, one year; Teacher in University of Southern California, Southern Branch, 1916-1920. (Appointed September 1, 1924.)

KATHERINE E. CORBETT, Training Supervisor and Assistant Professor of Education. B.S., Michigan State College; B.S. in Mathematics, Michigan State College; Teacher in Public Schools, Ypsilanti; special teacher in Americanization, July 1, 1921. (Appointed July 1, 1921.)

GEORGIA V. COY, Professor of Botany. Graduate San Diego Normal School; Teacher B.S., R.S. in Botany and Zoology, University of Wisconsin; B.S. in Botany and Zoology, University of Wisconsin; Assistant in Biology, University of California; Teacher in Public Schools, San Diego, 1920-1921; Teacher in Public Schools, San Francisco, 1921-1922. (Appointed January 1, 1923.)

ALMIRA DAWSON, Assistant Training School. A.B., San Diego State Teachers College. (Appointed September 1, 1923.)

CLARENCE J. DUFOUR, Assistant Professor of History. B.A., University of Wisconsin; M.L., Ph.D., University of Wisconsin; teacher, principal and superintendent of schools. (Appointed July 1, 1925; resigned January 1, 1928.)

LESLE S. EVETS, Accounting. B.L., University of Wisconsin; C.P.A., California, 1919. (Appointed September 1, 1920.)

WALDO H. FURBENSON, Biology. B.A., St. Olaf College, Northfield, Minnesota, 1924; Teaching Fellow, 1923-1924; Diploma St. Olaf College, Northfield, Minnesota, 1924; teacher, Roosevelt Junior High School, San Diego, 1925-1926; graduate student, University of Southern California, summers of 1925 and 1926. (Appointed September 1, 1926.)

WALLACE A. GERR, Assistant Professor of Chemistry. A.B., and C.E. (Chemical Engineer) at St. John's University; graduate student, Stanford University; Chemical Engineer, 1922-1923; with the Santa Cruz Portland Cement Company in the laboratory; and the Refinery of Standard Oil Company at El Segundo. (Appointed September 1, 1925.)

EDITH C. HAMMACK, Training Supervisor and Assistant Professor of Education. Graduate in Normal School, State Normal School of San Diego, professional study at University of San Jose; professional study at University of California; Public School Teacher, five years. (Appointed February 1, 1911.)

MRS. ALICE LEE HELDERS, German. Student at Universities of Bonn, Lauenne, Berneen; Postgraduate work at University of California; Postgraduate work at Hastings College and University of California. Head of Department of Modern Languages, State Normal School, Indiana, Pa.; Assistant Professor of Modern Languages, St. Lawrence University; Assistant Professor of Foreign Languages in the United States during the World War. (Appointed September 1, 1924.)

EDGAR L. HENRY, Professor of Anthropology. B.S., University of Geneva, Switzerland; Professor of American Research of the Archeological Institute of America; Director, San Diego Museum. (Appointed September 1, 1924.)

MYRNA ELIZABETH JOHNStON, Professor of Biology. B.S., M.S., Ph.D., University of California; Research Assistant, Scripps Institution of Oceanography, La Jolla, California. (Appointed September 1, 1923.)

SYRIL ELIZA JONES, Drama Production. B.L., M.L., University of California. Director Junior Players of Pasadena Community Playhouse; Drama Instructor in Chouinard Art School, Los Angeles; Organizer and Instructor in Play Writing of Summer Art Colony at Pasadena Community Playhouse; Drama Organizer and Director of San Diego Community Service. (Appointed September 1, 1925.)

MARJORIE E. LANDERS, Assistant Professor of Home Economics. A.B., Stanford University; graduate student at Santa Barbara State Teachers College; Head Department Home Economics, San Juan Union High School; Assistant in Home Economics, Public Hospital, Oakland, California. (Appointed September 1, 1925.)

CHARLES B. LEONARD, Professor of History. A.B., M.A., Ph.D., University of California. Professional study, three years at University of London; three years at University of London, Oxford. Instructor in History, Lowell High School, San Francisco. Teaching fellow in History, University of California, 1924-1925. (Appointed September 1, 1921.)

LEWIS B. LESLIE, Assistant Professor of History. A.B. Stanford University; M.A., University of California; Instructor, Principia School, St. Louis, Mo., 1920-1921; Teaching Fellow in History, University of California, 1922-1923; Native Sons' Traveling Fellow in Europe from University of California, 1923-1924; A. B. President of American History, Pomona College, 1925-1928. (Appointed September 1, 1924.)

GEORGE R. LIVINGSTON, Assistant Professor of Mathematics. B.S., M.A., University of California; Instructor, San Diego Junior College, 1914-1918; Head of Department of Mathematics, Santa Barbara Junior College, 1919-1921. (Appointed September 1, 1921.)

RICHARD S. MCINTYRE, Assistant Professor of Engineering. B.S. (Mining); M.S. (Petroleum Engineering) University of California; Mining Engineer Burana Mines, Ltd., Burana, India, 1914-1918; Construction Engineer, Burana Mines, Ltd., Bengal, India, 1918-1919; Mining Engineer Chemist and Mill Foreman, Greens Mines, Ltd., Nizamabad, A. C., 1919-1920; Mining Engineer, California and Old Mexico, Senior Instructor University of California, Mining and Petroleum Engineering, 1922-1924; Petroleum Engineer, Standard Oil Company of California; oil-shale research, U. S. Bureau Mines; Co-Head of Science and Mathematics Departments, Taft High School and Junior College, 1920-1924. (Appointed July 1, 1927.)

MARY RAWSON MOON, Fine Arts. A.B., University of California. Student at San Diego State College, and Colorado Springs Academy of Fine Arts. (Appointed September 1, 1926.)

ABRAHAM P. NASATIR, History. A.B., M.A., Ph.D., University of California; Assistant Teaching Fellow in History, University of California, 1920-1926; Native Sons Traveling Fellow in History (in Europe), 1924-1925; Instructor in History, State University of Iowa, 1926-1927.

*On leave of absence, 1928-1929.
†On leave of absence, 1927-1928.
WILLIAM L. NIDA, Associate Professor of Education, Supervisor of Public School Practice and Appointment Secretary, Ph.B., Ohio State University; graduate student, University of Chicago; M.A., University of Southern California; Principal of Olentangy High Schools, nine years; Superintendent of Schools, seventeen years, Illinois; Supervisor Junior High Schools, San Diego, California, two years. (Appointed July 1, 1921.)

CHARLES E. FISCHER, Director of Physical Education for Men and Women, Student at Oregon Agricultural College, the University of California and the State Normal School of San Diego; student two years under Robert Krohn; Director of Playgrounds. Y. M.C.A. Physical Education, Physical Education and Sanitary Science, United States Army camps; Berkeley School System. (Appointed July 1, 1921.)

WALTER T. PHILLIPS, Assistant Professor of Spanish and French. A.B., University of Washington; M.A., Stanford University; graduate assistant in Spanish and graduate scholar in Spanish; Stanford University; Assistant Professor of Modern Languages, Williamette University. (Appointed September 1, 1927.)

LEO FRANCIS PIERCE, Professor of Chemistry. B.S., Grinnell College; M.Sc., Tulane University; Ph.D., Stanford University; Research Assistant and Instructor, University of Idaho; Professor of Chemistry, Washburn College; Instructor and undergraduate student, Tulane University; Professor, Stanford University; Deutsche Chemische Gesellschaft. (Appointed September 1, 1923.)

ALICE M. RAWLINS, Physical Education. A.B., University of Southern California; Student Teacher in Physical Education, Polytechnic High School and University High School, Los Angeles; graduate student, University of Southern California, summer sessions 1924-1925; foreign travel, 1926. (Appointed September 1, 1923.)

MAPEL M. RICHARDS, Training Supervisor and Assistant Professor of Education. B.S. and A.M. University of Missouri; graduate student, University of Southern California; Rural School, City and High School Teacher; City Superintendent of Schools, six years; Supervisor of Mathematics, Training School, State Teachers College, Warrensburg, Missouri; Director in Demonstration School, University of Missouri State Teachers College, two years. (Appointed September 1, 1921.)

CHARLES R. SCHUBER, Assistant Professor of Industrial Arts, University of Illinois; State Normal School, Bellingham Washington; A.B., State Teachers College of San Diego; Teaching of Industrial Work at East Electric, Grand Rapids, Michigan; Director Industrial Arts at Evanston, Illinois; Muncie Normal Institute, Muncie, Indiana; State Normal School, Bellingham, Washington. (Appointed September 19, 1918.)

W. T. SKILLING, Associate Professor of Agriculture and Nature Study, State Normal School, Los Angeles; Teacher in Los Angeles county and city public schools five years; Teacher at Stanford University one year; B.S., M.A., University of California; Assistant in Physics, University of California, 1899-1901. (Appointed September 1, 1901.)

FLORENCE L. SMITH, Assistant Professor of English. A.B., Northwestern University; M.A., University of Chicago; Instructor, State Normal School at Oshkosh, Wisconsin. (Appointed July 1, 1917.)

LEILA D. SMITH,* Assistant Professor of Music. Mus. B., A.B., Oberlin College; formerly Head of Department of Music, State Teachers College, Winona, Minnesota. (Appointed September 4, 1922.)

MARIAN PEER SNOOK, Training Supervisor and Assistant Professor of Education. A.B. and A.M., Stanford University; Teacher in Public Schools; Assistant in History, Stanford University; Dean of Women, State Normal at Cheney, Washington; Francis W. Parker School, San Diego, California. (Appointed September 1, 1923.)

WILL J. STANTON, Commercial Law. L.L.B., University of Michigan; graduate study, University of Michigan; editor legal journal; editor legal, fourteen years; Prosecuting Attorney, Michigan and California; Instructor, San Diego High School and Junior College. (Appointed September 1, 1921.)

S. LATENS ER STOVALL, Assistant Professor of Engineering. Student University of Texas, 1895-1896, 1897-1898; B.S. in Electrical Engineering, University of California, 1921. Five years with the General Electric Company, research and design of apparatus; five years Chief Engineer of Mt. Washington and Electric Company; three years Chief Engineer of Irrigation Engineering; four years Efficiency Engineer in the oil fields of California. (Appointed September 1, 1924.)

*On leave of absence, 1924-1929.

ALVINA SCEL, Assistant in Geography A.B., M.A., University of California; Teaching Fellow and graduate student two years, University of California; teacher in public schools two years. (Appointed September 1, 1920.)

JESSIE RAND TAYLOR, Assistant Professor of Physical Education. B.S., Columbia University; Graduate Boston Normal School of Gymnastics; Bachelor's Teaching Diploma, Teachers College, Columbia University; tutor, Brookline, Massachusetts; graduate student, University of California; Supervisor of Physical Education, San Diego County Rural Schools, 1921-1923. (Appointed July 1, 1904.)


W. H. WRIGHT, Assistant Professor of Commerce. B.S., University of California; graduate study, one year, University of California; Head Department of Commerce, Union High School, Visalia, California, 1917-1921. (Appointed September 1, 1921.)

Special Lectures in Art

REGINALD POLAND, M.A., Director of Fine Arts Gallery of San Diego.

RALPH MORRIS, B.A., Assistant Director of Fine Arts Gallery of San Diego.

Assistant Instructors

DOROTHY R. HAYNE, Biology. A.B., San Diego State College; graduate work in Biology at Scripps Biological Institute, La Jolla, at the University of California, and at the University of Southern California; public school teaching five years. (Appointed September 1, 1924.)

GENEVIEVE KELLY, Sociology. A.B., Columbia University; A.M., Columbia University; Los Angeles Public Library School one year; teacher at Covenant Union High School; Librarian at Northern Arizona Normal School, Flagstaff; Librarian at Scripps Foundation for Research in Population Problems, Oxford, Ohio. (Appointed September 1, 1924.)

MARGERET KELLY, Fine Arts. B.E., University of California at Los Angeles, art major; teacher of art in Pasadena city schools. (Appointed September 1, 1927.)

THOMAS F. McMULLEN, Coach of Basketball. Student and coach of freshman basketball basket, Oregon State College; instructor at Francis Parker School.

HAROLD G. BRUCKER, Physical Education for Men. Coach of baseball and freshman football. Student at University of Redlands; basketball coach, U. S. Naval Training Station; basketball coach, Y. M. C. A., San Diego. (Appointed September 1, 1927.)

F. W. DE SILVA, Industrial Arts, California Institute of Technology; University of California at Los Angeles; B.A., San Diego State Teachers College. (Appointed September 1, 1927.)

NELLIE FORTER, Social Work. LL.B., John Marshall Law School; Graduate Chicago School of Civics and Philanthropy; formerly connected with United Charities of Chicago; American Red Cross and United States Children's Bureau; three years experience in Red Cross and Social Service in Austria, Czecho Slovakia and Porto Rico; resident of Hull House and Greenwhich House.

*On leave of absence, 1924-1929.
CALENDAR 1928-1929

Summer Session, 1928.
Term I, six weeks, June 25-August 3.
Term II, four weeks, August 6-August 28.

Fall Semester, 1928-1929.
September 5, 8:00 a.m., College Aptitude Test.*
September 7, 6:30 p.m., Assembly of New Students.
September 6, 8:00 a.m., Examination in Subject A (English Composition).
September 6, 10:30 a.m., Assembly of New Students.
September 7, 1:30 p.m., Fundamentals Test I.
September 8, 8:30 a.m., Reception to Freshmen.
September 8, 8:30 a.m. to 4:00 p.m., Registration of Old Students.
September 8, 8:30 a.m. to 4:00 p.m., Registration of New Students.
September 11, Class Work Begins.
November 12, Legal Holiday.
December 15, Christmas Recess Begins.
January 2, 1929, Class Work Resumes.
January 24, 1929, Mid-Year Examinations.
January 30, 1929, Mid-Year Graduation Exercises.

Spring Semester, 1928-1929.
January 31, 8:00 a.m., College Aptitude Test.*
January 31, 4:30 p.m., Assembly of New Students.
February 1, 8:00 a.m., Examination in Subject A (English Composition).
February 1, 10:30 a.m., Fundamentals Test I.
February 2, 7:30 p.m., Reception to Freshmen.
February 1, 8:30 a.m. to 4:00 p.m., Registration of Old Students.
February 1, 8:30 a.m. to 4:00 p.m., Registration of New Students.
February 4, Class Work Begins.
March 23-31—Spring Recess.
May 1, Dedication Day.
May 30, Legal Holiday.
June 7-8, Final Examinations.
June 14, Annual Commencement Exercises.

Summer Session, 1929.
Term I, six weeks, June 24-August 2.
Term II, four weeks, August 5-August 27.

HISTORICAL SKETCH

The State Teachers College of San Diego, usually designated the San Diego State College and formerly known as the State Normal School of San Diego, was established by legislative enactment March 13, 1897, and received its first class in the autumn of 1898. In April, 1921, the school, together with all of the California normal schools, received by act of the legislature, later approved by the Governor of the state and becoming effective July 28, 1921, the designation of State Teachers College, its full legal name being "State Teachers College of San Diego."

In June, 1921, under an enactment of the legislative session of the same year, known as the "State Teachers College Law," the San Diego Junior College was merged with the State Teachers College of San Diego. Under the arrangement thus made, separate courses of the lower division (freshman and sophomore years) have been offered, students preparing for the upper division (junior and senior years) of colleges and universities preparing themselves of the teaching service in the new three- and four-year curricula recently established by the State Board of Education. The four-year curricula leading to the degree A.B. (major in Education) were established for this institution June 30, 1922.

On July 1, 1927, the courses hitherto carried as "junior college" courses, will be offered as lower division courses of the regular three- and four-year curricula and the junior college, so-called, will give way to the "lower division," which will include, as heretofore, preparatory curricula leading to majors in liberal arts and the several professional fields. The certification of teachers, the authorized courses (elementary, special elementary, secondary and junior high school), are offered, and require, approximately three, four and years of work done in residence.

*Required of all students, not as a prerequisite for entrance but for purposes of guidance. Former graduates of this college and graduates from approved four-year college courses are exempt. A physical examination, a speech test and a social relations test are also required. The first two are given individually and students will make special appointments for them. The social relations test is given after college work has well started at an announced date.

This is the College for the following courses in Education: 1. CXXVIII, CVII, CVIII and CXVI. Former graduates of this college and graduates from approved four-year college courses and holders of California teaching credentials are exempt.

THE CALENDAR AND REGISTRATION

The college year is divided into the autumn and spring semesters of eighteen weeks each, followed by a summer quarter consisting of a first term of six weeks (the regular Summer Session) and a second term of four weeks in which professional courses of a seminar type are offered to students and those whose certification needs may be met by supplemental units of credit (not to exceed 4) earned in this term. Students may enter at the beginning of either semester and at the beginning of either term of the summer quarter.

The Summer Session meets the needs of regular students who wish to gain credits toward the professional diploma or the A.B. degree of teachers in service who wish to further professional training and of liberal arts students who wish to secure supplemental credit or to shorten the time for completion of work for the Junior Certificate.

Registration of students will be made September 7 and 8. A duly certified transcript of the applicant's record must be in the possession of the Registrar on or before the day of the applicant's registration.

N.B.—For details, see "Requirements for Admission."

DEPARTMENTS OF INSTRUCTION

Teacher Training

The College offers courses for the training of teachers in both the primary and upper divisions of the elementary school and in the Junior High School with special recommendations in English, Social Science, Natural Science, Mathematics, Fine Arts, Industrial Arts, Music, and Physical Education. The degree B.A. is granted to students completing the four-year courses in elementary and junior high school education and also in the liberal arts courses.

Special certification courses of secondary grade will be offered in Art, Commercial Education, Health Education, Music (Public School Music), Industrial Arts, and Physical Education.

Students who wish to enter for special certificate courses should not fail to note the matriculation requirements.

Liberal Arts

In the Liberal Arts division courses are offered in the following fields: Anthropology, Economics, Engineering, English, Foreign Languages, Graphic Art, History and Political Science, Home Economics, Hygiene, Mathematics, Music, Psychology, Botany, Physics, Chemistry and Zoology.

Students in the courses of the professional and collegiate field, with complete information as to admission requirements, will be found on the pages following under the headings "Admission," "Curricula," etc.

STANDARDS OF HEALTH, SCHOLARSHIP AND CHARACTER

All entering students will be required to meet the health standards set down by the department of health examination, and all lower division students, unless excused for cause, will be required to take the courses in physical education prescribed for freshmen and sophomores. Furthermore, each student will be expected as a matter of efficient student and community life, to keep himself in the best possible physical condition.

Standards of scholarship are based upon high entrance standards. Frequent ratings of the students are made by his instructors, so that he may at all times know how he stands; but the ability of the student to manage his own educational career, and hence reasonably near to his best capabilities are factors that will count in his final ratings.

Standards of character, as developed by and measured by honest student work, and as evidenced by evidences of the possession of thoroughgoing self-respect and community feeling, particularly as ideals in the important matters of citizenship and future parenthood, are more important than all else, and every student will have full opportunity to show that he is worthy and that he has the capacity and the will to manifest and develop character worthy of the student and student organizations, advisories have been established as follows:

THE STUDENT ADVISERS

Concerning matters of student-body policy, leaves of absence (men), personal advice (men), use of the gymnasiums, etc.—The Dean of Men.
Concerning the housing and living arrangements of students, rules of conduct, student social affairs, personal advice (women), rules of attendance, etc.—The Dean of Women.
Concerning supervision of practice teaching, conferences, etc.—The Dean of Education.

3—59218
Concerning matriculation, program of studies and teaching, credits, etc.—The Registrar.
Concerning health and physical condition, school athletics, rowing, etc.—The Director of Physical Education (women); The Director of Physical Education (men).
Concerning relations to the training school, to pupils, routine, etc.—The supervisors of training.
Concerning student-body affairs.—The executive officers of the student-body; The Dean of Liberal Arts; The Dean of Women.

STUDENT LIFE AND ORGANIZATIONS

Student affairs, and organizations to foster them, are many and varied, but are well coordinated through the central student body organization, The Associated Students. The following list indicates the major activities:
Kappa Delta Pi (National Education Honor), Delta Kappa (Chemistry), Engineering Club, Geography Club, Spanish Club, Art Club, International Relations Club, Two Masque Players, Tumble Club, Men’s Glee Club, College Orchestra.
Men: Men’s Club, Epsilon Iota, Xi Omega Delta, Phi Lambda Zi, Sigma Lambda, Kappa Phi Sigma, Omega Xi, Tau Delta Chi, College “Y” Club, The Aztec Club.
Women: Associated Women Students, Women’s Athletic Association, College Y, W. C. A., Shen Yo, Sphinx, Fra Di Noi, Komo Klub, Gamma Phi Zeta, Phi Kappa Gamma, Phi Sigma Nu, Sigma Pi Theta, Tau Zeta Rho, A. E. E. Club
Men’s Athletics: Football, baseball, basketball, track, swimming and tennis.
Women’s Athletics: Tennis, basketball, fencing, rowing and swimming.
Publications: The Aztec (weekly), Del Sudeste (year book), and El Palenque (quarterly).

APPOINTMENT SERVICE

The department of recommendations has charge of the placement of graduates, assisting them in securing teaching positions and assisting superintendents and boards of school trustees in finding qualified teachers.
Recommendations are based on records which indicate every item in the candidate’s equipment and particular care is taken to select for nomination in each case a teacher who can meet the requirements of the position.

FEES AND COURSE CHARGES

(Each Semester)
- Registration fee: $1.00
- Late registration fee: $2.00
- Fee for additional transcript: $1.00
- Special examination fee: $2.00

SPECIAL CHARGES

- Syllabi: $0.50
- English, Subject A: $2.00
- Fundamentals test: $2.00
- College Aptitude test: $3.00
- Physical service (men and women): $1.00
- Locker key (Physical Education or Arts), each key: $0.50

The above fees and charges, with the exception of the transcript and special examination fees, are payable at the time of matriculation. The English Fundamentals and Thorndike deposits are payable prior to taking the examinations.

COURSE CHARGE DEPOSITS

(Each Semester)
- Biology: $2.00
- Botany: $2.00
- Chemistry IA-1B, 6A, 6A-6B, 8-9: $2.00
- Chemistry 101-102: $2.00
- Chemistry 125-124 (per hour): $2.00
- Chemistry deposit (each course): $2.00
- Fine Arts: $1.00
- Industrial Arts IA-IB, 6A, 6A-6B, 8-9: $2.00
- Industrial Arts 4-5: $2.00
- Industrial Arts 8A, 8B, 117: $2.00

Library (each course, except 2A, 2B): $2.00
Surveying: $5.00
Zoology IA-IB: $2.00
Zoology 1B: $7.00

Course charges are payable at a time to be announced, usually about the fourth week, on the official bulletin board. Failure to pay on the specified dates will entail a penalty of 10% on the bill.

ORGANIZATIONS FEES

(Each Semester)
- Associated Students: $7.50
- Freshman, Sophomore, Junior, Senior Class: $5.00
- Associated Women Students: $5.00
- Associated Men Students: $5.00

EXPENSES

The Dean of Women will furnish, upon request, addresses of homes in which board and room may be secured, also lists of apartment houses and single rooms which may be patronized by students. Occasionally students are placed in positions where they may earn board, room, or small monetary compensation, but because of the irregularity of the demand it is not advisable to enter college entirely dependent upon such an opportunity.

Board and room, two meals per day, may be procured at from $4 to $5 per month. Apartments consisting of one room, kitchenette and bath, renting at $15 to $20 per month, will accommodate one or two persons. Single rooms with kitchen privileges at from $10 to $20 per month are also available. All those listed are in the vicinity of the College.

Other expenses for one semester of eighteen weeks may be estimated from the statement of Fees and Expenses, and Course Charges.

SELF HELP AND LOAN FUND

Opportunities for part-time employment for the students not residents of San Diego are frequent, particularly in the case of young women who are able to assist in housework or in the care of children. A limited amount of clerical work will be at $2 per hour. The library may be offered from time to time, but ordinarily is not sufficiently remunerative to reduce expenses materially. An employment service for men is conducted by the Dean of the College. The professional loan fund is administered for students in the teacher training courses, seniors being eligible for assistance. The general loan fund is available for short time loans to worthy young men and women who have been in attendance at the college one or more years.

The Kiwanis Club of San Diego and the City Teachers’ Association have set aside funds for student loans.

BUILDINGS AND EQUIPMENT

The main college building houses the library, the auditorium, the gymnasium, offices, laboratories and classrooms. The training school is housed in three separate units. The building for Applied Arts was made ready for occupancy in September, 1922, as a result of the remodeling of the old Training School Building. A new building for physical education of men was finished January 1, 1923, and new quarters for the physical education of women at the same date.

The institution has facilities and equipment as follows:
- A College Library of 13,000 volumes.
- Laboratories for Physics, Chemistry, and Biological Science.
- Shops, studios, and laboratories for the courses in Fine and Industrial Arts and in Home Economics.
- For Physical Education, a well equipped gymnasium, lockers and showers, classrooms, and athletic field, tennis courts, etc.

PHYSICAL CONDITIONS: CLIMATE

The physical conditions in San Diego for study are unsurpassed, since sustained indoor and outdoor effort can be made without discomfort from the heat or cold. Red lines of 60 degrees and 70 degrees, showing the summer temperature in San Diego, enclose Alaska and Siberia. Blue lines of 50 degrees and 60 degrees, showing the winter temperature at San Diego, enclose Egypt and Arabia. Thus San Diego may be said to have Alaskan summers and Egyptian winters.
OPPORTUNITIES FOR CULTURE AND RECREATION

Environmental conditions other than the physical ones must be taken into account before choosing a college. The institution's extra-curricular activities, the environment it provides for the student, and the opportunities offered by the location to undergraduate students are factors which should not be neglected.

San Diego is an eligible college city because while it is not a large city yet it has certain metropolitan advantages for the student. Many of these are to be found in the location itself, in the San Diego Exposition the year of 1915-1916, including the buildings themselves, which in their consistent and effective carrying out of motifs of the best types of Spanish colonial art, make up one of the finest in the world. Situated in the midst of these buildings is a museum of anthropology and culture history which are unsurpassed in certain fields, together with natural history and materials for the study of the science of archaeology. There is complete cooperation with the directorate of the collection and the Director of the San Diego Museum is a member of the faculty of the College. The campus is a veritable museum of excellence in paintings, and the plans for the development of a Public Conservatory of Music for which the great out-of-door organ furnishes a beginning. Balboa Park, in which all of these are located, also contains a modern horticultural farm and a great stadium for gymnasium, community gatherings and pageants.

At La Jolla, within the city limits, the Scripps Biological Institute, operated by the University of California, gives opportunity for important cooperation in the biological field.

The courses in commerce and other branches of economics will be considerably aided by San Diego's growing importance as a commercial point, particularly of the College will be able, is planned, through its department of economics, to assist the local Chamber of Commerce in industrial and commercial surveys.

The professional, teacher-training courses profit because of the policy of cooperation generously followed by the City School Department, which has resulted in a high degree of work in practical teaching in the Diego's fine system of schools, with all of the modern divisions of kindergarten, elementary schools, junior high schools, and senior high schools, furnishes numerous opportunities to demonstrate to students in training, for cooperation between the specialists of the city school system and the College.

Such a model is in modern thought and influence is brought to the student body through its weekly assembly, which, as arranged by a committee of students and faculty, include almost every worthwhile type of topic and appeal.

Routine and Procedure

Outside of the necessary routine and procedure in the conduct of registration, class attendance, conduct of examinations, college affairs are controlled by standards which are the result of experience or which reflect a very definite public opinion and college morale. There is no honor "system" in the College; but there is a standard of honor. Mutations of personal conduct are not subject to the ordinary rules of personal conduct, but are relaxed on the whole to meet the needs of the individual and the business world.

One problem, in process of solution, is that of study relations to the courses of study. At present, the courses are prescribed in arrangement of curriculum and "grading" in general. The choice of the courses prescribed is, of course, necessary. However, an effort is being made to the study of the students, and the student body a certain voice in and responsibility for study arrangements, through the various committees.

Recreational opportunities of an unusual number and variety are open to students, because of the combination of three conditions, namely, close proximity to the South and the South, close proximity to the North, and the all kinds, including swimming and rowing, are possible the year round. The College Outdoor Theater makes possible the presentation of many student productions in drama and pageant.

REQUIREMENTS FOR ADMISSION

1. Freshman Standing

Every person admitted as a student to this college must be of good moral character, of good health, at least 16 years of age, and of that class of men, women, or of proper age, would be admitted to the public schools of the state without restriction. Those who wish to enter a teacher training course must be free from any physical or other defect which would impair their fitness for the teaching service.

California, who have completed a regular four-year course of study, and who are recommended by the principal of the school in which such course of study was completed, may be admitted without examination.

Candidates may be admitted by either of two methods:

1. Clear admission. High school graduates who present twelve recommended units in English, mathematics, science, and social studies, and eight of each of the titles of the courses recommended by the school, will be granted clear admission.

2. Provisional admission. High school graduates who present fewer than the prescribed number of recommended units, but who through their principals' estimations of their abilities, present satisfactory evidence of ability to profit by courses in teacher training, who have abilities, and interests and talents desirable in teaching, who have satisfactory records in suitable colleges or other institutions, and vision students. At the close of the first semester in residence, a complete re-evaluation of the records of all such students will be made. Students with provisional admission may be granted clear admission, dropped from the college, or for sufficient reason continued as provisional students.

Certificates of successful examinations before the College Entrance Examination Board will be accepted to candidates who are recommended by the Committee on Advanced Study. These examinations may be taken at any time during the student's college career, and are not limited to freshmen.

II. Advanced Standing

Students from other institutions of recognized collegiate rank may be admitted to advanced standing upon such terms as the Committee on Advanced Standing may determine. In any case the student must have a scholarship record equal to a C average in his college. Every student is required to present a duly certified transcript to the College authorities, and the transcript must be genuine, and the basis upon which the applicant was matriculated and the preparatory subjects for which matriculation credit was given.

III. Special Students

A candidate not less than 21 years of age who has not had the opportunity to complete any course in high school but who is considered to be qualified may be admitted as a special student. He may take certain courses which will be admitted to special standing. Applicants will not ordinarily be admitted directly from the high school. However, if the Committee on Advanced Standing determines that the student is qualified, the student may be admitted to special standing after submission of evidence in writing to the Committee.

GENERAL REGULATIONS

Examinations

All students entering the College are required to take the following tests, mainly for purposes of guidance and assistance: (a) College Aptitude Test; (b) English Composition Test; (c) Social Relations Test; (d) Speech Test. Exceptions may be made for students who register for 6 units of work or less, and for those students, entrance examinations in the subjects of fundamental importance for the work proposed will be assigned whenever it seems advisable. Such students may be admitted to the College without satisfying the regular entrance requirements.

Registration

All students are required to register on one of the regular registration days preceding the opening of the class work of each session. Any student who registers after the close of the first week of the semester is subject to limitation of his study list. Late registration fee of two dollars must be paid for registering after the close of the regular registration period. Changes in study lists may be made only upon the approval of the proper administration officer.

Matriculation

A student is matriculated when he has satisfied all entrance requirements and has demonstrated his ability to do satisfactory college work. The standing of all students is therefore provisional during the first semester of residence.
Classification

Regular students are those students who have complied with the requirements of matriculation and are registered in 12 or more units of work.

Limited students are partial course students who, for adequate reasons, have been permitted to register for less than 12 units of work.

Special students are mature students who have not satisfied all entrance requirements and who are registered for such courses as the college, through its committee on student activities or the advisor, considers them to qualify them to pursue. Special students may also be limited students.

Admission to the junior college is open to all students who have completed 63 units of work, those who have completed 64 to 91 units are juniors; and those who have completed 92 or more units are seniors.

Units of Work and Study-List Limits

A unit of credit represents approximately, for the average student, three hours of actual work, per week, through the one semester—one hour of lecture or recitation, together with two hours of preparation, or three hours of work.

Sixteen units, in addition to physical education (4 units), constitute a normal semester load for students except those in Engineering, where the normal requirement is 174 or 18i units. An entering freshman, however, is allowed to enroll for a maximum of 17 units, and all other students for a maximum of 18 units, provided such additional enrollment seems to the adviser necessary or advisable in order to round out the study program. Ordinarily, only 16 units, in addition to physical education, will be credited toward graduation; except that, after a student's first semester at the college, a program of 17 units, in addition to physical education, will be credited provided the student was registered for at least 12 units in the preceding semester and attained an average of not less than 1.5 grade points; 18 units will be credited provided the student attained an average of not less than 2.9 grade points. Any course in which a student received a passing grade may be used in the satisfaction of course requirements, even though such course is in excess of the units credited for graduation. Credit for a program that does not conform to the above regulations can be obtained only by permission of the Scholarship Committee, upon approval of the student's advisor. Any student under 213 years of age may be allowed to register for less than 12 units without the permission of the Registrar.

SPECIAL SUBJECT REQUIREMENTS

English Composition

An entrance test in English (Subject A or an equivalent) is given and the results must be considered by students and advisers in making the selections. Students are themselves primarily responsible in the matter of overcoming deficiencies. No student whose use of the English language continues to be notably inadequate or inadequate should expect to receive a certificate of graduation from the college.

Physical Education and Hygiene

All regular students upon admission to the college must report to the proper health examiner for enrollment in physical education classes. A student may be excused from enrollment in physical education on account of illness or physical disability only by petition to the health examiner.

Scholarship Grades and Grade Points

The following grades are used in reporting the standing of students at the end of the semester:

A, excellent; B, good; C, fair; D, passed; E, conditionally passed; F, failed; I, incomplete.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no points; E, minus 1 point per unit; F, minus one point per unit.

The grade E is used to record work which is of low order but which may be made passable. If, by the close of the semester the work has been satisfactorily completed the grade E is changed to a D, otherwise it is incomplete and unacceptable; in the event the student is in incomplete or unacceptable in the course the student is considered to have failed. In the case of an E the work must be repeated. To qualify for a certificate in any curriculum or for a transcript of scholarship record in transferring to another college, a student must have earned as many grade points as he has earned units of credit; that is, he must have attained an average of at least 3.0 grade points in all work undertaken at the College.

Conditions and Failures

Credit is not given for courses in which the student has been given a grade of C or (conditioned) on the removal of the deficiency by supplementary examinations or study. A report of 'Incomplete' is made when the student, for good reasons, has been absent from class meetings or examinations or has failed to perform a definite part of the work of the course. A condition or "Incomplete" is not removed before the end of the following semester is considered failure. In case of failure in a course no credit is given until the course has been repeated.

Probation and Disqualification

A scholarship record below an average of grade D per unit of work undertaken in any single semester disqualifies a student for further attendance at the College. Probation status may be continued until the cumulative deficit is reduced, in the case of a regular student to an amount less than 12 and, in case of a limited student, to an amount less than the average number of units carried per semester.

Any probational student whose scholarship falls below an average grade of C in any single semester is disqualified for further attendance at the College. Probation status may be continued until the cumulative deficit is reduced, in the case of a regular student to an amount less than 12 and, in case of a limited student, to an amount less than the average number of units carried per semester.

A disqualified student may be reinstated after an interval of one semester for reasons satisfactory to the Committee on Scholarship. All applications for reinstatement must be in writing.

Eligibility for Extra-Curricular Activities

A limited student who fails to pass in all subjects for which he is registered and every other student who fails to pass in 12 units of work in any semester is ineligible in the next succeeding semester to represent the College in connection with any athletic, literary, musical, dramatic, social, or other organization.

Special Examinations and Reexaminations

Entrance examinations and examinations taken for the purpose of removing matriculation deficiencies or making up a course left "incomplete" are regarded as special examinations. A fee of two dollars, payable in advance, is charged for every special examination and reexamination.

Withdrawals From Class

Any student may withdraw from classes without the permission of the proper authorities. An unauthorized withdrawal from a class will result in a mark of failure on the student's record. A withdrawal after the sixth week of a semester except for reasons beyond the student's control is interpreted as a failure in the course.

Leave of Absence

A student should apply to his instructor for a leave of absence or an excuse for having been absent from a class exercise. A leave of absence for one or more days should be obtained from the proper dean. An excuse for absence does not relieve the student from completing all the work of each course to the satisfaction of the instructor.

Fellowships

Fellowships (without honorarium) have been instituted, a fellowship to be conferred by vote of the faculty on nomination of the department concerned, and to entitle the recipient to special training and to recommendation to county boards of education for the special elementary or the special junior high school certificate. Teachers Colleges, and must submit satisfactory evidence of special fitness and attainment, and must be able to show two years of college or other equivalent training and special fitness. Teachers Colleges, and must submit satisfactory evidence of special fitness and attainment, and must be able to show two years of college or other equivalent training and special fitness. Teachers Colleges, and must submit satisfactory evidence of special fitness and attainment, and must be able to show two years of college or other equivalent training and special fitness. Teachers Colleges, and must submit satisfactory evidence of special fitness and attainment, and must be able to show two years of college or other equivalent training and special fitness. Teachers Colleges, and must submit satisfactory evidence of special fitness and attainment, and must be able to show two years of college or other equivalent training and special fitness.

DEGREE REQUIREMENTS

General Requirements for the Degree of Bachelor of Arts in the Teachers College and the Liberal Arts College

The electives must be so chosen that, with the required work, the student will have a total of 48 units of credit in English, 12 units in Social Science and 12 units in Natural Science. Courses in journalism or in speech arts are not accepted as satisfying the English requirements. The electives in Natural Science may be reduced to a minimum of 6 units if the student presents acceptable grades from the
high school in Natural Science in laboratory courses offered in the third or fourth year. In general, each year's work of high school science will thus reduce the requirements by 3 units of credit. No college credit will be given for the high school work, simply an exemption of the requirements will be permitted.

Courses in the freshman and sophomore years are called Lower Division work and courses in the junior and senior years are called Upper Division. The former are given course numbers below 100 or C, and the latter are given numbers 100 or C, or above.

At least 40 of the units completed during the junior and senior years shall be in Upper Division courses. Introductory courses open to first-semester freshmen when taken in the junior or senior year may involve either additional work or reduction in the number of units of credit.

The course in the U.S. Constitution (Pol. Sci. 101), or the substitute course in Political Science 1B or U.S. History 171B, is required of all candidates for the A.B. degree.

A minimum of 124 units of college work is required. Not less than 54 of these units must be earned in the junior and senior years.

All candidates for the A.B. degree must complete at least 30 units of work at this College. These units must be completed in the senior or final year, and 12 of these units in the fall or spring semester of the senior year. The latter provision shall not apply to graduates from the elementary school course of this College until September 1, 1926.

The number of grade points acquired in this College by the candidate for a degree must be equal to the number of units registered on his permanent record card. (See page 16 for an explanation of scholarship grades and grade points.) Credits from other colleges will be evaluated in accordance with this general plan.

TEACHERS COLLEGE CURRICULUM

Leading to the A.B. degree and also to the General Elementary Credential (permitting the holder to teach in grades 1-8), or to the General Junior High Credential (permitting the holder to teach in grades 7-12), or to both credentials.

Freshman Year

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 10A (unless taken in high school)</td>
</tr>
<tr>
<td>Social Ethics</td>
</tr>
<tr>
<td>Geography 1A, Elements (Natural Science)</td>
</tr>
<tr>
<td>Physical Education 1A or 52A</td>
</tr>
<tr>
<td>Fine Arts 6A, Art Structure</td>
</tr>
<tr>
<td>Second Semester</td>
</tr>
<tr>
<td>Biology 10B (unless taken in high school)</td>
</tr>
<tr>
<td>Geography 2A, Regions (Social Science)</td>
</tr>
<tr>
<td>Physical Education 1B or 52B</td>
</tr>
<tr>
<td>Ed. XIX, Art in the Elementary School*</td>
</tr>
<tr>
<td>Either Semester</td>
</tr>
<tr>
<td>Sociology 10, Introduction to Social Science</td>
</tr>
<tr>
<td>Electives for Junior High Credential 18, for Elementary Credential or both</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology 2A, General Psychology</td>
</tr>
<tr>
<td>Music 1A, Music Fundamentals</td>
</tr>
<tr>
<td>Physical Education 52, Physical Activities or Physical Education 1C or 52C</td>
</tr>
<tr>
<td>Second Semester</td>
</tr>
<tr>
<td>Psychology 2C, Genetic Psychology</td>
</tr>
<tr>
<td>Ed. XXVII, Methods in the Elementary School*</td>
</tr>
<tr>
<td>Physical Education 53, Physical Education in Administration*</td>
</tr>
<tr>
<td>Physical Education ID or 52D</td>
</tr>
<tr>
<td>Either Semester</td>
</tr>
<tr>
<td>Ed. I, Introduction to Education</td>
</tr>
<tr>
<td>Industrial Arts 61A or 61H* (both required)</td>
</tr>
<tr>
<td>Electives for Junior High Credential 22, for Elementary Credential or both</td>
</tr>
</tbody>
</table>

Junior Year

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed. CXXVIII Primary Curriculum*</td>
</tr>
<tr>
<td>Ed. CXXIX Mathematics in the Elementary School*</td>
</tr>
<tr>
<td>Ed. CXXXIX Children's Literature*</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed. CXIV Practice Teaching</td>
</tr>
<tr>
<td>Either Semester</td>
</tr>
<tr>
<td>Ed. CXVII Educational Measurements</td>
</tr>
<tr>
<td>Curriculum in Field of Academic Major or Ed. CXI Elementary Curriculum* (or both)</td>
</tr>
<tr>
<td>Physical Education 51, Health Education</td>
</tr>
<tr>
<td>Electives for Junior High Credential 20, for Elementary Credential 12, or both</td>
</tr>
</tbody>
</table>

Senior Year

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
</tr>
<tr>
<td>Ed. CXV Practice Teaching</td>
</tr>
<tr>
<td>Second Semester</td>
</tr>
<tr>
<td>Ed. CXX Principles of Elementary Education* or Ed. CFI Principles of Junior High School Education*</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

Academic Teaching Major

The junior high school requires departmental teachers who have specialized in particular fields. Students seeking the junior high school credential must so pattern their courses that they will include a major of twenty-four units of credit in a subject or field taught in junior high school. This academic teaching major should be patterned early in the course so that it will be sure of approval as satisfying this requirement. If the student has not had adequate preparation in the high school for the academic teaching major, some additional college work may be necessary. A minimum of twenty-four units in education is required for any teaching credential and a maximum of forty credits may be taken.

PROFESSIONAL COURSES

The Elementary Diploma Course

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
</tr>
<tr>
<td>Orientation</td>
</tr>
<tr>
<td>Introductory Principles of Education I</td>
</tr>
<tr>
<td>Introduction to Geography, Elements 1A and Regions 2A</td>
</tr>
<tr>
<td>Mathematics in the Elementary School, Ed. XII</td>
</tr>
<tr>
<td>Physical Education</td>
</tr>
<tr>
<td>Electives*</td>
</tr>
</tbody>
</table>

Total | 32 |

Sophomore Year

<table>
<thead>
<tr>
<th>Units of Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology 2A and 2C</td>
</tr>
<tr>
<td>Primary Curriculum, Ed. CXXVIII</td>
</tr>
<tr>
<td>Children's Literature, Ed. CXXVI</td>
</tr>
<tr>
<td>Music in the Elementary School, Ed. XVII</td>
</tr>
<tr>
<td>Art in the Elementary School, Ed. XIX</td>
</tr>
<tr>
<td>Physical Education, 52, 53, 52D or 52D</td>
</tr>
<tr>
<td>Electives</td>
</tr>
</tbody>
</table>

Total | 32 |

*Not required if only an elementary school credential is sought.

Taking all courses excepting Ed. CFI leads to the combined Elementary and Junior High School Credential, permitting the holder to teach in grades 1-8. See the statements of requirements in social sciences, natural sciences and academic teaching major.

1. Electives must be so chosen that the student will have a total of twelve units of credit in Social Science (Contemporary Civilization, Political Science, History, Economics, Sociology, Anthropology) and twelve units of Biological and Physical Science. They must include six units in Biology unless the student presents a record of high school science courses and the student presents a record of high school science courses that shows a total of twelve units of credit in Science. Electives in the junior year must include a minimum of four units in Upper Division courses in the Liberal Arts curricula.

4—59218
**CURRICULUM FOR SPECIAL CERTIFICATION**

Special credentials enabling the holder to teach in the special field designated in grades one to twelve, inclusive, will be granted upon graduation with the B.A. degree in the fields of Art, Commercial Education, Health Education, Industrial Arts, Music, and Physical Education. Fifteen units of work in education as a minimum and from twenty-four to fifty units in the special field will be required. (California teachers in service may, before September 15, 1928, file application for the credential desired with the Division of Teacher Training and Certification, with an outline of the work planned to meet the requirements expiring September 15, 1928. If the programs are acceptable and can be completed by September 15, 1930, an extension of time will be granted.)

**Physical Education Type**
- Credential of Elementary and Junior High School Grade.
- Credential of Secondary School Grade.

**Arts Type**
- Credential of Elementary and Junior High School Grade.

**Music Type**
- Public School Music.

**Prevocational Type**
- Credential of Elementary and Junior High School Grade.
- Credential of Home Making.
- Credential of Occupational and Home Mechanics.

**Letters and Science Curriculum**

(Subject to the approval of the State Board of Education. For additional requirements see page 17.)

Lending to the A.B. degree. Completion of this course also enables the graduate to satisfy the undergraduate requirements for the General Secondary Credential which, with post-graduate work, will enable the holder to teach in a senior high school or junior college.

**Lower Division**

a) General Requirements for All Students.
- College Aptitude Test.
- An examination in Subject A (English Composition). 1 unit (Men) 2 units (Women).
- Physical Education, 2 units.
- Social Ethics, Orientation, 2 units.
- English, 6 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.

c) Mathematics.
- High school courses in elementary algebra and geometry.

d) Natural Science, 12 units.
- A maximum of 6 units chosen from the following high school courses when offered in the third or fourth year of the high school:
  - High School Physics,* 3 units.
  - High School Chemistry,* 3 units.
  - High School Botany, 3 units.
  - High School Biology, 3 units.
  - High School Zoology, 3 units.
  - High School Zoology, 3 units.
  - English, 6 units.

- A minimum of 6 units chosen from the following:
  - Astronomy, 1, 3 units.
  - Biology, 10A, 10B, 6 units.
  - Botany 2A, 2B, 8 units.
  - Botany 4, 3 units.
  - Chemistry 1A, 1B, 10 units.
  - Chemistry 6A, 6B, 6 units.
  - Chemistry 8, 9, 6 units.
  - Geology 1A, 2 units.
  - Physics 2A, 2B, 6 units.
  - Physics 3A, 3B, 2 units.
  - Physics 4A, 4B, 12 units.

- Zoology, 1A, 2B, 8 units.

- Foreign Language, additional to (b) or Mathematics, additional to (c), 6 units, chosen from the following:
  - German: Any two consecutive courses of A, B, C, D, 102A, 102B, 110D.
  - Latin: Two years of High School Latin, each year counting as 3 units.


- Social Science, 12 units, chosen from the following:
  - Anthropology, 1A, 1B, Commercial Law 18A, 18B.
  - Economics 1A, 1B, Economic History 2, 3.
  - History 4A, 4B, 5A, 5B, 5A, 5B.
  - Political Science 1A, 1B.

- Psychology 2A, 2B, Sociology 50.

- Courses required for the major.
  - See subjects listed under each major subject in the descriptive list of courses of instruction.

**Upper Division**

(See page 17 for additional requirements.)

The courses prescribed in the lower division should be completed before the Junior year. The removal of deficiencies in the Junior year may prolong the college course beyond the normal period of time.

*One of the courses marked with an asterisk must be chosen to meet the Natural Science requirements and the Social Science requirement, respectively.
The requirements of the Major Department must be completed in accordance with the following general rules:

A minimum of 24 units in the Major subject is required, at least 15 units of which shall be in upper division courses completed in the Junior and Senior years. The Major Department shall recommend, in addition to the courses prescribed, such other courses as may be considered desirable and shall exercise advisory supervision over the student's program during his Junior and Senior years.

The student is advised to choose his Major Department as early in his college course as practicable so that he may be able to plan his work according to the requirements given in the descriptive list of courses under the head of the Major Department. Failure to meet the lower division requirements of the Department before the Junior year may make it impossible to satisfy the upper division requirements within the normal period of two years.

A minimum of 12 units in Education is required and a maximum of 18 units will be counted toward the A.B. degree in the College of Liberal Arts. The courses in Education must be chosen from the following list:

Ed I, Introductory Principles (lower division elective); Ed CL, Principles of Junior High School Education; Ed CVI, Principles of Elementary Education; Ed CVII, History of Education; Ed CVIII, Educational Measurements; Ed CIX, Educational Administration and Supervision; Ed CXI, Elementary Statistics; Psychology 2C, Genetic Psychology.

A total of not more than 12 units of the applied and vocational courses taken in one or more of the departments listed below will be counted toward the degree:

Economics: Typewriting: 1A-1B, 2A; Stenography 1A-1B, 2A; Office Methods 3A; Business Mathematics A.
Industrial Arts: Woodwork 1A-1B; Painting and Finishing 2; Wood Turning 5; Cabinet Work 5; Upholstering 6; Concrete Work 7; Sheet Metal 9; Pipe Fitting 19; Automobile Mechanics 15; Elementary Industrial Arts 6A and 6B; Auto Repair 116; Advanced Cabinet Work 117.
English: Applied Journalism 53A-53B.
Music: Glee Clubs and Choral Clubs.
Physical Education: All sport and play activities; Physical Education 51 and 53.

**Commerce Curriculum**

a) General Requirements.

College Aptitude Test.

An examination in Subject A (English Composition).

Hygiene, 1 unit (Men), 2 units (Women).

Physical Education, 2 units.

Social Ethics.

Orientation, 2 units.

English Composition, 6 units.

b) A reading knowledge of French, Spanish, or German, 9 units.

(A high school language may be used to satisfy this requirement in part or in whole, each year-course counting as 3 units.)

c) History 4A-4B, 5A-5B, or Political Science 1A-1B, 6 units, or any combination of the foregoing courses.

d) Geography, 3 units, and Geography 2, 3 units.

e) Mathematics, 2, 3 units.

(Foreign Language and two years of high school Algebra or College Algebra.)

f) Natural Science, 9 units.

(This requirement may be satisfied in part by high school courses in Physics and Chemistry, each one-year course counting as 3 units.)

g) Economics 1A-1B, 6 units.

h) Electives.

**Upper Division**

Requirements for Senior standing in the Commerce curriculum, besides those of the Junior Certificate, include Economics 1A-1B (Accounting), 6 units; Economics 1A-1B (Business Law), 6 units; Economics 1A-1B (Economic History), 6 division units in economics.

Commerce candidates for the A.B. degree must meet the upper division requirements of the Letters and Science curriculum with a major in economics.

**Prelegal Curriculum**

a) The lower division requirements of the Letters and Science curriculum or, in special cases, the Commerce curriculum should be met in full.

b) Electives recommended:

History 4A-4B, 6 units.

Economics 1A-1B, 6 units.

Political Science 1A-1B, 6 units.

Public Speaking, 1A-1B, 6 units.

Sociology 1A-1B, 2 units.

Psychology 2A-2B, 6 units.

Accounting, 1A-1B, 8 units.

Business Law 1A-1B, 6 units.

English 52A-52B.

c) Third year (Required):

History 171A-171B and a minimum of 6 additional upper division units.

**Premedical Curriculum**

a) The lower division requirements of the Letters and Science curriculum should be met in full.

b) Additional requirements:

Chemistry 1A-1B, 10 units.

Chemistry 6A-6B, 6 units, 5-9, 6 units.

Zoology 1A-1B, 8 units.

A reading knowledge of German or French (2 years of High School German or French or 10 units of college German or French).

c) Third year (Required):

Physics 2A-2B, 6 units.

Physics 3A-3B, 2 units.

Chemistry 101-102, 8 units.

Zoology 101, 2 units.

Political Science 101, 2 units.

**Preprofessional Curriculum**

a) The lower division requirements of the Letters and Science curriculum should be met in full.

b) Additional requirements:

Chemistry 1A-1B, 10 units.

Chemistry 6A-6B, 6 units.

Zoology 1A-1B, 8 units, or Biology 1A-1B, 6 units.

Physics 2A-2B and 3A-3B, 8 units.

**Prearchitectural Curriculum**

a) The lower division requirements of the Letters and Science curriculum should be met in full.

b) Additional requirements (first year):

Mathematics 3A-3B, 6 units.

Physics 1A-1B, 6 units.

Art 4A-4B, 4 units.

Art 6A-6B, 4 units.

**Social Service Curriculum**

a) The lower division requirements of the Letters and Science curriculum should be met in full.

b) Additional requirements:

Economics 1A-1B, 6 units.

Biology 10A-10B, 6 units; or Zoology 1A, 4 units; or Physiology A, 4 units.

Anthropology 1A-1B, 4 units.

Sociology 20, 3 units.

Biology 10A-10B, 6 units; or Zoology 1A, 4 units; or Physiology A, 4 units.

Political Science 1A-1B.

History 4A-4B, or 5A-5B, or 5A-5B.

**Electives**

b) Electives recommended:

History 4A-4B, 6 units.

Economics 1A-1B, 6 units.

Political Science 1A-1B, 6 units.

Public Speaking, 1A-1B, 6 units.

Sociology 50, 3 units.

Psychology 2A-2B, 6 units.

Accounting, 1A-1B, 8 units.

Business Law 1A-1B, 6 units.

English 52A-52B.

c) Third year (Required):

History 171A-171B and a minimum of 6 additional upper division units.
### Mechanical, Electrical, Civil and Mining Engineering Curricula

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. I</th>
<th>Sem. II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 3A-3B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physics 1A-1B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 1A-1B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Plane Surveying 1A-1B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Orientation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hygiene</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Ethics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science (Elective)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Second Year**

**Mechanical and Electrical Engineering**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 4A-4B</td>
<td>3</td>
</tr>
<tr>
<td>Physics 1C-1D</td>
<td>3</td>
</tr>
<tr>
<td>Descriptive Geometry 3D</td>
<td>3</td>
</tr>
<tr>
<td>Machine Drawing and Design 6A</td>
<td>1</td>
</tr>
<tr>
<td>Applied Mechanics 1A</td>
<td>3</td>
</tr>
<tr>
<td>Electrical Engineering 1</td>
<td>3</td>
</tr>
<tr>
<td>Pattern Making 8A-8B</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

**Civil Engineering**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 4A-4B</td>
<td>3</td>
</tr>
<tr>
<td>Physics 1C-1D</td>
<td>3</td>
</tr>
<tr>
<td>Descriptive Geometry 3D</td>
<td>3</td>
</tr>
<tr>
<td>Geology 1A</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Railroad and Irrigation:</td>
<td>1</td>
</tr>
<tr>
<td>Applied Mechanics 1A</td>
<td>3</td>
</tr>
<tr>
<td>Pattern Making 8A-8B</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

**Sanitary and Municipal:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 8-9</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 6A-6B</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

### Preagricultural Curriculum

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Ethics</td>
<td>2</td>
</tr>
<tr>
<td>Orientation</td>
<td>1</td>
</tr>
<tr>
<td>Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>4</td>
</tr>
<tr>
<td>Botany 2A-2B</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Physics 2A-2B</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 6A-6B</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 8-9</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Surveying 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

### Curricula in Accountancy and Secretarial Training

The aim in giving courses in Accountancy and in Secretarial Training is to offer a business preparation of college grade. The courses are open to high school graduates who majored in commercial subjects as well as to those who have had no training for business. Candidates of not less than twenty-one years of age who have not completed four years of high school work may also be admitted as special students. The curricula have been formulated with a recognition of the varying needs of those who plan to engage actively in commercial pursuits. To this end, courses of one and of two years in length are provided in Accountancy and in courses of one and of two years in length are provided in Secretarial Training, or in a combination thereof. A minimum of 64 units of credit is required for a certificate.

**Accountancy**

**Two-Year Course (leading to Certificate in Accountancy)**

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>Typewriting 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>Business Mathematics A</td>
<td>2</td>
</tr>
<tr>
<td>Orientation</td>
<td>1</td>
</tr>
<tr>
<td>Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Social Ethics</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Accounting 60A-60B</td>
<td>3</td>
</tr>
<tr>
<td>Commercial Law 18A-18B</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Botany 2A-2B or Electives</td>
<td>3</td>
</tr>
<tr>
<td>Office Methods 3A</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Economic History 11 or Electives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
Secretarial Training

Two-Year Course (leading to Secretarial Certificate).

First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shorthand 1A-1B</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Typewriting 1A-1B</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Hygiene 2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Social Ethics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Orientation</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Commerical Law 18A-18B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Methods 3A</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Accounting 1A-14B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 2A-2B or Electives</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Economics History 11 or Electives</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Business Mathematics A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 1A-14B</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting 1A-1B</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Business Mathematics A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Hygiene</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Ethics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

Accountancy and Secretarial Training

First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 1A-14B</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting 1A-1B</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Business Mathematics A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Hygiene</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Ethics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Accounting 60A-60B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Commercial Law 18A-18B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Office Methods 3A</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Shorthand 1A-1B</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Physical Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>15</td>
</tr>
</tbody>
</table>

COURSES OF INSTRUCTION

One "unit" represents an hour recitation or lecture, together with the required preparation, or three hours laboratory work each week for a semester of 15 weeks. Courses numbered from 1 to 99 and 1 to XCIX are freshman or sophomore (lower division) courses; those numbered from 100 to 199 and C to CXCIX are junior or senior (upper division) courses, available for sophomores only by special arrangement.

26. Home Floriculture

A study of ornamental gardening to familiarize students with material used in gardening and methods of propagation. A part of the work consists in lath house practice and visits to nurseries, greenhouses and florists. The course is especially designed to furnish a part of the equipment needed by those intending to teach nature study and general science. An elective for teachers college students, not classified as a natural science. Two units; either semester.

20. Nature Study

The course aims to show the student what material, selected from the various sciences, may be woven into a nature study course suitable for children, with special reference to school and home gardening and agriculture. The subject matter covered is partly drawn from the physical sciences, astronomy, physics, etc. (for the upper grades), and partly from life studies of the plant and animal world (for lower grades). An elective for teachers college students, classified as a natural science. Two units; either semester.

ANTHROPOLOGY

The Major in Anthropology (lower division)—Anthropology 1A, 1B.

1A. General Anthropology: Origin and Antiquity of Man

HEWETT

Man as an animal; heredity; races and race problems; earliest culture. Two units; second semester.

1B. General Anthropology: Origin and Development of Civilization

HEWETT

The sources and growth of institutions, art, customs, industries, language, and religion. Prerequisite: Anthropology 1A. Two units; second semester.

ASTRONOMY

The Major in Astronomy (lower division)—Astronomy 1, Plane Trigonometry, Mathematics 3A-3B, 5A-5B, Physics 2A-2B and 3A-3B or 1A-1B and 1C-1D, a reading knowledge of French or German.

1. Descriptive Astronomy

SKILLING

This cultural course is planned to give as comprehensive a view as possible of the solar system and the stars. Only calculations of an elementary nature are made. Special attention is given to the methods and instruments by means of which astronomical knowledge has been gained. An observatory equipped with a six-inch Alvin Clarke telescope is used for observation. Also a good selection of lantern slides is used to illustrate various topics. Prerequisites: Elementary Algebra and Plane Geometry.

Three units; either semester.

11. Modern Astronomy

SKILLING

Stars and nebulae. A study of modern methods and instruments used in the observatory. Theory of matter as it applies to such studies. Prerequisites: Astronomy 1 and a knowledge of physics. Two units; one semester.

BIOLOGICAL SCIENCE

The biological science courses are grouped under the following heads: Biology, Botany, Zoology.

General students who are taking the minimum of biological science should register for Biology 10A-10B (6 units) whether or not they have taken any high school biology.

Students who are taking more than the minimum of biological science or who have credit for high school botany or zoology should not register for Biology 10A-10B but should take botany or zoology.

For courses in the teaching of biological science in the schools, see Education XX, CXX, and CXXV.
10A-10B. General Biology

M. E. Johnson

The fundamentals of plant and animal biology, with elementary work in heredity, evolution and ecology. The laboratory work supplements the lectures and includes a study of living and preserved material. The aim of the course is to acquaint the student with the basic facts of biology. It is designed not only to give the general student acquaintance with living things and their relationships, but also to furnish the prospective teacher with an adequate background for nature study teaching. Two lectures or recitations and one three-hour laboratory period per week.

Not open for credit to students who have taken Botany 2 or Zoology 1.

Three units; both semesters.

BOTANY

The Major in Botany (lower division)—Required: Botany 2A-2B and high school chemistry or Chemistry 1A-1B. Recommended: Chemistry 8 and 9, French, German, and elementary courses in other biological subjects.

2A. General Botany

A study of the fundamentals of structure and general behavior of seed plants. Two lectures or recitations and two three-hour laboratory periods per week.

Four units; first semester.

2B. General Botany

A continuation of 2A treating morphology and relationships of the lower plants and including an introduction to classification of seed plants. Lectures and laboratory as in 2A.

Four units; second semester.

4. California Plants

Lectures, laboratory exercises and field work on the classification and ecology of plants of the San Diego region. Two lectures and one three-hour laboratory period per week.

Three units; second semester.

102. Plant Geography

Lectures and field work on the principles of geographical distribution of plants. Prerequisite: Botany 2A-2B or Botany 4, or equivalent.

Two units: first semester.

ZOOLOGY

The Major in Zoology (lower division)—Required: Zoology 1A-1B and high school chemistry or Chemistry 1A-1B. Recommended: Chemistry 8 and 9, French, German, and elementary courses in other biological subjects.

1A. General Zoology

An introduction to animal biology dealing with structure, functions and evolution of animal life. The laboratory work supplements the lectures and is based on the study and observation of living and preserved material. The course will acquaint one with the fundamental facts and theories of biology as they pertain to animal life. It is valuable to the general student as well as to the biology specialist. Two lectures or recitations and two three-hour laboratory periods per week.

Four units; first semester.

1B. General Zoology

The structure, relationships, and classification of the chordates. Dissection of shark and catfish. Two lectures and two three-hour laboratory periods per week. Prerequisite: Zoology 1A.

Four units; second semester.

100. Embryology

M. E. Johnson

The development of vertebrates as illustrated by the chick, frog, and pig. Six hours per week of lecture, laboratory, and recitation. Prerequisite: Zoology 1A-1B or a grade of C or better in Biology 10B.

Three units; second semester.

112. Invertebrate Zoology

M. E. Johnson

The structure, classification, habits, and life histories of the invertebrates of the region, particularly of the marine fauna. One hour of lecture and six hours of laboratory per week. Prerequisite: Biology 10A-10B or Zoology 1A.

Three units; first semester.

(See Biological Science.)

CHEMISTRY

The Major in Chemistry (lower division) — Chemistry 1A-1B, with a grade of C or better. Chemistry 6A-6B, Physics 2A-2B or 1A-1B, Mathematics 8 and 9, or their equivalents, and a reading knowledge of German. Recommended: Physics 1A-1B, Mathematics 4A-4B.

The Major (upper division)—All units in excess of fourteen are counted as upper division units when taken in the junior or senior year. The minimum requirement for the major must include Chemistry 8-9, 101-102 and 123-124. The organization of the course for the major student must follow a definite plan approved by the department.

1A-1B. General Chemistry

The general principles, laws of chemical combination and a description of the elements and their important compounds. Two lectures, one quiz and two laboratory sessions per week. The second semester laboratory is Qualitative Analysis. Prerequisite: Chemistry 1A-1B.

Four units; first semester.

6A. Qualitative Analysis

A study of qualitative separations and theories as applied not only to solutions but to ores, slags, alloys, and solid salts. One hour lecture and quiz, three laboratory periods. Prerequisite: Chemistry 1A-1B.

Five units; both semesters.

6A-6B. Introductory Quantitative Analysis

The work consists of determinations by gravimetric, volumetric and electrolysis, particular attention being given to the cultivation of laboratory technique. One hour quiz and lecture and two laboratory periods per week. Prerequisite: Chemistry 1A-1B.

Three units; both semesters.

8-9. Organic Chemistry

A study of the carbon compounds (aliphatic and aromatic) and their derivatives, including the synthesis of different compounds and the proof of their constitution. A general consideration of the subject and the principles involved. Two lectures and one laboratory period, first semester; one lecture or quiz and two laboratory periods, second semester. Prerequisite: Chemistry 1A-1B.

Three units; both semesters.

101-102. Advanced Inorganic Chemistry

F. E. Biggs

The course treats of the laws and theories of elementary work from the viewpoint of physical chemistry. The laboratory work covers such typical items as gas laws, molar weights, laws of combination, ionization, Equilibria (homogeneous, heterogeneous and complex) and electrochemistry. Two lectures, two laboratory periods per week. Prerequisites: 1A-1B, 6A-6B, 8-9.

Four units; both semesters.

123-124. Organic Preparations

F. E. Biggs

A laboratory course illustrating some of the more important synthetic methods of organic chemistry. A reading knowledge of German is desirable. Laboratory and conferences. Prerequisite: 8-9. Hours to be arranged.

Two to five units; both semesters.

ECONOMICS

The major in Economics (lower division): Economics 1A-1B and at least one of the following: Political Science 1A-1B; History 4A-4B; 8A-8B; Psychology 2A-2B; Geography 1 and 2. Recommended: Sociology 50, Accounting 1A-1B, Commercial Law 18A-18B.

1A-1B. Principles of Economics

A careful consideration is given to the basic principles of economics: utility, wealth, value, price; economic production, distribution, and consumption; rent, interest, wages, and profit; competition, monopoly, and labor; production; property; money and banking; international trade and balance of trade; economic welfare and luxury; money and banking, international trade and balance of trade; economic welfare and luxury. The course is (1) to provide a foundation for further intensive study of economic problems; (2) to furnish to those who expect to follow business pursuits the broad foundation in economic principles; and (3) to introduce the future citizens to the political and economic problems of our time. Lectures, discussions, quizzes, and collateral reading. Not open to entering freshmen except by special arrangement.

Three units; both semesters.
11. Economic History of the United States

A comprehensive survey of American economic development and of national legislation in the field of industry.
Three units; second semester.

14A-14B. Accounting

A knowledge of bookkeeping is not required nor is it of advantage. A study is made of the balance sheet; profit and loss statement; various types of books of original entry; the opening, conducting and closing of books for different kinds of businesses; organizations, reorganizations, dissolutions and consolidations; branch store accounting, etc., keeping in view the best modern accounting practice. Eight hours lecture and laboratory.
Three or four units; both semesters.

60A-50B. Advanced Accounting

Weight, Everts

The second year consists of an intensive study of the corporation, its accounting and financial problems; a thorough study of the balance sheet; depreciation; factory accounting, etc. Under practical accounting an endeavor is made to design, construct, and operate sets of books to meet the needs of different conditions and kinds of businesses. Six hours lecture and laboratory.
Three units; both semesters.

18A-18B. Commercial Law

Stanton

The object of the course in commercial law is to give clearly and coherently the leading and fundamental principles of business law. Simple cases showing the actual application of the principles to commercial and business transactions are given, rather than development of those principles. The subjects covered are contracts, sales, agency, partnerships, corporations, real property, negotiable instruments, insurance and wills, with a brief study of evidence.
Three units; both semesters.

100. Economic Theory

Advanced study of demand and supply, production and distribution, and economic welfare. Prerequisites: Economics 1A-1B.
Three units; one semester.

101. History of Economic Thought

The chief contributors to economic theory from the time of Adam Smith to the present day. Prerequisite: Economics 1A-1B.
Three units; both semesters.

121. Business Organization

Description and analysis of business corporations, associations, and other forms of combination; differentiation functions of the bank, etc. Prerequisites: Economics 1A-1B.
Three units; one semester.

125. Advertising and Salesmanship

Principles and problems. (Not offered in 1928-1929.)
Three units; one semester.

131. Public Finance

Principles and practice of taxation, public expenditures, and financial administration.
Three units; one semester.

135. Money and Banking

The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States. Prerequisite: Economics 1A.
Three units; one semester.

140. Statistical Methods

Brook

An introductory study of the statistical measures and devices most commonly used in connection with work in the field of economics. Opportunity will be given to use of calculating machines and other aids to computation.
Two units; two semesters.

141. Economic Geography

(See Geography.)
EDUCATION

I. Education—Introductory Principles and Technique

THIS is the first required course in the study of education and has as its purpose the orienting of the mind of the student toward education and teaching. A preliminary survey of the field is made and of the theories and general principles applying to education in general. The study is in the direction of future development of the student and how to prepare him to fit the qualifications needed for the teaching profession. It will familiarize him with many types and problems of teaching and help him to appraise his own possibilities.

Open only to students who have passed the Fundamentals Test.

Three units; either semester.

CI. Principles of Junior High School Education

This course deals with the principles of educational science that should underlie the organization, administration, and curriculum of the secondary school, especially in the junior high school field. The prevailing patterns of high school education are studied, and responsibilities in the direction of future development are indicated. Particular attention is given to the problems of individual differences and the transition from the elementary school with the lower and higher schools.

This course also functions as a “Comprehensive Examination” of applicants for the college degree and diploma, which automatically become teaching credentials. Students are organized for reviewing and integrating the leading Biology 10A-10B; Psychology 2A-2C; Sociology 10A; principles and technique of teaching (I), primary school curriculum (CXXVIII) (for those who also seek the teaching of English (C XVII)). Students who take this course are exempted from course CVI.

Three units; one semester.

CII. Education for Citizenship

An analysis of the ideals and habits essential for good citizenship followed by a study of the part which each school subject and activity contributes to their development.

Two units; either semester.

CIII. Public Education in California

A study of the structure, organization and administration of the California school system, as given in the school law of the state, and as interpreted by the California courts. It is intended to give to prospective teachers a concrete picture of the main features of the California school system.

Two units; either semester.

CXXVIII. Primary School Curriculum

A study of the activities of the first three grades of the elementary school curriculum. Special emphasis is placed upon beginning reading and frequent demonstration lessons as conducted.

Open only to students who have passed the Fundamentals Test.

Three units; either semester.

CIV. Elementary School Curriculum

A study of the materials and activities of the elementary school and of accepted teaching techniques in teaching. A summary and evaluation is made of the results of scientific investigations in this field. Special emphasis is placed upon the teaching of English. Open only to students who have passed the Fundamentals Test.

Three units; either semester.

CV. Intelligence Testing

A brief review of the history and rationale of intelligence testing is followed by a discussion of the Stanford revision of the Binet-Simon Test, with demonstration. Emphasis in giving, scoring, and interpreting results is required. The purpose of the test is to find out if by inclination and endowment he is fitted to a particular type of scientific testing and to put him on the road of becoming skilled in giving and interpreting intelligence tests.

Two or three units; one semester.

CVI. Principles of Elementary Education

This course is designed as a culmination of the studies of education and its principles. It is a study of the biological, psychological, and social principles underlying modern education, in connection with the demands of modern society in a complex social, economic, and scientific world, with a view to the formulation of a philosophy in modern democratic society. It also functions as a course in vocational guidance in that it seeks to acquaint the student with the qualifications needed for the type of teaching and help him appraise his own possibilities.

Open only to students who have passed the Fundamentals Test.

Three units; one semester.

CVII. History of Education

The course includes a brief study of early Hebrew, Greek, Roman and early Christian Education, of the changes brought about by the Renaissance, the Reformation and the educational philosophies of the great reformers, together with a concluding study of the development of the American school system and of American ideals and practices in education.

Three units; one semester.

CVIII. Educational Measurements

This course consists of a brief survey of the history of scientific measurement in the elementary field, and a study of the nature of intelligence tests, especially of the educational use of group intelligence tests. The greatest stress, however, is laid upon the practical uses of achievement tests. The Stanford Achievement Tests given to the entire teaching school are utilized by many college students, but the text data used. Simple statistical teaching in handling data is acquired through practical open only to students who have passed the Fundamentals Test.

Three units; either semester.

CIX. Educational Administration and Supervision

A survey of the systems of organization, classification and promotion of pupils, and such problems as finances, the teaching staff, building standards, extra-curricular activities, etc.

Two units; either semester.

CX. Educational Organization and Supervision

A study of types of supervision and methods of evaluating and improving teaching.

Two units; one semester.

CXI. Practice Teaching

A practical observation, participation and actual teaching under competent supervision in the Training School and in the city schools of San Diego. The minimum requirement is nine units; for others, twelve or more. In some cases the student will be given additional practical experience while supervised.

Two units; either semester.

CXII. Class Management

A discussion of the problems arising in connection with schoolroom discipline; the methods of securing a wholesome school "spirit" and the application of civic principles to school life.

Two units; one semester.

CXXI. Principles of Secondary Education

This course deals with the principles of educational science that should underlie the organization, administration and curriculum of the secondary school. The prevailing patterns of high school education are studied, and tendencies in the direction of future development are indicated. Particular attention is given to the problems of articulation between the lower and higher schools.

Two units; one semester.
CXXX. Educational Psychology
This is a study of the learning process and includes such topics as laws and 
types of learning, curves of learning and of forgetting, economy of learning, amount 
and limits of improvement, spread of improvement or transfer and experimental 
studies in learning. Prerequisite: Psychology 2A and 2C.

CXL. Elementary Statistics
An introductory study of the statistical measures and devices most commonly 
used in connection with educational work. Data will be taken from typical school 
conditions. Opportunity will be given to obtain practice in the use of calculating 
machines and other aids to computation.
Three units; one semester.

The Statutory Curriculum
(Elemenetary School)

XI. Language
This course includes a study of the psychology and hygiene of reading, with a 
study of methods and materials suitable for the equipment of the elementary school 
teacher, and with a study, also, of the teaching of writing and spelling.
Two units; one semester.

CXXIX. Mathematics
A discussion of the applications of psychology and experimental education to the 
teaching of arithmetic and elementary general mathematics, together with study and 
observation of the newer methods as used under ordinary classroom conditions.
Two units; either semester.

XIII. Introduction to Geography
This course includes a study of the fundamental principles of Geography and 
their adaptation to teaching Geography in the elementary schools.
Two units; one semester.

CXXVI. Children’s Literature
This is a detailed study of the literature for children as a basis for the 
appreciation, selection and presentation of suitable material for the elementary school 
grades. It includes practice in story-telling and dramatization.
Two units; either semester.

XV. History
A course in the development of civilization beginning with ancient times, stress-
ing the characteristics of successive periods and building a cultural background for 
the history of the elementary school.
Two units; one semester.

XVII. Music in the Elementary School
Main objectives of music teaching in the public elementary schools. Study of 
the child voice. Organization of song material by grades. Procedure in presenting 
rote songs, ear training, elementary notation, sight singing, and part singing. Con- 
ducting. Prerequisite: Music 1A, Music Fundamentals.
Two units; either semester.

XIX. Art in the Elementary School
Prerequisite: Art 6A or its equivalent. This course is a practical application of 
the elements and principles of Art to problems for grades 1-6. It is presented 
through lectures, reports, demonstration lessons and laboratory work.
Two units; either semester.

XXII. Geography Materials for the Elementary School
This course aims to familiarize students with geography texts, geographical 
readers and other supplementary books, magazines valuable in the work, the different 
kinds of wall and desk maps, and also with concrete geographical materials such as 
pictures and exhibits. Prerequisite: Geography 1 or 1A.
Two units; second semester.

ORGANIZATION AND ADMINISTRATION
(see Education CIX and CX)

CXL. English
Bagley
This course consists of the following items: (a) Lectures and required papers 
on the objectives of secondary school work in English and on these selection and 
interpretation of materials; (b) of the study of methods with respect to pupil 
abilities and activities; (c) of observation of the work in the city schools.
Two units; one semester.

CXL. Mathematics
Richards
The subject matter, management of it and methods of teaching it in a junior 
high school curriculum in general mathematics, make up the principal topics of this 
course. Specific problems discovered include the application of arithmetic in current 
social and business life, intuitive geometry, graphic representation and the phase of 
statistics applicable to the junior high school pupil, together with the problem of making 
the work useful in preparation for senior high school mathematics.
Two units; one semester.

CXL. Geography
Clark
This course deals, first, with the subject matter suitable for secondary schools, 
particularly the junior high school, and with the arrangement and interpretation of 
this subject matter; second, with the problems of teaching geography in the junior 
high school grades. Lectures, papers, readings and observations are included.
Two units; one semester.

CXL. Social Science
This course for prospective junior high school teachers attempts to meet the 
problem of the teaching of some of the elementary facts and principles of a “general” 
social studies course. It is devoted to the experience and development of the junior high school 
pupil, through the medium of such social studies in the junior high school curriculum as 
history, geography and civics. Methods of securing direct experience and studying 
through suitable school and other survey and study projects, and of developing a 
genuine and continuing interest in social and civic problems through observation and 
reading, will be discussed and illustrated.
Two units; one semester.

CXL. History
Leonard, Lesley
A study of subject matter, organization, materials and methods for the teaching 
of history in the junior high school. The course includes a study of text books, maps, 
pictures and other material.
Two units; one semester.

CXL. Commercial Education in the Secondary School
Wright
The place of commercial education in the general field of vocational education. 
The objectives of commercial education. A study of methods, use of texts, cooper- 
a tion with business men.
Two units; one semester.

CXL. Art in the Junior High School
Benton
Prerequisite: XIX. This course is for third year Art students working for 
the Special Art Certificate of Elementary and Junior High School grade. 2 units.

CXX. A—B—C—D. The Teaching of Science in the Junior High School
Johnson
A course in the content, methods, field work, textbooks, laboratory work, equip-
ment, and reference readings for Junior High School Science. Prerequisite: 1B units 
of college science.
CXX. A. Prerequisite: 1B units of college science including Biology 10A—10B 
or Geology 1A—1B.
CXX. B. Prerequisite: 1A units of college science including Biology 10A—10B 
or Botany 2A—2B.
CXX. C. Prerequisite: 1B units of college science including Physics 2A—2B.
CXX. D. Prerequisite: 1B units of college science including Physics 1A.

CXXII. Organization of Industrial Arts
Scudder
Prerequisite: thirty units in Industrial Arts. Two hours per week.
Two units; second semester.
CXXII. Teaching Industrial Arts
Prerequisite: thirty units in Industrial Arts. Five hours per week. Three units; either semester.

CXXIV. Romance Languages
Brown
A consideration of the main questions of pronunciation, grammar, composition, reading, texts, etc., as applied to teaching elementary classes in French and Spanish; the different methods; their history and value. Two units; one semester.

CXXVII. Music in the Secondary School
L. D. Smith
Two units. (Not offered in 1928-29.)

PHYSICAL EDUCATION FOR TEACHERS

CL. Methods in Formal Activities
Tanner, C. E. Peterson
(For Elementary and Junior High Schools.)
(a) A systematic study of the principles and technique of teaching physical training activities.
(b) A study of the selection, classification, arrangement and progression of formal activities. The responsibility of the physical instructor toward the problems of age, growth, and sex variations as affected by exercise is stressed.
One unit; one semester.
For descriptions of the courses in Biology, Physiology, Hygiene, etc., required for special certification in Physical Education, see those subjects in the list of general collegiate courses.

CLII. Theory of Teaching and Leadership in Physical Education
Tanner
A consideration of the elements and the teaching process in Physical Education; the application of Psychology to leadership; the physical, mental and social equipment of the successful physical instructor.
One unit; one semester.

CLIII. Methods in Play Activities
C. E. Peterson
Methods and materials used in intra- and inter-class games, with special reference to mass competition. Problems of classification, selection, organization, and management of inter-school contests and relations. Discussion of honor societies.
Three units; one semester.

CLIV. Administration of Physical Education Program in Secondary Schools
Peterson
A study of interclass and intramural activities, with marked attention to methods to the interest and physical needs of high school pupils; the relations of the instructor. Two units; one semester.

CLV. Practice Teaching in Physical Education
Tanner, Peterson
Skill in teaching games, athletic sports, in the use of Decathlon Events and in gymnastic drills is expected. Training School and College classes are course in the Organization of Physical Education Program for the school group to be taught and a course in Games.
Five units.

CLVI. A-B. Methods in Coaching Competitive Athletics
Peterson
The presentation of different systems of teaching competitive athletics in high schools. This course will parallel the major sport in season and time will be spent in both the theory and practice of the most successful systems. Two units; both semesters.

ADDITIONAL COURSES IN PHYSICAL EDUCATION

First Semester, 1928-1929

Stunts and Gymnastic Dancing
One-half unit. Third year.

Intramural Sports (Methods)
Two units per semester. Fourth year.

Intramural Sports (Continued)
Two units.
First Aid (Women only)
One unit. Third year.

Recreational Leadership
Three units. Fourth year.

C. Mechanical Drawing
De Silva
This course is designed to train students in lettering and in neatness and accuracy in the use of instruments. Geometric problems, shop problems, theoretical objects with developments, warped surfaces with developments and construction of points, lines, planes, perpendiculars, parallel planes, distances, angles, solids, developments, warped surfaces, intersections, etc. The aim of the course is to prepare the students sufficiently to visualize and present on paper problems which are theoretical or practical. Prerequisite: Mechanical Drawing C or the high school course in Mechanical Drawing.
Three units; either semester.

3D. Descriptive Geometry
Stovall
In this course 21 or more plates are required and four examinations given. The plan is to deal with the customary problems of points, lines, planes, perpendiculars, parallel planes, distances, angles, solids, developments, warped surfaces, intersections, etc. The aim of the course is to create originality and to develop the ability of the student to visualize and present on paper problems which are theoretical or practical. Prerequisite: Descriptive Geometry 2D.
Six units; two semester.

6A. Machine Drawing and Design
Stovall
Function of machines; motion, force, and work in machines; analysis of mechanism; velocity, acceleration, and effort diagrams; parallelogram motions, cams, ratchets, toothed wheels, valve gear and design. Three lectures and two drafting periods. Three units; second semester.

1A-1B. Plane Surveying
McIntyre
Use and application of surveying instruments, computations and map-making together with a study of land, topographic, city and mine surveying. Two instruction periods and one three-hour period for field work and mapping each week. Prerequisites: Trigonometry and Mechanical Drawing.
Three units; both semesters.

11. Applied Mechanics
Stovall
Problems concerning the action of external forces on rigid bodies; composition and resolution of forces; equilibrium; rectilinear and curvilinear motion; acceleration, linear and angular; harmonic motion; translation and rotation; moment of inertia; kinetic and potential energy; work, power, friction; machines; efficiency. Prerequisites: Mathematics 3A-3B and Physics 1A-1B.
Three units; both semesters.

12. Elements of Electrical Engineering
Stovall
A general survey of the field of Electrical Engineering. Single and polyphase circuits, power-factor, reactance, generators, motors, transformers, and transmission of power. Prerequisites: Mathematics 3A-3B and Physics 1C.
Three units; second semester.

ENGLISH

The Major in English—Required: Thirty-six units in English, of which not more than six may be in Journalism and Public Speaking and not more than nine in Composition.
The Major (lower division)—English 1A-1B and six units from 56A-56B, 58A-58B. Recommended: A reading knowledge of German or French.
The Major (upper division)—At least fifteen units in upper division courses completed in the junior and senior years.

1A-1B. English Composition
Bagley, Smith
The purpose of this course is to develop precision and directness in speaking and writing. A study of models, chosen from modern literature, forms the basis of class discussion and presentation. In 1A the emphasis is on exposition; in 1B on argu-
mentation, description, and narration. Open only to students who have passed the English A examination.
Three units; both semesters.

4A-4B. Great Books
A survey of books and bodies of literature that are significant sources or expressions of European and American culture. These include the Hebrew Bible, Greek Epic and Tragedy, Norse Eddas, and other literature of religious and communal character; and highly significant masterpieces in poetry and prose by great authors down to the nineteenth century.
Three units; both semesters.

52A-52B. Types of Literature
Introduction of the study of lyrical and narrative poetry; origin and elements of poetry; typical poems.
Three units; first semester.
Introduction to the study of dramatic poetry and prose, the essay, novel and short story; elements, principles and characteristics; examples.
Three units; second semester.

56A-56B. Survey of English Literature
The aim of this course is to give the student a better acquaintance with great examples of English Literature which reveal the development of thought and social ideals from the Anglo-Saxon period to the middle of the nineteenth century. The work consists of readings in the masterpieces, class discussions, occasional quizzes, and written reports.
Three units; both semesters. (Not offered in 1928-1929.)

60. Periodical Literature
A study of current literature, in content and form, as presented by leading periodicals, with the purpose of promoting intelligence and discrimination in reading; emphasis on fiction, poetry and drama.
Three units; either semester.

101. Modern Prose Fiction
A study of recent and contemporary fiction in drama, novel, and short story, beginning with Meredith and including the best British and American fiction of today.
Three units; each semester.

105. Advanced English Composition
A laboratory course in modern writing, with the purpose of developing style and strength in the composition. A variety of prose forms (excluding the novel) and some poetry considered; student may choose one or two forms for intensive practice. Outside readings. Prerequisite: One year of college composition.
Three units; first semester.

117. Shakespeare
Extensive reading of Shakespeare's plays, with special attention to a select group of the comedies and another of the tragedies. Lectures and special reports.
Three units; first semester.

118. Makers of Eighteenth Century Literature
A study of Pope, Swift, Johnson, Goldsmith, Fielding, Burns, and their contemporaries as interpreters and teachers of their age. Open to upper division students.
Three units; first semester.

121. Browning and His Contemporaries
A study of Tennyson and Browning and their contemporaries and successors, relating English poetry to nineteenth century life and thought.
Three units; second semester. (Not offered in 1927-1928.)

130A-130B. American Literature
A survey of American literature and its backgrounds from 1607 to the Civil War.
Three units; first semester.
Recent American literature, with its backgrounds from the Civil War to the present time, giving special attention to the development of prose fiction in the novel, short story and drama.
Three units; second semester.

151. Medieval Literature
A study of the literature of the fourteenth century, especially the verse romances, Fierc Flowman, and the poetry of Chaucer. Open to upper division students.
Three units; second semester.

51A. News Gathering and Reporting
Bagley
Study of news sources and practice in news writing. Newspaper organization.
Three units; first semester.

51B. News Editing and Correspondence
Bagley
Practice in copy reading. Study of news values and types of newspaper stories.
Three units; second semester.

53A-53B. English-Journalism Applied
Smith
Credit is earned by actual work throughout a full semester as editor of "The Antec," "El Palenque," or "Del Sudoeste," or for specified staff work throughout one semester.
One to three units; each semester.

Speech Arts
The Major in Speech Arts (lower division): Public Speaking 1A-1B, Public Speaking 3A and 5A, or Public Speaking 53A-53B.

1A-1B. Elements of Public Speaking
Walker
Training in fundamental processes of oral expression: methods of obtaining and organizing material; outlining; principles of attention and delivery; extemporaneous speaking and open forum debating; penence in construction and delivery of type forms of speech.
Three units; each semester.

3A. Advanced Public Speaking
Walker
Survey of public speaking methods. Study of selections; observation of speaking in community. Organization and delivery of speeches. Analysis of individual problems in speech making. Participation in a public debate or oratorical contest, or the presentation of an equivalent amount of practical speaking before public assembly is required.
The membership of the class is limited to twenty. Before enrolling the core members must consult the instructor in charge.
Two units; second semester.

5A. Argumentation and Debate
Walker
A study of the obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention will be given to intramural and intercollegiate debating.
Three units; first semester.

55A-55B. Play Production
Jones
Study of its history and technique. Practical training in acting and producing. Public presentation of plays worked out in class. Limited to thirty students.
Three units; both semesters.

56B. Dramatic Workshop
Jones
The making of plays. Students specialize creatively along lines of their individual dramatic interest including presentation of original and standard plays. Limited to twenty advanced students.
Three units; both semesters.

52A. Stage Design; 52B. Stage Costume; 52C. Stage Craft
(See Fine Arts.)
FINE ARTS

The Major in Fine Arts (lower division): Art A–B, 1A–1B, 6A–6B, 12B.

Art A. Freehand Drawing
Problems involving principles of perspective are given to develop ability to draw and technique in pencil, charcoal, etc.
Two units; first semester.

Art B. Freehand Drawing, Painting and Sketching
Drawing from costume pose, outdoor sketching and problems involving use of various color mediums. Prerequisite: Art A.
Two units; second semester.

1A. Art History and Appreciation
A study of architecture, sculpture, painting and handcraft from the dawn of art to the Renaissance, through illustrated lectures, research and discussion.
Two units; first semester.

1B. Art History and Appreciation
Same as 1A but covering that period from the Renaissance to the Modern School.
Two units; second semester.

6A. Art Structure
BENTON, MOON
Theory of design and color. This course is intended to increase appreciation and give a basic understanding of the elements and principles of art as expressed in the architecture, painting, sculpture and crafts of the past and present. The time is equally divided between lectures and practical problems.
Two units; either semester.

6B. Art Structure (Continued)
BENTON, MOON
Original, creative work in design with special stress on structural and industrial design and modern tendencies. Prerequisite: 6A.
Two units; either semester.

12A. Advanced Design
BENTON
Problems in creative design and processes of application through batik, block-printing, etc. Prerequisite: 6A–6B.
Two units; first semester. (Not offered in 1928–1929.)

12B. Lettering and Posters
MOON
Design studied in relation to lettering, illumination and posters. Lettering for prearchitecture students included when desired. Prerequisite: 6A.
Two units; second semester.

52A. Stage Design
BENTON
Theory of line, color and lighting. Original sets and costumes developed on the miniature stage. Development of modern art of the theater. This course leads to the advanced stage craft course 52C.
Three units; first semester.

52B. Stage Costume (Not offered in 1928–1929.)

52C. Stage Craft
JONES
Study of stage terminology and technique. Scene building and decoration. Materials and their treatment for stage effect. Actual experience in setting, costuming and lighting productions. Prerequisite: 52A.
Three units; second semester.

94A. Costume Design
MOON
Design studied in relation to modern dress for general and individual types. The course includes study of foreign and historic influences on dress; original problems; sketching from costumes in the shops and demonstrations with models. Prerequisite: 6A.
Two units; first semester.

94B. History of Costume and Advanced Costume Design
MOON
This course is for students working towards special art or home economics certificates of secondary grade. Prerequisite: 94A.
Two units; second semester. (Not offered in 1928–1929.)

95A. Home Decoration
BENTON
Design in relation to the home. House planning and landscaping, interior decoration, study of period furnishing and furniture and their influence today, through illustrated lectures, research and original problems. Prerequisite: 94A.
Three units; second semester.

95B. Home Decoration
BENTON
Advanced study of decorative textiles and furniture with problems in modern interior decoration. Prerequisite: 95A.
Two units; second semester. (Not offered in 1928–1929.)

115A–115B. Life Drawing and Painting
115A—Pose drawing from the figure. 115B—Illustration. Prerequisite: Art A–B.
Two units; both semesters. (Not offered in 1928–1929.)

Teacher-Training Courses
See Education: XIX, Art in the Elementary School; CXIX, Art in the Junior High School. See also, Industrial Arts, 61A.

FOREIGN LANGUAGES

The Major in a Foreign Language (lower division): Required: 16 units of credit in the language chosen for the major. Recommended: History 44–4B.

The Group Major in Romance Languages (lower division): French A, B, C, D, and Spanish A, B, C, D.

The Group Major (upper division): Eighteen upper division units in one language or twelve units in one language and six units in the other. The group major requirements are based on the assumption that the student will have taken courses in the high school which are equivalent to the college course in elementary French or Spanish. A student who offers matriculation credit for only two years of the high school course in a Romance language may take a placement test to determine his eligibility for the third semester of the college course.

Elementary German
Pronunciation, reading and grammar, with practice in simple conversation, narration, and description, both oral and written.

A. Elementary German
Five units; first semester.

B. Elementary German
Prerequisite: German A or two years of the high school course in German, or its equivalent.
Five units; second semester.

Intermediate and Scientific German
This course furnishes the regular preparation for the upper division courses.

C. Intermediate and Scientific German
Prerequisite: German A as three-unit course in literature or as a five-unit course combining literature and science. Prerequisite: German B with a grade of C or three years of High School German.
Three or five units; first semester.

D. Intermediate and Scientific German
Second semester: same as C. Prerequisite: German C with a grade of C or four years of high school German.
Three to five units; second semester.

Elementary French
Intensive study of French grammar and syntax; daily written work discussed in class; class drill in conversational idiom and pronunciation; reading with oral discussion and résumés; dictation; introduction to contemporary prose writers; study of the principles of French prose, with memory work.

A. Elementary French
HEIMERS, PHILLIPS
Five units; first semester.

B. Elementary French
Prerequisite: French A or two years of the high school course in French, or its equivalent.
Five units; second semester.

Intermediate French
Reading and composition; study of standard prose as a basis for class work; collateral reading with résumés and written reports in French; study of French Prose, with selections for memorizing; dictation. Class work conducted mainly in French. Individual conferences.
C. Intermediate French
Prerequisite: French B or three years of the high school course in French, or its equivalent.
Three units; first semester.

D. Intermediate French
Prerequisite: French C or four years of the high school course in French, or its equivalent.

SC. French
Scientific French. Prerequisite: French B or three years of high school French.
Two units; first semester.

SD. French
Scientific French. Prerequisite: French C or four years of high school French.
Two units; second semester.

101A-101B. French
Conversation and Composition. Prerequisite: French D, or its equivalent. (Fifteen units from upper division courses in Geography completed in the junior and senior years.
In addition to the foregoing requirements two units must be chosen from lower or upper division courses in Geography and nine units (six in the upper division) from the following list of subjects in consultation with the chairman of the department:

101A-101B. Novels and Short Story in Spain
Prerequisite: A grade of C in Spanish D or permission of instructor.
Three units; both semesters. (Not offered in 1928-1929.)

102A-102B. Modern Spanish Drama
L. P. Brown
This course will trace the development of the drama of Spain from the beginning of the nineteenth century to the present time.
Prerequisite: A grade of C in Spanish D or permission from the instructor.
Three units; both semesters. (Not offered in 1928-1929.)

102A-102B. Novel and Short Story in Spain
L. P. Brown
This course will trace the development of the novel and short story in Spain from 1920 to the present time.
Prerequisite: A grade of C in Spanish D or permission from the instructor.
Three units; both semesters. (Not offered in 1928-1929.)

GEOGRAPHY

105A-105B. Modern French Drama
E. M. Brown
 Plays of Musset, Scourie, Angier, Dumas fils, Pailleron, Brieux, Hervieux, Maeterlinck, Rostand and others will be read and discussed as to subject matter and technique. Outside reading and reports.
Prerequisite: French D or consent of instructor.
Three units; both semesters. (Not offered in 1928-1929.)

Elementary Spanish
L. P. Brown, Phillips
Intensive study of Spanish grammar and syntax, with daily written work; class drill in conversational phrases and pronunciation; reading with oral discussion and reading and discussion; introduction to contemporary prose writers; study of the principles of Spanish prosody, with memory work.

A. Elementary Spanish
L. P. Brown, Phillips
Five units; first semester.

B. Elementary Spanish
L. P. Brown, Phillips
Prerequisite: Spanish A or two years of the high school course in Spanish, or its equivalent.
Five units; second semester.

Intermediate Spanish
L. P. Brown, Phillips
Prerequisite: Spanish B or three years of the high school course in Spanish, or its equivalent.
Three units; first semester.

D. Intermediate Spanish
L. P. Brown, Phillips
Prerequisite: Spanish C or four years of the high school course in Spanish, or its equivalent.
Three units; second semester.

101A-101B. Spanish
Conversation and composition. Prerequisite: Spanish D, or its equivalent, with grade of C.

102A-102B. Introduction to Spanish Classics
L. P. Brown
This course will introduce the student to the several types of classical literature. Reading will be: Gil Blas, and other novels of Rougery; one drama each from the works of Lope de Vega, Calderon, Alarcon, and Moreto; selections from Don Quixote, and the Cien Mejores Poemas Castellanos; collateral reading and reports.
Prerequisite: A grade of C in Spanish D or permission from the instructor.
Three units; both semesters. (Not offered in 1928-1929.)

105A-105B. Modern French Drama
E. M. Brown

105A-105B. Modern French Drama
E. M. Brown

13. Climatology
L. P. Brown
A survey of the different climates of the world and their effect upon vegetation and human activities. Special attention is given to the climates of different parts of the United States. Prerequisite: Meteorology 3.
Two units.

116D. Geography of South America
L. P. Brown
This course deals with the climate, topography, and natural resources of the South American countries, and with the effect of those physical factors upon the economic, commercial and racial problems of the different nations. Prerequisite: Geography 1 or 1A.
Three units.
121. Geography of North America

A study of the natural regions of North America, their formation, occupations and historical development. Prerequisite: Geography 1 or 1A.

Three units; first semester.

124. Geography of Asia

A study of the cultural regions of Asia, their physical environment and historical development. Prerequisite: Geography 1 or 1A.

141. Economic Geography

A study of the raw materials of world trade; their production and distribution as related to the major geographic regions of the world. Prerequisite: Geography 1 or 1A and 2 or 2A.

Three units; first semester.

Geology 1A

General geology. A study of the surface features of the earth, agencies and processes of change and evolution of topographic forms.

Three units; first semester.

Geology 1B

Historical geology. Origin and geological history of the earth and of its animal and plant life. Prerequisite: Geology 1A.

Three units; second semester.

HISTORY

The major in History (lower division): History 4A or 4B or 5A-5B or 5A-5B, and either Political Science 1A-1B, Economics 1A-1B, or Geography 1 and 2. No student who wishes to major in History and who has had less than two years of European History in the High School may take History 5A-5B or 4A-4B.

The major (upper division): Twenty-four units of upper division work in history must be completed in consultation with the chairman of the department. The major work in history must be completed by the senior year. A term paper shall be submitted, the subject matter of which shall be arranged in consultation with the department.

4A-4B. History of Modern Europe

The development of Western European Society, politics and institutions from the Congress of Vienna to the present time. The first half-year's work extends to about 1870; the second half-year's work is devoted to the present day. The course is required for students who wish to major in History and who have had less than two years of European History in the High School.

Three units; both semesters.

8A-8B. History of the Americas

A general survey of the history of the western hemisphere from the discovery to the present time. Emphasis is placed on the development of European civilization in North and South America, the independent development of the American republics, and their relations with the rest of the world. The course is given on an independent study basis. Three units; both semesters.

5A-5B. History of England

A survey of the more important political, constitutional and cultural phases of English development. The course is given as a preliminary study for students who wish to major in History and Government. Three units; both semesters.

111A-111B. Ancient History

A. Greek history to the Roman conquest. B. Roman history to the sixth century. Three units; both semesters. (Not offered in 1928-1929.)

121A-121B. Medieval History

A general survey of European history from about 500 to 1500 A.D. Three units; both semesters.

144A-145B. Europe Since 1789

The Industrial Revolution; the development of Nationalism; the war between France and Germany; and political problems of contemporary Europe resulting from the World War. Library deposit, $2.50. Three units; both semesters.

151A-151B. Diplomatic History of Europe

A study of European diplomatic and colonial policies since 1648, with special attention to the basic facts of international organization and procedure. During the second semester special emphasis is placed on the period, 1860-1927.

Three units; both semesters. (Not offered in 1928-1929.)

154A-154B. History of British Expansion

A study of the growth, development, and break-up of the older overseas Empire; the beginnings of the newer Empire after 1783; the rise, federation and imperial relations of the self-governing Dominions; the crown colony system; India under British rule; and British expansion in Afirn and the Pacific.

Three units; both semesters. (Not offered in 1928-1929.)

171A-171B. The Rise of the American Nation

A. English colonization in North America and the development of colonial institutions and politics. B. The revolutionary movement and the Revolutionary War; the establishment of the government under the Constitution to about 1840. Library deposit, $2.50. Three units; both semesters.

173A-173B. The Expansion of the United States

 Territory and growth of the United States; the diplomacy and politics of expansion; the settlement and development of the West and the influence of expansion upon American institutions and upon international affairs at each stage of the advance.

Three units; both semesters. (Not offered in 1928-1929.)

HOME ECONOMICS

Household Art

The Major in Household Art (lower division) required: High school courses in Botany and Chemistry or equivalents; Household Art 1A-1B; Art 6A-6B; History 4A-4B, or equivalents. Recommended: Economics 1A-1B, Art 12, Psychology 4A-4B, or equivalents. Three units; both semesters.

1A. Clothing

A study of clothing problems. The hygiene, artistic and economic aspects of clothing. Three units; both semesters.

1B. Clothing and Costume Design, Textiles

A study of costume design with lectures on artistic appreciation, color and material. Two laboratory periods per week. Recommended for students planning to enter Art 6A or equivalent, Art 6B. Three units; both semesters.

2A. Home Making

A general view of the place of the home in society. Administration of the household. Budgeting of incomes to cover shelter, food, clothing, savings and social life. Field work, assigned reading and theme writing required. Three units; both semesters.

2B. Home Accounting

Basic principles of administering household finances. The moderate income; keeping accounts; banking methods; home management. Three units; both semesters.

3. MILITARY

Making of hats, frames, trimmings, etc. Application of principle of design. Recommended: Art 6A. Art 6B may be taken concurrently with this course. Three units; both semesters.
Household Science

The Major in Household Science (lower division): Household Science 1A–1B, Chemistry 1A–1B, 8, Economics 1A–1B.

1A. Food Economics

Principles of selecting and preparing foods. A study of Composition, production, preservation, nutrition value, digestibility, flavor and cost of foods. One lecture or recitation and two laboratory periods per week.

Three units; first semester.

1B. Food Economics

Principles of diet applied to individual family and special group. The planning and serving of meals. One lecture or recitation and two laboratory periods per week.

Three units; second semester.

2. Dietetics

An analysis of food with special reference to needs of special group. Prerequisites: Food Economics 1A–1B.

Two units; second semester.

HYGIENE

1. Hygiene and First Aid

C. E. Peterson

An informational course in personal and community Hygiene required of all men in the freshman year taking work in the Liberal Arts curriculum. The course includes a study of Sanitary Hygiene and of the Hygienic Principles of Exercise, Bathing and Sleep. Civic Hygiene is vitalized through investigations by each student of special topics, the means by which the health of the local community is protected and improved, providing subjects for special study. Lectures, reference reading, special topics, discussions, oral and written quiz.

One unit; either semester.

2. Hygiene and First Aid

Tanner

An informational course reviewing the principles underlying the improvement and preservation of personal and civic health. Social Hygiene is studied in its relations to the practical problems of young women and prospective home makers. The topics are selected on the basis of the needs of the local community. Each student is required to prepare a report covering the social and civic health matters of particular interest to women. The reports are read in class and discussed.

Two units; either semester.

INDUSTRIAL ARTS

A special junior high credential in Shopwork may be obtained as well as general junior high degree in four years attendance if electives are carefully chosen. For requirements for a teaching credential in Occupations and Home Mechanics see page 20.

1. Woodwork (Benchwork in Wood)

Scudder

Five hours per week.

Two units; second semester.

2. Painting and Finishing

Scudder

Prerequisite: 1A–1B. Five hours per week.

Two units; second semester.

3. Mechanical Drawing

Scudder

Nine hours per week.

Three units.

4. Wood Turning

Prerequisites: 1A–1B, 2. Five hours per week.

Three units.

5. Cabinet Work

Scudder

Prerequisites: 1A–1B, 2, 4. Nine hours per week.

Three units; second semester.

6. Upholstering

Scudder

Prerequisites: 1A–1B, 2, 3. Five hours per week.

Two units.

7. Concrete Work

Desilva

Five hours per week.

Two units; first semester.

8A. Pattern Making

Scudder

Five hours per week.

Two units; first semester.

8B. Pattern Making

Prerequisite: 8A. Five hours per week.

Two units; second semester.

9. Sheet Metal

Desilva

Prerequisite: 3. Five hours per week.

Two units.

11. Shop Drawing: Linear and Shadow Perspective

Scudder

Prerequisite: 3. Nine weeks.

One unit; second semester. Five hours per week.

12. Machine Drawing

Scudder

Prerequisite: 3. Nine hours per week.

Three units.

13. Automobile Mechanics

Desilva

Ten hours per week.

Four units.

18. Lettering

Desilva

Prerequisite: 3. Three hours per week.

One unit.

61A. Elements of Industrial Arts

Benten

Practical problems in the handling of industrial materials such as clay modeling and pottery, paper making, bookbinding, weaving, basketry. Also the study of related subject matter and the use of industrial arts information and skills.

Two units; either semester.

61B. Elements of Industrial Arts

Scudder

Practical problems in the handling of industrial materials involving tool and assembly operations in wood, sheet metal and concrete. Supplies and materials for various projects and the relation and contribution of industrial arts to other activities. Industrial arts as contributing to the evolution of civilization.

Two units; either semester.

116. Auto Repair

Desilva

Prerequisites: 13, 14, 15. Ten hours per week.

Four units.

117. Advanced Cabinet Work

Scudder

Prerequisite: 5. Ten hours per week.

Four units.

Teacher-Training Courses

See Education CXXII, Organization of Industrial Arts; and CXXXIII, Teaching Industrial Arts.

MATHEMATICS

The Major in Mathematics (lower division) required: Mathematics 3A, 3B, 5A–5B, and 6. Recommended: Physics 2A–2B or 1A–1B and a reading knowledge of French and German.

C. Plane Trigonometry

Livingston

Logarithms, solution of triangles, trigonometric functions and relations. Prerequisites: One and one-half years of high school Algebra.

Two units; second semester.

1. Intermediate Algebra

Livingston

Functions and graphs, theory of quadratic equations, binomial theorem, logarithms, progressions. Prerequisites: One and one-half years of high school Algebra.

Two units; first semester.
2. Mathematics of Investment
Interest and annuities; amortization; sinking funds; valuation of bonds; depreciation; mathematics of building and loan associations; mathematics of life insurance. Prerequisites: Plane Trigonometry and two years of high school Algebra, or Mathematics 1.
Three units; first semester.

3A. Introduction to Analysis
Livingston, McIntyre
An introduction to the fundamental ideas of differential and integral calculus, together with a wide range of applications. Through separate sections, the course ministered to the particular needs of students in Letters and Science and in Engineering. Prerequisites: Plane Trigonometry and one and one-half years of high school Algebra.
Three units; first semester.

3B. Analysis
Livingston, McIntyre
Analytic geometry, differentiation of algebraic and transcendental functions, and applications. Separate sections for students in Letters and Science and in Engineering. Prerequisite: Mathematics 3A.
Three units; second semester.

4A-4B. Engineering Mathematics
Stovall
This course includes analytic geometry, both plane and solid; calculus, both differential and integral, with special emphasis on their practical use in engineering work.
Three units; both semesters.

5A-5B. Higher Analysis
Livingston
A unified course in algebra, trigonometry, analytic geometry and calculus with applications in the life sciences, social sciences and physical sciences. The acquisition of a good technique is emphasized. Prerequisite: Mathematics 3A and 5B.
Three units; both semesters.

6. Introduction to Projective Geometry
Livingston
The construction and study of conic sections by means of perspectives, poles and polars and involutions. Prerequisite: Plane Trigonometry.
Three units; second semester.

101. Elementary Geometry for Advanced Students
The critical parts of geometry are examined from the point of view of higher mathematics. Primarily for prospective teachers. Prerequisites: Mathematics 3A, 3B and 4B.
Three units; first semester. (Not offered in 1928-1929.)

102. Elementary Algebra for Advanced Students
The critical parts of Algebra are examined from the point of view of higher mathematics. Primarily for prospective teachers. Prerequisites: Mathematics 3A and 5B.
Three units; second semester. (Not offered in 1928-1929.)

111. Theory of Equations
Livingston
General solutions of algebraic equations; approximate numerical solutions; applications. Prerequisites: Mathematics 5A-5B.
Three units; first semester.

112. Analytic Geometry of Space
Livingston
Planes, lines and quadric surfaces. Prerequisites: Mathematics 5A-5B.
Three units; second semester.

MUSIC
The major in Music (lower division): Music 1A-1B, 3A-3B, 4A-4B, and 5A-5B. These courses are arranged with a particular view to the needs of the student for the Secondary Credential in Music. Special arrangements will be made for the required work in "applied music"—voice, piano, organ, and other instruments.

1A. Sight Singing and Ear Training
L. D. Smith
This is the first semester of the course "Music 1A-1B—Sight Singing and Ear Training." It includes, besides training and drill in sight singing and ear training, the elements and materials of music; elementary musical theory; musical forms and modes of performance; with considerable listening to music by means of the phonograph. Prerequisite to all music teaching courses.
Two units.

18. Sight Singing and Ear Training
L. D. Smith
The first semester of this course, specially designed "Music Fundamentals," is a prerequisite to all courses in music teaching.
Two units; both semesters.

1C-1D. Sight Singing and Ear Training, Advanced
L. D. Smith
Two units; both semesters. (Not offered in 1928-1929.)

2A. Appreciation of Music
Bedelmann
How people appreciate music, how it is made. How to listen to, enjoy, and appreciate it. Illustrated with numerous phonograph records. A general, fundamental, and non-technical course, requiring no previous musical training or background.
Two units; either semester.

3A-3B. History of Music
Bedelmann
The development of music from the earliest times, with a particular effort to gain some acquaintance with the music of the various periods and composers by actually listening to examples of it.
Two units; both semesters.

4A-4B. Harmony (Elementary)
L. D. Smith
Scale construction, intervals, chords, structure, modulation, through various types of tonal structures. Special attention is paid to the keyboard application of problems in harmonization, transposition, and modulation. Prerequisite: 1A, or the equivalent.
Three units; both semesters.

5A-5B. Applied (Advanced) Harmony
Bedelmann
Completion of harmonic theory—modulation, inharmonic tones, etc. Musical form, and elementary musical composition. Harmonic form analysis. Polyphonic treatment of harmony. Prerequisite: 4A-4B.
Two units; both semesters.

7A. Conducting
Bedelmann
The technique of the baton. Methods and materials for use in directing choral and instrumental organizations. Prerequisite: 1A-1B, or 4A-4B.
Two units; first semester.

8A. Orchestration
Bedelmann
Theory and practice of arranging music for instrumental combinations. Prerequisite: 4A-4B.
Two units; second semester.

Musical Organizations
L. D. Smith
Troble Clef (Women's) Glee Club
Membership based on competitive try-outs.
One-half unit; either semester.

Men's Glee Club
Membership based on competitive try-outs.
One-half unit; either semester.

Orchestra
One-half unit; either semester.

Teacher-Training Courses

A. Orientation
A. G. Peterson
An orientation course planned to furnish educational guidance and to encourage a scientific attitude in the analysis and solution of problems in the field of human engineering: Lectures and collateral reading. Required of all freshmen in the College of Liberal Arts.
Two units; either semester.

PHYSICAL EDUCATION
The Group Major in Physical Education and Hygiene (lower division) required: High school Chemistry, Biology 1A-1B, Psychology 2A. Recommended: German or French, Public Speaking 1A-1B.
C. E. Peterson
Physical Education for Men
A two-hour course required for the two years of lower division work. Physical examination is given each student when entering and special attention is given to correcting postural faults. In addition to the body building work given in the class.
periods, physical efficiency tests embracing agility, defense and swimming are given each semester. During the two years a playing knowledge of the major and minor sports is given and fundamentals of boxing and wrestling taught each student.  
1A, B, C, or D. Physical Education. One-half unit; both semesters.  
1AA or B. American Football. One-half unit; first semester.  
1Aa or B. Track. One-half unit; second semester.  
1A. Basketball. One-half unit; second semester.  
1Aa or B. Basketball. One-half unit; second semester.  
1Aa or B. Tennis. One-half unit; either semester.  
1Aa or B. Boxing. One-half unit; either semester.  
1Aa or B. Wrestling. One-half unit; either semester.  
10A, B, C, or D. Swimming. One-half unit; either semester.

Physical Education for Women

Students are given a health and physical examination, the physical activities prescribed being based upon the data thus obtained. Two hours weekly of directed physical training are required of all women students, the chief purpose being to develop a knowledge of and interest in suitable sports and games, that habits of vigorous exercises may be promoted. Intramural sports are encouraged, particularly those of inter-class nature.

22A-52B. Physical Education. Prescribed courses for freshmen.  
One-half unit; both semesters.  
22C-52D. Physical Education. Prescribed courses for sophomores.  
One-half unit; both semesters.

51. Health Education

A course for teacher-training students which includes the study of the diseases, common physical defects, and health indices of school children; the detection and control of communicable diseases which may appear in the school; and the elements which underlie a health education program. Methods of presenting personal and group health to children of different ages. Hygiene of the school room, such as seating, lighting and ventilation.

Two units; either semester.

52. Play Activities

The required Physical Education for the second semester consists of intensive playing of a large range of games. The course does not deal with highly specialized athletics.  
(For teacher-training students.)  
One-half unit; either semester.

53. Administration of Physical Education Program in Elementary and Junior High Schools

Materials and methods noted in the state program of Physical Education are studied. Emphasis is placed upon athletic tests, group activities under student leadership, the administration of the "relief" and play periods and the means of securing better postures. Standards and practices in health measurements as applicable to elementary school children, and the treatment of school emergencies are included. Lectures, demonstrations and individual study of important problems.  
(For teacher-training students.)  
Two units; either semester.

101. First Aid and Bandaging

C. E. Peterson

Proper care of injuries received on the playground and athletic field. Methods of bandaging and the fundamentals of massage used in athletic training.  
One unit; first semester.

Teacher-Training Courses

See Education: CLI, Methods in Formal Activities; CLII, Theory of Teaching and Leadership in Physical Education; CLIII, Methods in Play Activities; CLIV, Administration of Physical Education; Program in Secondary Schools; CLV, Practice Teaching in Physical Education; CLVI, Methods in Coaching Competitive Athletics.

PHYSICS

The Major in Physics (lower division). Required: Physics 1A-B or 1C-D; Chemistry 3A-B; Mathematics C, 3A-B, or 4A-4B; or their equivalents. Recommended: A reading knowledge of French and German.

1A-1B. General Physics

McIntire

Mechanics, properties of matter, and heat. This course aims at a development of the fundamental laws which underlie the subject of physics, and the application of them in the discussion of practical problems. The work is presented in lectures.

1C-1D. General Physics

Baird

This course is a continuation of Physics 1A-B for students in the sophomore year, and includes magnetism, electricity, sound and light. Two lectures and one laboratory period each week.  
Three units; both semesters.

2A-2B. General Physics

Baird

Properties of matter, mechanics, heat, sound, light, electricity and magnetism. A non-majors engineering course. Lectures, demonstrations and discussions. Prerequisite: Two years of high school mathematics.  
Three units; both semesters.

3A-3B. Physical Measurements

Baird

Laboratory work in mechanics, properties of matter, heat, sound, light, electricity and magnetism. These exercises are usually taken in conjunction with Physics 2A-B.  
One unit; both semesters.

107. Electrical Measurements

Baird

Devoted mainly to the study of potentiometer methods, capacity, inductance, resistance, and magnetic flux. One lecture and two laboratory periods each week. Prerequisite: Eight units in physics.  
Three units; first semester.

108. Modern Physics

Baird

An introductory survey of the problems of modern physics. Theories of atomic structure and series in optical spectra, radioactivity, conduction of electricity through gases, radiation and the quantum theory. Prerequisite: Eight units in physics.  
Three units; second semester.

PHYSIOLOGY

Ow

A study of the human body. Lectures and laboratory exercises on the physiology of the several systems of organs with emphasis on the applications to hygiene and physical education. A brief survey of human histology and a vertebrate dissection furnish the necessary facts of structure. An elective for teachers college students, classified as a natural science.  
Four units; first semester.

POLITICAL SCIENCE

The Major in Political Science (lower division): Political Science 1A-B and Economics 1A-B or History 4A-B or Geography 1 and 2. High school Civics is presupposed in the following courses.

1A-1B. Comparative Government

Leonard

A comparative study of typical European governments and the government of the United States. The first semester, England, France, Germany, Italy and Switzerland. The second semester, the lesser European states and the United States. Library deposit.  
$2.50.  
Three units; both semesters.

101. Constitution of the United States

W. E. Johnson

This course is planned to meet the requirements of the state law for the certification of teachers. The origins, principles and development of the Constitution. Library deposit.  
$2.00.  
Two units; first semester.

Theory of the State

Leonard

The nature of the state, its organization and activities, and its relation to individuals and to other states. Library deposit.  
$2.50.  
Three units; first semester.

113. American Political Ideals

Leonard

Underlying theories and principles of American governmental policy. Library deposit.  
$2.50.  
Three units; second semester.
PSYCHOLOGY


2A. General Psychology (for Liberal Arts students)  
An introductory survey of the entire field of psychology. In the study of normal adult human behavior, and the factors which condition it, a conservative position is taken, leaving the student as nearly as possible unbiased toward the special schools of psychology.
Three units; first semester.

2A. General Psychology (for Education students)  
An introductory survey of the entire field of psychology. The fundamental facts of human behavior and the facts conditioning it are given with special emphasis upon such problems as original endowment, the learning process, work and fatigue and individual differences in their relation to education.
Three units; both semesters.

2B. Applied Psychology  
A general survey of the results of modern psychology applied to self-improvement, and to the work of the lawyer, physician, clergyman, merchant, and educator. The purpose of the course is to give intelligent basis for discrimination in these fields between scientific, legitimate psychology and the pseudo-psychology that is popular because of its simplicity and plausibility or because of its mysticism.
Three units; second semester.

2C. Genetic Psychology—Growth and Development of the Child  
A study of the mental and physical growth and development of the child. Special emphasis is given to norms of structure and function as a basis for an interpretation of variations from them. Behavior problems and the growth of personality traits and conditioning factors of physical and mental hygiene are also stressed.
Three units; second semester.

145. Social Psychology  
The instinctive and reflective side of man, and his adjustments to civilization. Personality, suggestion and imitation, leadership, the crowd, public opinion, social control, etc. Prerequisite: Psychology 2A.
Three units; second semester.

ZOOLOGY

(See Biological Science.)