UNIVERSITY OF NEVADA BULLETIN

VOL. XXIII MAY 1, 1929 No. 3

THE UNIVERSITY OF NEVADA CATALOGUE

1929-1930

With Record for 1928-1929

FORTY-FIRST ANNUAL NUMBER

BRING THIS CATALOGUE WITH YOU WHEN YOU COME TO REGISTER

PUBLISHED QUARTERLY BY THE UNIVERSITY OF NEVADA
RENO, NEVADA

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CARSON CITY, NEVADA

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1929

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OFFICE OF THE
BOARD OF REGENTS, UNIVERSITY OF NEVADA
RENO, NEVADA, May 1, 1929

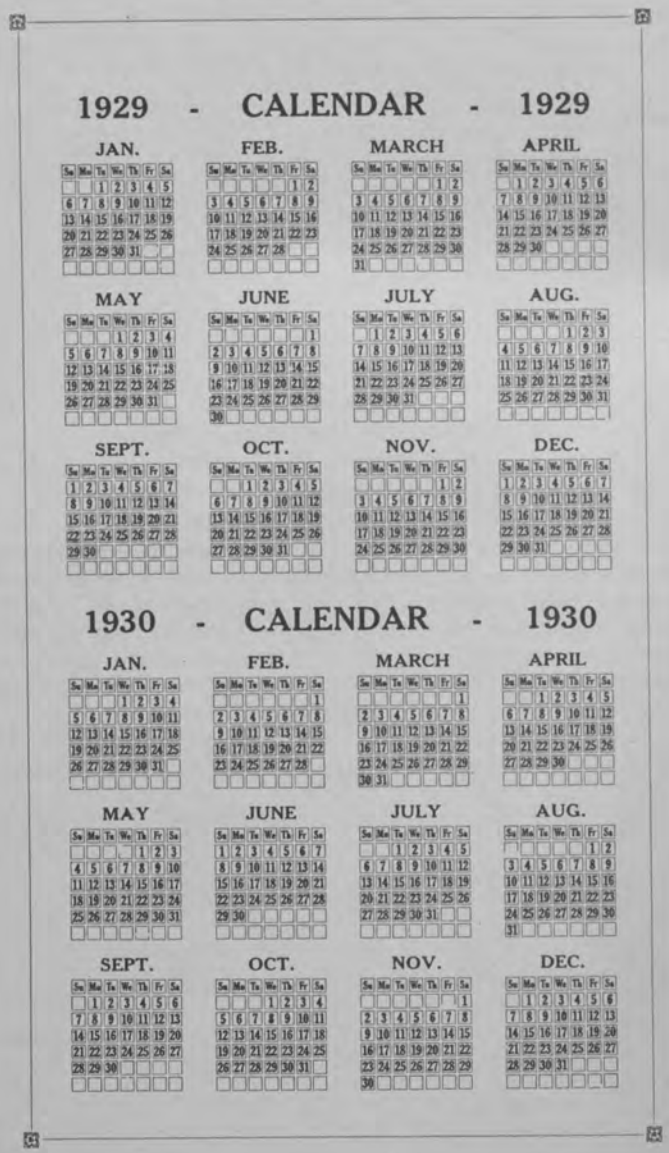
To His Excellency, FRED B. BALZAR,
Governor of the State of Nevada.

SIR: The Regents of the University of Nevada have the honor to submit herewith the Annual Catalogue of the University, giving the records for the year 1928–1929, containing the courses of study, general information, the membership of the Faculty, and the enrollment of the students, as required by the Act of the Legislature, approved March 6, 1901.

By the Board of Regents:

GEORGE S. BROWN,
Chairman.

CAROLYN M. BECKWITH, *Secretary.*



UNIVERSITY CALENDAR

1929	First Semester	
August 24–25	Saturday–Sunday	Dormitories open to students
August 26–27	Monday–Tuesday	Examinations for admission
August 26–27	Monday–Tuesday	Reexamination to remove conditions
August 26–27	Monday–Tuesday	Matriculation and registration
August 28	Wednesday	Regular class work begins
September 2	Monday	Labor Day
September 17	Tuesday	Registration closes
October 23	Wednesday	Mid-semester reports are due
Nov. 28–Dec. 1	Thursday–Sunday, inc.	Thanksgiving recess
December 21	Saturday, 12 m.	First semester closes
December 24	Tuesday, 4 p. m.	Final grades must be on file with Registrar
1930	Second Semester	
January 6–7	Monday–Tuesday	Matriculation and registration
January 8	Wednesday	Regular class work begins
January 28	Tuesday	Registration closes
March 12	Wednesday	Mid-semester reports are due
March 29	Saturday	Mackay Day
April 18–20	Friday–Sunday, inc.	Easter recess
May 5	Monday	Senior standings must be on file with Registrar
May 9	Friday	Meeting of Honorary Board of Visitors
May 10	Saturday, 12 m.	Second semester closes
May 10	Saturday evening	Phi Kappa Phi address
May 11	Sunday	Baccalaureate Sunday
May 12	Monday	Commencement Day
May 15	Thursday, 12 m.	Final grades must be on file with Registrar
June 15–July 25		Summer Session
August 25		First Semester of University year 1930–1931 opens

OFFICERS OF THE UNIVERSITY

THE BOARD OF REGENTS

HON. GEORGE F. TALBOT (1931) ..... Reno
HON. FRANK WILLIAMS (1933) ..... Goodsprings
HON. WALTER E. PRATT (1935) ..... Reno
HON. GEORGE S. BROWN (1937) ..... Reno
HON. GEORGE WINGFIELD (1939) ..... Reno

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MR. CHARLES H. GORMAN, Comptroller ..... Reno

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ADMINISTRATIVE OFFICERS

WALTER E. CLARK, Ph.D., LL.D., President.

MAXWELL ADAMS, Ph.D., Vice-President.

CHARLES H. GORMAN, Comptroller.
LOUISE M. SISSA, Registrar.
MARGARET E. MACK, A.M., Dean of Women.
JOSEPH D. LAYMAN, B.L., Librarian.
HORACE P. BOARDMAN, C.E., Director of the Engineering Experiment Station.
J CLAUDE JONES, Ph.D., Curator of the Mackay Museum.
EDMUND S. LEAVER, Met.E., Superintendent, United States Bureau of Mines Experiment Station.
JOSEPH B. LYNCH, Superintendent of Buildings and Grounds.
....., Matron University Hospital.
MAE WEISNER, Matron of Manzanita Hall.
MRS. LAURA E. AKIN, Matron of Artemisia Hall.

Colleges and Schools—

MAXWELL ADAMS, Ph.D., Dean of College of Arts and Science.
FREDERICK H. SIBLEY, M.E., Dean of College of Engineering.
ROBERT STEWART, Ph.D., Dean of the College of Agriculture.
JOHN W. HALL, M.A., Dean of the School of Education and Director of the Summer Session.
JOHN ALLEN FULTON, E.M., Director of the Mackay School of Mines.

Public Service Division—

WALTER S. PALMER, E.M., Director of the State Analytical Laboratory.
HENRY ALBERT, M.D., Director of the Hygienic Laboratory.
EDWARD RECORDS, V.M.D., Director of Veterinary Control Service.
SANFORD CROSBY DINSMORE, B.S., Commissioner, Food and Drugs Control and Weights and Measures.
SAMUEL BRADFORD DOTEN, M.A., Director of the Agricultural Experiment Station.
CECIL W. CREEL, B.S., Director of Agricultural Extension.
JOHN ALLEN FULTON, E.M., Director, State Mining Bureau.

General Library Staff—

THEA C. THOMPSON, Assistant Librarian.
RUTH NASH, B.A., Loan Desk Assistant.
....., Cataloguer.

Central Clerical Staff—

CAROLYN M. BECKWITH, Secretary to the President.
LOIS LAMERTON, Departmental Stenographer.
MRS. FREDA METCALF, Clerk, Comptroller's Office.
ALICE TERRY, Clerk, Comptroller's Office.

OFFICERS OF INSTRUCTION[1]

University Faculty[2]

WALTER ERNEST CLARK, Ph.D., LL.D., President.

A.B., Ohio Wesleyan University, 1896; A.M., Ohio Wesleyan University, 1898; Ph.D., Columbia University, 1903; LL.D., Ohio Wesleyan University, 1918; Instructor in Mathematics, Ohio Wesleyan University, 1896–1899; Tutor in Philosophy, College of the City of New York, 1901–1902; Instructor in Philosophy, *ibid.*, 1902–1906; Assistant Professor of Philosophy, *ibid.*, 1906–1907; Associate Professor and Acting Head of the Department of Political Science, *ibid.*, 1907–1910; Professor and Head of the Department of Political Science, 1910–1918; Extension Lecturer in Economics, Columbia University, 1916–1918; President, University of Nevada, September, 1917–.

MAXWELL ADAMS, Ph.D., Professor of Chemistry, Dean of the College of Arts and Science, and Vice-President.

A.B., Leland Stanford Junior University, 1895; A.M., *ibid.*, 1896; Ph.D., University of Chicago, 1904; Instructor in Chemistry, Leland Stanford Junior University, 1896; Teacher of Science, Chico State Normal School, 1897–1900; Vice-President of the Chico State Normal School, 1901–1906; Professor of Chemistry, University of Nevada, 1906–; Acting Dean of the College of Arts and Science, 1917–1918; Dean of the College of Arts and Science, 1918–; Vice-President of the University, 1922–.

[3]JAMES EDWARD CHURCH, JR., Ph.D., Professor of the Classics.

A B., University of Michigan, 1892; Ph.D., University of Munich, 1901; Instructor in Latin and German, University of Nevada, 1892–1894; Assistant Professor of the Latin Language and Literature, 1894–1895; Associate Professor of the Latin Language and Literature, 1895–1896; Professor of the Latin Language and Literature, 1896–1918; Professor of the Classics, 1918–.

JEANNE ELIZABETH WIER, B.A., LL.D., Professor of History and Political Science.

B Di., Iowa State Teachers' College, 1893; B.A., Leland Stanford Junior University, 1901; LL.D., University of Nevada, 1924; Acting Assistant Professor of History, University of Nevada, 1899–1901; Associate Professor of History, 1901–1906; Professor of History and Political Science, 1906–1917; Professor of History, 1917–1921; Professor of History and Political Science, 1921–.

PETER FRANDSEN, A.M., LL.D., Professor of Biology.

A.B., University of Nevada, 1895; A.B., Harvard University, 1898; A.M., *ibid.*, 1899; LL.D., University of Nevada, 1924; Assistant Professor of Zoology and Bacteriology, University of Nevada, 1900–1902; Associate Professor of Zoology and Bacteriology, 1902–1903; Professor of Zoology and Bacteriology, 1903–1906; Professor of Biology, 1906–.

HORACE PRENTISS BOARDMAN, C.E., Professor of Civil Engineering and Director of the Engineering Experiment Station.

B.S., University of Wisconsin, 1894; C.E., *ibid.*, 1911; Professor of Civil Engineering, University of Nevada, 1907–; Director of the Engineering Experiment Station, 1921–.

LEON WILSON HARTMAN,[4] Ph.D., Professor of Physics.

B S., Cornell University, 1898; A.M., *ibid.*, 1899; Ph.D., University of Pennsylvania, 1903; Assistant Instructor in Physics, Cornell University, 1900–1901; Professor of Physics, Kansas Agricultural College, 1901–1902; Instructor in Physics, Cornell University, 1904–1905; Assistant Professor of Physics, University of Utah, 1905–1906; Associate Professor of Physics, 1906–1909; Professor of Physics, University of Nevada, 1909–.

[1]The record of teaching experience does not include work in high schools or academies, except for members of the School of Education, and of the Public Service Divisions, nor University instruction as fellows or student assistants Summer-school and extension instruction is also excluded.

[2]The President, Vice-President, Deans, Librarian, Registrar, and all persons with the rank of instructor or above, who give instruction in any of the regular college departments of the University, constitute the University Faculty.

[3]The order beginning here is seniority.

[4]On leave, fall semester of 1929.

CHARLES HASEMAN, Ph.D., Professor of Mathematics and Mechanics.

A.B., Indiana University, 1903; A.M., *ibid.*, 1906; Ph.D., Göttingen University, 1907; Instructor in Mathematics, Indiana University, 1907–1908; Assistant Professor of Mathematics, 1908–1909; Associate Professor of Mathematics and Mechanics, University of Nevada, 1909–1910; Professor of Mathematics and Mechanics, 1910–.

FREDERICK WESTON WILSON, M.S., Professor of Animal Husbandry.

B.S., Kansas State Agricultural College, 1905; M.S., University of Illinois, 1913; Professor of Animal Husbandry, University of Arizona, 1913–1914; Professor of Animal Husbandry, University of Nevada, 1914–.

REUBEN CYRIL THOMPSON, M.A., Professor of Philosophy.

B.A., McMinnville College, 1899; B.A., Harvard University, 1901; M.A., *ibid.*, 1902; Teacher in Latin, Albion State Normal School, Idaho, 1905–1908; Instructor in Latin and Greek, University of Nevada, 1908–1909; Assistant Professor of Latin and Greek, 1909–1910; Associate Professor of Latin and Greek, 1910–1914; Professor of Latin and Greek, 1914–1915; Professor of Philosophy, 1915–.

J CLAUDE JONES, Ph.D., Professor of Geology and Mineralogy, Curator of Mackay Museum.

A.B., University of Illinois, 1902; Ph.D., University of Chicago, 1923; Assistant in Geology, University of Illinois, 1904–1905; Instructor in Geology, *ibid.*, 1905–1906; Instructor in Mineralogy and Geology, University of Nevada, 1909–1910; Assistant Professor of Geology and Mineralogy, 1910–1914; Professor of Geology and Mineralogy, University of Nevada, 1914–; Curator, Mackay Museum, 1925–.

WALTER S. PALMER, E.M., Professor of Metallurgy; Director State Analytical Laboratory.

B.S., University of Nevada, 1905; E.M., Columbia School of Mines, 1907; Instructor in Mining and Metallurgy, University of Nevada, 1910–1913; Assistant Professor of Mining and Metallurgy, 1913–1916; Professor of Metallurgy, 1916–; Director, State Analytical Laboratory, 1925–.

ALBERT ELLSWORTH HILL, A.B., Professor of English.

A.B., University of Chicago, 1899; Assistant in English, University of Chicago, 1905–1907; Associate in English, 1907–1909; Instructor in English, 1909–1913; Assistant Professor of English, University of Nevada, 1913–1914; Associate Professor of English, 1914–1916; Professor of English, 1917–.

JAMES REED YOUNG, Ph.D., Professor of Psychology.

B.L., Berea University, 1907; A.B., Leland Stanford Junior University, 1909; A.M., *ibid.*, 1910; Ph.D., University of Chicago, 1916; Teacher San Diego Normal Training School, 1910–1912; Instructor in History of Education, University of Chicago, 1913–1915; Associate Professor of Education, University of Nevada, 1915–1917; Professor of Education, 1917–1920; Professor of Psychology, 1920–.

JOHN PAUL RYAN, Colonel U.S.A., Professor Emeritus of Military Science and Tactics.

U. S. Military Academy, 1888; Professor of Military Science and Tactics, University of Nevada, 1917–1918; Commanding Officer, S. A. T. C. October, 1918–January, 1919; Professor of Military Science and Tactics, 1919–1928; Professor Emeritus of Military Science and Tactics, 1928–.

STANLEY GUSTAVUS PALMER, M.E., Professor of Electrical Engineering.

B.S., University of Nevada, 1909; M.E., Cornell University, 1910; Instructor in Electrical Engineering, University of Nevada, 1915–1916; Assistant Professor of Electrical Engineering, 1917–1918; Professor of Electrical Engineering, September, 1918–.

VERNER E. SCOTT, B.S., Professor of Dairying and Poultry.

B S., University of Wisconsin, 1911; Instructor in Dairying, University of Nevada, 1912–1915; Acting Instructor in Animal Husbandry, 1913–1914, Professor of Dairying, 1919–1929; Professor of Dairying and Poultry, 1929–.

JOHN WILLIAM HALL, M.A., Professor of Education and Dean of the School of Education.

Principal Normal Practice School, 1890–1892; Principal Franklin School, Observation School of the University of Buffalo, 1895–1897; Superintendent Training Department, Colorado Teachers College, 1898–1900; B.S., Teachers College, Columbia University, 1901; M.A., Columbia University, 1902; Teacher of Psychology and History of Education, New York Training School for Teachers, 1901–1905; Professor Elementary Education, University of Cincinnati, 1905–1920; Dean of the School of Education and Professor of Education, University of Nevada, 1920–.

FREDERICK H. SIBLEY, M.E., Professor of Mechanical Engineering and Dean of the College of Engineering.

Ph.B., Brown University, 1898; M E., Case School of Applied Science, 1905; Professor of Mechanical Engineering, University of Alabama, 1907–1912; Professor of Mechanical Engineering, University of Kansas, 1912–1920; Professor of Mechanical Engineering, University of Nevada, 1920–; Dean of the College of Engineering, 1921–.

ROBERT STEWART, Ph.D., Professor of Agronomy and Dean of the College of Agriculture.

B.S., Utah Agricultural College, 1902; Ph.D., in Agronomy, University of Illinois, 1909; Assistant Chemist, Utah Experiment Station, 1902–1905; Assistant Professor of Chemistry, Utah Agricultural College, 1905–1908; Professor of Chemistry and Station Chemist, Utah Agricultural College, 1908–1915; Professor of Soil Fertility, University of Illinois, 1915–1920; Dean of the College of Agriculture and Professor of Agronomy, University of Nevada, 1920–.

SARAH LOUISE LEWIS, M.A., Professor of Home Economics.

B.S., Columbia, 1919; M.A., Teachers College, Columbia, 1923; Instructor at Oregon Agricultural College, 1912–1915; Assistant Professor, Oregon Agricultural College, 1915–1917; Professor of Household Science and Head of Department, O. A. C., 1919–1920; Professor of Home Economics, University of Nevada, 1920–.

BENJAMIN FRANKLIN CHAPPELLE, Ph.D., Professor of Modern Languages.

A B., Dickinson College, 1908; A.M., *ibid.*, 1911; Diplome de L'Alliance Francaise University of Poitiers, 1914; Ph.D., University of Pennsylvania, 1917; Acting Head of the German Department, Dickinson College, 1910–1911; Instructor in French, Gettysburg College, 1911–1912; Head of the Department of Romanic Languages, 1912–1916; Assistant Instructor in Romanic Languages, University of Pennsylvania, 1916–1917; Assistant Professor of Romanic Languages and Literatures, University of Nevada, 1917–1918; Assistant Professor of Romanics, University of Pennsylvania, 1918–1921; Professor of Romanic Languages, University of Nevada, 1921–1922; Professor of Modern Languages, 1922–.

SAMUEL BRADFORD DOTEN, M.A., Professor of Agricultural Research.

B.A., University of Nevada, 1898; M. A., *ibid.*, 1912; Instructor in History and Mathematics, University of Nevada, 1890–1900; Instructor in Mathematics and Entomology, 1900–1902; Assistant Professor of Mathematics and Entomology, 1902–1903; Assistant Professor of Entomology, Meteorology, and Mathematics, 1903–1905; Professor of Entomology, 1906–; Entomologist and Director, Nevada Agricultural Experiment Station, 1913–; Professor of Agricultural Research, 1922–.

EDWARD RECORDS, V.M.D., Research Professor of Veterinary Science.

V.M.D., University of Pennsylvania, 1909; General practice, 1909–1910; First Assistant, State Livestock Sanitary Board, Pennsylvania, 1910–1911; Veterinarian with H. K. Mulford Co., 1911–1914; Veterinarian, Nevada Agricultural Experiment Station, 1914–1917; Head of Department of Veterinary Science, 1918–; Research Professor of Veterinary Science, 1922–.

CHARLES ELLIOT FLEMING, B.S.A., Research Professor of Range Management.

B.S., Utah Agricultural College, 1909; B.S.A., Cornell University, 1910; Plant Ecologist, U. S. Forest Service, 1910; Grazing Examiner, U. S. Forest Service, 1911–1912; In Charge of Grazing Studies, Montana, 1913–1914; In Charge Grazing Reserves in New Mexico and Arizona, 1915–1916; Head of Department of Range Management, Nevada Agricultural Experiment Station, 1916–; Research Professor of Range Management, 1922–.

CECIL WILLIS CREEL, B.S., Professor of Agricultural Extension.—

B.S., University of Nevada, 1911; Agent, Bureau of Entomology, U.S.D.A., 1911–1912, detailed at Salt Lake City, Utah, and Agricultural Experiment Station, Purdue University, Lafayette, Indiana; Special Agent, U. S. Department of Interior, 1912–1913; Scientific Assistant, Bureau of Entomology, U.S.D.A., 1913–1919; County Agent Leader, Agricultural Extension Division, University of Nevada, 1919–1921; Director Agricultural Extension Division and Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1921–.

GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.

B.S., Drury College, 1908; M.S., University of Illinois, 1911; Ph.D., University of Illinois, 1914; Instructor in Chemistry, University of Illinois, 1914–1917; Instructor in Chemistry, University of Nevada, 1917–1918; Associate Professor of Chemistry, 1918–1924; Professor of Chemistry, 1924–.

FRED W. TRANER, M.A., Professor of Education.

A.B., Beloit College, 1908; M.A., University of California, 1920; Instructor in High School, Lancaster, Wisconsin, 1908–1909; Superintendent of Schools, Lancaster, Wisconsin, 1909–1914; Instructor in Education, University of Nevada, 1915–1918; Assistant Professor of Education, 1918–1920; Associate Professor of Education, 1920–1924; Professor of Education, 1924–.

JOHN ALLEN FULTON, E.M., Professor of Mining Engineering, and Director, Mackay School of Mines.

B.S., University of Nevada, 1898; E.M., Columbia University, 1900; Practical work in Africa and the United States, 1900–1924; Professor of Mining Engineering, Director Mackay School of Mines, University of Nevada, 1924–.

PHILIP A. LEHENBAUER, Ph.D., Professor of Biology.

A.B., Westminster College, 1907; A.M., Millikin University, 1909; Ph.D., University of Illinois, 1914; Instructor in Botany and Horticulture, University of Nevada, 1914–1916; Assistant Professor of Botany and Horticulture, 1916–1917; Plant Physiologist, University of Illinois, 1917–1922; Associate Professor of Biology, University of Nevada, 1922–1925; Professor of Biology, 1925–.

FREDERICK L. BIXBY, C.E., Professor of Civil Engineering.

B.S., University of California, 1905; C.E., University of Nevada, 1918; Professor of Civil and Irrigation Engineering, New Mexico College of Agriculture and Mechanic Arts, 1910–1913; Associate Professor of Agronomy, University of Nevada, 1919–1920; Associate Professor of Civil Engineering, 1922–1926; Professor of Civil Engineering, 1926–.

FRANCIS CLARK MURGOTTEN, Ph.D., Professor of Modern Languages.

A.B., Stanford University, 1901; A.M., *ibid.*, 1908; Ph.D., Columbia University, 1924; Professor of Hebrew, Church Divinity School of the Pacific, 1908–1918; Instructor in French, Tenth Division Schools of the British Army in Egypt, 1919; Assistant Professor of Modern Languages, University of Nevada, 1922–1924; Associate Professor of Modern Languages, 1924–1926; Professor of Modern Languages, 1926–.

JAY ARNOLD CARPENTER, E.M., Professor of Mining.

B.S., University of Nevada, 1907; E.M., Mackay School of Mines, University of Nevada, 1911; Instructor in Metallurgy, University of Nevada, 1908–1909; Assistant Professor of Metallurgy, *ibid.*, 1909–1910; Professor of Mining, South Dakota School of Mines, 1921–1922; Professor of Mining, University of Nevada, 1926–.

THEODORE H. POST, M.A., Professor and Director of Music.

Graduate New England Conservatory of Music, 1918; A.B., Washburn College, 1922; M.A. in Music, Harvard University, 1926; Assistant Professor of Voice Culture and Singing, 1919–1921, Smith College; Professor of Voice Culture and Singing, Washburn College, 1921–1924; Assistant Professor of Theory, Teacher of Singing and tenor soloist, Grinnell College, 1926–1927; Professor and Director of Music, University of Nevada, 1927–.

WILLIAM RUSSELL STANDIFORD, Colonel, United States Army, Professor of Military Science and Tactics.

A.B., West Virginia University, 1897; Assistant Principal, West Virginia State Normal School, 1897–1898; Captain, 2d West Virginia Volunteer Infantry, 1898–1899; First Lieutenant and Captain, 41st U. S. Infantry, 1899–1901; Second Lieutenant and First Lieutenant, 2d Infantry, 1901–1907; Signal Corps, 1907–1910; Captain, 5th Infantry, 1911–1914; Major, Philippine Scouts, 1914–1917; Major and Lieutenant Colonel (temporary), 1917–1919; Colonel, National Army, 1919–1920; Lieutenant Colonel, United States Army, 1920–1928; Colonel, United States Army, 1928–; Instructor, Army School of the Line, Langre, France, 1918; Chief of Staff of the Tank Corps in France, 1918. *Graduate*, Infantry and Cavalry School, 1906; Army Signal School, 1907; Army School of the Line, 1922; Army Staff College, 1923; Army War College, 1924. Member of the General Staff Corps Eligible List, United States Army. On War Department General Staff, 1917–1921; on General Staff with Troops, 1924–1927. Professor of Military Science and Tactics, University of Nevada, 1928–.

JOHN EDWARD MARTIE,[1] B.S., Professor of Physical Education for Men.

B.S., Central Missouri State Teachers College, 1923; Instructor of Physical Education for Men, University of Nevada, 1923–1924; Assistant Professor of Physical Education for Men, 1924–; Acting Head of Department, 1924–1926; Associate Professor of Physical Education for Men, 1926–1929; Head of Department and Professor of Physical Education for Men, 1929–.

Associate Professors[2]

KATHERINE LEWERS, Associate Professor of Freehand Drawing.

Instructor in Freehand Drawing, University of Nevada, 1905–1907; Assistant Professor of Freehand Drawing, 1907–1914; Associate Professor of Freehand Drawing, 1914–.

KATHARINE RIEGELHUTH, M.A., Associate Professor of English.

B.A., University of Nevada, 1897; M.A., Columbia University, 1913; Instructor in German, University of Nevada, 1905–1916; Assistant Professor of German, 1916–1917; Associate Professor of German, 1917–1922; Associate Professor of English, 1922–.

ELSA SAMETH,[1] M.S., Associate Professor of Physical Education for Women.

A.B., Cornell University, 1911; B.S., Columbia University, 1911; M.S., University of Wisconsin, 1922; Instructor in Physical Education for Women, University of Nevada, 1913–1915; Assistant Professor of Physical Education for Women, 1915–1918; Associate Professor, *ibid.*, 1918–.

MARGARET ELIZABETH MACK, A.M., Associate Professor of Biology and Dean of Women.

B.S., University of Nevada, 1910; A.M., Columbia University, 1913; Instructor in Biology, University of Nevada, 1913–1917; Assistant Professor of Biology, 1917–1922; Associate Professor of Biology, 1922–.

MEREDITH RAINES MILLER, M.S., Associate Research Professor of Agricultural Chemistry.

B.S., University of California, 1912; M.S., University of Nevada, 1927; Assistant Chemist, Alameda Sugar Co., 1909–1912; Assistant Chemist, Insecticide and Fungicide Laboratory, University of California, 1912–1918; Chemist, Nevada Agricultural Experiment Station, 1918–; Associate Research Professor of Agricultural Chemistry, 1922–.

MARY E. BUOL, B.S., Associate Professor of Agricultural Extension in the College of Agriculture.

B.S., St. Lawrence University, 1912; Home Economics Teacher, Swarthmore High School, 1912–1914; Home Economics Teacher, East Orange High School, 1914–1915; Home Economics Department Head, Germantown High School, 1915–1917; Emergency Home Demonstration Agent, University of Minnesota, 1917; County Home Demonstration Agent, Minnesota, 1918–1921; Assistant Director of Agricultural Extension and Associate Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1922–.

[1]On leave, 1929–1930. [2]Order of Seniority.

SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.

A.B., Drury College, 1907; A.M., University of Nebraska, 1912; Professor of Latin and History, York College, 1907–1910; Assistant in History and Political Science, University of Nevada, 1913–1915; Instructor in History and Political Science, 1915–1916; Assistant Professor of History, 1917–1924; Associate Professor of History and Political Science, 1924–.

GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics.

A.B., Tabor College, 1902; A.M., Washburn College, 1904; Assistant in Physics and Astronomy, Washburn College, 1904–1905; Assistant in Allegheny Observatory, 1905–1906; Professor of Physics, Morningside College, 1907–1909; Instructor and Assistant Professor of Physics, Oregon Agricultural College, 1912–1919; Assistant Professor of Physics, University of Nevada, 1919–1924; Associate Professor of Physics, 1924–.

WILLIAM MURIECE HOSKINS, Ph.D., Associate Professor of Chemistry.

A.B., University of California, 1919; Ph.D., University of California, 1922; Instructor in Chemistry, University of Nevada, 1923–1924; Assistant Professor of Chemistry, University of Nevada, 1924–1925; Associate Professor of Chemistry, 1925–.

EDWARD G. SUTHERLAND, A.B., Associate Professor of Economics, Business and Sociology.

A.B., University of Utah, 1923; Instructor in Economics, Business and Sociology, University of Nevada, 1924–1925; Assistant Professor of Economics, Business and Sociology, 1925–1926; Associate Professor of Economics, Business and Sociology, 1926–.

ALFRED LESLIE HIGGINBOTHAM, M.A., Associate Professor of English.

A.B., Oberlin College, 1920; A.M., *ibid.*, 1920; Correspondent for Ohio Metropolitan Newspapers, 1918–1920; Reporter, Copyreader and State Editor Cleveland Plain Dealer, 1920–1922; Editorial Staff Nevada State Journal, summer of 1923; Contributor to Magazines and Newspapers, 1918–; Instructor in English, University of Nevada, January, 1923–1924; Assistant Professor of English, 1924–1926; Associate Professor of English, 1926–.

THOMAS E. BUCKMAN, B.S., Associate Professor of Agricultural Extension.

B.S., University of Nevada, 1921; County Agricultural Agent, Lyon County, 1921–1922; County Agricultural Agent, Washoe County, 1923–1924; Acting Assistant Director, Nevada Agricultural Extension, University of Nevada, 1925–1926; Assistant Director of Agricultural Extension and Associate Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1926–.

VICTOR ELWIN SPENCER, M.S., Associate Professor of Soils Research in the Nevada Agricultural Experiment Station.

B.S., University of Illinois, 1915; M.S., *ibid.*, 1926; Associate in Soil Fertility, *ibid.*, 1915–1927; Associate Professor of Soils Research in Nevada Agricultural Experiment Station, 1928–.

CHARLES ROGER HICKS, A.M., Associate Professor of History and Political Science.

A.B., Clark University, 1915; A.M., Stanford University, 1922; Instructor in First Commercial School, Kyoto, Japan, 1916–1918; Professor of History and Political Science, Ottawa University, 1922–1924; Instructor in History and Political Science, University of Nevada, 1924–1925; Assistant Professor of History and Political Science, *ibid.*, 1925–1928; Associate Professor of History and Political Science, *ibid.*, 1928–.

JESSIE P. POPE, M.A., Associate Professor of Home Economics.

B.S., University of Nebraska, 1913; M.A., Columbia, 1926; Instructor in Home Economics, University of Nevada, 1918–1927; Assistant Professor of Home Economics, *ibid.*, 1920–1929; Associate Professor of Home Economics, *ibid.*, 1929–.

SIGMUND W. LEIFSON, Ph.D., Associate Professor of Physics.

B.S., North Dakota State Agricultural College, 1922; Teaching Fellow in Physics, University of California, 1922–1925; Ph.D., University of California, 1925; Instructor in Physics, University of Nevada, 1925–1926; Assistant Professor of Physics, *ibid.*, 1926–1929; Associate Professor of Physics, *ibid.*, 1929–.

VINCENT P. GIANELLA, M.S., Associate Professor of Geology and Mineralogy.

B.S. in E.E., Oregon Agricultural College, 1910; B.S. in E.M., Oregon School of Mines, 1911; M.S. in E.M., Mackay School of Mines, 1920; Instructor in Metallurgy, University of Nevada, 1923–1928; Assistant Professor of Geology and Mineralogy, *ibid.*, 1928–1929; Associate Professor of Geology and Mineralogy, *ibid.*, 1929–.

Assistant Professors[1]

GEORGE HARDMAN, M.S., Assistant Research Professor of Irrigation.

B.S., Oregon Agricultural College, 1915; M.S., *ibid.*, 1916; Field Agent, Bureau of Good Roads and Rural Engineering, U.S.D.A., 1915–1916; Soil and Irrigation Expert, Eastern Oregon Land Co., 1916–1917; Irrigation Engineer, Goose Lake Valley Irrigation Co., 1917–1918; Assistant Agronomist, Nevada Agricultural Experiment Station, 1918–1919; Assistant in Irrigation, 1919–; Assistant Professor of Agronomy, University of Nevada, 1919–1926; Assistant Research Professor of Irrigation, 1922–.

LYMAN R. VAWTER, D.V.M., Assistant Research Professor of Veterinary Science.

D.V.M., Kansas State Agricultural College, 1918; Meat Inspector, Bureau of Animal Industry, 1917–1918; Assistant in Pathology, Kansas State Agricultural College, 1918–1919; Instructor in Pathology, 1919–1920; Pathologist, Nevada Agricultural Experiment Station, 1920–; Assistant Research Professor of Veterinary Science, 1922–.

LOUISE KERR SPRINGER, B.S., Assistant Professor of Home Economics.

B.S., Oregon Agricultural College, 1921; Instructor in Home Economics, University of Nevada, 1922–1924; Assistant Professor of Home Economics, 1924–.

JOHN HYRUM WITTWER, B.A., Assistant Professor of Agricultural Extension.

B.A., Utah Agricultural College, 1917; County Agricultural Agent, Uintah County (Utah), 1917–1921; County Agricultural Agent, Clark County, 1921–1923; District Extension Agent, Clark and Lincoln Counties, 1924–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1924–.

EDWIN EUGENE WILLIAMS, M.A., Assistant Professor of Modern Languages.

B.S., University of Nevada, 1912; Licentiate, Instituto de Barcena, Mexico, 1918; M.A., University of Nevada, 1928; Associate Professor of Spanish and German, University of Redlands, 1920–1921; Instructor in Modern Languages, Oregon Agricultural College, 1919–1920; Instructor in Modern Languages, University of Nevada, 1924–1925; Assistant Professor of Modern Languages, 1925–.

EDITH M. RUEBSAM, B.A., Assistant Professor of Education.

B.A., Columbia, 1921; Demonstration Teacher of Kindergarten and Teacher Training, San Jose (California) State Teachers College, 1915–1924; Supervisor of Rural Schools, Sonoma County, California, 1924–1925; Assistant Professor of Education, University of Nevada, 1925–.

JOHN R. GOTTARDI,[2] M.A., Assistant Professor of Modern Languages.

B.A., University of Nevada, 1921; M.A., *ibid.*, 1926; Instructor in Modern Languages, University of Nevada, 1922–1926; Assistant Professor of Modern Languages, 1926–.

[1]Order of seniority. [2]Absent on leave, 1929–1930.

CHARLES LOUIS SEARCY, A.M., Assistant Professor of Mathematics.

B.C.E., Purdue University, 1891; C.E., *ibid.*, 1892; A.M., University of California, 1922; Professor of Mathematics, College of Montana, 1897–1899; Assistant Professor of Civil Engineering, University of Kansas, 1899–1900; Instructor in Mathematics and Physics, Eureka (California) Junior College, 1918–1921; Instructor in Mathematics, University of Nevada, 1925–1926; Assistant Professor of Mathematics, 1926–.

WILLIAM REGINALD BLACKLER, M.S., Assistant Professor of Economics, Business and Sociology.

B.S., University of Utah, 1924; M.S., *ibid*, 1925; Instructor in Economics, Business and Sociology, University of Nevada, 1925–1928; Assistant Professor of Economics, Business and Sociology, *ibid.*, 1928–.

WILLIAM I. SMYTH, E.M., Assistant Professor of Metallurgy and Analyst in State Mining Laboratory.

B.S., University of Nevada, 1914; E.M., *ibid.*, 1927; Instructor in Metallurgy and Analyst in State Mining Laboratory, University of Nevada, 1925–1928; Assistant Professor of Metallurgy and Analyst, *ibid.*, 1928–.

PAUL ATKINS HARWOOD, B.A., Assistant Professor of English.

B.A., University of Nevada, 1924; Instructor in English, University of Nevada, 1927–1929; Assistant Professor of English, *ibid.*, 1929–.

S. ALLAN LOUGH, M.S., Assistant Professor of Chemistry.

A.B., University of Denver, 1924; M.S., University of Michigan, 1927; Teacher of Organic Chemistry, University of Denver Dental College, 1923–1924; Research Assistant in Physiological Chemistry, Medical School, University of Michigan, 1924–1925 and 1927; Instructor in Chemistry, University of Nevada, 1928–1929; Assistant Professor of Chemistry, *ibid.*, 1929–.

ORPHA A. MILLER, B.A., Assistant Professor of Agricultural Extension.

B.A., Indiana State University, 1913; Teacher of Home Economics, High School, Carlisle, Indiana, 1915–1916; Teacher of Home Economics, High School, Los Angeles, Calif., 1919–1922; Home Demonstration Agent, Imperial County, California, 1922–1927; District Extension Agent, Clark and Lincoln Counties, 1928–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1929–.

JOSEPH WILLIS WILSON, B.S., Assistant Professor of Agricultural Extension.

B.S., University of Nevada, 1913; County Agricultural Agent, Lyon County, 1917–1920; Humboldt County, 1921–1925; Elko County, 1925–1928; District Extension Agent, Northern Eureka and Elko Counties, 1929–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1929–.

CHESTER M. SCRANTON, M.A., Assistant Professor of Physical Education for Men.

B.A., University of Nevada, 1924; M.A., *ibid.*, 1928; Instructor in Physical Education for men, *ibid.*, 1928–1929; Assistant Professor of Physical Education for Men, 1929–; Acting Head of Department, 1929–1930.

Instructors[1]

CHARLES LEROY BROWN, M.A., Instructor in Biology.

B.A., University of Nevada, 1912; M.A., *ibid.*, 1913; Instructor in Biology, University of Nevada, 1918–.

[1]Order of seniority.

OSCAR THORVALD ROCKLUND, Instructor in Shop Practice and Superintendent of Shops.

Instructor in Shop Practice and Superintendent of Shops, University of Nevada, 1923–.

BERTRAND FRANKLIN COUCH, Instructor in Mine Accounting.

Instructor in Mine Accounting, University of Nevada, 1924–.

EDWIN JOSEPH DUERR, A.B., Instructor in English.

A.B., University of California, 1926; Instructor in English, University of Nevada, 1926–.

MAE BERNASCONI, B.A., Instructor in Physical Education for Women.

B.A., University of Nevada, 1928; Instructor in Physical Education for Women, *ibid.*, 1928–; Acting Head of Department, 1929–1930.

MARGARET LESLIE CANBY, M.A., Instructor in Biology.

A.B., Pomona College, 1926; M.A., Cornell, 1928; Instructor in Biology, University of Nevada, 1928–1929.

ARTHUR W. GAY, B.S., Instructor in Engineering.

B.S. in E.E., University of Nevada, 1928; Instructor in Engineering, *ibid.*, 1928–.

ROBERT STUART GRIFFIN, B.S., Instructor in English.

B.S., Oregon State College, 1928; Instructor in Public Speaking, Oregon State College, 1927; Instructor in English, University of Nevada, 1928–.

RAYMOND D. COOL, Ph.D., Instructor in Chemistry.

B.S. (Honor Graduate), Bridgewater College, 1922; M.S., University of Virginia, 1926; Ph.D., *ibid.*, 1928; Teaching Fellow in Chemistry, University of Virginia, 1925–1927; DuPont Fellow in Chemistry, *ibid.*, 1927–1928; Instructor in Chemistry, University of Nevada, 1928–1929.

FRANK ALBERT BONASI, A.B., Instructor in Modern Languages.

A.B., University of Pennsylvania, 1926; Instructor in French and Italian, University of Michigan, 1926–1927; Instructor in Modern Languages, University of Nevada, 1928–.

GRANT H. HUSTIS, Sergeant, U. S. A., Instructor in Military Science and Tactics.

Instructor in Military Science and Tactics, University of Nevada, 1928–.

WAYNE WALLACE BUERER, B.S., Instructor in Mechanical Engineering.

B.S., University of Nevada, 1928; Instructor in Mechanical Engineering, *ibid.*, 1928–1930.

IRVING JESSE SANDORF, B.S., Instructor in Electrical Engineering.

B.S. in E.E., University of Michigan, 1923; Research Engineer, Development and Research Department, American Telephone and Telegraph Company, 1923–1926, 1927–1928; Instructor in Electrical Engineering, University of Nevada, 1928–.

ERNEST SPARGUER BROWN, B.A., Instructor in Economics, Business and Sociology.

B.A., University of Nevada, 1927; Instructor in Economics, Business and Sociology, *ibid.*, 1928–.

MILAN J. WEBSTER, B.E., Instructor in Economics, Business and Sociology.

B.E., Nebraska Normal College, 1908; Assistant in Psychology, *ibid.*, 1907–1908; Instructor in Education, *ibid.*, 1908–1909; Assistant in Economics, Business and Sociology, University of Nevada, 1928–1929; Instructor in Economics, Business and Sociology, 1929–.

GEORGE PHILBROOK, B.S., Instructor in Physical Education for Men and Football Coach.

B.S., Notre Dame, 1912; Chairman of Athletics, Multnomah Athletic Club, 1920–1922; Track Coach, University of Idaho, 1925–1927; Director of Athletics, Whittier College, 1927–1929; Instructor in Physical Education for Men and Football Coach, University of Nevada, 1929–.

Lecturers, Fellows, and Assistants

BENSON DILLON BILLINGHURST, B.S., LL.B., LL.D., Lecturer in Education.

B.S., Ohio Wesleyan University, 1897; LL.B., University of Washington, 1908; LL.D., University of Nevada, 1924; Superintendent of Schools, Prescott, Arizona, 1900–1907; Superintendent of Schools, Reno, Nevada, 1908–; Lecturer in Education, University of Nevada, 1920–.

CLYDE D. SOUTER, LL.B., Lecturer in Law in the Department of Economics, Business and Sociology.

A.B., Dartmouth College, 1906; LL.B., New Jersey Law School, 1911; Instructor, New Jersey Law School, 1914–1915; Assistant Professor, *ibid.*, 1916–1918; Professor of Law, *ibid.*, 1918–1922; Lecturer in Law, University of Nevada, 1926–.

RUTH ADELINE TALBOY, B.S., Lecturer in Vocational Home Economics.

B.S., Iowa State College, 1924; Nevada State Supervisor of Home Economics, 1926–; Lecturer in Vocational Home Economics, University of Nevada, 1927–.

ROBERT B. JEPPSON, B.S., Lecturer in Education.

B.S., Utah Agricultural College, 1924; State Supervisor of Agricultural Education, 1926–; Lecturer in Education, University of Nevada, 1928–.

ALDA LAVENDER RUSSELL, Lecturer in Education.

Scout Executive, Youngstown, Ohio, 1916–1917; Camp Director, Texas and California, 1917–1926; Scout Executive, Sonoma and Lake Counties, California, 1926–1927; Nevada State Scout Executive, 1927–; Lecturer in Education, University of Nevada, 1928–.

LAWTON B. KLINE, M.A., Assistant in Modern Languages.

B.A., University of Nevada, 1926; M.A., *ibid.*, 1928; Assistant in Modern Languages, 1928–.

FRANCIS S. OAKBERG, A.B., Fellow in Chemistry.

A.B., Illinois College, 1929; Fellow in Chemistry, University of Nevada, 1929–.

EVALYN MARIE NELSON, B.A., Assistant in Physical Education for Women.

B.A., University of Nevada, 1926; Assistant in Physical Education for Women, 1929–.

UNIVERSITY STANDING COMMITTEES

The first-named member of each Committee is its Chairman, to whom all matters of business should be referred.

Admission, Entrance Examinations, and Advanced Standing—
G. W. SEARS, P. A. LEHENBAUER, S. G. PALMER.

Assemblies and Lecturers—
C. R. HICKS, F. C. MURGOTTEN, G. B. BLAIR.

Athletics—
R. C. THOMPSON, C. M. SCRANTON, MISS BERNASCONI.

Campus Employment—
MISS MACK, J. B. LYNCH.

Graduate—
M. ADAMS, R. STEWART, J C. JONES.

Health—
P. FRANDSEN, S. C. DINSMORE, J. E. MARTIE.

High-School Relationships—
F. W. TRANER, MISS RIEGELHUTH, MISS POPE.

Library—
A. E. HILL, MISS WIER, W. S. PALMER, B. F. CHAPPELLE, MISS THOMPSON.

Registration and Scholarship—
M. ADAMS, R. STEWART, F. H. SIBLEY, J. W. HALL, J. A. FULTON, MISS SISSA.

Schedules—
H. P. BOARDMAN, S. C. FEEMSTER, V. P. GIANELLI.

Scholarships and Prizes—
J. A. CARPENTER, C. HASEMAN, MISS LEWIS.

Student Affairs—
MISS MACK, J C. JONES.

Teacher Appointment—
F. W. TRANER, J. W. HALL, MISS CORNELIA WILLIAMSON, Secretary.

Vocational Guidance—
J. R. YOUNG, A. L. HIGGINBOTHAM, J. A. CARPENTER.

Chief Marshal of Formal Assemblies—
COLONEL JOHN PAUL RYAN, U. S. A.

THE HISTORY AND DEVELOPMENT OF THE UNIVERSITY

1862—*The Morrill Land Grant.* By the terms of this grant the State of Nevada received a donation of 90,000 acres of land, in 1866, "for the endowment, support and maintenance of at least one college whose leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." The land in this State is known as the "90,000-Acre Grant," and the sales of this land have amounted to $116,144.51, upon which the United States Government requires an annual interest of 5%.

1864—*Foundation.* The Constitution of the State declares that the "Legislature shall encourage, by all suitable means, the promotion of intellectual, literary, scientific, mining, mechanical, agricultural, and moral improvement," and shall provide for "the establishment of a State University which shall embrace departments for agriculture, mechanic arts and mining." A further provision in the Constitution relates to the Normal School.

1866—By a special Act of Congress there were seventy-two sections in the State set aside for the purposes of endowment of the universities in the State. The fund from the sale of this land now amounts to $54,550.34.

1873—*Location.* The University was first located at Elko by an Act of the Legislature approved March 7, 1873. By an Act of the Legislature approved March 7, 1885, it was moved to Reno, and formally reopened March 31, 1886.

1887—The enrollment of the students in 1887–1888 was 50. The faculty consisted of 2 members, President Brown and Professor Hannah K. Clapp. During the first year 2 additional members were added, and by the end of the second year the faculty numbered 7.

During the first year five departments were recognized, although not fully organized. They were the Liberal Arts, the Mining, the Normal, the Agricultural, and the Business Schools.

1888—The School of Mines was organized, with Robert D. Jackson, Ph.B., as Director. The Normal School was organized, with Miss Kate N. T. Tupper as the head. The Military Department was organized, with Lieutenant Arthur C. Ducat, Jr., as commandant.

1889—*The Hatch Act*—The Agricultural Experiment Station was organized, President Brown acting as Director. By an Act of Congress passed March 2, 1887, known as the Hatch Act, which was accepted by this State, there was established, in connection with the colleges founded upon the Congressional Act of 1862, agricultural experiment stations, "to aid in the acquiring and diffusion among the people of the United States of useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The Hatch Act of 1887 appropriated $15,000 annually for this support.

1889—Administration of President Jones began.

1890—The second Morrill Act of Congress made further appropriations for endowments of institutions established under the Act of 1862. Under this endowment the University is now receiving $25,000 per year.

1891—The first graduates from the School of Liberal Arts.

1892—The first graduates from the Schools of Mines and Agriculture.

1894—Administration of President Jones ended.
Administration of President Stubbs began.

1895—The State Analytical Laboratory was organized under provisions of an Act of the Nevada Legislature of March 16, 1895.

1899—Washoe County presented to the University a farm of sixty acres, to be used in connection with the Agricultural Experiment Station. The cost of the farm was $12,000.

1904—The tridecennial celebration of the establishment of the University was held.

1906—*The Adams Act*—Congress, under Act dated March 16, 1906, known as the Adams Act, provided for additional appropriation for the support of the Agricultural Experiment Station, limiting the money's use to necessary expenses of original research and experimental work in agriculture. This grant amounts to $15,000 per year.

1907—*The Nelson Fund*—An Act of Congress of March 4, 1907, carried with it an appropriation for the further support of the universities established under the Morrill Act of 1862. The present appropriation under this fund amounts to $25,000 per year.

1907—Mrs. John W. Mackay and Mr. Clarence H. Mackay began a donation to the University which founded the Mackay School of Mines, the Mackay Athletic Field, and the Mackay Training Quarters, and contributed $25,000 toward the beautifying of the Campus. They also presented a statute in bronze by Gutzon Borglum of John W. Mackay, one of the pioneers of the Comstock.

1909—State Hygienic Laboratory was organized under provisions of the Act of the Nevada Legislature, approved March 25, 1909.

1910—Laboratory for Pure Foods and Drugs and Weights and Measures was established under provisions of Act of the Nevada Legislature of 1909, effective from January 1, 1910.

1911—Twenty-fifth anniversary of the establishment of the University at Reno, celebrated by Silver Jubilee and home-coming of former students and graduates.

1912—Mrs. John W. Mackay and Mr. Clarence H. Mackay presented to the University Board of Regents $150,000 an an endowment for the Mackay School of Mines.

1914—Administration of President Stubbs closed with his death on May 27.

1914—By an Act of Congress known as the "Smith-Lever Act," there was established a fund for the purpose of agricultural extension. The fund, amounting to $10,000 the first year, increased each year until it amounted in 1923 and thereafter, to $15,699 per year.

1914—September 14, administration of President Hendrick began.

1915—State Veterinary Control Service was organized under provisions of an Act of the Nevada Legislature, approved March 11, 1915.

1917—University Farm of 213 acres purchased.

1917—May 1, administration of President Hendrick ended.

1917—September 1, administration of President Clark began.

1918—*The Smith-Hughes Act*—An Act of Congress passed early in 1917 for the promotion of vocational education. This Act provides for cooperation with the States in the promotion of such education as agriculture, home economics, trades, and industries, and in preparation of teachers of vocational subjects. Under the Nevada State Board of Vocational Education, the University of Nevada does the Nevada vocational-teacher training in accord with the Smith-Hughes Act, being granted special federal and state funds for this purpose. This work began at the University in January, 1918.

1918—First training detachment of 103 soldier students from June 15 to August 13; second training detachment of 103 soldier students from August 15 to October 12; Collegiate Section A—79 soldier students from October 1 to December 21; Vocational Section B—212 soldier students from October 15 to December 21.

1920—The School of Education was organized.

1920—The Rare and Precious Metals Federal Mining Experiment Station was assigned to the University July 8, 1920, by the Federal Bureau of Mines.

1920—A Federal Radio Station was established on the University Campus in September, 1920. The operant station and the government wireless laboratory were both housed in the smaller of the two Barracks buildings until 1924 when this station was transferred to the Federal Aviation Field south of Reno.

1920—The University of Nevada was placed on the approved list of the Association of American Universities in November, 1920.

1921—An Engineering Experiment Station was established.

1924—The Semicentennial of the University was celebrated in May with a home-coming of former students and graduates. Actual University work first began in Elko in 1874.

1924—The Robert Lardin Fulton Lecture Foundation was established.

1925—Mr. Clarence H. Mackay began his additional gift of $18,000 per year to the Mackay School of Mines.

1925—*The Purnell Act*—An Act of Congress passed in February, 1925, under which the income of the University's Agricultural Experiment Station was increased to $50,000 for the year beginning July, 1925, and is due for further increase of $10,000 per year thereafter until the annual income reaches $90,000.

1926—Mr. William A. Clark, Jr., began the construction of a Library Building in memory of his wife, Alice McManus Clark, a native of Virginia City, Nevada.

1926—Mr. Clarence H. Mackay gave the University $100,000 to enlarge the Mackay School of Mines Building and to perfect its equipment.

1927—Presentation of Memorial Library to University by William Andrews Clark, Jr., October twenty-first.

1928—Mr. Clarence H. Mackay and his mother gave the University seven beautiful bound volumes of the *Virginia City Enterprise*—a nearly complete file of this rare newspaper for the years 1866 to 1872, inclusive.

1928—Mr. Clarence H. Mackay gave $6,500 to aid in collecting historical Comstock Lode material for Mackay School of Mines Museum.

1928—Mr. George Wingfield financed the construction of a retaining wall back of the Engineering Buildings.

1928—Mr. Thomas F. Cole financed important improvements on the Lincoln Hall Men's Dormitory.

1928—*The Capper-Ketcham Act*—An Act of Congress was passed in May, 1928, under which the income of the University's Agricultural Extension Service was increased $20,000 per year beginning with July, 1928.

1929—Construction begun on Mackay Science Hall. This $325,000 building, gift of Mr. Clarence H. Mackay, will house the Departments of Chemistry, Physics and Mathematics.

1929—Under Act of March 29, 1929, the Nevada Legislature established a State Bureau of Mines, putting control under the Board of Regents of the University and making an annual grant for the first biennium of $5,000.

THE UNIVERSITY ORGANIZATION

A. College of Arts and Science.
School of Education and Nevada State Normal School.

B. College of Engineering.
- (a) Mackay School of Mines.
- (b) School of Mechanical Engineering.
- (c) School of Electrical Engineering.
- (d) School of Civil Engineering.
- (e) Engineering Experiment Station.

C. College of Agriculture.
- (a) School of Agriculture.
- (b) School of Home Economics.

D. Affiliated Organizations.
- (a) Agricultural Experiment Station.
- (b) Smith-Lever Extension in Agriculture and Home Economics.
- (c) State Analytical Laboratory.
- (d) State Mining Bureau.
- (e) State Hygienic Laboratory.
- (f) Pure Food and Drugs Control and Weights and Measures.
- (g) State Veterinary Control Service.
- (h) United States Bureau of Mines Experiment Station.

E. Summer Session.

COLLEGES, SCHOOLS, AND PUBLIC SERVICE DEPARTMENTS

THE COLLEGE OF ARTS AND SCIENCE

The College of Arts and Science offers four-year courses leading to the degree of Bachelor of Arts. (Students who have majored in Mathematics and Science may, upon application to the faculty, receive the degree of Bachelor of Science if they prefer.)

Work in the following subjects is offered in the College of Arts and Science: Art, Biology, Business, Chemistry, Classics, Economics, Education, English, Geology, History, Mathematics, Mineralogy, Modern Languages and Literatures, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, and Sociology.

SCHOOL OF EDUCATION AND STATE NORMAL SCHOOL

The training of teachers at the University of Nevada embraces the following courses and divisions:

1. The School of Education (included as a division of the College of Arts and Science, but with its own Dean and its direct affiliations with the Colleges of Agriculture and Engineering), which offers to prospective secondary-school teachers a liberal and professional course of study of four years leading to the bachelor's degree and a teacher's high-school diploma, giving title to a teacher's high-school first-grade certificate, and also a special training course for future school principals and superintendents.

2. The State Normal School, which offers to fully accredited students of college grade a two-year professional training leading to a teacher's elementary diploma giving title to a first-grade elementary certificate. Students who cannot immediately proceed after the first year to the second year of this course are granted credentials giving title to a second-grade elementary certificate.

3. The Summer Session, organized more particularly for the benefit of present and prospective teachers and conducted for six weeks in June and July, with a wide variety of liberal and professional courses which carry both university and state-certificate credit. For 1929 this Session is scheduled from June 17 to July 26, inclusive.

THE COLLEGE OF ENGINEERING

The Mackay School of Mines offers a four-year course in mining, leading to the degree of Bachelor of Science in Mining Engineering, which prepares students to become mining engineers, metallurgists, and mining geologists and a one-year graduate course leading to the degree of Master of Science in Mining. The school is provided with the equipment necessary to teach efficiently the courses in mining, metallurgy, and geology, which form the basis of a mining education. The professional degree of Engineer of Mines is conferred upon graduates who have held responsible mining positions for at least five years and who present satisfactory theses.

The Schools of Mechanical, of Electrical, and of Civil Engineering each offer four-year courses of instruction leading, respectively, to the degrees of Bachelor of Science in Mechanical, in Electrical, or in Civil Engineering. The shops are well equipped, and the laboratories offer most excellent facilities for practical work.

ENGINEERING EXPERIMENT STATION

The Engineering Experiment Station was established by the Board of Regents, November 1, 1921. It cooperates with engineering experiment stations in other institutions and conducts useful investigations along engineering lines, publishing bulletins from time to time whenever the results justify such publication.

THE COLLEGE OF AGRICULTURE

The College of Agriculture curriculum leads to the degree of Bachelor of Science in Agriculture. This is a four-year course including, in addition to the prescribed agricultural subjects, such subjects in the College of Arts and Science as are necessary to establish in the student's mind a thorough knowledge of agricultural problems.

The degree course in the School of Home Economics gives to young women of the University a comprehensive understanding of the household sciences, including both domestic science and domestic arts.

AGRICULTURAL EXPERIMENT STATION

The Agricultural Experiment Station receives its Federal support from the Hatch Fund (1887), from the Adams Fund (1906), and from the Purnell Fund (1925). These

funds are restricted by law to the scientific investigation of agricultural problems, including the problems arising from soil conditions, the duty of water, animal diseases, poisonous range plants, economical feeding of live stock, insect pests, plant diseases, and other problems of agricultural economics and practice.

AGRICULTURAL EXTENSION DIVISION

Agricultural Extension, provided for by the Federal Smith-Lever Extension Bill, is under the immediate charge of a director.

Its specific purpose is "the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects, through field demonstrations, publications, and otherwise." Further information concerning the work under this division, staff, etc., is given in this catalogue.

PUBLIC SERVICE DEPARTMENTS

The Legislature of the State has placed the following four public service departments under the direction of the President and Board of Regents of the University:

STATE ANALYTICAL LABORATORY

The State Analytical Laboratory, which was organized under an Act of the Legislature approved May 16, 1895, provides a means whereby citizens of Nevada may have ores and minerals, taken from within the boundaries of the State, assayed and analyzed free of charge.

STATE HYGIENIC LABORATORY

The State Hygienic Laboratory was organized in 1909 to provide facilities for the diagnosis of infectious human diseases and to provide for the control of such diseases. The services of the laboratory are available to physicians, health officers, and health boards. The laboratory is located at the corner of Fifth and Sierra Streets, Reno.

FOOD AND DRUGS CONTROL, AND WEIGHTS AND MEASURES

The Act of the Legislature in 1909 which established the Food and Drugs Control, and Weights and Measures

Departments, provides that all rules, regulations, definitions, and decisions proclaimed by the Secretary of Agriculture for the enforcement of the national law, shall be adopted by this department in the enforcement of the state law. The Department of Weights and Measures is also charged with the enforcement of the provisions of the Nevada Fruit and Vegetable Standardization Act (1923). The laboratory is located at the corner of Fifth and Sierra Streets, Reno.

STATE VETERINARY CONTROL SERVICE

The State Veterinary Control Service was organized in 1915, to provide facilities for the diagnosis of communicable diseases of domesticated animals, for research into the nature, cause, and methods of controlling the same, including the preparation and distribution of special sera and vaccines which cannot be purchased on the open market.

ADMINISTRATION

GOVERNMENT

The control of the University is vested by law in a Board of Regents consisting of five members elected by the people. By an Act of the Legislature, approved March 24, 1917, the tenure of office for University Regents is ten years. At each biennial election one Regent is to be elected.

The administration of the University is vested by the Board of Regents in the President of the University, the University Faculty, the Faculties of the several Colleges and the Deans and Directors of the Colleges and Schools and of the Public Service Division.

THE PRESIDENT

The President of the University is the executive head of the University. It is his duty to secure efficiency in all the departments and orderly and economical administration and healthful development in all the affairs of the University. He is ex officio a member of each committee.

THE VICE-PRESIDENT

In the absence of the President or in case of his inability to act, the Vice-President shall perform his functions.

DEANS

The Dean is the administrative officer of his college or school. Any matters in which the faculty of the college can legislate are within the administrative functions of the Dean. He is directly responsible to the President of the University.

DEAN OF WOMEN

The academic and social welfare of the women students is under the particular supervision of a Dean of Women. It is especially desirable that young women who are away from their home influences should have some one to whom they may look for advice in matters affecting their welfare as women and as students. The Dean of Women has jurisdiction over all social matters in which women students are concerned. For women students whose homes are out of the city and who are not accommodated in Manzanita or Artemisia Halls, the Dean of Women has a list of suitable homes

accommodating women exclusively and in which a parlor is provided for the reception of visitors. Women students are required to report to the Dean of Women in order that they may register their addresses. The Dean of Women invites correspondence with parents and guardians, and gladly cooperates with them regarding the welfare of students.

THE TREASURER AND COMPTROLLER

The Treasurer and Comptroller is authorized to receive all moneys arising from gifts or bounties in any form to the University or for its benefit; all fees from students or others; proceeds from all sales of farm products or any articles of personal property of whatever nature or kind; fees for services rendered in any manner, and funds from any sources whatsoever other than in cases by law required to be paid to the State Treasurer. He keeps the accounts of the moneys in his custody in such separate funds as are necessary for proper and systematic accounting.

THE UNIVERSITY FACULTY

The President, Vice-President, Deans, Librarian, Registrar, and all persons who give instruction, with the rank of instructor or above, in any of the regular college departments of the University, constitute the University Faculty.[1] Subject always to the approval of the President and the Board of Regents, the University Faculty has legislative jurisdiction in all matters of government, discipline and educational policy not delegated by it to the separate faculties, and has the right of review of all actions of the several colleges which relate to the educational welfare of the University as a whole.

The Standing Committees, through which much of the business of the University Faculty is done, are listed on page 21 of this Catalogue.

MEETINGS

The University Faculty meets at the call of the President.

COLLEGE FACULTIES

The faculty of each college directs the educational and

[1]Exceptions to the above rule:
1. Any member of the faculty not teaching during any given college year shall not have the privilege of voting in faculty meetings during that year.
2. New appointees shall not have the right to vote until one year after appointment, except those who may be appointed to the rank of full professor, or as the head or acting head of a department.

internal life of the college, makes rules and regulations peculiar to that college; formulates the course of study, the entrance and graduation requirements, which, when approved by the University Faculty, the President and the Board of Regents, become the statutes in force in that college. It shall not have the authority to take away from a student any university privilege nor shall it trench upon the executive duties of the Deans. All matters which may require the action of the University Faculty shall be presented to that body by the Dean. The faculty of each college shall organize and carry out its functions as it deems wise. The Dean shall be chairman of the faculty and ex officio a member of all committees. The action of each faculty is subject to the approval of the President and of the Board of Regents. A copy of the minutes must be filed with the President immediately following each meeting.

DEPARTMENTS

The department is the educational unit in the University. The head of the department is responsible directly to the President for the efficiency and educational effectiveness of the department. For general administrative work the head of the department is in that college in which his major work appears.

The heads of departments make all department reports, prepare estimates for the expenses of their departments, and are responsible for the distribution and expenditure of the funds assigned to them.

ADVANTAGES AND EQUIPMENT

Reno, the seat of the University, is a substantially built and steadily growing city, numbering in 1928 twenty thousand inhabitants. It is located in the valley of the beautiful Truckee River at the junction of three railroads, the Southern Pacific, a transcontinental line, the Virginia and Truckee Railway, a short line with Reno and Virginia City as terminals, and the Western Pacific Railway, another trunk-line between the East and the West.

The scenery is magnificent. The University Campus, at the northern edge of the city of Reno, is a low plateau. On the west are the Sierra Nevada Mountains, pine clad, crowned with snow the year round, and towering to majestic heights, the white summit of Mount Rose, queen of the range, being over two miles above sea-level. On the east are the lower gray-brown Virginia Mountains, endlessly restful with their subdued lights and their velvet shadows. These two ranges unite in low hills to the north, while to the south a green and fertile valley crossed by the silver thread of the Truckee, stretches to the horizon mountains.

The air is clear and invigorating. The temperature is equable. Over three hundred days of the year the sun shines from a usually cloudless sky of wondrous blue. The nights are always cool and refreshing. There are few, if any, more healthful places in America.

The grade-and high-school system of the city has deserved repute throughout the Pacific States. The Reno Young Men's and Young Women's Christian Associations have well-equipped quarters which are centers of athletic and social activities. University students are welcomed by all of the churches of Reno.

BUILDINGS AND GROUNDS

The University Campus has an area of sixty acres and is beautifully located on an eminence overlooking the city. The academic buildings center upon a turfed Quadrangle; broad walks and drives traverse the grounds. The natural advantages of the site respond well to landscape embellishment, and much has been done toward beautifying the grounds.

The following brief descriptions will give some idea of the principal buildings and the purposes for which they are used:

AGRICULTURAL BUILDING—The Agricultural Building is a three-story structure of brick, with stone facings and trimmings, situated directly east of the University lake. The first floor includes the administration offices, three classrooms, a large lecture room, the millinery laboratory, the offices of the Veterinary Control Service, and the nature study laboratory. The second floor is devoted to the School of Home Economics and the Department of Biology, and includes the sewing laboratory, the cooking laboratory, the model kitchen and dining room, and the biological laboratories. The basement includes laboratories for dairying, farm crops, soil physics, biology, Experiment Station chemistry, soils research and veterinary science. (1918*)

ARTEMISIA HALL—The second residence hall for women students is a modern brick building, steam heated and electrically lighted. It is located north of and adjacent to the Dining Hall. Eighty women students and the matron can be accommodated. There are double rooms, living rooms, study, tub baths, showers, lavatories, kitchenette, laundry and other conveniences for comfortable living. (1926)

BARRACKS—The Barracks Building is a two-story frame building located directly north of Lincoln Hall. It is used by the Military Department and for special exhibition purposes. This building was erected in September, 1918, for the use of the Vocational Section of the Students' Army Training Corps. (1918)

CHEMISTRY BUILDING—The Chemistry Building is a two-story gray stone building standing on the west side of the Quadrangle. On the first floor are found the elementary inorganic and qualitative laboratories, a balance room, stock room, and physical chemical laboratory, which is equipped for work. The quantitative laboratory occupies the south half of the second floor. The second floor also contains a lecture room, offices, a department library, and small laboratories. The basement is divided into two compartments, one being used as a furnace and combustion room, the other as an acid room. All the laboratories are heated from the central heating plant. (1902)

*Figures given in parentheses at the end of paragraphs describing the buildings state the years in which the respective buildings were completed.

DINING HALL—The University Dining Hall is a one-story brick building on the west side of the Campus. It is a conveniently equipped Dining Hall for the accommodation of two hundred and fifty students. (1905)

EDUCATION BUILDING—A two-story brick building, with stone facings and columns, situated north of the Agricultural Building. The first floor has an auditorium seating 350, with stage and dressing room, the offices and three classrooms of the School of Education. The second floor is occupied by the Departments of Art, Economics, Business and Sociology, Philosophy and Psychology, and has the music room and other classrooms of Education. (1920)

ELECTRICAL BUILDING—The Electrical Building, situated on the east side of the campus, is a two-story brick building, 50x110 feet. The first floor contains classrooms and the mechanical, electrical and strength of materials laboratories. These laboratories are equipped with modern machinery for giving instruction in the several courses, such standard tests as are usually required being represented. The second floor contains the computing room, drafting room and the classrooms of the civil engineering department. (1912)

EXTENSION BUILDING—This is a two-story brick and stone building situated on the east side of the Campus directly east of the Mechanical Building. The entire second floor and a room of the basement houses the Department of Agricultural Extension. The basement is used by the Department of Building and Grounds. (1913)

GREENHOUSE—A working greenhouse is on the east side of the Campus. It is used by the Departments of Botany and Horticulture, and also for the study of plant industry. (1909)

GYMNASIUM—The Gymnasium is a brick buliding one hundred and fifty feet long and sixty feet wide. The assembly hall is one hundred feet by sixty feet, and is used for general University purposes. The building is devoted to the use of the men's and women's classes in Physical Education, and is equipped with shower baths, dressing rooms, and offices of the Physical Education departments. (1897; extension, 1922)

HALL OF ENGLISH—This building is situated on the west side of the Quadrangle, is constructed of brick and stone in

conformity with the architecture of other buildings and formerly housed the Library. (1913)

HATCH STATION—Hatch Station, as enlarged in 1926, is occupied by the Agricultural Experiment Station. The first floor is occupied by the Department of Farm Development and the Station Library. The second floor is occupied by the offices of the Station Director and by the Departments of Entomology and Range Management. The herbarium occupies the third floor. (1891; moved to Virginia Street, basement added, 1926)

HEATING PLANT—A central heating plant supplies most of the buildings on the Campus. It consists of four large boilers, pumps, engines, motors, etc., and is operated in connection with the mechanical engineering laboratories. (1908; enlarged, 1926)

HOSPITAL—The University Hospital is situated between the Gymnasium and Lincoln Hall. This is a one-story building and contains six rooms and a basement. There are four wards—two upon the west for men and two upon the east for women. There is a convenient kitchen where the food for the patients is prepared. A matron is in charge of the hospital. The physician engaged by the Hospital Association of the University has daily office hours in this building. (1902)

LIBRARY—CLARK MEMORIAL—A two story and basement fireproof brick building, the gift of Mr. William A. Clark, Jr., in memory of his wife, Alice McManus Clark. The main stackroom and a receiving room are in the basement. The first floor has workrooms and seminar rooms. The second floor includes the main reading room, a periodical room, a display room and the main offices of the librarian and staff. (1927)

LINCOLN HALL—Lincoln Hall, the men's dormitory, is a modern three-story brick building, built after the plan of such halls in use in the larger eastern colleges. It affords a comfortable home for ninety men. (1896)

MACKAY SCHOOL OF MINES—The Mackay School of Mines, the gift of Mrs. John W. Mackay and Mr. Clarence H. Mackay, houses the Departments of Mining, Metallurgy, Geology, and Mineralogy. It is a dignified and spacious structure in the colonial style, occupying a space 112x118 feet and is two stories throughout with basement, except for

a light well over the library in the center of the building. In the basement are storerooms, the seismograph laboratory, geology department workroom, mining laboratory, lavatory, shower and locker rooms for the students, and the ore dressing laboratory or mill.

Upon the first floor are the chemical laboratory, electric furnace laboratory, first mezzanine mill floor of the mill, assay laboratory, museum, library, classrooms and offices of the Director, metallurgy department, and mining department.

Upon the second floor are the State Analytical Laboratory, mezzanine floor of the museum, drafting room, seminar room, instruments room, office of the Department of Geology, the mineralogy laboratory, maproom, petrography laboratory, petrography grinding and polishing room, and classrooms. (1908; enlarged, 1926)

MANZANITA HALL—Manzanita Hall, the first hall of residence for women students, is a brick building electrically lighted and steam heated. It provides accommodations for about eighty-five women. There are single rooms, double rooms, and two-room suites. Some rooms have running water and all have outside exposure. There is a large sleeping porch overlooking the lake. Complete arrangements for comfortable living are provided by the presence of adequate living rooms, study, tub baths, showers, laundry facilities, etc. A covered passageway connects the hall with the Dining Hall. (1896; annex 1909)

MECHANICAL BUILDING—The Mechanical Building which is on the east side of the Quadrangle adjoining the Electrical Building is of two story brick construction 80x80 feet. It contains a machine shop, forge shop, foundry and pattern shop. The machine shop is equipped with eight engine lathes, two Universal milling machines, power drill press, thirty-inch Gray planer, two whip crank shapers, benches, grinders, hack saws, and a full complement of small tools sufficient to handle a class of fifteen men at one time. The forge shop is equipped with twelve down-draft forges with anvils and necessary tools. The foundry contains a No. O Whiting cupola and a brass furnace with the usual small equipment for casting iron and brass. The pattern shop is equipped with band saw, jointer, jig saw and a complete outfit of benches, small tools and lockers sufficient for twenty students at one time. (1897)

MINES EXPERIMENTING BUILDING—This building has been erected north of the east wing of the School of Mines Building. It is a two-story and basement brick building, housing the storage rooms, laboratories, library, and offices of the Federal Rare and Precious Metals Mining Experiment Station. (1921)

MORRILL HALL—Morrill Hall is a three-story brick building with a large basement. On the first floor are the offices of the President, the Comptroller, and the Registrar. The Departments of Mathematics and the Classics occupy the second floor. The third floor is used for overflow classes. The office of the Superintendent of Buildings and Grounds and the University Post Office are in the basement. (1886)

PHYSICS BUILDING—The Physics Building is a two-story brick building. On the first floor are the balance room, the dark rooms, the storage-battery room, the shop, the laboratories of the Physics Department, the offices of the Artemisia and the Sagebrush, and a storage room for the greenhouse. The second floor contains the Physics lecture room, with a seating capacity of eighty persons, the apparatus rooms, and the offices. (1889; annex 1905)

PRESIDENT'S HOUSE—The President's house is situated on the southeast corner of the Campus. (1900)

STEWART HALL—Stewart Hall is a three-story brick building with a basement. The basement is used as an armory and contains also the offices of the Military Department. The Departments of History and Political Science and of Modern Languages occupy the first floor. The second floor is occupied by the Department of English. (1890)

THE MACKAY FIELD AND TRAINING QUARTERS—The natural amphitheater on the Campus, which had been leased to the University for a number of years by former Regent Evans, was purchased for the University by Mr. Clarence H. Mackay and provision made for its improvement. In order to make room for other branches of athletics, such as basket-ball and tennis, the Nevada Legislature of 1909 made provision for the purchase of additional land to the south of the old field, so that now about ten acres of land is being used for athletic purposes. The improvements donated by Mr. Mackay include a Training Quarters Building, situated on the east side of the field (1909). This building has showers, baths, locker and

dressing rooms, a committee room, and a lounging room. Directly opposite to this on the west bank are the bleachers and colonnade. The natural slope of the bank has been utilized so that the field closely resembles the stadium used at the ancient Olympic games. There are seventeen tiers of concrete, with a colonnade for a covered grandstand in the rear. The seating capacity is about two thousand.

Situated between these structures is a full-sized American football field, surrounded by a quarter-mile track which has an arm extended to make provision for the 220-yard events.

THE EXPERIMENT STATION FARM—East of the University Campus lies the 60-acre farm given by citizens of Washoe County to be used for agricultural experimentation. (1899)

THE UNIVERSITY FARM—Four miles south of Reno the State purchased, in 1917, a 213-acre farm primarily for use as a stock farm. On this farm over $35,000 worth of blooded stock is kept for animal husbandry and dairy class use and for supplying blooded animals to stockmen of the State. (1917)

LIBRARIES

GENERAL LIBRARY

The University Library contains 50,200 bound volumes and several thousand pamphlets. The books have been selected with particular reference to the needs of the several departments of study; but, besides the works needed by special departments, there are many general works and reference volumes of various kinds. The books are catalogued according to the Dewey Decimal Classification System.

The reading room is supplied with daily and weekly newspapers and with many of the best periodicals. The list includes subscriptions to about two hundred of the leading cultural, scientific, and technical magazines and journals.

During the University year the Library is open from 7:30 a. m. to 9:30 p. m. every day except Sundays and holidays. During the Summer Session and vacations special hours are announced.

To the general public (not children) is extended the use of the Library under such restrictions of the time for which a book may be withdrawn as are necessary to prevent interference with the work of the students. Borrowers residing outside of Reno are asked to pay the necessary postage or expressage on the books loaned to them.

AGRICULTURAL EXPERIMENT STATION LIBRARY

The Agricultural Experiment Station Library, containing about twenty-eight hundred bound volumes and a large number of pamphlets is housed in Hatch Station. The volumes and pamphlets may be classified broadly as follows: Bulletins and Reports of the Experiment Stations of the various States, publications of the United States Department of Agriculture, and general works on agriculture and the related sciences. Many current agricultural periodicals are on the tables in the reading room. The library is catalogued and classified, and suited for ready reference. It is open daily, and, while intended primarily for the use of the Station Staff, it is also accessible to the public.

MINING LIBRARY

Reference books, textbooks, recent technical journals, and other works pertaining to geology, mineralogy, mining, and metallurgy are concentrated in one large study room which is conveniently located upon the ground floor of the Mackay School of Mines. The library consists of some 2,000 bound volumes, in addition to which is maintained a complete set of publications of the U. S. Geological Survey and the U. S. Bureau of Mines. The Consolidated California and Virginia Mining Company donated a complete set of records of the company operations during the period of the Big Bonanza. These records include correspondence, mine, bullion, and mill reports, etc., and are invaluable from a historical point of view. Frederic J. Siebert donated his mining library of about three hundred volumes. Many of these books are out of print. Thirty current periodicals are received. This library is open at all times during the sessions.

MINING EXPERIMENT STATION LIBRARY

The library of the U. S. Bureau of Mines Station at the University consists of between 2,000 and 3,000 volumes and pamphlets. The important mining and research periodicals are received, together with the publications of the Bureau of Mines.

OTHER DEPARTMENTAL LIBRARIES

These libraries are maintained primarily for the use of students taking work in the respective departments. They cover animal husbandry, biology, chemistry, education, home economics, physics, and veterinary science.

CITY AND STATE LIBRARIES

Besides the University libraries, members of the University have the facilities of the Reno Free Library of 25,000 volumes and of the State Library at Carson City which has over 61,000 volumes, 40,000 of which make one of the best Law Libraries in the west.

LABORATORIES

ARTS AND SCIENCE LABORATORIES

Biological—The Biological Department occupies part of the basement, and the north half of the second floor of the Agricultural Building. There are five laboratories consisting of the following: (1) The main laboratory, used for all the elementary courses, which will accommodate thirty-five students; (2) The advanced zoological laboratory; (3) The advanced botanical laboratory; (4) The plant physiology and pathology laboratory; and (5) The anatomy laboratory. The first three are located on the second floor, and the last two are in the basement. In addition to these laboratories, there are small rooms for storage, an ice room, a dark room, a fireproof incubator room, and a small museum and exhibition room. In the basement there are arrangements for the keeping of running aquaria and supplies of living animals. In the central part of each laboratory are stationary tables provided with gas, water, and sink connections, lockers and drawers—all adapted for the setting up of apparatus in physiological and other experimental work. Tables grouped in front of the windows are arranged for microscopic work. Each individual table is provided with a microscope, locker, and combination-lock drawers for the keeping of individual supplies and apparatus. Wall cabinets, reagent cases, and lockers are used for storing general equipment and supplies. The department possesses fifty-five compound microscopes, ten of which are provided with oil immersion lenses and all the accessories needed for the most delicate and precise microscopical work. Among the larger pieces of apparatus are an electrical incubator, a Freas electric oven, paraffin water bath, dry air and steam sterilizers, autoclave, centrifuges, and a full projection apparatus for microscopic lantern-slide and opaque demonstrations. Four complete sets of physiological apparatus will accommodate eight students in experimental animal physiology. Smaller apparatus and a greenhouse make possible a limited amount of work in plant physiology.

Chemical—The laboratory for qualitative analysis will

accommodate sections of sixty students each. The sophomore laboratory will accommodate sections of thirty-six each, with locker room for three sections. The laboratory is completely fitted with water, gas, and fume closets. The quantitative analysis laboratory will accommodate twenty-four students. It is equipped with gas, water, fume closets, steam closets, steam evaporators, drying ovens, etc. In connection with this is a balance room containing twelve balances. The organic chemical laboratory is fitted with desks and equipment to accommodate twenty students.

Geological and Mineralogical—The Departments of Geology and Mineralogy are provided with reference collections illustrating the minerals, rocks, and fossils, and with class collections for study and determination. Also all folios and some 2,000 topographic maps published by the U. S. Geological Survey are provided for laboratory use. The Mineralogical Laboratory is arranged, for the present, for the accommodation of single sections of forty students. There is, in addition, a laboratory fitted up for microscopic work, and equipped with petrographical microscopes and the necessary accessories. It has also a set of mineral thin sections cut in definite direction, and a collection of rock sections with many representatives of each of the chief types, together with many sections illustrating special types. A separate grinding room is provided with apparatus for making thin sections of rocks and minerals. Blowpipe and other chemical work is also provided for. A lantern with a growing collection of slides furnishes additional illustrative material for lecture work.

Physical—The work of the Physical Laboratory is fully adapted to the needs of the students of arts, science, medicine, education, or engineering. The General Laboratory contains, besides a shop, a Freshman and Sophomore laboratory for work in sound, mechanics, heat, light, magnetism, and electricity. The equipment of these laboratories consists of modern apparatus of approved design and substantial construction, suited for accurate physical measurements. The apparatus for the more important experiments has been duplicated, so that at present individual work can be insisted upon in the laboratory. Aside from the main laboratories, there are a weighing room, containing four Becker balances mounted on piers; a dark room provided with standard photometric apparatus; and a battery room equipped with

sixty lead storage batteries and fifteen Edison storage batteries. The department shop contains a motor-driven lathe, with taper attachment, change gears for cutting metric threads, and all other accessories, hand tools for wood and metal work, including metric taps and dies, a small circular and linear dividing engine, and a direct current dynamo with two armatures, furnishing current at various voltages. All of the laboratories are supplied with water, gas, and electricity.

ENGINEERING LABORATORIES

Civil Engineering — The Civil Engineering equipment includes the following items:

A 200,000-lb. capacity Riehlé general testing machine, electrically operated, equipped for testing materials in tension, compression, bending and shear.

A 100,000-lb. capacity Riehlé hand operated, hydraulic compression testing machine.

A 1,000-lb. capacity Fairbanks and Morse tension testing machine for cement and various other necessary cement testing equipment.

A good assortment of surveying instruments.

A large accurate suspended pantograph.

A complete set of railroad curves and other important drafting room equipment.

A computing machine of Swiss manufacture.

This equipment is in the Electrical Building, second floor, except the strength of materials testing machines and other apparatus located on the first floor of the Mechanical Building.

Electrical—The Electrical Laboratory contains equipment for making all the experiments usually included in undergraduate courses in electrical engineering. The equipment is kept up-to-date and machines of all standard types are available for study and operation. Measuring instruments covering a wide range of indicating, graphic and integrating types and in both commercial and laboratory forms are available. Among the principal units for testing are the following:

A 15-kva. two-unit, phase-displacement, dynamometer set driven by a 25-hp. direct current motor.

A loading set consisting of one 15-kw. three-phase resistor, three 5-kva. reactors, three 2-kva. condensers, for testing the above machine.

Two identical motor generator sets consisting of 15-hp. induction motors directly coupled to 7-kw. direct current compound generators.

A laboratory type 10-kw. rotary converter with accessory apparatus consisting of three 5-kva. special testing transformers and a complete starting and regulating panel.

A motor generator set, consisting of a 25-hp. induction motor and a 3-wire type, 20-kw. direct current generator.

A 7½-kw. alternating current laboratory type generator with four interchangeable rotors and control equipment.

A 128 volt, 200 ampere hour storage battery.

A complete telephone demonstration plant with central office equipment and two subscriber sets.

A series direct current motor and a variable speed alternating current motor arranged with Prony brake equipment.

A one panel mercury arc rectifier set.

A two panel 4000-volt slate switchboard with oil circuit breaker, current and potential instrument transformers.

A seven panel slate switchboard complete with switches, meters, rheostats, automatic voltage regulator and synchronism indicator for the main laboratory machines.

A three panel slate transfer switchboard.

A small separate room in the laboratory is equipped with radio and telephone apparatus for experimental work and study in this branch of electrical engineering.

In addition to the apparatus described, there are available numerous smaller pieces of apparatus covering various types of motors, generators, transformers and controlling equipment.

Mechanical—The Mechanical Laboratory is arranged to present a series of about thirty fundamental experiments in mechanical engineering in the regular courses. In addition, equipment is available for research problems. Each of the regular test units is flexibly arranged so that complete operating characteristics of the type represented may be secured.

In the laboratory are the following units:

A 80-hp. oil-fired Babcock and Wilcox boiler with injector, feed pump and hot well.

A 12x24 Corliss engine belted to an alternator provided with grid rheostats for loading.

A 10x10 high speed, piston valve, automatic cut-off Buffalo Forge Co., steam engine with Prony brake.

A 5x5 vertical slide valve Ball engine.

A 7-kw. Curtis turbo-generator with control panel.

A 6-hp. DeLaval steam turbine geared to a centrifugal pump.

A Wheeler surface condenser connected so that it may be used with any of the steam units.

For gas-engine testing there are the following:

A 6-hp. vertical gas engine.

A 10-hp. oil engine.

A 4-hp. gas engine geared to a displacement pump.

A Buick automobile engine.

A complete 12 cylinder Liberty airplane engine and other small gas engines.

A 5-hp. motor-driven air compressor.

A Sprague dynamometer 100-hp. unit for testing any high speed internal combustion engine. The last-named unit will be provided with auxiliary equipment to convert it into an automobile chassis dynamometer when desired. Complete apparatus for fan testing and air flow measurements, for solid, liquid and gaseous fuel analysis; for calorimetry, including a Parr adiabatic oxygen bomb calorimeter, and a Sargant gas calorimeter for experimental crude oil distillations and for instrument testing. Standard instruments such as pyrometers, pressure indicating and recording gages, steam calorimeters, Orsat apparatus, engine indicators, etc., are included in the equipment.

The funds and facilities of the Engineering Experiment Station are available for work on research problems.

MINING SCHOOL LABORATORIES

Assay—The Fire Assay Laboratory in the Mackay Building is equipped with five gas-fired muffle furnaces and gas-fired melting furnace, six Thompson pulp scales for weighing assay pulps, and suitable hood for parting. Adjoining the Laboratory is a storeroom for supplies and a grinding room for the preparation of samples. The grinding room is equipped with a Braun sample jaw crusher, Braun pulverizer, shaking screen, bucking board, and exhaust fan for removing dust.

Connected with the fireroom is the weighing room. Both chemical and button balances for assaying work are placed in this room. The equipment consists of two analytical balances and eleven button balances. Different makes of

balances are in use, including the Becker, Ainsworth, Keller, Oertling, and Staudinger.

Chemical—The Chemical Laboratory of the School of Mines is fully equipped with the usual desks, hoods, hot plates, and air baths. Electric air baths and drying pans are provided for overnight work. Four four-gallon slime agitators, driven by a small electric motor, are used for slime tests. A direct connected electric driven exhaust fan draws the air from the hood in this laboratory. A complete electrolytic outfit for lead, copper, and other determinations has been installed. The equipment also includes a Richlitz automatic water still, a Monroe hydraulic classifier, and a Spencer binocular microscope.

Geological and Mineralogical—The Departments of Geology and Mineralogy are provided with reference collections illustrating the minerals, rocks, and fossils, and with class collections for study and determination. Also all folios and some 2,000 topographic maps published by the U. S. Geological Survey are provided for laboratory use. The Mineralogical Laboratory is arranged, for the present, for the accommodation of single sections of forty students. There is, in addition, a laboratory fitted up for microscopic work, and equipped with petrographical microscopes and the necessary accessories. It has also a set of mineral thin sections cut in definite direction, and a collection of rock sections with many representatives of each of the chief types, together with many sections illustrating special types. A separate grinding room is provided with apparatus for making thin sections of rocks and minerals. Blowpipe and other chemical work is also provided for. Lanterns, with a growing collection of slides furnishes additional illustrative material for lecture work.

Metallurgical and Ore Dressing—The Metallurgical and Ore Dressing Laboratory equipment includes the following:

One 4 x 8 Sturtevant jaw crusher, one pair 10 x 12 crushing rolls; 2 ft. x 5 ft. Stearns-Rogers rod mill; 15-ft. Dorr classifier, one two-compartment bucket elevator and one Vezin automatic sampler. All of these machines are so arranged that ore passes mechanically through any desired series after being fed to the jaw crusher. An exhaust fan prevents dust escaping from the dry crushing machines. The overflow from the Dorr classifier is pumped to two

Devereux agitators which in turn are connected to either of two classifiers, a double cone or a Fahrenwald, thence to a Deister Plat-O table or a Deister slime table. Centrifigual pumps circulate the pulps or pump them to waste.

The smaller equipment consists of two Janney flotation machines, one Ruth and one Callow, with accessory equipment for preparing samples, a small General Engineering unit consisting of a small two-compartment jig and small Wilfley table.

A large roller agitator is provided for cyanide testing and also a small mechanical agitator for somewhat larger tests.

Special equipment consists of a two-compartment jig, Sperry filter press, suction filter leaves, vacuum pump, 150-lb. tube mill, Krupp ball mill, and platform scales.

Power is supplied by several motors varying in size up to 25 hp. All the machines are so arranged that they can work independently or in conjunction with one another. The following processes may be conducted on a working scale: The dry crushing and automatic sampling of an ore; the concentration of sands and slimes after crushing an ore either in stamp battery or rolls; the wet crushing, plate amalgamation, and concentration of a gold ore; the cyanide treatment of a gold or a silver ore, and the pan amalgamation of a silver ore. Fine grinding plant in enclosed circuit to prepare ores for cyanidation, concentration, flotation, or any other tests. A very representative collection of various types of ores for testing purposes is maintained.

Metallographic—The Metallographic Laboratory is equipped with the following:

One Sauveir & Boylston polishing machine; one Warner & Swasey polishing machine, and a Leitz grinding machine; two large Leitz metallurgical microscopes with photomicrographic cameras; one Heele-Berlin spectroscope; one Spencer metalurgical microscope; one electric hot plate; one set prepared specimens of the common and ferro alloys.

Electro-Metallurgical—The electro-metallurgical equipment consists of a Munning direct current generator operated by alternating current motor; one large General Electric automatically controlled heat treating furnace; one small heat treating muffle furnace and a small arc melting furnace. Additional equipment is also available in the United States Bureau of Mines Building.

Mining—The Mining Laboratory consists of the following equipment:

One 8½-inch by 9-inch Laidlaw feather-valve compressor; one 25-hp. motor, direct connected to compressor; one Ingersoll-Sargeant piston drill; one Cochise piston drill; one jackhammer drill; one Waugh stoper; one butterfly stoper; one Obertop drill tester; one Tool-O-Meter; one Clark airmeter; one electric blasting machine; one breathing apparatus; hand and machine drill steels, mine lamps, shovels, hygrometers, anemometers, etc.

Petrographic—The Petrographic Laboratory includes the following equipment:

One Sauveir & Boylston polishing machine; apparatus for hand polishing; rock saws; five grinding laps; eight Bausch & Lomb petrographic microscopes; one Iver tint photometer; seven Lietz petrographic microscopes; one Warner & Swasey polishing and grinding machine; one reflecting goniometer; one Abbe refractometer; one microscope for the study of polished sections of opaque ores and minerals; 1,200 slides of rocks and minerals; 1,500 hand specimens of rocks and minerals.

Seismograph—The Seismograph Laboratory equipment consists of one Weichert inverted two-component seismograph, and a small Ewing duplex pendulum. These are kept in continuous operation throughout the year. The records are used chiefly for the study of earthquakes of local origin.

PUBLIC USE OF SCHOOL OF MINES LABORATORIES

As there are no public testing laboratories in the State of Nevada, the University Board of Regents has authorized the use of the laboratories of the Mackay School of Mines by properly qualified persons under certain restrictions. The conditions under which the laboratories may be used are as follows:

1. The laboratories may be used only during regular laboratory hours, which are from 8:40 to 12:15 a. m. and 1:15 to 3:45 p. m. from Monday to Friday, inclusive, and from 8:40 to 12:15 a. m. Saturday. The laboratories may not be used on Sunday. All work must be planned to conform to this requirement, and no motors must be left running at other times.

2. No person will be permitted to use the laboratories at times when his work will interfere with that of students, faculty, or other experimenters.

3. Any person desiring to use the laboratories must first satisfy the instructor in charge that he is thoroughly capable of undertaking the work he has in view.

4. He must then present to the instructor a written application setting forth the work he proposes to undertake and stating what machines he wishes to use and for what lengths of time. The use of the assay laboratory for routine assaying will not be permitted.

5. If the instructor approves this application, he will sign it and note thereon the fees and deposits which he considers necessary to reimburse the University for supplies used, power consumed, wear on machinery, breakage, etc.

6. The application must be presented to the Comptroller and the fees and deposits noted thereon paid before laboratory work may begin. Any unused portions of deposits may be recovered from the Comptroller upon presentation of a refund order signed by the instructor.

7. The laboratories must be kept in good order during the experiments, and at the conclusion of the experiments must be put in the same condition in which they were found.

LABORATORIES OF THE EXPERIMENT STATION OF THE UNITED STATES BUREAU OF MINES

The laboratories of the U. S. Bureau of Mines are equipped to carry on investigations in ore dressing, flotation, hydro- and electro-metallurgy, chemistry, and radioactivity. The usual facilities are provided for assaying and chemical analysis. The equipment for preliminary ore dressing includes a Case crusher, iron rolls, Braun and McCool pulverizers, coffee mill, Abbe silex-lined ball mill, Abbe pebble mills, Patterson iron ball mill, Sturtevant impact screen, Tyler automatic screen shaker with a complete set of screens, Wetherill and Dings magnetic separators, Richards pulsating classifier and jig, Wilfley table and a centrifugal concentrator of special design by the Station. Flotation equipment of various designs includes two Ruth, two mechanical, one Colburn, and one Janney machine. The hydrometallurgical equipment consists of earthenware leaching pots, redwood agitating and settling tanks, acid-proof distributing pumps, filter presses, and vacuum and pressure pumps. The electrical equipment consists of an electrical switchboard of 50-kva. capacity, and electric vacuum, arc, and resistance furnaces. The laboratories for work in radio-activity are provided with a full electroscopic equipment for the measurement of

radium ores and the various radio-active products, and includes alpha ray and emanation electroscopes, designed by the Bureau of Mines. Equipment for high-temperature measurements consists of a Brown pyrometer, platinum-rhodium and base metal thermocouples, and a Leeds and Northrop potentiometer, also a Caron-Clevenger reduction furnace for the treatment of refractory manganiferous silver and gold ores.

AGRICULTURAL LABORATORIES

Dairy (Room 12, Agricultural Building)—This laboratory contains machinery for the manufacture of butter, ice cream and cheese, and equipment for bottling milk and sterilizing utensils. It also has full equipment for making quantitative and qualitative tests of all dairy products. The present equipment can easily accommodate ten students in any one section.

Experiment Station Chemical—In this laboratory the students who are interested in agricultural work have an opportunity to pursue this work according to the methods adopted by the Association of American Agricultural Chemists.

Farm Crops—This laboratory includes a large display of samples of seeds and matured plants of the different varieties of cereal and forage crops. The equipment includes a large electric germinator for testing all kinds of farm seeds for germination; testers and cleaners; dockage machines; and other equipment used by the Federal Government for the commercial grading of grain and hay. Students will make germination and purity tests of commercial samples of farm seeds sent to the laboratory from the various farming districts of the State.

Soil Physics—The Soil Physics Laboratory contains tables fitted with gas and water, and holding the chemical reagents used in the work; soil screens; tubes for determining capillarity, water retention and effect of mulches. Various appliances for determining column weight, pore space, specific gravity, etc., are provided. Harvard balances for weighing, not demanding extreme accuracy, and analytical balances for the more exact work are furnished. In connection with the soil-moisture work, there are provided balances for weighing, soil cans, an electric soil oven, and soil augers and tubes for taking samples. For the work in mechanical analysis, the laboratory is fitted with analytical balances, agitator, soil sieves and shaker, and a centrifuge.

A part of the laboratory is used as a storeroom, where soil can be taken, dried, ground, mixed, and stored in suitable bins.

Veterinary Science — This laboratory is fitted up for research in pathology and bacteriology. It is used for the work of the Department of Veterinary Science in the Agricultural Experiment Station, and the State Veterinary Control Service.

HOME ECONOMICS LABORATORIES

Cooking—The Cooking laboratories, pantries and locker rooms are on the second floor of the south half of the Agricultural Building. The Cooking Laboratory is equipped with tables, four set-in white enamel sinks, and gas plates for twelve students, around a hollow square, with all the utensils for individual practice in cooking, and with full equipment for a large quantity of cooking and catering. Adjoining the cooking laboratories are two-unit kitchens equipped with gas ranges, sinks, tables, closets and utensils for preparing family-sized receipts; a wood-and-coal range, and oil and electric stoves, so that the students may learn the use of all common fuels. Adjoining the unit kitchens is a dining room suitably furnished for catering. The large built-in sideboards and side-wall lights make the room very attractive.

Sewing—The Sewing Laboratory, well lighted by south and west windows and the modern electric fixtures, is fitted with sewing and drafting tables and individual lockers for twenty students, with ironing boards, irons, and six sewing-machines. Adjoining this room is a large garment-fitting room equipped with full-length triplicate mirrors and space for hanging all garments in the process of making.

Millinery—The Millinery Laboratory, on the first floor, is equipped with low work tables and individual lockers for twenty students, with a white enamel sink for dampening and shaping hat foundations, and with a full equipment for steaming, renovating and pressing hat materials.

Demonstration — The Demonstration Laboratory and Lecture Room has raised seats for one hundred students, and a 16-foot demonstration table equipped with a white enamel sink, and a gas range. This lecture room is also provided with a lantern for illustration of demonstrations and lectures.

SCIENTIFIC COLLECTIONS

MACKAY MUSEUM

The Mackay Museum, located in the northwest wing of the Mackay School of Mines, contains the mining, metallurgical, geological, and mineralogical displays. The exhibits in this museum are arranged in such a manner as to give a good general idea of the mining industry of the State of Nevada, and to illustrate standard classifications of minerals and rocks. On the ground floor at the left of the entrance to the museum is a large map of Nevada, showing the location of all the mining districts of the State, while in the center of the museum at the rear there is a topographical relief map of the State on a scale 4 miles to the inch. The show cases on the left-hand side of the museum present a collection of minerals arranged scientifically according to Dana, followed by a systematic collection of rocks; the cases on the right-hand side of the museum are devoted to displays of Nevada ores of the precious and base metals and of Nevada economic minerals, arranged according to counties, while the cases on the center aisle contain collections of minerals arranged according to to their economic uses.

On the Mezzanine floor, east side, are the exhibition cases containing fossil specimens, etc., relating to historical geology, illustrating the development of life from the earliest known to the present.

North Side—A collection of rock drills from the first Burleighs down to present day drills—an excellent working model of ore shaft, hoist, skip, and stamp mill presented by the Tonopah Mine Operators Association.

West Side—Display of Comstock Lode ores, relics, pictures, maps, etc.—display of mine models of various types.

South Side—Prehistoric footprints removed from sandstone in State Prison at Carson City, also pictures and plaster casts of prints not removed from sandstone beds.

Other special exhibits in the Museum include exhibits of metallurgical products of different minerals, various milling and mining processes and a collection of assay products.

Among the several collections included in the museum are the Nevada State Mining Exhibit from the Panama-Pacific Exposition, the exhibit at the Goldfield session of the American Mining Congress in 1909, the loan collection of the United States Geological Survey of the rocks and minerals of Goldfield; ores and minerals of Nevada, presented by Colonel H. B. Maxson; the collection of rocks and minerals formerly in the State Capitol at Carson City; the Cole collection, purchased from Dr. Cole by Mr. Mackay and presented by him to the museum; the Malcolm McDonald collection, presented to the University after the death of Mr. McDonald: the C. W. West collection; the F. M. Fellows collection, and several other smaller collections received from various sources.

Many valuable gifts were made to the Mackay Museum during the past year, and its continued growth depends largely upon the generosity of those engaged in the development of the mining industry of Nevada. Contributions of specimens of country rocks, ores, minerals, and metallurgical products, and of photographs, maps, diagrams, and models are greatly desired.

The museum is open to the public during the school year, and as far as possible every facility will be placed at the disposal of any one who wishes to inspect or study the various collections.

BIOLOGICAL MUSEUM AND COLLECTIONS

The Biological Museum is in the southwest room on the first floor of the Agricultural Building. A portion of the biological collections, including economic insect life-histories and mounts of economic birds and mammals, is arranged here for public exhibition.

The biological collections include a set of some 400 skins and mounts of native birds; 100 sets of birds' eggs and about as many nests, donated by Mr. Steinmetz of Carson City; 250 insect life-histories and several miscellaneous groups; 75 stuffed mammal skins and mounts; 25 mounted skeletons of various vertebrates; nearly a thousand general museum preparations; about 10,000 prepared microscopic slides; some 200 zoological and physiological models, and about 60 botanical models, some 900 lantern slides, as well as much miscellaneous material.

HERBARIUM

The Nevada Agricultural Experiment Station herbarium now contains 12,000 mounted sheets, nearly all of western

species, and at least half of them from Nevada. Certain of the forage plants, as grasses, clovers, and lupins, are especially well represented. Although as yet small, this collection is of considerable importance, as it contains a number of types and typical plants obtained from type localities.

Connected with this herbarium is a large number of negatives depicting various phases of plant life.

PATHOLOGICAL MUSEUM

The Department of Veterinary Science has a collection of several hundred permanently mounted gross pathological specimens covering practically all the common infectious diseases of animals and miscellaneous disease processes of particular interest. The collection also contains some material from human sources, mostly representing disease processes common to both man and the lower animals. This collection is available for teaching purposes and inspection.

CHEMICAL SPECIMENS

A number of substances representing the field of the chemical industries have been collected and placed in cases in the lecture room of the Chemistry Building. Among these are samples purchased from chemical dealers; about 200 samples made and put up by students in the laboratory; about 80 samples of American-made dyes manufactured by the National Aniline and Chemical Company and donated by Professor Maxwell Adams; plastics, including artificial silk and leather; explosives; alloys; lubricating oils; and all the common minerals.

PUBLIC LECTURES

GENERAL ASSEMBLY

A general assembly of University students and members of the faculty is under the special direction of the Standing Committee on Assemblies and Lecturers. Lectures are given by members of the faculty and by men and women of special eminence in particular fields of study, travel, and business enterprise. The 11-o'clock hour Fridays is kept free for assemblies.

The following is a list of lectures given in 1928–1929.

COMMENCEMENT, 1928

May 7—Phi Kappa Phi Address, "An Age of Mystery," by Reverend John Stephens of Palo Alto, California.

May 8—Baccalaureate Sermon, "The Meaning of Life," by Reverend John Stephens of the First Methodist Episcopal Church of Palo Alto, California.

May 9—Commencement Address, "The Challenge of a Changing World," by Dean Paul F. Cadman of the University of California.

ASSEMBLY ADDRESSES

September 7—Convocation Address, President Walter E. Clark.

September 14—"The Origin of the American Constitution," Honorable Key Pittman, United States Senator.

October 5—"Our Relations with Central America," Colonel Wilbur S. Tupper of San Francisco.

December 8—"Modern Arabian Knights," Mrs. Ruth Bryan Owen of Washington, D. C.

1929

January 25—"Character Studies of Great Literary Men, Mr. Sidney Bryan Landon.

February 20—"What South America Means to Us," Mr. Edward Tomlinson.

February 22—Washington's Birthday Address, Judge Clyde D. Souter of Reno.

THE ROBERT LARDIN FULTON FOUNDATION SERIES

April 9—"Progress and Civilization."

April 10—"Russia Before and Since the Revolution."

April 11—"Tolstoy, His Life and Teachings."
Count Ilya Tolstoy, second son of Leo Tolstoy.

FACULTY SCIENCE CLUB, 1928–1929

October 11—"Recent Climatic Changes in the Great Basin," Dr. J Claude Jones of the University.

October 25—"The Illinois Soil Survey," Professor V. E. Spencer of the University.

November 8—"Centrifugal Concentration of Ores," Mr. H. A. Doerner of the United States Bureau of Mines.

November 22—"The Present Influenza Epidemic," Dr. M. R. Walker of Reno.

December 13—"The Financing of Education in Nevada," Professor F. W. Traner of the University.

February 7—"Opal Deposits of Northern Nevada," Mr. R. M. Oliver of Reno.

February 28—"The Structure of Matter—The Periodic Law and Facts of Chemistry," Dr. George W. Sears of the University.

March 14—"Meat Inspection in Nevada," Dr. L. C. Butterfield, Inspector in Charge, Bureau of Animal Industry, U. S. D. A.

April 4—"Landscaping the Home Grounds," Dr. Phillip A. Lehenbauer of the University.

April 25—"Some Problems Revealed by Agricultural Economic Conferences in the Western States," Eugene Merrit, U. S. D. A.

May 1—"America's Opportunity in Chemistry," Dr. William Albert Noyes of the University of Illinois.

ORGANIZATIONS AND PUBLICATIONS

THE ALUMNI ASSOCIATION

The Alumni Association was organized in June, 1894. Its object is to promote union and good fellowship among the Alumni, and to advance and protect the interests of the University of Nevada. The dues of the association are $1 a year for ten years, or a life membership for $10. The annual meeting is held during Commencement week.

OFFICERS FOR 1928–1929

President.....GLENN F. ENGLE,'17
Vice-President.....CHESTER M. SCRANTON,'24
Secretary.....LOUISE BLUM LEWERS,'95

EXECUTIVE COMMITTEE

JOHN A. FULTON,'98 FRANK H. NORCROSS,'91
ROBERT P. FARRAR,'14

THE ASSOCIATED STUDENTS

The student body is organized into an association called "The Associated Students of the University of Nevada." Through this association the students handle all matters relating to the student body as a whole, and control all athletic interests of the University subject to the approval of the Faculty Committee on Athletics. The officers of this association are elected by popular vote. By the payment of the student fee each semester a student receives the A. S. U. N. card which entitles him to a vote in the association and admission to all local games, contests, or other events under the Association's management, and subscriptions to the U. of N. Sagebrush, the Desert Wolf, and the Artemisia.

THE UNIVERSITY HOSPITAL ASSOCIATION

In January, 1919, at the request of the student body, the Board of Regents approved the organization of a Student Hospital Association under the joint management of a student and faculty committee. From the experience gained in the four years of its successful operation and from a comparative study of the hospital organizations in other universities, the original plan has been modified and expanded into the University Hospital Association. This plan went into effect in September, 1923.

The direct management of the Association is the responsibility of the University Committee on Health. Its membership consists of all students who pay the regular hospital fee of $3 a semester. This fee will be exacted of all students who do not live with their parents or guardians in Reno or Sparks unless they present at the time of registration a written request from their parents or guardians that they shall not pay such a fee. While primarily intended for the safeguarding of the health of students who are away from home, the Association will accept into its membership any student living at home who would like to take advantage of its privileges by paying the membership fee.

The funds obtained from the hospital fee will be used to pay the salaries of the College Physician and of the Hospital Matron, to purchase necessary equipment, medicines, hospital supplies, and such other services and materials as may be needed. Any surplus above that required to provide for emergencies will be used to extend the services of the Association to its members.

The College Physician will hold regular daily consultation periods at the University hospital. Members are entitled to call for his services at any other time only if they are confined to their beds with a legitimate illness or on the occasion of an emergency. Students who prefer to see the College Physician at his down-town office may have the privilege of doing so by paying the special rate for Association members of $1 per visit.

The University Hospital will at all times be at the service of the Association members. The matron in charge will care for the patients. General nursing, treatment by the College Physician, medicines, prescriptions, and laboratory diagnosis will be furnished free of charge, but special nursing or the attendance of physicians other than the College Physician will have to be paid for by the individual patient. Patients will obtain their board from the Dining Hall and will be expected to pay the regular rates therefor, but such special articles of diet as may be prescribed by the physician or deemed desirable by the matron will be furnished free of charge. At the discretion of the Health Committee ward beds in St. Mary's Hospital for a period not to exceed two weeks for any one student member in any one year, including board, general nursing and the attendance of the College Physician, may be provided by the Association without

charge to members, but special nursing, surgical, operating, or other expenses must be assumed by the patient.

In the special cases of operations or other prolonged illnesses, members may make applications to the Health Committee for financial assistance, and in case the funds will permit it part of such expenses may be paid by the Association.

THE ASSOCIATED WOMEN STUDENTS

The Associated Women Students is an organization made up of all the women students registered at the institution. Its purpose is to bring all the women together in order to obtain more effective action. The dues are 25 cents per semester, which is deducted from the amount paid into the A. S. U. N. treasury. The organization gives a $25 scholarship each year to the woman student attaining the highest average grade for the year and who receives no other scholarship.

THE FACULTY SCIENCE CLUB

The Faculty Science Club is an organization of those members of the Faculty who are interested in scientific research. The purpose of the organization is to broaden the outlook and to come in touch with scientific progress outside of one's own sphere of activity. Biweekly meetings are held in the lecture room of the Agricultural Building. Reports are presented and discussed at each meeting. The subjects of the reports are either the result of individual research or articles of general interest that have recently appeared in scientific journals. The meetings are open to visitors.

Advanced students find the meetings of considerable value.

HONOR SOCIETIES

The Phi Kappa Phi is a national honor society composed of graduate and undergraduate members of all departments in American universities and colleges. Its prime object is to emphasize scholarship in the thought of college students, to hold fast to the original purpose for which institutions of learning were founded, and to stimulate mental achievement by the prize of membership. This society elects to membership a certain number from the graduating class, on the basis of high scholarship. Local chapter established in 1912.

Sigma Gamma Epsilon—A national organization of geologists, mining engineers, metallurgists, and ceramists. Upperclass students in these subjects are eligible to membership

in the local chapter. Biweekly meetings are held for the discussion of problems related to these professions.

CLUBS AND ASSOCIATIONS

Engineering Societies—All engineering students and the engineering faculty are members of the Associated Engineers. This society meets from time to time during the college year for the consideration of social and scientific matters.

In addition to this general society there is a student branch of each of the four great national societies of Engineering. These groups hold monthly meetings for the discussion of scientific matters relating to their own branch of the profession.

The Chemistry Club—This organization includes all students, faculty and others on the campus interested in Chemistry. Its purpose is to keep its members in touch with present developments in the chemical field and to foster interest in the science of Chemistry. Meetings are held each Thursday evening in conjunction with Chemistry 95-96. Once each month a program of special interest to underclassmen is arranged.

Sigma Sigma Kappa—An honor organization whose membership is elected from the Chemistry Club on the basis of scholarship and ability shown in the field of Chemistry.

The Crucible Club—This is an organization of the upperclass mining, metallurgical, and geological students and faculty. The club meets every other Wednesday, and is addressed by prominent members of the mining profession, or papers are read by the various members. The Crucible Club is affiliated with the Society of the American Institute of Mining and Metallurgical Engineers.

The Aggie Club—Founded by the agricultural students in 1909. This organization has since been very active, now sponsoring the Aggie Show each year and having many other activities. Women and men students, as well as faculty members of the College are members. The Club meets the last Wednesday of each month to carry on business and social activities.

The Debating Society—Membership in Clionia, the debating society of the University of Nevada, is open to all the students of the University. Its purpose is to encourage and support debating, both local and intercollegiate.

Delta Alpha Epsilon—The purpose of this society is not only to develop histrionic talent among the young women of the University, but to awaken an appreciative interest in dramatic interpretation by the presentation of standard plays.

The Campus Players—The aim of this society is to offer the men and women of the University a chance to develop their talents both in the appreciation of good plays and by furnishing the opportunity for presentation.

Mu Alpha Nu—This club was formerly known as the "Math" Club, and its aim is the furtherance of interest in the science of mathematics.

Coffin and Keys—A club organized for the purpose of securing and rendering efficient the complete cooperation of all students by combining in organized form the men of the University who are considered leaders in student life and activity.

Home Economics Society—The faculty of the Department of Home Economics and all students electing one or more courses in that department may be members of this association.

Fraternities and Sororities—The following fraternities and sororities have chapters, the figures in parentheses giving the dates chapters were established in this University: National fraternities—Sigma Nu (1914), Sigma Alpha Espilon (1917), Phi Sigma Kappa (1917), Alpha Tau Omega (1921), Sigma Phi Sigma (1922), Delta Sigma Lambda (1922), Beta Kappa (1925); Lambda Chi Alpha (1929). National sororities—Delta Delta Delta (1913), Pi Beta Phi (1915), Gamma Phi Beta (1921), Kappa Alpha Theta (1922); local—Sigma Alpha Omega (1922); Beta Delta (1923).

Lincoln Hall Association—The Lincoln Hall Association is an organization composed of the students of the University of Nevada who reside in Lincoln Hall. Its object is to deal with all matters of student concern in Lincoln Hall and to preserve its customs and traditions.

Manzanita Hall Association—Residents of this hall are organized into a body under the name of Manzanita Hall Association, with president, vice-president, secretary and treasurer elected for one year. The chairmen of standing

committees, which include the phases of dormitory life (Red Cross work, laundry, room inspection, bell duty, quiet, and fire drill), are appointed by the president of the association. Meetings of the association are held monthly.

Christian Associations—The Young Women's Christian Association has a branch organization among the students with a membership of over one hundred girls in the University. The purpose of the association is the maintenance of high standards in all student relations, mutual helpfulness and pleasure, and the promotion of Christian ideals.

The Young Men's Christian Fellowship Association of the University of Nevada has for its purpose the encouragement and cultivation of religious interests among men on the Campus. Among other activities, it favors the formation of discussion groups which deal with problems of vital ethical and religious interest.

Square and Compass—This is a chapter of a National Fraternity of campus members of the Blue Lodge Masons.

Musical Organizations—Volunteer organizations for the promotion of both vocal and instrumental music are heartily encouraged. The organizations at present are the Men's and Women's Glee Clubs, the University Orchestra and the University Band.

The Press Club—This is an organization of those interested in writing, in the student publications of the University, and in the profession of journalism. They gather each fortnight to discuss common interests and to mingle socially.

Mu Beta Sigma—This is a club of students specializing in psychology and interested in research and experimentation in this subject.

Cap and Scroll—A club organized for the purpose of developing the highest ideals on Nevada's Campus by combining in organized form the women of the University who are leaders in student life and activity.

The Caucus Debating Society—This society is organized for the purpose of furthering speech on the Campus, through local contests in debating, declamation, and oratory. All students are eligible who have speaking ability.

The Commercial Service Club—This is an organization of students interested in a better understanding of the world of business and commerce.

Nu Eta Epsilon—A local honor society established at the University of Nevada in May, 1923, for the purpose of encouraging higher standards of scholarship among engineering students. The qualifications for membership are the same as for the National Honor Society of Tau Beta Pi. Elections are held twice a year, and selections of eligibles are based entirely upon scholarship.

Sigma Sigma—An honor organization whose membership is elected from the students majoring in Home Economics on the basis of scholarship, qualities of leadership and the application of principles taught in Home Economics.

Omega Mu Iota—A club organized in 1923 by premedical students to promote scholarship and common interests. Its membership is open to second semester freshmen who have made an acceptable scholarship record in the work of the first semester and are preparing themselves for the study of medicine, dentistry or nursing.

Kappa Kappa Psi—This is an honorary musical fraternity for University men which promotes and encourages better band music, better musicianship, and good scholarship among college band men. Any man accepted as a permanent member of the band is eligible for election to the organization. (Established at Nevada in April, 1929.)

UNIVERSITY PUBLICATIONS

The Bulletin—The Bulletin is the official publication of the University and is issued quarterly. It gives information concerning the University and such other matters as may be helpful to the cause of education in the State.

STUDENT PUBLICATIONS

The U. of N. Sagebrush—The U. of N. Sagebrush is issued weekly throughout the University year by the students of the University.

The Desert Wolf—The Desert Wolf is a quarterly published by the Associated Students of the University of Nevada. It was started in the fall of 1923.

The Artemisia—The Artemisia is an annual published by the Associated Students of the University of Nevada.

PHYSICAL EDUCATION AND ATHLETICS

MEN

The purpose of this department is to assist the men of the University to live to the best advantage, and so to aid them in the formation of hygienic habits that during their stay at the University they may make profitable physical preparation for life. There is urgent necessity that each student should have an intelligent appreciation of the means requisite for the preservation of his health, in order that he may be able to formulate wisely his own policy of health control.

REQUIRED PHYSICAL EDUCATION

Physical Education is required of all Freshmen and Sophomores unless excused for disability by the University Physician. Credit counting toward the college degree is given. The individual's grade is largely based on attendance, punctuality, earnestness and application, but practical tests are also given.

PHYSICAL EXAMINATIONS

Each student on entrance to this department is given a physical examination in order that his work may be directed to meet his individual requirements. Members of squads out for varsity teams, reporting regularly, are excused from the practical work during the regular season of that sport, and are entitled to full credit in that portion of their work.

UNIFORM AND FEE

Each student must provide himself with a regulation uniform. These should not be procured until after arrival at the University.

Tentative Cost of Uniform:

White sleeveless gym shirt	$0.75
White running pants, short leg	$1.25 up
White rubber-soled shoes	$2.00 up
Athletic supporter	$0.75 up

A locker-and-laundry fee of $1 is charged each semester.

ATHLETICS

Excellent facilities are provided on the Mackay Athletic Field for all branches of athletics. American football, baseball, track, basket ball, and tennis are the sports of special

prominence at present. The main policy of the University is to foster the spirit of honor and manliness, to prevent the development of commercialism or professionalism in athletics, and to see to it that athletic sports do not encroach upon the claims of scholarship. Athletic activities in the University are supervised by the Directors of the Departments of Physical Training for Men and for Women, who are counseled by the Athletic Committee of the Faculty.

To represent the University of Nevada in a public contest, a student must conform to the following rules:

1. He must be an amateur.
2. He must have presented 15 Carnegie units for entrance.
3. He must be registered in at least 12 hours of University work.
4. He must have passed two-thirds the normal requirements of his course the preceding semester.
5. He must be successfully carrying two-thirds the normal requirements of his course one week preceding the first conference game. If declared scholastically eligible at this time, he shall be scholastically eligible for the remainder of the season.
6. No student on probation will be permitted to represent the University in any public contest.
7. All students must pass a physical examination satisfactory to the Committee on Athletics.
8. Schedules for all games must be submitted to the Committee on Athletics and approved by them.
9. Approval by the Committee on Athletics is required in the case of every individual intending to represent the University of Nevada in any single contest.

WOMEN

The University gives its young women the opportunity for an all-around physical development by maintaining a Department of Physical Education. Physical training, properly applied, makes an important contribution to sense and motor training and to the development of physical judgment, presence of mind, self-reliance, courage, and strength of will. These ends are sought through systematic exercise, both out of doors and in the gymnasium, as well as through the various forms of athletics suited to women.

The women students of the University have organized an Athletic Section in conjunction with the Associated Women

Students for the purpose of fostering mass and interclass athletics. Every woman is eligible to membership by participating in any sport and through this organization may win recognition in many branches of athletic activity, *i. e.*, hockey, volley ball, basket ball, baseball, track, and tennis.

Work in Physical Education is required of all Freshman and Sophomore women. Upon entering a class, students are carefully examined and measured by the Physical Director to discover the individual needs of each. As far as possible the work of this department will be adapted to these needs. If necessary, upon the advice of a physician, Freshman and Sophomore work may be *postponed.*

During each semester of this required work instruction is given in personal and public hygiene.

Women taking these courses are required to provide themselves with a regulation gymnasium suit and shoes. Suits with guimpes cost from $12 to $15. Students must provide themselves with suits, but are advised not to make such purchase until they have counseled with the Physical Director for Women. A $1 locker-and-laundry fee is charged each semester.

MILITARY SCIENCE AND TACTICS

1. There is maintained at the University an Infantry Unit of the Reserve Officers' Training Corps.

This corps was established by the Act of Congress of June 3, 1916, for the purpose of preparing, by systematic and standard methods of training, students at civil educational institutions for reserve officers in the United States Army.

2. The corps consists of all physically fit male students in first and second years at the University and such additional students as may elect to continue with the advanced work in their third and fourth years.

3. When registering in Military for the first time at the University, students are required to take an examination to determine their *physical* fitness for enrollment in the Reserve Officers' Training Corps.

4. The United States Government furnishes service uniforms and all equipment necessary to carry on the instruction. In addition, those who elect to continue the work in their Junior and Senior years are paid commutation of rations and are required to attend a training camp at the end of the Junior year.

NOTE—At the present time, the amount paid to students enrolled in the advanced course approximates $200 for the two years.

5. The arms, equipment, and uniforms issued to students for military training are the property of the United States for which the University is financially responsible. To protect the University against any charge for loss or damage to government property arising from misuse or neglect on the part of the student, a deposit of $10 will be required from each student registered in Military.

6. Every male student who is a candidate for graduation in any of the schools of the college will be required to complete the prescribed two-year (Basic) course of Military Training unless excused therefrom by proper authority.

The following students may be excused from all or a part of the prescribed training:

(a) Those over 27 years of age.

(b) Those who have had previous military training equivalent to all, or part, of the prescribed course.

(c) Aliens, and those physically unfit for military service.

Students excused from Military Training receive no credit toward advanced standing in Military except in the case of those who have received training as members of an R. O. T. C. unit, or at an educational institution under the supervision of an officer of the Army regularly detailed as Professor of Military Science and Tactics.

Excused students not receiving advanced credit are required to take additional work aggregating the number of units allowed for that part of the military course from which they are excused.

7. Students who satisfactorily complete the basic and advanced military courses will be tendered commissions by the United States Government as Second Lieutenants of Infantry in the Reserve Corps of the Army.

8. Special Regulations for the Department of Military Science and Tactics are published in pamphlet form, a copy of which will be issued to each student registered in Military. The cadets will be held to a strict observance of all special regulations of the Military Department and to such orders and instruction as may be issued from time to time in connection with their military training.

9. All cadets are required to perform the prescribed military duties unless excused in advance by the President or the Commandant. In case of absence without previous excuse, a written explanation will be submitted upon resuming duty. In case of sickness or injury, such explanation must be authenticated by the signature of a parent or of a physician.

10. Cadets will be held strictly accountable for the care and proper use of the public property in their possession. They will use only such arms and equipments as are officially assigned (by number to each cadet) and must return them to their proper places in the armory immediately after drill.

11. Upon registration, each cadet will immediately take steps to familiarize himself with the Regulations for the Department of Military Science and Tactics.

HONORS, COMPETITIONS, PRIZES, AND FOUNDATIONS

UNIVERSITY SCHOLARSHIP HONORS

The University gives recognition to such students as attain a high grade of scholarship by announcing at Commencement time the students who have received honorable mention in each of the several colleges, or in their full four-year course. Honorable mention is won by attaining a standing of 90 per cent or better on the average in the full work of any one year or of the four years. At the end of each semester the Faculty Scholarship Committee issues a scholarship Honor List.

GOLD MEDAL

A gold medal is awarded annually to that member of the graduating class who has attained the highest average grade of scholarship throughout his college course.

Beginning with Commencement of 1923, the firm of R. Herz & Brother, jewelers, of Reno, Nevada, generously makes an annual gift of this gold medal.

PHILO S. BENNETT PRIZE

The Philo S. Bennett prize is the interest on a fund of four hundred dollars, the prize to be awarded for the best essay on "The Principles of Free Government." The income from this fund is allowed to accumulate until a prize of approximately fifty dollars can be given.

SENIOR PUBLIC-SERVICE PRIZE

(Established, 1924)

This prize, the annual gift of Dr. Henry Albert, formerly Director of the State Hygienic Laboratory, carries an annual value of twenty-five dollars.

This prize is to be awarded annually at Commencement to that member of the graduating class whose collegiate record shows the most satisfactory combination of good scholarship, good character, and worthy service in behalf of the University or the community, or both.

The winner of this prize shall be chosen by the Chairmen of the Faculty Committees on Scholarship and on Athletics,

the Dean of Women, the Master of Lincoln Hall, and the President of the University.

THE ROBERT LARDIN FULTON LECTURE FOUNDATION

(Established, 1924)

In memory of Robert Lardin Fulton, constructive citizen of Nevada for over half a century, Mrs. Mary Bragg Fulton has established a lecture foundation at the University. The income from this foundation is to be used to bring annually to the University some leader in the field of science, art, literature or public affairs, who will give a series of lectures upon his special themes. The foundation was initiated in April, 1925. The Committee chosen by the founder to select the lecturer under this foundation consists of the President of the University, the Deans of the Colleges of Arts and Science, of Agriculture, and of Engineering, and of the School of Education, and the Director of the Mackay School of Mines.

Lecturers	*University Year*
Dr. Robert A. Millikan	1924–1925
Dr. Edward T. Devine	1925–1926
Upton Close (Josef Washington Hall)	1926–1927
Dr. Will Durant	1927–1928
Count Ilya Tolstoy	1928–1929

THE THEODORA STUBBS FULTON MEMORIAL FOUNDATION

In the spring of 1925 a friend of Mrs. Fulton began an annual anonymous gift of $50 per year in her honor, the gift to be invested in books in Biology and in Physical Education for Women.

SCHOLARSHIPS AND FELLOWSHIPS

For 1929–1930 the following scholarships are available:

1. REGENTS' SCHOLARSHIPS

A. (Established, 1911)

Five Regents' Scholarships of $50 each, to be awarded annually to regular students on the basis of scholarship, one to a Freshman, two to Sophomores, and two to Juniors. These scholarships will be announced at Commencement, and shall be paid to the winners the first of October following, provided these winners have enrolled for the subsequent year's work in this University, otherwise they shall be paid to alternates satisfying the conditions.

B. (Established, 1922–1923)

By formal action the Regents have exempted the following Federal groups from the payment of the nonresident tuition charge:

(a) Officers and enlisted men of the United States Army and Navy and their children;

(b) Sons and daughters of officers, warrant officers and enlisted men in the Coast Guard.

C. (Established, 1926)

At the request of the General Federation of Women's Clubs a total of not more than ten students in any one University year will be admissible without the payment of the nonresident tuition fee from Mexico, Central America and South America; provided, that not to exceed three such students from any nation in this area claim this exemption. It is understood that such students will be required to pay all other regular University charges.

2. THE ELLA S. STUBBS MEMORIAL SCHOLARSHIP

(Established, 1919)

The Women's Faculty Club offers the Ella S. Stubbs Memorial Scholarship of $100 to a student entering the Junior or Senior class who is working his way, wholly or in part, through the University and who has received no other scholarship.

3. THE ALICE G. CLARK SCHOLARSHIP

(Established, 1917)

A yearly scholarship of $250, established and maintained

by Mrs. W. A. Clark, Jr., in honor of her mother, Katherine Hays McManus, is being continued by Mr. W. A. Clark, Jr., in memory of Mrs. Clark, and is known as the Alice G. Clark Scholarship. It is to be awarded alternately to a man and then to a woman student who is closing the Junior year and is the worthiest Junior of individual ability and need. The Scholarships Committee shall choose an alternate for the scholarship, judging on the same conditions. The scholarship award shall be payable one-half on September 15 and one-half on January 15 following the Commencement announcement and shall be paid only if the winner is then duly enrolled for the Senior year's work in this University, otherwise it shall be paid to the chosen alternate, provided that alternate is duly enrolled for the Senior year's work in this University.

4. ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP

(Established, 1918)

A yearly scholarship of $25 is given by the Associated Women Students of the University of Nevada to the woman student attaining the highest average grade for the year and who receives no other scholarship.

5. THE LEWIS D. FOLSOM SCHOLARSHIP

(Established, 1920)

An annual scholarship of $100, given by Mrs. Mary E. Folsom of Reno, in memory of her husband, Lewis D. Folsom.

This scholarship is to be awarded alternately to a man and then to a woman student of the Junior Class, who is deemed by the Scholarship Committee to be the worthiest member of that class of individual ability and need and who is not receiving another scholarship. The Scholarship Committee shall choose an alternate for this scholarship, judging on the same conditions. This scholarship award is payable on September 15 following the Commencement announcement and shall then be paid to the winner only if enrolled for regular Senior work at the University. Otherwise, it shall be paid to the chosen alternate, provided that the alternate is duly enrolled for Senior work in this University.

6. THE ROSE SIGLER MATHEWS SCHOLARSHIP FUND

(Established, 1920)

This scholarship fund was established by Mr. Isaac R. Mathews of Reno, Nevada, in memory of his wife, Rose Sigler Mathews. The trust fund, given by Mr. Mathews for scholarship purposes, amounts to $6,700, and yields an annual income above $300. By arrangement with the donor during the earlier years of this scholarship, the Board of Regents will grant scholarships from the income of this trust fund upon the recommendation of Mr. Mathews, and such scholarships may be, on Mr. Mathew's further recommendation, continued to his nominees, provided they make good scholarship records.

7. RENO BRANCH OF THE NATIONAL ASSOCIATION OF UNIVERSITY WOMEN SCHOLARSHIP

(Established, 1921)

The Reno branch of the National Association of University Women offers the Theodora Stubbs Fulton Memorial scholarship having annual value of $200. This scholarship is to be awarded to an upper-class woman student of the University of Nevada, who has taken all her work at the University of Nevada, provided that—

1. She shall have maintained a high average during the first two or three years of her college course in the University of Nevada, and shall have been active in college activities.
2. She shall not have received another scholarship for the period covered by this scholarship.

This scholarship shall be awarded on the recommendation of the University Committee on Scholarships with the approval of the Executive Committee of the National Association of University Women.

These same committees shall choose an alternate satisfying similar conditions.

The winner of this scholarship shall be announced at Commencement.

The scholarship shall be paid to the winner in two equal installments; one at the beginning of each semester in the following University year; provided, she be duly enrolled in the University of Nevada; otherwise it shall be paid to the chosen alternate provided she be enrolled.

8. THE MARYE WILLIAMS BUTLER SCHOLARSHIP FUND

(Established, 1921)

In the University year 1921–1922, Mrs. Sophie E. Williams of Nye County, Nevada, established a scholarship fund of $1,000, to be known as the Marye Williams Butler Scholarship Fund, in memory of her daughter, Marye Williams,

graduate of the Normal School of the University of Nevada, Class of 1899.

The income from this fund is to be awarded annually by the University Scholarship Committee, beginning with the Commencement of 1923, to the most worthy student who has completed University mathematics through calculus with an average grade of at least 2 in all these University mathematics courses, who has earned due credits in this minimum of mathematics, not later than the closing semester of the Junior year, and who receives no other scholarship.

This scholarship will be payable on or before October 1 following the Commencement of its award, provided the student winner is then enrolled for the new year's work in the University of Nevada, otherwise the scholarship will be payable to an alternate chosen under similar conditions by the University Scholarship Committee and duly enrolled for the new year's work in the University of Nevada.

9. THE ADOLPHUS LEIGH FITZGERALD SCHOLARSHIPS

(Established, 1921)

These two scholarships, each of an annual value of $150, were established in the fall of 1921 by the Scottish Rite bodies of Masonry in Nevada, in memory of Adolphus Leigh Fitzgerald.

These scholarships are to be awarded at each Commencement, beginning with that of the year 1922, one to a man student, the other to a woman student, under the following conditions:

1. The student must be the worthiest man or woman completing a Freshman year's work in the University of Nevada who receives no other scholarship.
2. The student must be of a Nevada family or must be a graduate of a Nevada high school.
3. The scholarship sum will be paid to the winner on the 15th day of September following the Commencement award, provided that the winner is then enrolled for the regular work of the Sophomore year in his chosen course at the University of Nevada. Otherwise, this scholarship sum shall be paid to an alternate chosen under the same conditions and duly enrolled for the work of the Sophomore year in the University of Nevada.

10. THE AZRO E. CHENEY SCHOLARSHIP FUND

(Established, 1922)

The Honorable Azro E. Cheney bequeathed to the University of Nevada $5,000 in trust, to be controlled and invested by the Board of Regents. The income from this trust fund is to be awarded, by the University Scholarship Committee, at each annual Commencement of the University to that member of the Freshman or Sophomore class who is a bona fide resident of Nevada and whom the Head of the Department of English shall certify is justly entitled thereto as the best student in English, during that year, character and improvement both being considered. This scholarship sum shall be payable one-half on the 15th day of September and one-half on the 15th day of January following the award, provided the winner is then enrolled for a further year's work in the University of Nevada, otherwise to an alternate satisfying the conditions.

11. THE GENERAL O. M. MITCHELL WOMAN'S RELIEF CORPS SCHOLARSHIP

(Established, 1922)

This yearly scholarship of $50 was established by the General O. M. Mitchell Woman's Relief Corps No. 27. It is to be awarded to that student of the Sophomore class enrolled in the Reserve Officers Training Corps who has completed the basic course and who, in the opinion of the officers of the Army on duty at the University, best exemplifies the soldierly qualities of attention to duty, punctuality, neatness, and military bearing. This scholarship award is payable on October 1 following the Commencement announcement and shall be paid to the winner or a chosen alternate only if then enrolled in the Advance Course. Should neither the winner nor alternate qualify by enrolling in the Advanced Course, the award shall accumulate not to exceed $100 and shall then be payable to the first winner or alternate who qualifies in a succeeding year.

12. THE ROBERT LEWERS SCHOLARSHIPS

(Established, 1923)

These two scholarships, each of an annual value of $150, were established in the spring of 1923 by the Scottish Rite bodies of Masonry in Nevada, as a memorial to Robert Lewers.

Since the year 1924 these scholarships have been awarded, one to a man student, the other to a woman student, under the following conditions:

1. The student must be the worthiest man or woman having completed the first semester of a Freshman year's work in the University of Nevada, who receives no other scholarship.

2. The student must be of a Nevada family or must be a graduate of a Nevada High School.
3. The scholarship sum will be paid to the winner on the 10th day of January each year, provided that the winner is then enrolled for the work of the second semester of this Freshman year at the University of Nevada. Otherwise, this scholarship sum shall be paid to an alternate chosen under the same conditions and duly enrolled for the work of the second semester of the Freshman year at the University of Nevada.

13. WOMEN'S ATHLETIC ASSOCIATION SCHOLARSHIP

(Established, 1923)

This scholarship, of $75 annual value, was established in 1923 by the Women's Athletic Association of the University It is annually to be awarded to a woman student of the Freshman, Sophomore, or Junior Class, in time for Commencement announcement, by a committee consisting of the Head of the Department of Physical Education for Women, the Athletic Instructor for Women, and the President and two Senior members of the Women's Athletic Association, in accordance with the following conditions:

1. The student, during the year then closing, must have participated in at least four interclass sports and must have been a member of at least three teams of her class.
2. The student must have been a leader in good sportsmanship.
3. The student, for her college course to date, must have earned a scholarship average of not less than 2.5.
4. This scholarship amount will be paid to the winner on the 1st of October following the award, provided the student is then duly enrolled for another year's work in the University of Nevada. Otherwise, the scholarship shall be paid to the alternate best satisfying the conditions.

14. ANONYMOUS SCHOLARSHIP

(Established, Spring 1925)

A scholarship having annual value of $500 and tenable for four years, granted to a Nevada man high school graduate adjudged by the President of the University to have the best record among all nominees named by High School Principals. This scholarship was renewed in the spring of 1929.

15. THE NEVADA BAR ASSOCIATION SCHOLARSHIP

(Established, 1925)

This $100 scholarship, given by the Nevada Bar Association and available for award for the first time at Commencement, 1925, is to be awarded annually at Commencement by

the University Scholarship Committee to a worthy student who has earned Sophomore standing during the first year's University work and who has made most marked progress in written and in spoken English during that year.

This scholarship sum shall be payable on the first of October following the award, provided the winner is then enrolled for a further year's work at the University of Nevada, otherwise to an alternate satisfying the conditions.

The Bar Association expects that each student to whom this scholarship shall be awarded will, after he is successfully established in business or profession, return the sum awarded to him to the University to be again awarded to a student who satisfies the conditions stated for this scholarship.

16. THE CHARLES H. MOORE SCHOLARSHIP

(Established, 1925)

A debating scholarship of $50, donated by Colonel Charles H. Moore of Reno, is awarded by the University Scholarship Committee each Commencement to that student who has earned Junior standing in the University and who, during the Freshman and Sophomore years, has shown the most progress in debate and who intends to take part in University debating activities during the Junior year. This scholarship amount is payable October 1 following the award, provided the winning student is then duly enrolled in the University of Nevada for the Junior year's work, otherwise to an alternate satisfying the conditions. The first award will be made at Commencement of 1926.

17. THE MRS. CARL OTTO HERZ SCHOLARSHIP

(Established, 1926)

This scholarship was established early in 1926 by Mrs. Carl Otto Herz of Reno, and since the early spring of 1929 is being continued in her memory by Mr. Carl Otto Herz.

The scholarship carries an annual value of $50 and is to be awarded at the end of each University year, beginning with May, 1926. The scholarship is to be awarded by the University Scholarship Committee to one of three Electrical Engineering students nominated to the Committee by the Head Professor of Electrical Engineering. The nominees must each be Electrical Engineering students who are self-supporting in whole or in part, are of good character and of good scholarship, and who have earned Senior standing in the University of Nevada. The scholarship sum will be payable to the winner on September 15 following the award,

provided the winner is then enrolled in the University of Nevada for his Senior year in Electrical Engineering. Otherwise the sum is to be paid to a chosen alternate satisfying the same conditions.

18. THE CHARLES ELMER CLOUGH SCHOLARSHIPS IN ENGINEERING

(Established, 1926)

In the fall of 1926 Mr. Charles Elmer Clough of Reno established two scholarships in Engineering.

These two scholarships each carry an annual value of at least $150, and are to be awarded at the end of each University year, beginning with the award in May, 1927. The scholarship winners are to be chosen by the head Professors of the Schools of Civil, Electrical, and Mechanical Engineering. The winners each year must be chosen from the students enrolled in Civil, Electrical, and Mechanical Engineering and must, in the judgment of the selecting Professors, be the best all-round students, who are self-supporting in whole or in part, are of good character and of good scholarship, and who have earned one, Senior standing, and the other Junior standing, in the University of Nevada.

The scholarship sums will be payable to the respective winners, one-half on September 15 and the other half on January 15, following the award, provided the winners are then enrolled in the Engineering College of the University of Nevada. In case any winner is not so enrolled, the scholarship sum will then be paid to a similarly chosen alternate satisfying the same conditions.

19. THE JAMES WARD GERMAN-KATHERINE MORRISON GERMAN SCHOLARSHIP

(Established, 1926)

This scholarship, carrying an annual value of $500, was established in the fall of 1926 by Mr. and Mrs. James Ward German of Reno.

In the spring of each second year, beginning with the spring of 1927, the Principals of the four-year high schools of Nevada will be requested to nominate candidates for this scholarship to the President of the University of Nevada, who shall select the winning German scholar from these nominees.

The following conditions shall be observed:

a. This scholarship is to be awarded alternately to a young man and to a young woman, beginning with an award to a young man for the two University of Nevada years beginning with August, 1927. Each winner shall hold this scholarship for two successive years, provided the conditions stated in d and e below are satisfied.

b. Any nominee must have been graduated from a regular four-year Nevada high school, must have maintained a high scholarship record throughout the high school years, must be of good character and must have been helpfully active in the general life of the high school. The candidate must be one who, without aid of a scholarship would have to be self-supporting, in whole or in large part, if he came to college.

c. The family of the candidate must have been resident in Nevada at least four years prior to the date of nomination or, if the candidate is an orphan, or has been wholly self-supporting, then the candidate must have been a bona fide resident of Nevada for at least four years prior to his nomination.

d. The scholarship amount for each winner is to be $500 for each of two consecutive University of Nevada years, except that whenever the award is made to a candidate recommended from the Reno or Sparks high schools, then the winner shall receive $350 for each of two years, and a second award of the remaining $150 shall be made for each of two consecutive years to the candidate of second highest record. In each University year one-half of the scholarship amount due shall be paid on September 15 and the other half on January 15, provided that the winner is duly enrolled in the University of Nevada on these dates.

e. If within the two years of the scholarship any holder fails to maintain good standing in the University of Nevada, both in scholarship and in conduct, the President of the University is authorized to stop any further payments to this scholar. The sums accruing from such stoppage of payments or accruing because of any scholar's death or withdrawal from the University of Nevada shall be used to fund an added scholarship, or scholarships, in the discretion of the President of the University, to be awarded at the next regular time for choosing a new scholar. However, if any winner fails to take residence in the University of Nevada in the fall following his selection, the President of the University shall then award the scholarship to an available alternate who next best meets the conditions of the original award.

20. THE RACHEL RAND SCHOLARSHIPS

(Established, 1928)

The anonymous donor of these two $50 scholarships established them in honor of Miss Rachel Rand, a graduate of the University of Nevada School of Education in the Class of

1914. The scholarships are awarded at the end of each University year by the University Scholarship Committee, one to the most deserving man student and the other to the most deserving woman student of the University of Nevada during the year closing who satisfies the following conditions:

1. Must be working their way through the University.
2. Must have obtained passing grades in all subjects studied during the year.
3. Award is to be made, at the request of the donor, to *any* student meeting these requirements regardless of race, color, or religious creed.

The amount of the scholarship is to be payable to the students chosen by the Scholarship Committee on or after the 15th of September following the award, provided that the winners are then enrolled for another semester's work in this University of Nevada. Otherwise the scholarship shall, on recommendation of the Scholarship Committee, be paid to an alternate then enrolled who satisfies the requirements of the scholarships.

In May, 1930, and thereafter, these scholarships shall have an annual value of $100 each.

21. THE CARRIE BROOKS LAYMAN SCHOLARSHIP

(Established, Spring 1929)

This scholarship, established in memory of Carrie Brooks Layman, provides for ten consecutive payments of $30 each to a worthy, self-dependent Sophomore or upper class man or woman student who, while in college, is an abstainer from debt, intoxicants and tobacco. The recipient of this scholarship is to be chosen each spring by the University Committee on Scholarships and Prizes. If any of Mrs. Layman's sons or grandchildren should enter the University of Nevada, then such son or grandchildren shall have prior claim to this scholarship. During the earlier years of this scholarship payments will be made to the winner by the donor through the Comptroller's office. The inital $30 payments of each semester shall be made on the winner's registration day, and shall be followed by similar payments on the 5th of each September, October, November, December, February, March, April and May, provided the winner is duly enrolled as a student at the University of Nevada.

22. THE RHODES SCHOLARSHIPS

Special attention is called to the Rhodes Scholarships in Oxford University, England, to which one appointment from the State of Nevada will be made for each of the years 1926, 1928, 1929, and so on, omitting every third year. The scholarships are each of the value of approximately $2,000 a year, and are tenable for three years.

Scholars will be selected on the basis of the following qualities:

1. Qualities of manhood, force of character, and leadership.
2. Literary and scholastic ability and attainments.
3. Physical vigor, as shown by interest in outdoor sports or in other ways.

The ideal Rhodes scholar should excel in all three of the qualities indicated, but in the absence of such an ideal combination, committees will prefer a man who shows distinction either of character and personality, or of intellect, over one who shows a lower degree of excellence in both. Participation and interest in open-air and athletic pursuits form an essential qualification for a Rhodes scholar, but exceptional athletic distinction is not to be treated as of equal importance with other requirements.

In addition to the above requirements, a candidate to be eligible for election from the State of Nevada must—

1. Be a citizen of the United States, with at least five years' domicile, and unmarried.
2. Be a student in or a graduate of the University of Nevada, or, if a student in some other university or college, a resident of Nevada.
3. By the 1st of October of the year for which he is elected have passed his nineteenth and not have passed his twenty-fifth birthday.
4. By the 1st of October of the year for which he is elected have completed at least his Sophomore year in the University of Nevada or in some other recognized degree-granting university or college of the United States.

The appointments thus far made to Rhodes Scholarships from the State of Nevada are as follows:

1907—Arthur Leonidas St. Clair[1], Deeth, Nevada.
1908—William Scott Unsworth, Reno, Nevada.
1910—Stanley Mayhew Wilton,[2] Goldfield, Nevada.
1911—Cedric Harding Beebe,[3] Reno, Nevada.
1913—Floyd Sherman Bryant, Sparks, Nevada.
1914—Walter Clarence Jepsen, Verdi, Nevada.
1917—Thomas Henry Edsall,[4] Reno, Nevada.
1918—No appointment was made, owing to the war.
1919—Stanley M. Pargellis, Reno, Nevada.
1921—Charles M. Chatfield, Reno, Nevada.
1922—Leslie Maltby Bruce,[5] Reno, Nevada.
1923—Paul A. Harwood, Reno, Nevada.
1925—John Ocheltree, Reno, Nevada.
1926—Fred Siebert, Reno, Nevada.
1928—Fred Anderson, Carson City, Nevada.

[1]Died February 20, 1920. [2]Withdrew before completion of work.
[3]Died January 4, 1926. [4]Died January 2, 1918. [5]Died January 8, 1923.

The Rhodes Scholarships offer an unusual opportunity both for a university education in the Liberal Arts, the Sciences, Engineering, or the professions of Jurisprudence or Theology, and for travel among the chief centers of life and activity in foreign lands. These advantages, with the gift of financial means approximately ample for their enjoyment, have made these scholarships the most attractive ever established.

Further information about Oxford and the Rhodes Scholarships may be secured by addressing the President of the University of Nevada, or the Secretary of the Committee, Charles M. Chatfield, 621 Washington Street, Reno, Nevada.

23. THE JOHN ARMSTRONG CHALONER RESEARCH FELLOWSHIP AND WOMEN'S PRIZES

(Established, 1925)

A. Through the gift of John Armstrong Chaloner of Virginia, the University of Nevada, the United States Bureau of Mines cooperating, offers in the Mackay School of Mines an alternate year fellowship under the following conditions:

1. This fellowship is open to graduates of American mining colleges of recognized standing. Preference will be given to candidates who have had practical experience subsequent to graduation.

2. The income of the fellowship is $750 per year, payable monthly. The only fees required will be regular laboratory fees in connection with courses in the School of Mines, and the diploma fee, the fellow being exempted from other fees approximating $175 for the year.

3. The year runs from July 1 following each election to June 30 of the following year, with one month out for vacation.

4. The holder of the fellowship will be required to carry a minimum number of graduate courses in the Mackay School of Mines and, in lieu of the usual thesis, will be assigned to research service with the United States Bureau of Mines Rare and Precious Metals Station located on the Campus. In his research service, the holder of the fellowship will be subject to rules governing employees of the United States Bureau of Mines and he is to begin this research service July 1, 1929.

5. The holder of the fellowship, having satisfactorily completed the year's work, will receive the degree of Master of Science or other advanced mining degree for which he may be qualified.

This fellowship shall be awarded in alternate years, beginning with the University year 1925–1926. If in any year due for this fellowship a fellow satisfying the above conditions shall not have been chosen by September 15, then the

$750 for that year shall be given as prizes to women students in accord with B below.

B. Each alternate year, beginning with the University year 1926–1927, Mr. Chaloner's $750 is, by his plan, to be awarded in five $100 first prizes and five $50 second prizes to women students to be chosen in the fall semester by the Associated Women Students of the University.

BENEFICIARY AID

LOAN FUNDS

The Nevada State Federation Scholarship Fund—The Nevada State Federation of Women's Clubs has established a scholarship fund for the University of Nevada to be loaned to students in amounts varying to suit individual needs. The money thus loaned is to be returned to the fund at the borrower's convenience without interest. The fund is available first to girls, high-school graduates, or girls who have completed one year of normal or university work, the latter to have the preference. Boys are eligible under like conditions, but only when the funds are ample and no applications from girls are on file. Students desiring to take advantage of this offer will apply to Mrs. E. E. Wardin, State Chairman of the Committee on Student Loan Fund, 130 West Liberty Street, Reno, Nevada.

The David Russell Loan Fund—By will, David Russell of Loyalton, California, bequeathed, in 1908, the income of his residual estate, amounting to a little above $19,000, to be paid to the University of Nevada after a small payment had been made to another institution. The Board of Regents established the David Russell Fund to receive these annual payments after they became available in 1913. The Board has set aside $5,000 of this fund as a revolving fund for loans to deserving students who satisfy the President of the University of their fitness to receive this aid. The money is loaned to students on the basis of 4 per cent interest until maturity.

The Olin Ward Bequest—Two scholarships of $300 each, bequeathed by Mr. Olin W. Ward of Reno, Nevada. Under the terms of the will the beneficiaries of such scholarships must be earnest, industrious boys, of good moral character, financially unable to attend or continue their attendance at the University without the aid of such scholarships, and shall be chosen by the President of the University. Each beneficiary so chosen must, as a condition of his receiving such scholarship and before said sum or any part thereof is paid to him, enter into a written agreement with the Board of Regents that he will, within seven years after

receiving such scholarship, pay or cause to be paid to the Board of Regents the sum of $300 for the purpose of providing a scholarship in the University for some boy having like qualifications and chosen as above specified.

OTHER AID FOR STUDENTS

It is the purpose of the officers of the University to aid meritorious students of limited means so far as it lies in their power. Some of the work in and about the University buildings and grounds is done by young men and young women. Students are favored whenever possible with such work as typewriting, copying, housework, dining-hall service, and janitorial service. A committee allots the open positions to students who apply, giving preference to those who have good scholarship records, who need the assistance, who do the work well, and who are upper-class applicants. During the year 1924–1925 the committee was able to place fifty men and women students on the Campus, and through its direct efforts additional students were provided with positions in the city. Applications for campus employment should be made to the Secretary of the President. It is to be remembered that the power to favor students with self-help is limited by circumstances, and *therefore students cannot expect to earn enough to pay all their expenses while pursuing their studies.*

The *necessary campus* expenses for a University year are covered by about $375 for each Nevada student. Students from other States should add $150 for tuition. (See page 93 for tabulation of expenses.)

It is clearly better, both for the individual student and for the common student life on the Campus, if students can do their necessary money-earning during the long summer vacation. If they can have all their time during their University year free for their studies and for their participation in general student activities, they will more surely develop themselves into fully rounded men and women than if they are compelled to inroad their time with many hours each week given to work for pay. *Particularly is it desirable that first-year students should, if possible, plan fully to finance their first year without necessity of working for pay during the University year. Every student from Nevada should have at least $150 cash in hand, after reaching the Campus, properly to start any University year. Outside students should have $250 on hand to start the year.*

EXPENSES OF STUDENTS

TUITION

The Board of Regents is empowered to charge tuition to students who come from outside of Nevada. The Board of Regents set this *tuition charge, payable by students from outside Nevada, at $75 per semester,* beginning with August, 1925. *No rebate is allowed on this nonresident tuition charge after the third week of any semester.*

LATE REGISTRATION FEES

A fee of $3 is charged for registration later than the regular enrolling days of each semester. This fee is increased to $5 for those registering later than the end of the week including enrollment days. *No exception is made to the rule.* Each student shall complete his registration by 4 p. m. of the second day after he begins registration, otherwise he shall pay to the Comptroller 75 cents for each day or fraction of a day thereafter until his registration is completed.

UNIFORMS

Young women are required to provide themselves with a regulation gymnasium outfit costing about $8 to $10.

Students in cooking will provide themselves with two white aprons, costing about $4.

Military students must make a deposit of $10 to cover uniform and equipment.

THE DORMITORIES

Manzanita and Artemisia Halls—Manzanita and Artemisia Halls furnish campus residence for women students. They are well ventilated, heated and lighted dormitory buildings, with all modern conveniences and comfortably furnished. They can accommodate one hundred and sixty-five residents.

Dean of Women Margaret E. Mack and Matrons Miss Mae Weisner and Mrs. Laura E. Akin live in these dormitories and have supervision over them. Miss Weisner is in charge of the University Dining Hall.

Unless women students have applied for residence in excess of the number that can be accommodated in the women's dormitories, all unmarried women students who are not residents of Reno or Sparks are required to live in one of the women's dormitories during their entire Freshman year. The only exceptions to this rule may be made by the Dean of Women when written request has been filed in advance with the Dean of Women by parents requesting that their daughter be permitted to live with relatives whose home is in Reno or Sparks. Residence privilege in this hall will not be granted to married women unless they were formerly students of the University. Women students not living in a dormitory are required to select accommodations approved by the Dean of Women. A list of approved places is on file in the office of the Dean of Women.

Application for residence privileges in the women's dormitories should be made to the Dean of Women who will consider such applications in the order of their receipt. Special application blanks for hall residence will be sent on request made either to the Registrar of the University or to the Dean of Women. All applications, to be honored, must (1) Be on file with the Dean of Women at least one week prior to the opening day of any semester; (2) *Be accompanied by a sum covering the room rent for the semester concerned.* Room rent is as follows:

	1st Sem.	*2d Sem.*
Room with roommate	$34.00	$36.00
Single room	42.50	45.00
Suite with roommate	42.50	45.00
Double room used by one person	63.75	67.50

Checks for room rent should be made payable to the Board of Regents. Such sum will be returned in full to the one making the reservation if due notification is sent of desire to cancel reservation, on or before the end of the first enrollment day of the term, to Dean Margaret Mack. If cancelation or withdrawal is made after the end of the first enrollment day, but before the end of the third week of the semester, one-half of the room fee will be rebated. If withdrawal is made after the end of the third week, no rebate on the semester's room rent will be made.

No one can be given room in a dormitory until room rent for the term has been paid.

All residents of women's dormitories are required to:

1. Register in and to carry throughout each semester at least fourteen credit hours of University work unless excused by the Dean of Women.

2. Conform to the regulations of the Hall as adopted by the Manzanita Hall Association in consultation with the Dean of Women and the Matron of the Hall.

3. Be provided with the following articles: Four sheets, 60x90 inches; four pillow-slips, 20x30 inches; two white bedspreads; one pair of blankets; two comforts; one mattress protector, 3x6 feet, six good towels, two dresser scarfs, and personal toilet articles. If window hangings and rugs are desired, they must be supplied by the students. White curtains are furnished by the University. Young women should also have two large aprons for work in the laboratories. All articles of room equipment and wearing apparel should be plainly marked with the name of the owner.

4. Take care of their own rooms and linen.

The women's dormitories will open Saturday, August 24, 1929, to receive student residents for the University year 1929–1930.

Lincoln Hall—Lincoln Hall is the University home for men. The building has accommodations for 90 young men, and it is equal to the best of modern college halls. Men coming to Lincoln Hall must provide themselves with the following articles: Two white bedspreads; one pair blankets; one comfort, 72x90 inches; one mattress protector, 3x6 feet; six good towels, and personal toilet articles. All articles of room equipment and personal wearing apparel should be plainly marked with the name of the owner.

Application for residence privileges in Lincoln Hall should be made to Master of Lincoln Hall, who will consider such applications in the order of their receipt. Special application blanks will be sent upon request made either to the Master of Lincoln Hall or to the Registrar of the University.

In order to be honored, *reservations must be* (1) *accompanied by a sum covering the room rent for the semester concerned; and* (2) *be on file with the Master of Lincoln Hall at least one week prior to the opening day of any semester.* The room rent for the first semester of any university year is $38, and for the second semester, $40.50. Checks should be made payable to the Board of Regents. Such sum will be returned in full to the one making the reservation if due notification is sent of desire to cancel reservation, on or before the end of the first enrollment day of the term, to the Master of Lincoln Hall. If cancelation or withdrawal is made after the end of the first enrollment day, but before the end of the third week of the semester, one-half of the room fee will be rebated. If withdrawal is made after the end of the third week, no rebate on the semester's room rent will be made.

No one can be given room in the dormitory until room rent for the term has been paid.

Lincoln Hall will be open Saturday, August 24, 1929, to receive students for the University year 1929–1930.

For men students whose homes are outside the Reno district and who are not living in Lincoln Hall, the Master of Lincoln Hall has a list of homes offering suitable accommodations for men. He invites correspondence with parents or guardians of men students of the University and will gladly cooperate with them in matters making for the welfare of such students.

THE UNIVERSITY DINING HALL

For the accommodation of the students the University conducts a Dining Hall. The service is maintained for the purpose of obtaining board and table service of the most acceptable character and at the most reasonable figure. Students boarding at the Dining Hall will be charged $25 per month for board.[1] At each student's first meal at the beginning of a University semester $5 will be collected at the Dining Hall which will be credited toward the payment of the first month's board of the individual. Each student should therefore come prepared to pay this amount to the head waiter.

All women students residing in a University dormitory are required to board at the University Dining Hall. Men students may board at the University Dining Hall.

REGULATIONS GOVERNING THE UNIVERSITY DINING HALL

1. Board is payable in advance. When board is not paid by the fifth of the month, an additional 50 cents per day will be added until board is paid and receipt therefor from the Comptroller's Office is presented to the head waiter.

2. Students desiring to board regularly at the University Dining Hall will be required to register with the head waiter.

3. Registration at the Dining Hall will be made only on presentation of the Comptroller's receipt for board paid, or of a special permit issued by the President. In order to furnish board at the rate charged, it is imperative that all board bills be paid, and it is therefore ordered that no credit be extended. *Students who intend to*

[1]The Board of Regents is considering the desirability of increasing the monthly charge to $28 or $30. In case they decide to make the increase, such increase would probably be effective from the beginning of the year 1929–1930.

board at the Dining Hall will be expected to come with sufficient money to keep their board paid one month in advance. When board is not paid by the fifth of the month, an additional 50 cents per day will be added until board is paid and receipt therefor from the Comptroller's Office is presented to the head waiter.

4. Rebate at the rate of $5 per week will be allowed for necessary absences, but no rebate will be made on board for less than one week's continuous absence. Due notice must be given and permission secured from Miss Mack in advance, or no rebate will be allowed.

PREFERENCES IN DINING HALL AND DORMITORIES GIVEN TO NEVADA STUDENTS

The Board of Regents adopted the following rule:

Whenever the requests for University of Nevada dormitory or dining-hall privileges exceed the number that can be accommodated, preference shall be given as follows:

(1) To Nevada students.
(2) To formerly enrolled students from outside Nevada.
(3) To new students from outside Nevada.

N. B. *Such preferences for Nevada students in the dormitories are open to all who apply not later than one week before the opening of any given semester. Nevadans making application later than such time will be accommodated if places are still open, but cannot be received otherwise.*

LABORATORY FEES

LABORATORY FEES—Departments giving laboratory courses must charge fees to cover special expenses incident to such courses. These fees are calculated to cover the cost of the materials used and the expense incurred for the individual student.

BLANKET DEPOSIT

At registration time a general deposit of $10 is required from each student. Breakage or damage in all laboratory courses, in Library, in dormitories and in any other University connection is charged against this deposit. The remainder of this deposit, after all above charges, if any, are deducted, will be returned at the end of the University year only, unless a given student is not returning for the second semester. The military deposit is additional to this general deposit. If there are substantial first-semester charges reported against any given student, the Comptroller has authority to require that student to renew his deposit to the full $10.

ASSOCIATED STUDENTS MEMBERSHIP FEE

At the request of the Associated Students of the University

the Board of Regents voted to make the fee for membership in the Student Association a compulsory fee upon all students except visitors, members of the University staff, and Nevada school-teachers in active service. This fee, $6.60 for the first semester and $10.60 for the second semester, which includes subscriptions to the U. of N. Sagebrush, the Desert Wolf, and in the second semester the Artemisia, and which pays up each student's class dues and covers admittance to all regular varsity athletic events, must be paid to the Comptroller at the time of registration.

HOSPITAL FEE

A University Hospital fee is charged to all students with the exception of those who present, at the time of their registration, written request from their parents or guardians that they shall not pay this hospital fee, and with the exception of those students whose families live in Reno or Sparks. This fee is $3 per semester and is payable to the Comptroller on registration.

TABLE OF TUITION CHARGES, SPECIAL FEES, DEPOSITS AND LABORATORY FEES PER COURSE PER SEMESTER

	Fees
Agronomy 71, 72	$1.00
Agronomy 1, 6	3.00
Animal Husbandry 4, 56	3.00
Animal Husbandry 59	1.50
Associated Students Fee (First semester)	6.60
Associated Students Fee (Second semester)	10.60
Bacteriology 51	5.00
Botany 1, 2, 55, 64	3.00
Botany 3, 52	2.00
Botany 71, 72	4.00
Botany 91, 92 (fee determined by type of work).	
Chemistry 9, 10	9.00
Chemistry 81, 82, 102	3.00
Chemistry 1, 2, 5, 6, 25, 51, 52, 53, 61, 63, 64, 67, 71, 72, 100	6.00
Chemistry 200 (fee per credit hour)	3.00
Civil Engineering 52, 54, 64	3.00
Civil Engineering 58	5.00
[1]Civil Engineering 58 (Transportation)	15.00
Civil Engineering 72	2.50
Civil Engineering 90	1.00
Dairy Husbandry 1, 53, 54, 56	3.00
Dairy Husbandry 59	1.50
Dairy Husbandry, 5, 55	2.00

[1]If a student supplies his own transportation in a satisfactory manner, this fee will not be required.

	Fees
Deposit, General	10.00
Deposit, Military	10.00
[1]Diploma (Degree or Certificate)	5.00
[2]Drawing Outfits	$20 to 30.00
Education 20, 41, 48, 60, 71	1.00
Electrical Engineering 61, 62, 63, 64	5.00
Electrical Engineering 77, 78	2.50 per credit
Electrical Engineering 80, fee determined by work taken, maximum	10.00
[3]History Syllabus	25c to 1.00
Home Economics 31, 32, 55, 83, 85	5.00
Home Economics 33	3.00
Home Economics 34	.50
Home Economics 9, 15, 16, 18, 45, 49, 50, 66, 95	2.00
Home Economics 88	1.00
Home Economics (locker)	.50
Home Economics 87	1.50
Hospital Fee	3.00
Hygiene 7, 8	2.50
Mechanic Arts 1, 2, 3, 4, 5, 6, 7a, 7b	4.00 per credit
Mechanical Engineering 64, 65, 66, 80	5.00
Metallurgy 51	15.00
Metallurgy 52, 65	$5.00
Metallurgy 56	1.00
Metallurgy 70	10.00
Metallurgy 79, 80, 180 (deposit according to work).	
Mineralogy 1	2.00
Mineralogy 2	3.00
Nature Study 1, 2	1.00
Physical Education (locker)	.50
Physical Education (laundry)	1.00
Physics 1b, 2b, 5, 6, 19, 20, 55, 56, 57, 58, 63	3.00
Physics 75, 76	5.00
Poultry 2, 4, 6, 8	2.00
[4]Transcript of student record	1.00
Tuition to non-Nevadans	75.00
Zoology 53	1.00
Zoology 2, 4, 65, 66	4.00
Zoology 51, 63, 64	2.00
Zoology 91, 92, 201 (fee determined by character of laboratory work).	
Zoology 9	5.00

No rebate is allowed on any of the above fees or upon non-resident tuition payments after the end of the third week of any semester.

[1]If two diplomas are granted in one year, the charge will be $5 for the first and $4 for the second; if three diplomas are granted in any one year, the charge will be $5 for the first, and $4 each for the second and the third.

[2]See footnote 4, page 95.

[3]According to work being done.

[4]When two or more transcripts of record are asked for at the same time, each additional transcript will be 50 cents. *Request for transcript or transcripts,* MUST BE *accompanied by the stipulated fee.*

TABULAR ESTIMATE OF NECESSARY ANNUAL EXPENSES OF STUDENTS EXCLUSIVE OF PERSONAL INCIDENTALS, CLOTHING AND TRAVELING[1]

	Low	*Moderate*	*Liberal*
[2]Tuition	None	None	None
Board, 8½ months	$215.00	$225.00	$325.00
Room	80.00	90.00	125.00
[3]Laundry	25.00	35.00	50.00
[4]Books, stationery, etc.	30.00	35.00	45.00
Fees (laboratory, athletic, medical, etc.)	30.00	35.00	50.00
[5]Totals	$380.00	$420.00	$595.00

[1]The low and moderate estimates apply to residents of dormitories. The liberal estimate, with the exception of books and fees, applies to students living elsewhere.

[2]Students from outside the State of Nevada must add a tuition of $75 each semester.

[3]This item may be greatly reduced by residents of Manzanita Hall who choose to take advantage of the house-laundry facilities.

[4]All engineering students will require complete drawing outfits. These cost from $20 to $30. Students having this equipment should bring it with them.

[5]These amounts do not include the deposit of $10 required of all students at the beginning of each semester, the required military deposit, nor the cost of drawing outfits needed by all engineering students, nor do they include the cost of special uniforms needed in some departments, such as the gymnasium uniforms.

GOVERNMENT OF THE STUDENTS

In the government of the University the largest liberty consistent with good work, good order, and good character is given the students. Their habits of life are expected to be such as to promote daily cultivation of high moral character. They are expected in all their relations to each other and to the University to observe the usages of good society without requiring special regulations for that purpose. They are expected to be punctual and regular in their attendance upon all University exercises. The State provides its bounty for the earnest and industrious student. The indolent or the unworthy will not be retained in the University. Young men and young women who do not intend to give themselves up to the very highest demand of university life are advised to remain at home or to go elsewhere.

OFFICIAL NOTICES

Students should watch the bulletin-board for notices. AN OFFICIAL NOTICE PROPERLY POSTED IS DEEMED SUFFICIENT INFORMATION TO ALL STUDENTS.

ADMISSION AND DEGREES

Applicants for admission to first-year standing in the University of Nevada should present satisfactory evidence of having completed fifteen units of acceptable high-school or preparatory work. A "unit" represents a year's study in any subject in a secondary school, constituting approximately one-quarter of a full year's work. Two periods of laboratory work, or shop work, count as the equivalent of one recitation.

Applicants for entrance who are Nevada residents but who cannot qualify for regular Freshman standing may be admitted as Limited Freshmen[1] or as Specials.[2]

SCHOLARSHIP REQUIREMENTS FOR NON-NEVADANS

1. College of Arts and Science

Applicants for admission to first-year standing in the University of Nevada from States of the Union other than Nevada must have a grade above 3[3] in at least 10 of their 15 acceptable high school units presented for entrance.

2. Colleges of Agriculture and of Engineering

Applicants for admission to first-year standing in the College of Agriculture or in the College of Engineering of the University of Nevada from States of the Union other than Nevada must have a grade above 3[3] beginning with the fall of 1928, and thereafter, in at least 6 of their acceptable high school units presented for entrance. "Special" students from outside Nevada will be received by both of these colleges.

No new students from outside Nevada will be received as (a) *"Limited Freshmen" in any University of Nevada College;* (b) *as "Specials" in the College of Arts and Science.*

SCHOLARSHIP REQUIREMENTS FOR NEVADA APPLICANTS

All applicants for regular Freshman standing or for limited Freshman standing who present credentials from Nevada high schools or are from Nevada families, must present at least 6 of their acceptable high school units with a grade better than 3.

[1] See footnote, p. 99.
[2] See p. 108.
[3] Grades equivalent to this University's "above 3" in the usual A, B, C, etc., system are grades of B or better, and in the percentage grading system are grades of 80 per cent or better.

All high school and other certificates which are to be presented for admission should be forwarded to the Registrar of the University prior to the time the student expects to enter. Applications not received in time for an examination by the Admission Committee prior to the opening day will not be considered until after the regular matriculation days.

Applicants, who for any reason have been unable to secure their credentials, may file a petition with the Registrar for temporary admission. Such petition should contain the name and location of the preparatory school, the reason of the absence of credentials, a list of the subjects taken in the preparatory school, and the College of the University which the applicant desires to enter. These petitions will be acted on by the Admission Committee, and meritorious cases will be permitted to register temporarily, pending the receipt of credentials.

LIMITATION OF ENROLLMENT

The Board of Regents at its Commencement session, held May 11, 1920, unanimously adopted the following rules for limitation of enrollment in the University of Nevada, to be applicable from and after September 1, 1920:

That the University of Nevada shall not, during either semester of any University year, receive students whose families or whose guardians reside outside the State of Nevada or who, if they have been living independently of family or guardian, have themselves been residing outside the State of Nevada, to a number exceeding 50% of the total number of students from Nevada enrolled during the preceding University year, September to May, inclusive; *provided*—

(a) That the above limitation shall not be put into effect until the total enrollment of the University has reached 600 for a given semester, or when it will reduce the enrollment below 600; and

(b) That the above limitation policy shall not operate to exclude any students from outside the State of Nevada who desire to enroll in the regular courses for mining engineers, metallurgists or mining geologists, and who are fully qualified for entrance or advanced standing in the Mackay School of Mines.

REQUIREMENTS FOR ADMISSIONS TO THE SEVERAL COLLEGES AND SCHOOLS

ADMISSION OF CANDIDATES FOR DEGREES

The privileges of the University, while open to all qualified persons of good character and serious purposes, are designed primarily for those who satisfy the requirements for admission and become candidates for degrees. In order to insure

some breadth of view on the part of students as well as some degree of achievement, curricula have been established in the several colleges, each intended to meet the needs of a considerable body of students. So far as is consistent with the purposes the curricula are intended to fulfill, students are left free to choose their work according to their individual needs and tastes. For most persons it is believed that the pursuit and completion of a regular curriculum is of much higher value than any unrestricted selection of courses. The University wishes, therefore, to impress upon parents and students its firm belief that, under all ordinary circumstances, students should satisfy the requirements for admission and pursue the regular curricula.

TO THE COLLEGE OF ARTS AND SCIENCE; AND TO THE NEVADA STATE NORMAL SCHOOL

For unconditional[1] admission, 15 units.

I. *Required:* English, 3 units.
Mathematics, 2 units (Algebra and Plane Geometry).

II. *Elective in Groups:*
Three in one and two in another; or two units in each of three of the following groups:

1. Foreign Language: (If foreign language is offered to satisfy group requirements, at least two units must be in one language.)
Latin. French. German.
Greek. Spanish.

2. Natural Sciences:
Botany. General Science. Physical Geography. Physics.
Chemistry. Geology. Physiology. Zoology.

3. Social Sciences:
Economics.
History (Ancient, Medieval, and Modern, World, English, or American History and Civics).
Sociology.
Commercial Geography.
Commercial Law.

4. Mathematics: c and d.

III. 10 of the 15 required units must be from Divisions I and II.

IV. *Free Electives:* 5 or 4 units.
These may be selected from any of the above subjects, or from any of the subjects appearing on the next page. Not more than 5 units may be taken in subjects 18 to 30, inclusive, and not more than the highest number indicated in any one of these subjects.

[1]Students from Nevada presenting 14 or 13 accredited units may be admitted as "limited Freshmen." Nonresidents may not have this classification.

To the College of Engineering
ALL SCHOOLS

I. *Required:*	English	3 units
	Mathematics	3 units
	Algebra	1½ units
	Plane Geometry	1 unit
	Solid Geometry	½ unit
	History	1 unit
	[1]Science	2 units
II. [2]*Elective*		6 units
	Total	15 units

To the College of Agriculture and the School of Home Economics

I. *Required:*	English	3 units
	Social Science	1 or 2 units
	Mathematics	2 units
	Natural Science	1 or 2 units
II. *Elective:*	Academic or vocational subjects	7 units
	Total	15 units

SUBJECTS ACCREDITED FOR ADMISSION

Subject	*Units*[3]
1. English (a)	1
English (b)	1
English (c)	1
English (d)	1
2. Latin (a)	1
Latin (b)	1
Latin (c)	1
Latin (d)	1
3. Greek (a)	1
Greek (b)	1
Greek (c)	1
Greek (d)	1
4. German (a)	1
German (b)	1
German (c)	1
German (d)	1
5. French (a)	1
French (b)	1
French (c)	1
French (d)	1

[1]Sciences recommended are Physics and Chemistry.

[2]The electives may be chosen from recognized high school subjects, but in no case may more than 5 units be elected in subjects 20 to 32, inclusive, and not more in any one of these subjects than the highest number which is indicated. It is advised that the electives include 2 units of foreign language, preferably modern language, and that the science requirement be in chemistry. In certain meritorious cases some entrance credit, not exceeding 1 unit, may be granted for practical experience.

[3]A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work. Two hours of laboratory work are regarded as the equivalent of one hour of prepared work.

Subject	*Units*
6. Spanish (a)	1
Spanish (b)	1
Spanish (c)	1
Spanish (d)	1
7. Italian (a)	1
Italian (b)	1
Italian (c)	1
Italian (d)	1
8. Ancient History (a)	1
Medieval and Modern History (b)	1
English History (c)	1
American History and Civics (d)	1
9. Economics	1
10. Sociology	1
11. Algebra (a)	1
Plane Geometry (b)	1
Advanced Algebra (c)	½
Solid Geometry (d)	½
Trigonometry	½
12. General Science	1
13. Physics	1
14. Chemistry	1
15. Physical Geography	½ or 1
16. Botany	½ or 1
17. Zoology	½ or 1
18. Physiology	1
19. Drawing	½ to 2
20. Music	½ to 2
21. Agriculture	½ to 4
22. Domestic Science	½ to 4
23. Manual Training	½ to 3
24. Shopwork	1 to 3
25. Bookkeeping	½ to 3
26. Stenography	½ to 3
27. Typewriting	1 to 2
28. Trades and Industries	½ to 4
29. Vocational Work	1
30. Commercial Arithmetic or Applied Mathematics	½ to 1
31. Commercial Law	½ to 1
32. Commercial Geography	½ to 1

Additional units for subjects listed above or additional subjects will be accepted if approved by the Committee on Admission and Advanced Standing.

METHODS OF ADMISSION

The credits required for admission to the undergraduate department, as detailed above, may be secured:

By examination;

By certificate from an accredited high school or other secondary school;

By transfer from any university or college of recognized standing.

ADMISSION BY EXAMINATION

Examinations for admission are held at the University immediately preceding the opening of the fall semester. Application for examination should be in the hands of the Committee on Admission and Advanced Standing at least one week in advance. These examinations cover all subjects required or accepted for admission, but cannot be taken for the purpose of raising grades obtained in preparatory schools.

ADMISSION BY CERTIFICATE FROM AN ACCREDITED PREPARATORY SCHOOL

On application to the Registrar blank certificates may be obtained by students who wish to enter the University by this method. Students should obtain blanks early and should have them filled out and sent to the Registrar for approval as soon as possible after the closing of the high school year in June. Applications not received in time for an examination by the Admission Committee prior to the opening day will not be considered until after the regular matriculation days.

Applicants for admission to first-year standing in the College of Arts and Science in the University of Nevada from States of the Union other than Nevada must have a grade above 3[1] in at least 10 of their 15 acceptable high school units.

Applicants for admission to first-year standing in the College of Agriculture or in the Engineering Colleges of the University of Nevada from States of the Union other than Nevada must have (a) for the fall of 1927, a grade above 3 in at least 4 of their 15 acceptable high school units; (b) for the fall of 1928, and thereafter, a grade above 3 in at least 6 of their 15 acceptable high school units. "Special" students from outside Nevada will be received in both the Colleges of Agriculture and of Engineering.

Applicants for regular Freshman standing or for limited Freshman standing who come from Nevada high schools or from Nevada families must, beginning with August, 1927, present at least 4 of their high school units with grades above 3, and beginning with August, 1928, such students must present at least 6 high-school units with grades above 3.

[1]Grades equivalent to this University's "above 3" in the usual A, B, C, etc., system are grades of B or better, and ir the precentage grading system are grades of 80 per cent or better.

Applicants, who for any reason have been unable to secure their credentials, may file a petition with the Registrar for temporary admission. Such petition should contain the name and location of the preparatory school, the reason of the absence of credentials, a list of the subjects taken in the preparatory school, and the College of the University which the applicant desires to enter. These petitions will be acted on by the Admission Committee, and meritorious cases will be permitted to register temporarily, pending receipt of credentials.

ADMISSION BY TRANSFER

Admission is granted by transfer from any university or college of recognized standing on presentation of the proper credentials, but such credit is provisional until the first year's work is completed.

Students who are disqualified at other colleges will not be admitted during the semester immediately following their disqualification.

Students transferring from other colleges must present certificates of honorable dismissal unless one or more full semesters have elapsed since they left their other college. In all cases of transferred students, at least one-half of the credits from other institutions accepted for such transferring students must be of grade above 3.

ADMISSION OF PERSONS WHO ARE NOT CANDIDATES FOR DEGREES

Unclassified Students

An "unclassified" student is one who has satisfied the regular requirements for admission, but who, for reasons satisfactory to the Dean of his college, does not desire to pursue any regular curriculum. He shall present to his Dean a written application for permission to register as an unclassified student, stating why he does not wish to take a regular curriculum, and specifying the courses of instruction he wishes to elect, the prerequisites to which he must already have satisfied. Unless he is over 21 years of age or is self-supporting, his application must bear the approval of his parents or guardian.

Unclassified students are subject to all rules relating to

registration and scholarship. By satisfying the requirements in any curriculum for which they have full admission, they may become candidates for degrees.

Special Students[1]

A special student is one who *cannot* satisfy the requirements for admission to the college in which he wishes to study. Any person who can satisfy such requirements will be permitted to register only as a regular or as an unclassified student.

Special students must be at least 21 years of age. Except upon the specific recommendation of the principals of their high schools, students who in the previous semester were in high schools will not be admitted to special standing. All applicants must present certificates of good character from reliable persons, credentials covering such academic work as they may have done, or other evidence of their ability and disposition to do satisfactory work in the University. Persons who have shown no serious purposes either in school or in employment will be refused admission. Those admitted will usually be expected to register in not fewer than ten hours in courses of elementary character which may be counted for admission. They will be permitted to register in advanced courses only upon the approval of their Dean and the head of the department concerned. They are expected to meet all requirements for regular admission within two years after entering the University. Except by action of the University Faculty, no person will be permitted to register as a special student for more than four semesters.

A special student may obtain status as a regular student by fulfilling any one of the following requirements:

1. College credit may be cancelled at the rate of four college credits for each high school unit necessary to fulfill the requirements of the college in which the student is registered.

2. Examinations may be taken within the first two years of residence at the University in sufficient of the subjects (1–32) listed as accredited for admission to fulfill the requirements of the college in which the student is registered.

3. A special student who has successfully carried the regular prescribed work of his college during four semesters

[1]No new special students from outside Nevada will be received in the College of Arts and Science.

and who has made a grade of 2.5 or better in 50% of his work and has no unremoved conditions or failures will be allowed to matriculate as a regular Sophomore student. If he has made a grade of 2.5 or better in 90% of his work and has no unremoved conditions or failures, he will be allowed to matriculate as a regular Junior student.

For any person who can present satisfactory reasons for such action, the rules relating to the minimum age limit and the minimum number of hours of registration may be waived by vote of the University Faculty.

Special students are subject to all the rules relating to registration and scholarship. By satisfying the requirements for admission to any college they may gain regular standing and become candidates for degrees.

Public School Teachers

Public School Teachers in actual service in Nevada may be permitted to enroll in a University course or courses during the University year and without payment of fees other than those required of all who enroll in laboratory courses.

World-War Service Men Specials

Any special student who is a World-War veteran and holds an honorable discharge from the United States Army, Navy, or Marine Corps will be permitted to graduate without regard to entrance deficiencies if he meets all the other requirements for a degree; provided, that if such student should fail in any college subject having entrance prerequisites for which he has no credit, these prerequisites must be made up before the student will be permitted to repeat the college subject.

Visitors

With the consent of the President and the instructors concerned, regular visitors may be enrolled as such, during the first three weeks of the term, provided they are above 21 years of age or present credentials of graduation from a standard high school. They shall be governed by the regular University rules. Casual visitors may not have the privilege of attending a class in excess of four times during any given semester except with permission from the President. No official record of these visits need be made. Regularly enrolled students of the University, who are registered for the full number of hours, may be allowed only the privilege of the casual visitor. Under no circumstances will

visitors be allowed to do laboratory work, engage in class discussion, take the time of the instructor from regular classwork, or receive credit toward a degree. Any eligible visitor who has been a bona fide resident of Nevada for a year or more is exempt from the payment of any fees.

ADMISSION TO ADVANCED STANDING

Students who have graduated from a full four-year high school course and who have also graduated from a one-year professional course in an accredited normal school are allowed one year's credit on advanced standing.

Graduates from a two-year normal school, who are also graduates from a full four-year approved high school course, will be allowed two years' credit on advanced standing, if they have completed all of the prescribed requirements for admission, and provided the subjects offered for advanced standing are in harmony with the group requirements for graduation.

The preceding statements refer to advanced standing granted by the College of Arts and Science and the State Normal School. All other applicants for advanced standing from reputable universities and colleges will receive, upon presentation of their credentials, such credit as the Committee on Admission and Advanced Standing may deem fair. In all doubtful cases the claims will be referred to the heads of the departments. All credit for advanced standing, however, is provisional and subject to revision at the end of the first year following the enrollment of the student. No such student, however, will be granted a Bachelor's Degree or a diploma without at least one full year of work in residence.

High school graduates who have completed more than the full requirements for entrance may be granted college credit by the Advanced Standing Committee, but not after the end of the Sophomore year. No advanced standing will be given for history or natural science, or for the first two years of a foreign language, or for algebra or plane geometry.

A student who desires to take an examination for advanced credit must present to the instructor by whom the examination is to be given a statement from the Registrar certifying that he is eligible to enter the examination.

UNIVERSITY RULES GOVERNING REGISTRATION

The following rules govern matters of registration, classification of students, conditions and failures, late registration, absences, hours of registration, withdrawals, transfer of students from one college to another, and honorable dismissal:

I. Method of Registering

1. On registration day the student will secure a registration blank from the Registrar. This card will be filled out by the student in accordance with the directions thereon.

2. In registering, the student will observe carefully the rules governing conditions, failures, maximum number of hours, status, and prerequisites.

3. All students having required courses must give preference to such courses in regular sequence; no required course may be deferred beyond one year.

4. Students under twenty-one years of age are expected to remove entrance deficiencies in their Freshman year. At the close of the second semester of each year the Committee on Admission and Advanced Standing will send to the Registration Committee a list of all Freshmen who have not registered for or who have failed in entrance subjects in which they were deficient. The Registration Committee shall then hold up the registration of such students in their Sophomore year until they register for the subjects in which they are deficient.

5. Any "regular" student who is twenty-one years of age and has carried the regular prescribed work of four semesters with 90% of it in grade 2.5 or better, and who has no unremoved conditions or failures, may have any entrance deficiencies canceled.

6. The signature of the instructor must be obtained for each course the student wishes to pursue.

7. The card must then be approved and signed by the Dean of the College in which the student has registered.

8. After having obtained the Dean's approval, fees will be paid to the Comptroller, who will issue receipts for the same. These receipts must be presented to the Registrar and to the heads of the departments concerned.

9. The registration card shall finally be deposited with the Registrar, who in turn will issue class cards to be filled out by the student and returned to the Registrar. These cards shall be sent to the various instructors and shall entitle the student to enter the classes concerned.

10. Any change of residence occurring after the completion of the student's registration should be reported to the Registrar immediately.

II. Classification of Students

1. Three classes of students, seeking college credit, are recognized—regular, unclassified, and special.

2. A "regular" student is one who has satisfied the requirements for admission to a college and is pursuing a curriculum leading to a diploma or degree.

3. An "unclassified" student is one who has satisfied the requirements for admission to a college, but, for reasons satisfactory to his Dean, is not pursuing a regular curriculum.

4. A "special" student[1] is one who, though unable to satisfy the requirements for admission to the college in which he wishes to study, is permitted to register in courses for which he has satisfactory preparation.

5. For regular Sophomore, Junior, or Senior standing, a student's deficiencies must not exceed 6 college units from the requirements of his college.

III. Requirements for Admission to Junior Standing

Only those students who have fulfilled one of the following conditions may register as Juniors:

1. Students who have no entrance deficiencies and who have fulfilled all Freshman requirements and have satisfactorily completed within six units of half the number required for graduation in the course for which they are registered. At least one-third of the units presented must have been carried with grades above 3.

2. Students transferring to the College of Arts and Science, who are graduates of recognized junior colleges or two-year normal schools, requiring at least 60 units for graduation, and who have carried at least one-half of the work with grades above 3. In no case will more than 64 units be accepted from these institutions. Such students will not be required to fulfill the specific entrance Freshman and Sophomore requirements prescribed by the University, but will be expected to fulfill all other requirements for graduation including that of carrying at least one-half of the work done at the University of Nevada with grades above 3.

[1]Special students are not admitted from outside Nevada to the College of Arts and Science.

3. Students transferring to the College of Arts and Science from other colleges or universities of recognized standing who present at least 60 acceptable[1] units, of which 10 units are in each of the following branches: English, a foreign language, social science, and natural science or mathematics. Such students will not be required to fulfill the specific entrance Freshman and Sophomore requirements prescribed by the University but will be expected to fulfill all other requirements for graduation, including that of carrying at least one-half of the work done at the University of Nevada with grades above 3.

IV. Conditions and Failures

1. Each instructor will determine the final grade of his students by any method he may consider best adapted to his course.

2. Any student who receives a final grade of 5 in any subject shall be considered as "failed" in that subject.

3. Any student who receives a grade of 4 shall be conditioned. A condition may be removed by satisfying the requirements of the department. A student who desires to remove a term condition must present to the instructor by whom the examination is to be given a statement from the Registrar certifying that he is eligible to enter the examination.

4. A failure in a required subject shall be removed by repeating the subject in class. This must be done as soon as the study is repeated in the University program, and any required subject in which a student has failed takes precedence over all other subjects in the arrangement of his program.

5. If a condition in any course is not removed within the next year of the student's residence after it is incurred, the course must be repeated in class.

6. A student may be dropped from class at any time for negligence or misconduct upon recommendation by the instructor and with the approval of the committee concerned.

7. A student may be placed on probation or suspended from the University at any time his scholarship or conduct warrants such action. Unless a student is passing in two-thirds of his work, he is liable to be placed on probation or

[1]Note—The term "acceptable" is intended to mean work of a distinctly college character, one-half of which shall carry grades above 3. Also see Section VIII under University Rules Governing Registration.

to be suspended from the University. Each individual case will be considered by the Committee on Registration and Scholarship.

8. Students who have twice been suspended for unsatisfactory work are not permitted to register again.

9. No student while on scholarship or conduct probation may represent the University in any public contest.

10. By a vote of the Faculty Committee on Registration, the rules stated above may be waived for any student who can show that his unsatisfactory record is due to reasons for which he is not personally responsible.

11. Instructors will report on delinquent students at mid-semester. The time for dropping subjects without failure is at the end of six weeks. A student whose work is of passing grade may drop a subject, without failure, at any time with the consent of his Dean.

V. Late Registration

1. A fee of $3, to be increased to $5 for those registering later than the end of the week including enrollment days, shall be charged for belated registration, and there shall be no exception to this rule.

2. A student who begins to register after the regular registration days shall not be permitted to enroll in the number of hours to which he would otherwise be regularly entitled; for every week or fraction thereof of delay in registering one hour will be deducted.

3. No person will be permitted to register as a student after the close of the third week of either semester. This rule applies also to changes in registration.

4. Each student shall complete his registration by 4 o'clock p. m. of the third day after he begins registration, otherwise he shall pay to the Comptroller 75 cents for each day or fraction of a day thereafter until his registration is completed.

VI. Hours of Registration

1. Including required Military Science and Physical Education, regular students in the College of Engineering shall register for eighteen hours. In the Normal School, in the College of Arts and Science, and in the College of Agriculture, including the School of Home Economics, beginning with the class which was the Freshman class in the fall of 1924, students shall register for fifteen hours in addition to required Military Science and Physical Education.

2. No Freshman during the first semester shall be allowed to enroll in more credits than his regular course requires.

3. Any student may at any time enroll in as low as three credits less than his course requires, but to take less than this amount the student must have the Dean's permission.

4. In case a student during the previous semester[1] receives above 3 in three-fourths of all of his work, and has no 4 or 5, he may enroll in a maximum of three hours above the normal requirement of his course. No other student shall be allowed any extra work.

Two exceptions may be allowed to this rule:

(1) A Senior, who, during the previous semester, carried the allowed three extra hours, received above 3 in three-fourths of his work, received no 4 or 5 in any work, and who needs one to four hours for graduation above that allowed by the rule, may be allowed to register, each semester, in one or two hours above the extra three allowed by the rule.

(2) A Senior, who, during the previous semester, received above 3 in two-thirds of his work, received no 4 or 5 in any work, and who lacks for graduation a few more hours than the rule allows, may be allowed three hours above his regular course. The Registration Committee shall enforce this rule.

5. In case a student failed to pass in some of his work during the previous semester, the Dean may restrict his registration to fewer hours than his course regularly requires.

6. The Registrar shall check up these regulations for each student when he finishes registering.

7. At the beginning of any semester, with the approval of the Deans concerned, a student may change his registration from one college to another. In so transferring, the student shall satisfy the admission requirements of the college to which he transfers, effective at the time he is admitted to the University, and he shall satisfy the course of study of the college to which he transfers,[2] effective at the time the transfer is made, the details of the transfer to be handled by the Committee on Admission and Advanced Standing.

8. Special students must enroll in at least ten hours of work. Exception to this rule can only be made by action of the University Faculty.

[1] *Previous semester*, when used to determine the maximum number of hours, shall be construed to mean the last semester in which a student was registered. *Students entering from another school* with advanced standing who wish to take extra hours must furnish records to the Registration Committee showing that the work previously done was of grade corresponding to that required of our own students who are eligible for extra hours.

[2] See page 121 for Arts and Science requirements.

VII. Withdrawals

1. A student who wishes to withdraw from any course shall first secure from the Registrar a withdrawal slip. He shall take this to the instructor in the course in question for his signature. He will then report to the Dean of his College, who may grant a withdrawal from the class. The withdrawal slip must be filed by the student with the Registrar, who shall notify the instructors concerned. The date of withdrawal shall be the date on which the slip is filed with the Registrar.

2. After the end of the sixth week of the semester a student desiring to withdraw from a course must present to the Dean a written statement from the instructor stating that his work done to date is of passing grade, otherwise the record will be "withdrawal with failure."

3. In courses in which fees are charged no fees will be returned to the student upon withdrawal from class after the end of the third week of any given semester.

VIII. Transfer of Students to One College from Another

1. When a student transfers from one college within this University to another, he shall have the same standing in the college to which he transfers as he had in the college from which he transferred, except that he shall satisfy the specific requirements of the college to which he transfers.

IX. Honorable Dismissal

1. Upon the request of a student in good standing, the Registrar will issue a letter of honorable dismissal. If the student desires to enter another university, a copy of his or her university credentials, including entrance, and stating thereon whether or not this University recommends such transferee, will accompany the letter. A fee of $1 must be paid for each transcript of record furnished to students by the University Registrar.

THE GRADING SYSTEM

1. The following grading system became effective in May, 1921:

1	equals 95% to 100%	(passing)
1.5	equals 90% to 94%	
2	equals 85% to 89%	
2.5	equals 80% to 84%	
3	equals 75% to 79%	
3.5	equals 70% to 74%	
4	equals 60% to 69%	(condition)
5	equals Below 60%	(failure)

2. In determining honors, the average of the figures representing the grades per credit shall be taken.

3. Except when a clerical error has been made, the passing grade of a student may not be changed after the class records have been filed with the Registrar, unless the subject has been repeated in a regular college class.

REQUIREMENTS FOR GRADUATION

A candidate for a Bachelor's Degree must pass in all the subjects both prescribed and elective in his chosen course, and he must conform to all directions given in connection with that course in regard to electives.

In order to graduate, a student shall have at least 50% of all his credits above a grade of 3.

In the College of Arts and Science 126 credits are required for graduation.

In the College of Agriculture 130 credits must be presented by candidates who entered in August of 1924, 1925, and 1926. Candidates entering in August, 1927, and thereafter, will be required to present but 128 credits.

In the School of Home Economics 128 credits are required of entrants of 1924, 1925, and 1926. Beginning with the fall of 1927, and thereafter, 126 credits will be required.

In the College of Engineering 150 credits will be required for graduation of the Class of 1928, 148 of the Class of 1929, 146 of the Class of 1930, 144 of the Class of 1931, and thereafter.

In the State Normal School a candidate must complete the courses of study as laid down.

The value of a *credit is defined* as three hours of work per week for one semester.

DEGREES

The College of Arts and Science confers upon its graduates the Degree of Bachelor of Arts. Any student, however, who pursues a course in which the natural sciences or mathematics have received particular emphasis may, upon petition to the faculty of the College of Arts and Science, be granted the Degree of Bachelor of Science.

Upon graduates of the College of Engineering are conferred degrees as follows: Graduates of the Mackay School of Mines receive the degree of Bachelor of Science in Mining Engineering, Metallurgical Engineering or Geological Engineering. Graduates of the Schools of Mechanical Engineering, of Electrical Engineering, or of Civil Engineering receive, respectively, the Degree of Bachelor of Science in Mechanical Engineering, Bachelor of Science in Electrical Engineering, and Bachelor of Science in Civil Engineering.

Graduates of the College of Agriculture receive the Degree of Bachelor of Science in Agriculture. Graduates from the School of Home Economics receive the Degree of Bachelor of Science in Home Economics.

Combination curricula leading to the Bachelor's Degree in each of two schools or colleges in the University may be arranged. The minimum requirements shall be one extra year in residence and 30 credit hours of extra work. More work may be necessary if the specific requirements of the department in which the degree is sought have not been met.

A charge of $5 is made for all baccalaureate diplomas. If, however, a student in addition to receiving the baccalaureate degree receives a diploma for a teacher's certificate, the arrangement of the charge is as follows: If two diplomas are granted in any one year, the charge will be $5 for the first, and $4 for the second; if three are granted in one year, the charge will be $5 for the first, and $4 each for the second and for the third.

DIPLOMAS

For information concerning teachers' diplomas, see The School of Education.

RESIDENCE REQUIREMENT

If a student is in residence at the University for one year only, that year's work must be done in the college from which the degree is expected. No college faculty in the University will recommend a student for a degree unless he has been a regularly registered student in that college for at least one year. Attendance at the summer session is construed as resident study.

THESES

A thesis, if satisfactory, may be offered by each candidate for graduation from any school of the University.

The thesis is intended to give the student an opportunity to make a comparatively independent effort in some chosen field while still under the guidance of some department, and to test his ability for such independent work in a way that cannot be done in connection with ordinary classwork.

It is expected, therefore, that the thesis will show scientific and literary knowledge and good arrangement and presentation of subject.

In order to insure time for the satisfactory preparation of his thesis, the student will elect and pursue thesis work in some department as he would any regular elective course.

The thesis should be typewritten upon 8½x11 paper and bound in a 9x11¼ flexible backed cover. All maps and drawings or other illustrations should be so arranged that they can be bound within the same cover. Two copies of each thesis accepted for graduation must be placed in the library.

The title-page should conform to the style of the following sample title-page:

The Origin of the English Gilds

A THESIS

SUBMITTED TO THE FACULTY OF THE COLLEGE OF ARTS AND SCIENCE IN CANDIDACY FOR THE DEGREE OF BACHELOR OF ARTS

(Department of History)

By

JOHN EDWARDS SMITH

RENO, NEVADA

1920

GRADUATE COURSES

Admission—Graduates of this University or of other colleges or universities of equal rank are admitted to graduate standing in this University without examination. Admission to graduate study should not be understood as implying admission to candidacy.

Registration—Students wishing to register should present their credentials to the Committee on Admission and Advanced Standing, and if approved a card of admission will be issued to the applicant. When the student has decided in what department he desires to do his major work, he will confer with the head of that department, who, in consultation with the student, will outline the work to be done. The student will then submit the major and minor courses chosen to the Graduate Committee for approval.

Fees—Graduate students pay the same fees as the undergraduates in the various departments of the University.

Degrees Offered—The University offers the following advanced degrees in residence: Master of Arts and Master of Science.

Residence and Candidacy—The student desiring to become a candidate for an advanced degree should file a petition, approved by his major professor, with the Chairman of the Graduate Committee, stating the graduate work already done, and setting forth the proposed work to be offered in candidacy for the degree. No graduate student is considered a candidate for any advanced degree unless he has been definitely advanced to candidacy by his major professor and the Graduate Committee. At least one semester must elapse between the formal advancement to candidacy for any degree and the conferring of that degree. Actual residence and study, except for graduates of this University, must precede formal advancement. Graduate work done in other universities may be accredited toward an advanced degree at the University of Nevada, but such allowance of credit will not reduce the period of residence. The time of residence for students of this University shall not be less than one semester and for graduates of other universities not less than one year.

Outside Work—Work which has been accepted for the Bachelor's Degree may not be used to meet any of the requirements for the Master's Degree. In general one year of the student's full time will be necessary to complete the work for a Master's Degree. Candidates for advanced degrees who do not wish to spend more than one year in residence may be allowed to give only a limited amount of time to instruction, laboratory assistance, or other outside work. The amount and nature of this work must be definitely set forth by the student and officially allowed by the Graduate Committee. Students doing outside work in excess of the equivalent of two or three units per week will require more than one year to complete the work for a Master's Degree.

Courses of Study—The courses of study shall represent 30 units of work distributed between a major and at least one minor department not less than one-half of which, nor more than three-fourths, shall be done in one department in the College of Arts and Science, or in one school in the College of Agriculture or the Engineering College. With the permission of the Graduate Committee, however, upon the recommendation of the major department and approval of the University Faculty, less than one-half or more than three-fourths of the work may be done in one department or school. The major work should be distributed among two or more instructors where this is possible. At least 7 units of graduate work must be done in the minor department. The remainder of the 30 units may be elected by the student from advanced courses in any department of the University. Graduate credit will be given only for courses accepted by the major professor, authorized by the Graduate Committee, and approved by the University Faculty. So far as possible these courses should be listed in the catalogue as available for such credit. Courses numbered below 50 will not be accepted for graduate credit.

A thesis shall constitute a part of the prescribed course of study. It should, ordinarily, represent an equivalent of six to ten units, and shall have the general form prescribed for the Bachelor's thesis, or shall be a reprint of an article appearing in a reputable periodical. It must be presented to the Graduate Committee for their final approval at least two weeks before the date set for the conferring of the degree.

The Master's degree will be conferred only after the candidate has passed an examination in the general field offered for the degree in the major and minor subjects and the thesis. The examiners shall consist of the major professor, the minor professor, and one or two additional professors appointed by the Graduate Committee.

When semester examinations are taken, the grades received will be averaged with the oral examinations and the thesis. An average grade of at least 2 must be attained in all the work offered for the Master's degree, and no credit be allowed for any course where the grade falls below 3.

The Degree of Master of Arts is conferred upon students who have received the Degree of Bachelor of Arts; and the Degree of Master of Science upon those who have received the Degree of Bachelor of Science or the Degree of Bachelor of Arts in science groups. The diploma fee for a Master's degree is $5.

ENGINEERING DEGREES

The engineering degrees—Engineer of Mines (E.M.), Metallurgical Engineer (Met. E.), Mechanical Engineer (M.E.), Civil Engineer (C.E.), and Electrical Engineer (E.E.)—may be conferred upon graduates who have taken corresponding courses in the College of Engineering of the University of Nevada, or upon graduates of other institutions who have obtained the Master of Science degree in

engineering from the University of Nevada; who have been engaged in honorable and successful engineering work in positions of responsibility for a period of at least five years in the case of holders of the B.S. degree, or four years in that of holders of the M.S. degree; and who submit theses showing ability to conduct advanced engineering work. Theses will not be considered when they are merely investigations in literature, compilations of routine laboratory tests, or presentations of the work of others.

The engineering degrees may also be conferred upon graduates of the College of Engineering of the University of Nevada and upon graduates of other engineering colleges of equal standing, who, after graduation, have been engaged for a period of at least one year in honorable and successful engineering work in a position of responsibility, and who subsequently complete successfully one year of graduate work in engineering, including thesis, at the University of Nevada. Graduates of other institutions must include in their graduate work any subjects in the corresponding undergraduate curricula which are required by the College of Engineering of the University of Nevada, but whose equivalents were lacking in their undergraduate courses.

Formal application for an engineering degree must be filed with the Registrar not later than the beginning of the second semester of the year in which the degree is sought, and approved in turn by the Engineering Faculty and the Graduate Committee. The application must be accompanied by detailed and satisfactory evidence as to the extent and character of the applicant's professional work. The thesis shall have the general form prescribed for the Bachelor's thesis, or shall be a reprint of an article appearing in a reputable magazine. In the case of a nonresident applicant, it shall be presented to the Engineering Faculty and to the Graduate Committee at least eight weeks before the date set for conferring the degree. The diploma fee for an engineering degree is $5.

THE COLLEGE OF ARTS AND SCIENCE

FRESHMAN AND SOPHOMORE REQUIREMENTS

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
English 1 (Composition and Rhetoric)	3	English 2 (Composition and Rhetoric)	3
Foreign Language	3 or 4	Foreign Language	3 or 4
History 1	3	History 2	3
Physics, Chemistry, Biology, or Mathematics	3 or 4	Physics, Chemistry, Biology, or Mathematics	3 or 4
Military and Physical Education	1–2	Hygiene 1	1
Elective	3	Military and Physical Education	1–2
		Elective	0–2

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
English 41 or 44 (Literature)	2 or 3	English 42 or 45 (Literature)	2 or 3
Foreign Language	3	Foreign Language	3
Economics, Philosophy or Psychology	3	Economics, Philosophy or Psychology	3
Natural Science or Mathematics	2 to 4	Natural Science or Mathematics	2 to 4
Military and Physical Education	½–1½	Military and Physical Education	½–1½
Elective	3 to 5	Elective	3 to 5

In case of 4 units entrance in one foreign language, 2 units in each of two, or 3 units in one and 1 in another, one year in college in advanced work in one of these languages will suffice. Otherwise two years in college shall be in the same language.

History 1–2 is required of all Freshmen. However, the History requirement in the Freshman year may, in the case of premedical students, with the consent of the Dean, be deferred until the Sophomore or Junior year.

English 41–42, or 44–45, in the case of premedical students, may be deferred until the Junior year.

In Science a total of 12 units in Freshman and Sophomore work is required, at least 6 of which must be laboratory Science or Mathematics.

The Sophomore requirement in Social Science may be satisfied by six units chosen from the departments of Economics, Philosophy, or Psychology.

A variation of one or two units in the above requirements in Language, Social Science, or Natural Science may be made by the Registration Committee upon recommendation of the Major Professor of the Department concerned.

No subject with the number of 50 or more will be open to Freshmen or Sophomores without the permission of the Dean.

Students transferring to Arts and Science from other institutions and from other colleges in the University of Nevada must meet the above Freshman and Sophomore requirements.

When students transfer to the College of Arts and Science from other colleges, they will be considered deficient in as many hours in Arts and Science as they are deficient in the college from which they transferred.

No student may transfer from the College of Agriculture or the College of Engineering to the College of Arts and Science unless he be a regular student in the college from which he transfers. Any regular student not eligible for entrance to the College of Arts and Science at the time of his admission to the University may transfer when he has met the following conditions:

1. He shall have attended the University at least two full semesters.

2. He shall have completed more than one-half of the regular course required by his college with a grade above 3.

3. He shall have no conditions or failures at the time of his transfer.

Courses given primarily in other colleges of the University may be taken by Arts and Science students, but not to exceed twenty units of such work shall be counted for Arts and Science Degrees.

JUNIOR AND SENIOR REQUIREMENTS

Candidates for a Baccalaureate Degree must select courses in a group of departments consisting of a major and one or two correlated minors, the total aggregating not fewer than thirty hours of work designed primarily for Juniors and Seniors. Subject to the requirement of correlation, the group may be chosen from any department in the College of Arts and Science. The combined work of the two or three departments should represent a unity of aim. The particular grouping, however, will depend upon the particular aim of the student. For example, a student making some one language his major may find it desirable to elect a considerable amount of History. A student planning to study medicine should elect a major in Biology or Chemistry, but may find it desirable to take additional work in Physics. Those intending to study law, should elect a major in Political Science or Economics, but may find it desirable to take advanced work in English. Students taking a Science major will generally find it profitable to have a good reading knowledge of French and German.

The foregoing directions must be regarded as general in nature; any grouping of major and minor subjects showing an intelligent purpose will be approved.

The specific requirements for majors and minors in the different departments will be found in the description of courses of study under their respective heads in the courses of instruction.

It is advisable that students should plan their work for the Junior and Senior years as early as the Sophomore year, in order that the studies then elected may fit in with their later work. At the beginning of the Junior year, each student must give the Dean written notice of his selection of major and minor departments; such selection should bear the approval of the instructors concerned.

Any student after electing his major and minor departments may, with the consent of the department concerned and of the Dean, change his major department or major and minor departments, as the case may be, provided he complies with all the requirements in the case of the new major and minor departments.

The remaining units necessary to make a total of 128 may be freely elected from any department, or, subject to the limit of twenty units named above, from the other colleges of the University.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

The following course of study is designed for students looking toward the field of chemistry as a profession. It is intended to fit students to enter directly into industrial work or to prepare them for more advanced study. Certain electives are provided in order to fill the needs of students interested in the different branches of chemistry. These electives, therefore, are subject to the approval of the head of the department, and should be chosen in consultation with him.

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 5	3	Chemistry 6	3
English 1	3	English 2	3
History 1	3	History 2	3
Mathematics 9	3	Mathematics 10	3
German 1	3	German 2	3
Elective	1	Hygiene 2	1
	16		16

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 9	4	Chemistry 10	4
Physics 1a	3	Physics 2a	3
Physics 1b	1	Physics 2b	1
English 41	2	English 42	2
German 3	3	German 4	3
Bus. Adm. 41 or Economics 1	3	Bus. Adm. 42 or Economics 2	3
Elective	1	Elective	1
	17		17

Junior Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 51	4	Chemistry 52	4
Chemistry 81	3	Chemistry 82	3
Mathematics 25	3	Mathematics 26	3
Chemistry 95	0	Chemistry 62	2
Elective	6	Chemistry 96	1
		Elective	3
	16		16

Senior Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 71	2	Chemistry 72	3
Chemistry 63	2	Chemistry 100	2
Chemistry 95	0	Chemistry 92	2
Elective	11	Chemistry 96	1
		Elective	7
	15		15

In addition to the above course of study, students will be required to fulfill the regular University requirements in Military and Physical Education.

Students primarily interested in the engineering aspects of chemistry may enroll in the course leading to the degree of Bachelor of Science in Metallurgical Chemistry outlined on page 138 under the announcement of the School of Mines.

PRELEGAL COURSES

Students who purpose to study law should elect their college work in such a way as to comply with the requirements and recommendations of the better law schools. Such requirements or recommendations usually embrace: (1) fundamental courses in English; (2) the study of at least one foreign language, preferably Latin; (3) some work in mathematics or logic, or both; and (4) a considerable number of selected courses in the social sciences. The following recommended course is based on the requirements and recommendations of a few of the more accessible law schools of high standing, and it is believed that it will satisfy the requirements of law schools generally. Students will sometimes

find it advantageous to deviate from this course, and in such cases they should consult Professor E. G. Sutherland, who is designated as adviser of prelegal students.

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
English 1 (Composition and rhetoric)	3	English 2	3
Foreign Language: Latin	3–4	Foreign Language: Latin	3–4
History 1	3	History 2	3
Mathematics, Physics, Chemistry or Biology	3–4	Mathematics, Physics, Chemistry or Biology	3–4
Military and Physical Education	1–2	Military and Physical Education	1–2
Elective	0–2	Hygiene 2	1
		Elective	0–1

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
English 41 or 44 (Literature)	2–3	English 42 or 45 (Literature)	2–3
Foreign Language	3	Foreign Language	3
Political Science 1	3	Economics	3
Natural Science or Mathematics	2–4	Natural Science or Mathematics	2–4
Military and Physical Education	½–1½	Military and Physical Education	½–1½
Economics	3	Political Science 2	3

Junior Year

Constitutional History
Economics, Psychology
Political Science

Certain law schools admit students upon the completion of three years of college work. The University will confer the degree of Bachelor of Arts upon any student of high rank who, after completing three years of approved work in this University, shall enter a law school of approved standing and shall complete worthily one year's work in such law school. (A student of high rank is one who stands above the average of his class.) In order to receive the degree in this way the student must, at the end of his first year in the law school, present a signed testimonial from the Dean of the Law School to the Dean of the College of Arts and Science, such testimonial to include a statement of courses taken, grades achieved, and a recommendation that the degree be granted.

PREMEDICAL COURSES

The requirements for admission to Class A medical colleges vary from a minimum of two years of standard college work to the possession of a Bachelor's Degree. Students contemplating studying medicine should communicate early in their undergraduate course with the Dean of the particular medical college they may wish to enter in order to learn the exact entrance requirements at the time they expect to enter. Practically all medical colleges prescribe the same minimum of subject matter which includes general zoology, vertebrate

anatomy, embryology, general inorganic chemistry, qualitative analysis, organic chemistry, general physics, and a reading knowledge of French or German. Quantitative analysis is also required by some and advised by others.

PREMEDICAL COURSE

To permit the conclusion of all the premedical requirements and to satisfy the University requirements for the A.B. Degree, the following arrangement of the course of study will be found a desirable one.

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
English 1	3	English 2	3
French or German	3	French or German	3
General Chemistry	3 or 4	General Chemistry	3 or 4
Botany 1	3 or 4	Zoology 2	3 or 4
Military and Physical Education	1–2	Hygiene 2	1
Elective	1–3	Military and Physical Education	1–2
		Elective	0–2

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
English 41	2	English 42	2
French or German	3	French or German	3
Quantitative Analysis or Organic Chemistry	5	Quantitative Analysis or Organic Chemistry	5
Comparative Anatomy	5	Embryology	5
Military and Physical Education	½–1½	Military and Physical Education	½–1½

Junior Year

First Semester	*Units*	*Second Semester*	*Units*
Psychology or other Social Science	3	Psychology or other Social Science	3
General Physics	4	General Physics	4
Chemistry or Biology	4	Chemistry or Biology	4
History 1	3	History 2	3
Elective	2	Elective	2

The University will confer the degree of Bachelor of Arts upon any student of high rank who, after completing three years of approved work in this University, shall enter a medical school rated Class A by the American Medical Association, and shall complete worthily one year's work in such medical school. In order to receive the degree in this way, the student must, at the end of his first year in the medical school, present a signed testimonial from the Dean of the Medical School to the Dean of the College of Arts and Science, such testimonial to include a statement of courses taken, grades achieved, and a recommendation that the degree be granted.

For further advice relative to this work, the student is referred to Professor Frandsen, who is designated adviser of premedical students.

PRENURSING COURSE

Beginning with the University year 1923–1924, an affiliation with the Stanford School of Nursing was established similar to that existing within Stanford University. The Prenursing curriculum is designed primarily for those who wish to prepare themselves for administrative, teaching, social service or public health work. It consists of three years' work at the University of Nevada and two years at the Stanford School of Nursing, Lane Hospital, San Francisco, the Degree of Bachelor of Arts being conferred by the University of Nevada and the Degree of Graduate Nurse by the Stanford School of Nursing at the end of five years. The completion of 98 semester units with 50 per cent of the grades above a 3 are necessary before the student may enter the School of Nursing. The following course is advised for those who wish to satisfy these requirements:

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
Botany 1	4	Zoology 2	4
English 1	3	English 2	3
History 1	3	History 2	3
German or French	3	German or French	3
Physical Education	1	Hygiene 2	1
Elective	2	Physical Education	1
		Elective	1

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
Physiology (Hygiene 7)	3	Physiology (Hygiene 8)	3
English 41	2	English 42	2
Economics 1	3	Economics 2	3
French or German	3	French or German	3
Chemistry 5	3	Chemistry 6	3
Physical Education	1	Physical Education	1
Elective	2	Elective	2

Junior Year

First Semester	*Units*	*Second Semester*	*Units*
Zoology 9	4	Zoology 64	4
Bacteriology 51	4	Zoology 66	4
Elective	8	Elective	8

The fourth and fifth years consist of a course of instruction in Nursing, Theory and Practice in Lane and Stanford University Hospitals, in residence at Stanford School of Nursing.

TEACHERS' DIPLOMAS

For the requirements for a Teacher's Diploma see School of Education pages 132–134.

THE MASTER'S DEGREE IN ARTS AND SCIENCE

For requirements for the Master's Degree, see pages 115–118.

THE SCHOOL OF EDUCATION AND THE NEVADA STATE NORMAL SCHOOL

THE SCHOOL OF EDUCATION AND THE NEVADA STATE NORMAL SCHOOL

FACULTY

WALTER E. CLARK, Ph.D., LL.D., President of the University.
JOHN W. HALL, M.A., Dean of the School of Education; Professor of Education.
REUBEN CYRIL THOMPSON, M.A., Professor of Philosophy.
ALBERT ELLSWORTH HILL, A.B., Professor of English.
JAMES REED YOUNG, Ph.D., Professor of Psychology.
SARAH LOUISE LEWIS, M.A., Professor of Home Economics.
FRED W. TRANER, M.A., Professor of Education.
THEODORE H. POST, A.M., Professor and Director of Music.
KATHERINE LEWERS, Associate Professor of Freehand Drawing and Art.
ELSA SAMETH, M.S., Associate Professor of Physical Education for Women.
MARGARET ELIZABETH MACK, M.A., Associate Professor of Biology.
SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.
EDITH M. RUEBSAM, Assistant Professor of Education.
MAE BERNASCONI, B.A., Instructor in Physical Education for Women.
B. D. BILLINGHURST, A.B., LL.D., Lecturer in Education.
RUTH A. TALBOY, B.S., Lecturer in Vocational Home Economics.
ROBERT B. JEPPSON, B.S., Lecturer in Education.
ALDA LAVENDER RUSSELL, Lecturer in Education.
CORNELIA WILLIAMSON, Secretary to the Dean.

COOPERATING TEACHERS

In the Reno High School—
AGNES BELL, B.A., French.
RUTH BRIGGS, English.
ROSE HARRIS, B.A., English.
MILDRED KLAUS, A.B., Commercial.
MRS. ANNA LOOMIS, A.B., Spanish.
EFFIE MACK, M.A., History.
FRANCES MILLER, B.A., Commercial.
ESSIE MORRELL, A.B., English.
ANNA PORTER, A.B., English.
ALWINE SIELAFF, B.A., Algebra.
AGNES MARY WATT, B.S., Biology.
RALPH WARREN, B.S., Physics.
EDWIN STRENG, B.S., Chemistry.
CLAIRE WILLIAMS, B.A., English.
GLADYS WYCKOFF, B.S., Home Economics.
ANTHONY ZENI, B.A., Civics.

In the Sparks High School—
JAMES F. BROWN, A.B., English.
ROSE COLOGNE, B.S., Home Economics.
PAUL MALONEY, B.S., Agriculture.
DOROTHY WHITNEY, B.A., Spanish.
MINNIE S. WOLF, B.A., Commercial.

In the Reno Junior High School—
MARGARET HILL, B.A., General Science.
JEAN JACKSON, A.B., History.
J. L. LIPPINCOTT, A.B., General Science.
GEORGIA MACNAIR, M.A., History.
LULU MCLAUGHLIN, A.B., Spanish.
BEATRICE MORRIS, A.B., History.
ESTELLE PROUTY, M.A., History.
LILY SWANSON, B.A., English.
MARGARET WHEATLEY, B.S., Algebra.

In the Reno Elementary Schools—
FLORENCE BROWN, Third Grade.
KATHERINE CLARK, Fourth Grade.
MRS. PEARL DOMINGUEZ, Fifth Grade.
ALPHONSINE LIOTARD, Second Grade.
ELIZABETH MCCORMACK, A.B., First Grade.
RENA SEMENZA, B.A., Kindergarten.
OLIVIA E. TREANOR, Fifth Grade.
GRACE WARNER, Sixth Grade.

The Nevada State Normal School was established as an integral part of the University of Nevada by an Act of the Legislature approved February 7, 1887. The first session was in the academic year 1887–1888. In the fall of 1920 it took up its work in the finely equipped new Education Building. The connection of the Normal School with the other departments of the University gives it certain advantages. Its students enjoy the same rights and privileges as those enrolled in any other school or college of the University. Their association with those students who are pursuing four-year courses gives them greater breadth of view and higher academic ideals. Its students and graduates, if they satisfy the requirements for admission to any other school or college of the University, may become candidates for the University degrees. Subject only to the provision that they meet the specific requirements of the college which they enter, they are given full credit in all of the Colleges of the University for the work they have done in the Normal School.

AIM

The aim of the Normal School is to give adequate preparation and training to those students of the University who wish to teach in the public schools of the State. To achieve this purpose, thoroughgoing courses in the theory and practice of teaching and in academic subjects are offered for those who are preparing to teach in the elementary schools. The School of Education will recommend no student or graduate

for any teaching position who is seriously deficient in the subject matter to be taught.

ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of units belonging to each, see pages 97–106.

TEACHERS' ELEMENTARY CERTIFICATE

First-Grade Certificates

Students who satisfy the admission requirements and complete both years of the curriculum outlined following will be granted diplomas entitling them to first-grade elementary certificates from the State Board of Education. These give the holders the right to teach, without examination, for five years in any of the elementary schools of the State. On evidence of successful teaching for not less than forty-five months, the State Board of Education will grant the holders first-grade elementary certificates valid for life.

Second-Grade Certificates

Students who, for financial or other reasons, cannot continue their studies for two years, may, upon satisfying the requirements for admission, and completing one year of the two-year course, be granted second-grade elementary certificates by the State Board of Education. These give the holders the right to teach, without examination, for three years in any of the elementary schools of the State. At the expiration of the time for which they are valid, these certificates cannot be renewed. If holders wish to continue teaching, they must either complete the requirements of the two-year course of study, or pass the state examination for a first-grade certificate.

COURSE OF STUDY

FIRST YEAR	*First Semester*	*Second Semester*
Education 20 (Principles of Teaching)	3	....
Education 31 (The Teaching of Arithmetic)	....	3
Education 34 (The Teaching of English)	3	....
Education 37 (The Teaching of Geography)	2	....
Education 23 (Problems in Rural Education)	2	....
Education 25 (Observation of Teaching)	1	....
Education 28 (Supervised Teaching and Conferences)	....	5
Nature Study 1–2	2	2
Music 1–2	1	1
Art 1–2	1	1
Physical Education 1–2	1	1
Home Economics 9 (General Home Economics)	3	....
Political Science 79–80	½	½
Penmanship	....	....
Totals	16½	15½

SECOND YEAR	*First Semester*	*Second Semester*
Psychology 5 (General Psychology)	3	....
Psychology 8 (Psychology of Childhood)	....	2
Education 35 (The Teaching of English)	3	....
Education 42 (The Teaching of History and Civics)	....	2
Education 29 (Supervised Teaching and Conferences)	5	....
Education 24 (School Management and Law)	....	1
Music 5	....	2
Art 8	....	1
Physical Education 10	....	1
English 1–2 (Composition and Rhetoric)	3	3
Philosophy 28 (Social Ethics)	....	2
Hygiene 4	2	....
Education 41 (Kindergarten Methods)	....	1
Education 48 (Educational Tests and Measurements)	....	1
Totals	16	16

Graduates of the Nevada County Normal Training Schools are admitted to the second year of the course, and can ordinarily complete their work in one year.

SCHOOL OF EDUCATION

The School of Education is included as a division of the College of Arts and Science, but with its own Dean, and direct affiliations with the other colleges in cooperative work in the training of teachers. It offers a liberal and professional course of study of four years to prospective secondary-school teachers and to those students looking forward to supervisory and administrative positions in the schools of Nevada. At the end of this time successful candidates are granted a Bachelor's Degree and a teacher's diploma, the latter giving title to a teacher's first-grade high school certificate. On evidence later of at least forty-five months of successful teaching, this certificate is exchangeable by the State Board of Education for a life diploma.

THE HIGH SCHOOL TEACHER'S CERTIFICATE

The high school teacher's certificate is granted by the State Board of Education to any graduate of the four-year course who has met the requirements for a minor in Education. This minor consists of the following prescribed courses:

In the regular academic departments 18 hours of professional work are required, distributed as follows: Psychology 5 (3 hours), Psychology 10 (2 hours), Education 60 (3 hours), Education 63 (1 hour), Education 71 (3 hours), Education 75 (2 hours), Education 76 (2 hours), and two additional credits to be arranged.

Notice—Unless candidates have a major or a minor in at least two high school subjects they will have great difficulty in making satisfactory arrangements for Supervised Teaching and in securing a high school position.

For teachers of the following subjects, special certificates are required: Art, Commercial Subjects, Home Economics, Languages, Manual Training, Music, and other vocational subjects.

In addition to the work in Education:

Graduation from the School of Home Economics is necessary for the teacher's certificate in Home Economics;

Graduation from the College of Agriculture is necessary for the teacher's certificate in Agriculture.

At least a minor in any of the other special subjects is necessary for a teacher's certificate in that subject, except Commercial subjects, for which the academic requirement follows:

(1) Eighteen credits in the department, namely, Economics 1–2, Business Administration 43–44, and Business Administration 68, and additional three units chosen according to the needs of the student. Business Administration 53–54 and Business Administration 41–42 are recommended.

(2) Proficiency in stenography and typewriting, to be secured outside the University and before the end of the Junior year. Students should consult the instructor in Business Administration about this requirement at some time during their Sophomore year.

SUPERVISED TEACHING

Arrangements have been made with the Reno and Sparks public schools whereby prospective teachers may have adequate teaching under normal conditions. Teachers in the public schools and the School of Education will cooperate in the supervision of this work.

IMPORTANT

All candidates for the high-school teacher's diploma should confer with the Dean of the School of Education at the beginning of the Sophomore year, as it is highly desirable that they begin their professional studies at that time. Failure to do this will limit the opportunity for choice in the advanced academic courses.

THE COLLEGE OF ENGINEERING

1. THE MACKAY SCHOOL OF MINES
2. THE SCHOOL OF MECHANICAL ENGINEERING
3. THE SCHOOL OF ELECTRICAL ENGINEERING
4. THE SCHOOL OF CIVIL ENGINEERING
5. THE ENGINEERING EXPERIMENT STATION

THE COLLEGE OF ENGINEERING

FACULTY

WALTER E. CLARK, Ph.D., LL.D., President of the University.
MAXWELL ADAMS, Ph.D., Vice-President and Professor of Chemistry.
FREDERICK H. SIBLEY, M.E., Dean of the College of Engineering; Professor of Mechanical Engineering.
JOHN ALLEN FULTON, E.M., Director Mackay School of Mines and Professor of Mining.
PETER FRANDSEN, A.M., LL.D., Professor of Biology.
HORACE PRENTISS BOARDMAN, C.E., Professor of Civil Engineering.
LEON WILSON HARTMAN, Ph.D., Professor of Physics.
CHARLES HASEMAN, Ph.D., Professor of Mathematics and Mechanics.
J CLAUDE JONES, Ph.D., Professor of Geology and Mineralogy.
WALTER S. PALMER, E.M., Professor of Metallurgy.
ALBERT ELLSWORTH HILL, A.B., Professor of English.
Colonel JOHN PAUL RYAN, Professor Emeritus of Military Science and Tactics.
STANLEY G. PALMER, M.E., Professor of Electrical Engineering.
GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.
FREDERICK L. BIXBY, C.E., Professor of Civil Engineering.
JAY ARNOLD CARPENTER, E.M., Professor of Mining.
JOHN EDWARD MARTIE, B.S., Professor of Physical Education for Men.
Colonel WILLIAM R. STANDIFORD, B.A., Professor of Military Science and Tactics.
KATHERINE LEWERS, Associate Professor of Freehand Drawing.
KATHARINE RIEGELHUTH, A.M., Associate Professor of English.
GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics.
SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.
WILLIAM M. HOSKINS, Ph.D., Associate Professor of Chemistry.
EDWARD G. SUTHERLAND, A.B., Associate Professor of Economics, Business and Sociology.
ALFRED LESLIE HIGGINBOTHAM, M.A., Associate Professor of English.
SIGMUND W. LEIFSON, Ph.D., Associate Professor of Physics.
VINCENT P. GIANELLI, M.S., Associate Professor of Geology and Mineralogy.
CHARLES L. SEARCY, M.A., Assistant Professor of Mathematics.
WILLIAM R. BLACKLER, M.S., Assistant Professor of Economics, Business and Sociology.
WILLIAM I. SMYTH, E.M., Assistant Professor of Metallurgy.
PAUL A. HARWOOD, B.A., Assistant Professor of English.
S. ALLAN LOUGH, Ph.D., Assistant Professor of Chemistry.
CHESTER M. SCRANTON, M.A., Assistant Professor of Physical Education for Men.
OSCAR T. ROCKLUND, Instructor in Shop Practice.
BERTRAND F. COUCH, Instructor in Mine Accounting.
EDWIN J. DUERR, A.B., Instructor in English.
IRVING J. SANDORF, B.S., Instructor in Electrical Engineering.
ARTHUR W. GAY, B.S., Instructor in Engineering.
WAYNE W. BUERER, B.S., Instructor in Mechanical Engineering.

AIM

The aim of the College of Engineering is to give young men a knowledge of those subjects which form the basis of the Mining, Mechanical, Electrical, and Civil Engineering professions. The technical courses of study are arranged and directed with the purpose of preparing students not only for immediate usefulness but also for future professional growth. The work is in the form of both lectures and recitations, supplemented by exercises in the drafting room, field, laboratory, and shop.

EQUIPMENT

For a general description of the equipment of the College of Engineering, see Mackay School of Mines, Mechanical Building, Electrical Building, Chemistry Building, Laboratories for Geology and Mineralogy, Laboratories of the Mining Department, Mining and Geological Museum, and the Chemical Laboratories, in the earlier part of this catalogue.

ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of credits belonging to each, see pages 97–106.

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ENGINEERING

The Degree of Bachelor of Science in (a) Mining Engineering, Metallurgical Engineering, or Geological Engineering, (b) Mechanical Engineering, (c) Electrical Engineering, and (d) Civil Engineering is conferred upon students who have satisfactorily completed the full course in the Schools of (a) Mines, (b) Mechanical Engineering, (c) Electrical Engineering, and (d) Civil Engineering, aggregating 150 semester units for the Class of 1928, 148 semester units for the Class of 1929, 146 semester units for the Class of 1930, and 144 semester units for the Class of 1931, and thereafter.

Combination curricula leading to the Bachelor's Degree in more than one school in the University may be arranged. The minimum requirements shall be one extra year in residence and 30 credit hours of extra work. More work may be necessary if the specific requirements of the department in which the degree is sought have not been met.

For students taking advanced military work, where sufficient elective credits (10) are not provided, arrangement will be made by substitution or other adjustment.

The state law of Nevada requires that all candidates for a degree must study, during one University year, the Constitutions of the United States and of the State of Nevada.

UNIFORM FRESHMAN COURSE

Common to All Four Schools of Engineering

Freshman Year—First Semester		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Chemistry 5	General Inorganic Chemistry	2	1
Mathematics 11	Advanced Algebra	..	2
Mathematics 13	Plane Trigonometry	..	3
Mechanical Engineering 2	Elementary Mechanical Drawing	3	..
[1]*Mechanical Engineering 3	Freehand Drawing	1	..
General Engineering 1	Orientation	..	1
Military 1	Basic Course	1	..
Physical Education 1	Developmental Exercises	½	..
			17½

Freshman Year—Second Semester			
English 2	Composition and Rhetoric	..	3
Chemistry 6	General Inorganic Chemistry	2	1
Mathematics 14	Analytic Geometry	..	3
Mechanical Engineering 6	Descriptive Geometry	2	1
Geology 10	Engineering Geology	1	2
Hygiene 2	Personal Hygiene	..	1
Military 2	Basic Course	1	..
Physical Education 2	Developmental Exercises	½	..
			17½

SCHOOL OF MINES

Subject to approval by the Engineering Faculty, substitution of courses may be made in the following School of Mines curriculum. This makes it possible to arrange satisfactory courses in

Mining Engineering
Geological Engineering
Metallurgical Engineering
Metallurgical Chemistry

and in the different phases of the separate branches such as design work, operating work, sales work, etc.

Summer Work		
Mining 5	Practical Mine Work	Four Weeks

Sophomore Year—First Semester		LAB.	LEC.
Mathematics 25	Differential Calculus	..	3
Physics 3	Engineering Physics	..	5
Mineralogy 1	Determinative Mineralogy	2	..
Metallurgy 53	General Metallurgy	..	1
Chemistry 9	Quantative Analysis	3	1
Geology 11	Historical Geology	..	3
Military 3	Basic Course	..	1
Physical Education 3		½	..
		5½	14
			19½

[1]Courses marked thus (*) may be substituted by other courses when approved by the head of the school and the Dean of the college. Such substituted courses, however, must form part of a systematic course of training.

Sophomore Year—Second Semester		LAB.	LEC.
Chemistry 10	Volume Analysis	3	1
Mathematics 26	Integral Calculus	..	3
Physics 4	General Physics for Engineers	..	5
Metallurgy 58	General Metallurgy	..	2
Mineralogy 2	Blowpipe Analysis	2	..
Mineralogy 3	Descriptive Mineralogy	..	2
Military 4	Basic Course	..	1
Physical Education 4		½	..
		5½	14
			19½

Junior Year—First Semester			
Mining 51	Excavation	..	3
Metallurgy 51	Assaying	3	..
Mathematics 55A	Analytic Mechanics	..	3
Geology 61	Economic Geology of Metals	..	3
Civil Engineering 51 and 52	Surveying	2	2
Geology 51	Petrology	1	1
		6	12
			18

Junior Year—Second Semester			
Mining 52	Mine Plant	..	3
Metallurgy 65	Ore Dressing	2	2
Geology 60	Economic Geology Nonmetallic	..	3
Civil Engineering 53 and 54	Surveying	2	2
Civil Engineering 74	Strength of Materials	..	3
Civil Engineering 72	Testing Materials	1	..
		5	13
			18

Summer Work		
Civil Engineering 58	Summer Surveying	Four Weeks

Senior Year—First Semester			
Economics 65	Introduction to Economics and Business Administration	..	3
Mining 61	Mining Methods	..	3
Metallurgy 70	Metallurgy of gold and silver	2	1
Metallurgy 60	Metallurgy of copper, lead and zinc	..	3
Political Science 79		..	½
Project in Mining, Metallurgy or Geology		2	..
Elective		..	3
		4	13½
			17½

Senior Year—Second Semester			
Mining 74	Mineral Industry Economics	..	3
Civil Engineering 90	Hydraulics	..	3
Geology 52 or Metallurgy 56	Petrography or Metallography	2	1
Mining 72	Mine Administration	..	3
Political Science 80		..	½
Project in Mining, Metallurgy or Geology		2	..
Elective		..	2
		4	12½
			16½

SCHOOL OF MECHANICAL ENGINEERING

Freshman Year—Both Semesters

Uniform course for all Engineering Schools. See page 136.

Sophomore Year—First Semester		LAB.	LEC.
*Mechanic Arts 1	Wood Work	1	..
Mechanic Arts 2	Forging	2	..
Physics 3	General Physics for Engineers	..	5
*Physics 5	Physical Measurements	2	..
Mathematics 25	Differential Calculus	..	3
Military 3	Basic Course, second year	..	1
Physical Education 3	Advanced Exercises	½	..
Civil Engineering 51–52	Elementary Surveying and Plotting	2	2
			18½

Sophomore Year—Second Semester			
Mechanic Arts 3	Machine Shop	2	..
Physics 4	General Physics for Engineers	..	5
*Physics 6	Physical Measurements	4	..
Mathematics 26	Integral Calculus	..	3
Mathematics 32	Practical Applications	..	2
Metallurgy 54	Engineering Metallurgy	..	2
Military 4	Basic Course, second year	..	1
Physical Education 4	Advanced Exercises	½	..
			19½

Junior Year—First Semester			
Electrical Engineering 51	Direct Current Machinery	..	3
Electrical Engineering 61	Electrical Engineering Laboratory	1	1
Mechanical Engineering 51	Kinematics	1	2
Mechanical Engineering 54	Engines and Boilers	..	3
Mathematics 55	Analytic Mechanics	..	3
Mechanic Arts 5	Machine Shop	2	..
Mechanical Engineering 64	Mechanical Laboratory	1	1
			18

Junior Year—Second Semester			
Electrical Engineering 72	Alternating Current Machinery	..	3
*Electrical Engineering 62	Electrical Engineering Laboratory	1	1
Civil Engineering 74	Strength of Materials	..	3
Civil Engineering 72	Testing Materials	1	..
Civil Engineering 90	Hydraulics	..	3
Mechanical Engineering 64	Mechanical Laboratory	1	1
Mathematics 56	Analytic Mechanics	..	2
Mechanic Arts 6	Pattern Making	1	..
Mechanic Arts 4	Foundry	1	..
			18

Senior Year—First Semester			
Mechanical Engineering 53	Machine Design	..	3
Mechanical Engineering 55	Thermodynamics	..	3
Mechanical Engineering 65	Mechanical Laboratory	2	1
*Mechanical Engineering 75	Power Plant Engineering	1	2
*Civil Engineering 75	Theory of Structures	..	3
*Economics 65	Introduction to Economics and Business	..	3
Political Science 79	Constitutions of United States and Nevada	..	½
			18½

Senior Year—Second Semester			
Mechanical Engineering 56	Thermodynamics	..	3
*Mechanical Engineering 58	Mechanics of Heat Engines	..	3
*Mechanical Engineering 66	Mechanical Laboratory	2	1
*Economics 66	Financial and Business Organization	..	3
*Psychology 5	General Psychology	..	3
Political Science 80	Constitutions of United States and Nevada	..	½
*Mechanical Engineering 80	Thesis	..	3
			18½

*See footnote p. 138.

SCHOOL OF ELECTRICAL ENGINEERING

Freshman Year—Both Semesters

Uniform course for all Engineering Schools. See page 136.

Sophomore Year—First Semester		LAB.	LEC.
Physics 3	General Physics for Engineers	..	5
[1]Physics 5	Physical Measurements	2	..
Mathematics 25	Differential Calculus	..	3
Civil Engineering 51–52	Elementary Surveying and Plotting	2	2
Mechanic Arts 3	Machine Shop	1	..
Mechanic Arts 2	Forging	1	..
Military 3	Basic Course, second year	..	1
Physical Education 3	Advanced Exercises	½	..
Elective		..	1
			18½

Sophomore Year—Second Semester			
Physics 4	General Physics for Engineers	..	5
[1]Physics 6	Physical Measurements	4	..
Mathematics 26	Integral Calculus	..	3
Mathematics 32	Practical Applications	..	2
Metallurgy 54	Metallurgy of Iron, Steel and Alloys	..	2
*Mechanic Arts 5	Machine Shop	1	..
Military 4	Basic Course, second year	..	1
Physical Education 4	Advanced Exercises	½	..
			18½

Junior Year—First Semester			
Electrical Engineering 51	Direct Current Machinery	..	3
Electrical Engineering 61	Electrical Engineering Laboratory	1	1
Mechanical Engineering 54	Engines and Boilers	..	3
Mechanical Engineering 51	Kinematics	1	2
Mathematics 55	Analytic Mechanics	..	3
Mechanical Engineering 64	Mechanical Laboratory	1	1
Elective		..	2
			18

Junior Year—Second Semester			
Electrical Engineering 52	Alternating Current Machinery	..	5
Electrical Engineering 62	Electrical Engineering Laboratory	1	1
Civil Engineering 74	Strength of Materials	..	3
Civil Engineering 72	Testing Materials Laboratory	1	..
Civil Engineering 90	Hydraulics	..	3
Mathematics 56	Analytic Mechanics	..	2
Elective		..	3
			19

Senior Year—First Semester			
Electrical Engineering 53	Advanced Alternating Currents	..	3
Electrical Engineering 55	Electrical Problems	1	..
Electrical Engineering 63	Electrical Engineering Laboratory	2	1
Electrical Engineernig 67	Telephone Engineering	..	2
Mechanical Engineering 55	Thermodynamics	..	3
*Mechanical Enginering 65	Mechanical Engineering Laboratory	2	1
Economics 65	Introduction to Economics and Business	..	3
Political Science 79	Constitutions of United States and Nevada	..	½
			18½

Senior Year—Second Semester			
Electrical Engineering 58	Electrical Design	..	3
Electrical Engineering 56	Electrical Problems	1	..
Electrical Engineering 64	Electrical Engineering Laboratory	2	1
*Physics 57	Electrical Measurements	2	..
*Economics 66	Industrial and Financial Organization	..	3
Political Science 80	Constitutions of United States and Nevada	..	½
Elective		..	6
			18½

[1]Students may be excused from Physics 5 and 6 by consent of Faculty.

*See footnote p. 138.

THE ENGINEERING EXPERIMENT STATION

WALTER E. CLARK, Ph.D., LL.D., President of the University.
HORACE P. BOARDMAN, C.E., Director, Chairman Executive Committee.
FREDERICK H. SIBLEY, M.E., Member Executive Committee.
STANLEY G. PALMER, M.E., Member Executive Committee.

The Engineering Experiment Station was established by the Board of Regents, November 1, 1921.

The objects are to cooperate with engineering experiment stations in other institutions and to conduct useful investigations along engineering lines and publish bulletins from time to time whenever the results justify such publication.

THE COLLEGE OF AGRICULTURE

THE COLLEGE OF AGRICULTURE

FACULTY

WALTER E. CLARK, Ph.D., LL.D., President of the University.
MAXWELL ADAMS, Ph.D., Vice-President, Professor of Chemistry.
ROBERT STEWART, Ph.D., Dean of the College of Agriculture; Professor of Agronomy.
PETER FRANDSEN, A.M., LL.D., Professor of Biology.
HORACE PRENTISS BOARDMAN, C.E., Professor of Civil Engineering.
LEON WILSON HARTMAN, Ph.D., Professor of Physics.
CHARLES HASEMAN, Ph.D., Professor of Mathematics and Mechanics.
FREDERICK WESTON WILSON, M.S., Professor of Animal Husbandry.
ALBERT ELLSWORTH HILL, A.B., Professor of English.
Colonel JOHN PAUL RYAN, Professor Emeritus of Military Science and Tactics.
STANLEY GUSTAVUS PALMER, M.E., Professor of Electrical Engineering.
VERNER E. SCOTT, B.S., Professor of Dairying.
SARAH L. LEWIS, M.A., Professor of Home Economics.
GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.
PHILIP A. LEHENBAUER, Ph.D., Professor of Biology.
FREDERICK L. BIXBY, C.E., Professor of Civil Engineering.
JOHN EDWARD MARTIE, B.S., Professor of Physical Education for Men.
Colonel WILLIAM R. STANDIFORD, B.A., U. S. A., Professor of Military Science and Tactics.
KATHERINE LEWERS, Associate Professor of Freehand Drawing.
KATHARINE RIEGELHUTH, A.M., Associate Professor of English.
ELSA SAMETH, M.S., Associate Professor of Physical Education for Women.
MARGARET ELIZABETH MACK, A.M., Associate Professor of Biology.
SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.
GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics.
WILLIAM M. HOSKINS, Ph.D., Associate Professor of Chemistry.
EDWARD G. SUTHERLAND, A.B., Associate Professor of Economics, Business and Sociology.
ALFRED LESLIE HIGGINBOTHAM, M.A., Associate Professor of English.
JESSIE P. POPE, M.A., Associate Professor of Home Economics.
SIGMUND W. LEIFSON, Ph.D., Associate Professor of Physics.
LOUISE KERR SPRINGER, B.S., Assistant Professor of Home Economics.
CHARLES L. SEARCY, M.A., Assistant Professor of Mathematics.
LYMAN R. VAWTER, D.V.M., Assistant Research Professor of Veterinary Science.
WILLIAM R. BLACKLER, M.S., Assistant Professor of Economics, Business and Sociology.
PAUL A. HARWOOD, B.A., Assistant Professor of English.
CHESTER M. SCRANTON, M.A., Assistant Professor of Physical Education for Men.
CHARLES LEROY BROWN, M.A., Instructor in Biology.
OSCAR T. ROCKLUND, Instructor in Shop Practice.

EDWIN DUERR, B.A., Instructor in English.
MAE BERNASCONI, B.A., Instructor in Physical Education for Women.
ERNEST SPARGUER BROWN, B.A., Instructor in Economics, Business and Sociology.
MILAN J. WEBSTER, B.E., Instructor in Economics, Business and Sociology.
MARGARET REGAN, Secretary to the Dean.

AIM

The aim of the School of Agriculture is to give such training in farming, gardening, and stock raising, and in the sciences and other related subjects as will furnish a well-rounded education.

EQUIPMENT

AGRICULTURAL BUILDING—For description of Agricultural Building, see p. 36.

UNIVERSITY FARM—The University Farm, comprising 213 acres formerly owned by the D. C. Wheeler Company, Incorporated, is located three miles south of Reno along the Virginia road. The college herds contain representative types of the following breeds: Percheron, Shire and Thoroughbred horses; Angus, Hereford and Shorthorn cattle; Corriedale, Hampshire, Rambouillet and Shropshire sheep.

The farm is maintained and operated as a livestock farm. Practically all feedstuffs used for the herds and flocks are grown on this farm. The farm is especially well equipped with high-class individuals of the different breeds of Nevada live stock.

DAIRY—The laboratory in the Agricultural Building, equipped with up-to-date machinery and apparatus, furnishes the best opportunity for instruction in methods of handling milk and dairy products, as milk testing, butter making, cheese manufacture, and the marketing of milk.

The dairy herd is situated at the University Farm. It consists of representative types of Holstein-Friesians, Ayrshires and Jerseys. About eighteen head of mature animals with the necessary accumulating young stock are maintained. The dairy herd gives an opportunity for studying breeds and also for practical work with the milking machine, as well as opportunity for observing methods in care of milk and its products.

EXPERIMENT STATION FARM — This is a farm of sixty acres lying east of the Campus and devoted to research projects of the University Agricultural Experiment Station.

SHOPS—The shops for teaching of wood-work and blacksmithing are equipped for the best of work. Arrangements have been made for the housing and use of the representative types of farm machinery used in the various field operations.

ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of credits belonging to each, see pages 97–106.

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN AGRICULTURE

The Degree of Bachelor of Science in Agriculture will be conferred upon students who satisfactorily complete the full course of study in the School of Agriculture, aggregating. for the Classes of 1929 and 1930, 130 semester units, and thereafter 128 semester units.

COLLEGE OF AGRICULTURE

COURSES OF STUDY

FRESHMAN YEAR	*First Semester*	*Second Semester*
Military 1–2	1	1
Hygiene 2	..	1
Physical Education 1–2	½	½
Chemistry	3 or 4	3 or 4
English 1–2	3	3
Agricultural Electives	4	3
Nonagricultural Electives	4 or 5	4 or 5
	16½	16½
SOPHOMORE YEAR		
Military 3–4	1	1
Physical Education 3–4	½	½
Agricultural Electives	6	6
Nonagricultural Electives	6	6
Open Elective	2	2
	15½	15½
JUNIOR YEAR		
Agricultural Elective	8	8
Nonagricultural Elective	6	6
Open Elective	2	2
	16	16
SENIOR YEAR		
Agricultural Elective	11	11
Open Elective	5	5
	16	16

SCHOOL OF HOME ECONOMICS

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN HOME ECONOMICS

The degree of Bachelor of Science in Home Economics is conferred upon students who have satisfactorily completed the full course of study aggregating 128 semester units (including 3 units in Physical Education and 1 unit in Hygiene in the Freshman and Sophomore years) in the School of Home Economics as given on the following pages.

AIM

The aim of the School of Home Economics is to raise the ideals of home - making, to prepare young women for the successful management of a home, and to impart to them scientific and technical knowledge, coupled with sufficient practice to fit them to become, either thoughtful home-makers, teachers of home economics, or workers in any field where this knowledge is needed.

Experience in actual home-making, either as a daughter working in the family or as a manager of a house, is a great aid to the successful work of the Home Economics course, and students are urged to get some such vocational experience.

EQUIPMENT

The Department of Home Economics has six large rooms and two offices in the Agricultural Building. For detailed description, see Agricultural Building and Laboratories.

The library of the Home Economics Department, covering dietetics, household sciences, house decoration, and textiles, is kept in the main University Library Building. Special fashion magazines are on a reference table in the sewing laboratory.

SCHOOL OF HOME ECONOMICS

COURSES OF STUDY

Freshman Year—First Semester		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Physics 19	Household Physics	1	2
Physical Education 1	Freshman Practice	1	..
Home Economics 3	Introductory Course	..	1
Home Economics 31	Food	2	1
History or Modern Language		..	3
Botany 3	Morphology and Physiology of Flowering Plants	1	2
			17

Freshman Year—Second Semester			
English 2	Composition and Rhetoric	..	3
Physics 20	Household Physics	1	2
Physical Education 2	Freshman Practice	1	..
Home Economics 32	Food	2	1
History or Modern Language		..	3
Hygiene 2		..	1
Home Economics 16	Textiles and Designs	2	..
			16

Sophomore Year—First Semester

		LAB.	LEC.
English 11 or 41	Public Speaking or Literature	..	2
Chemistry 1	Elementary Inorganic Chemistry	2	2
or			
Chemistry 5	General Inorganic Chemistry	1	2
Physical Education 3	Sophomore Practice	½	..
Home Economics 15	Clothing	2	..
Art 5	Principles of Art	2	..
Psychology 5	General Psychology	..	3
Elective		2	..
			15½

Sophomore Year—Second Semester

		LAB.	LEC.
English 12 or 42	Public Speaking or Literature	..	2
Chemistry 2	Elementary Inorganic Chemistry	2	2
or			
Chemistry 6	General Inorganic Chemistry	1	2
Physical Education 4	Sophomore Practice	½	..
Home Economics 18	Clothing	2	..
Art 6	Art Applied to the Home	2	..
Philosophy 22	Applied Ethics	..	3
Elective		3 or 4	..
			16½

Junior Year—First Semester

Chemistry 26	Household Chemistry	2	2
Hygiene 7	Physiology	1	2
Economics 1	Principles of Economics	..	3
Home Economics 55	Foods and Cookery	3	1
Elective		2	..
			16

Junior Year—Second Semester

Hygiene 8	Physiology	1	2
Economics 2	Principles of Economics	..	3
Home Economics 66	Advanced Clothing	2	1
Elective		7	..
			16

Senior Year—First Semester

Home Economics 88	Care of the House	1	1
Home Economics 87	House Decoration	2	1
Elective		11	..
			16

Senior Year—Second Semester

Home Economics 86	Household Administration	..	2
Home Economics 81–83	Dietetics	3	2
Home Economics 76	Child Care	..	2
Elective		6	..
			15

All regular Home Economics courses are open to Arts and Science Students.

RECOMMENDED ELECTIVES

Group I—Related Subjects:

Zoology 2, Bacteriology 51, History 53, English 25–26, 41–42, Latin 41 (Greek Art), and Latin 42 (Roman to Modern Art), Philosophy 7, 8, 61, 62, Business Administration 41–42, 57, Sociology, 71–72.

Group II—Home Economics Electives:

Home Economics, 33, 34, 45, 49–50, 52, 54, 85, 95; Vocational Education 88.

Group III—For a Minor in Education, Electives Should be Chosen as follows:

Sophomore year, second semester, Psychology, 10; Junior year, first semester, Education 63; second semester, Education 60; Senior year, first semester, Education 71, 75; second semester, Education 76, Vocational Education 88.

Attention is called to the fact that students majoring in Home Economics are allowed sufficient electives to take a second major or minor in some other department.

DAIRY SHORT COURSE

It has been the plan to offer a dairy short course whenever there were five or more applicants for work in dairy manufacturing. There is such a small number of creameries in the State that it is only occasionally that we have requests for this kind of work. Owing to the probably small number of students in dairy manufacturing, arrangements will be made for carrying on the short course in conjunction with the regular long course work. A small number of short course students will be able to obtain work half-time in the local creameries, which will not only help to pay their expenses but will enable them to get the practical as well as the theoretical side of the work.

COURSES OF INSTRUCTION

COURSES OF INSTRUCTION

On the following pages, listed under the Departments to which they belong, are given all the courses in which instruction is offered by the University. The Departments are arranged in alphabetical order, as in the table below. If all the instruction given by a department is intended for a particular College, this fact is indicated by the name of the College below the name of the Department. If certain courses offered by a Department are intended for a particular College, this fact is indicated by the name of the College following the number of the course. In all cases where no limitations of this character are found, it may be assumed that, so far as the curricula and regulations of the several colleges permit election, the instruction offered is open to all qualified students of the University.

The numbers prefixed to the courses ordinarily denote the classes of students for whom the work is intended, courses numbered from 1 to 50 being designated primarily for Freshmen and Sophomores, 51 to 100 for Juniors and Seniors, and 101 to 200 for graduate students.

DEPARTMENTS

AGRONOMY

College of Agriculture

PROFESSOR STEWART, HEAD OF DEPARTMENT

1. ELEMENTARY AGRICULTURE. Introduction to general agriculture. The soil—its formation, texture, plant food requirements, moisture, tillage, and fertility; the plant—its relation to soil and climate, its propagation, growth, and cultivation, and the kinds of crops and their culture. *First semester. Lectures, three hours; laboratory, one period. Four credits.* Stewart. Fee, $3.

4. FIELD CROPS. The principal cereal crops—corn, wheat, oats, barley, rye, rice, sorghum, etc. Laboratory—the study of the matured plant of the different varieties of grain; the judging of grain and hay according to the commercial standards of perfection for pure-bred varieties. *Second semester. Lectures, three hours. Three credits.* Stewart.

6. SOIL MANAGEMENT. A general lecture and laboratory course in geology of soils, origin, formation, physical composition, soil moisture, moisture movements and conservation, physical processes, surface tension, osmosis, capillarity, aeration and temperature. Influence of washing, drainage, and irrigation. Laboratory—comparison of the physical properties of different soil types as—specific gravity, water retension, capillarity, organic matter, alkalies, etc. Effect of mulches; soil sampling; mechanical analysis. *First semester. Lectures, two hours; laboratory, two periods. Four credits.* Stewart. Fee, $3.

53. FORAGE CROPS. Legumes and grasses, the special use of these crops as hay, soiling, silage, pasture, green manure, cover crops, etc.; the care and management of pastures; plans for the rotation of soiling crops; adaptation of grasses and other crops for growing under different climatic and soil conditions. *First semester. Lectures, three hours. Three credits.* Stewart.

57. FARM MANAGEMENT. The evolution of farming; the relation of capital and labor to farm management; the general management of implements and equipment; ownership versus rental of land; the choice of a farm; systems of farming; farming compared with other lines of business; marketing problems; advertising; farm records and farm accounts; the management of fields, crops, and manures. *Adams:* Farm Management. *Second semester. Lectures, three hours. Three credits.* Stewart.

58. IRRIGATION AND DRAINAGE. A study of the principles of irrigation as follows: Sources of water supply; measurement of water; water requirements of crops; duty of water; losses in use of irrigation water; preparation of land and methods of irrigation; farm ditches and structures; drainage of farm lands and reclamation of alkali lands. *First semester. Lectures, three hours. Three credits.* Stewart.

62. SOIL FERTILITY. Composition and value of fertilizers, barn-yard and green manures; maintenance and improvement of fertility; effect of various crops and different systems of farming on the fertility of the soil. Studies of crop rotation and fertility. Study of the productivity, best uses of Nevada soils and their improvement. *Prerequisite:* Agronomy 6. *Second semester. Lectures, two hours. Two credits.* Stewart.

71. GENERAL FARM MECHANICS. A fully equipped laboratory in the basement of the Agricultural Building offers facilities for a full course of instruction and practice in the machinery and equipment of the farm, including concrete mixing and forms for concrete: construction and use of modern field machinery for tillage, seeding and harvesting; general labor saving machinery for the farm; farm pumps, windmills, pressure systems and gasoline engines. (Machinery for study and demonstration purposes is loaned by the leading implement houses of Nevada.) *First semester. Lecture, one hour; laboratory, two periods. Three credits.* Fee, $1.

72. FARM STRUCTURES. A course in the methods of construction and designs of ordinary farm buildings, including houses, barns, sheds, granaries, silos, etc. Various small farm implements and appliances as road drags, levelers, irrigation boxes and forms for concrete work will be designed and built. Field trips will be taken to observe buildings under construction; sketches and complete cost estimates will be made of these buildings. Principles of rural sanitation including heating, lighting, water supply, and sewage disposal. *First semester. Laboratory, two periods. Two credits.* Fee, $1.

76. HISTORY OF AGRICULTURE. A review of the history of organized agriculture together with a consideration of the

various agrarian movements, their causes and effect. Review of the history of reclamation, of irrigation institutions, economics, water rights, etc. *Either semester. Three credits.* Stewart.

157. ADVANCED FARM MANAGEMENT. A course for graduate students consisting of assigned special problems in farm management. *Either semester. Three to five credits.* Stewart.

200. THESIS COURSE IN AGRONOMY. *Either semester. Credit to be arranged.* Stewart.

ANIMAL HUSBANDRY

College of Agriculture

PROFESSOR WILSON, HEAD OF DEPARTMENT

1. BREEDS OF LIVE STOCK. The origin, development, characteristics, and uses of types and breeds of farm animals. For illustration, the animals owned by the department and other stock farms in the vicinity will be used, also lantern slides of typical animals of the various types and breeds. *Plumb:* Types and Breeds of Farm Animals. *First semester. Three credits.* 105 Agricultural Building. Wilson.

4. LIVESTOCK JUDGING. Practice in judging live stock to gain familiarity with the points of excellence in the various breeds of farm animals. *Plumb:* Judging Farm Animals. *Prerequisite:* Animal Husbandry 1. *First semester. Lectures, two hours; laboratory, two periods. Four credits.* 105 Agricultural Building, and University Farm. Wilson. Fee, $3.

30. LIVESTOCK FEEDING. The principles underlying and problems connected with the feeding of farm animals. *Henry and Morrison:* Feeds and Feeding. *Savage and Morrison:* Manual. *Prerequisite:* Animal Husbandry 1 and 4, Chemistry, 5, 6. *Second semester. Three credits.* 105 Agricultural Building. Wilson.

51. GENETICS. A discussion of the principles underlying the science of breeding, the aim of which is to develop, maintain, and improve the various types and breeds of farm animals and farm crops, studied with special reference to their application to breeding of farm animals. *Winters:* Animal Breeding. *Prerequisite:* Zoology 2. *Second semester. Three credits.* 105 Agricultural Building. Wilson.

54. LIVESTOCK REGISTRATION. The details of registering pure bred animals, requiring the use of blanks for making application for registry; the use of herd books. A study of the history of the recognized registry associations and the rules governing them; a study of the value of pedigrees and how to keep the herd records. *Prerequisite:* Animal Husbandry 1 and 4. *First semester. One credit.* 105 Agricultural Building. Wilson.

55. ADVANCED LIVESTOCK FEEDING. The work in this course is largely laboratory, consisting of actual feeding experiments with farm animals. The laboratory is given for at least sixty days, seven days a week. *Prerequisite:* Animal Husbandry 30. *First semester. Lecture, one hour; laboratory, two periods. Three credits.* 105 Agricultural Building, and University Farm. Wilson.

56. ADVANCED STOCK JUDGING. Comparative scoring and judging. The judging of animals in classes, as at fairs and stock shows. *Prerequisite:* Animal Husbandry 4. *First semester. Three credits.* 105 Agricultural Building, and University Farm. Wilson. Fee, $3.

57. LIVESTOCK MANAGEMENT. A study of the problems confronting the livestock farmer; calculating profits under various conditions; systematic keeping of records of farming operations; selection of animals for the feed yard, show ring, market, and butcher. *Prerequisite:* Animal Husbandry 1, 4, 30. *Second semester. Three credits.* 105 Agricultural Building. Wilson.

58. RANGE MANAGEMENT. Lectures covering the following subjects in Animal Husbandry: Development and proper distribution of stock salting grounds; rotation and proper location of drift fences; estimation of carrying capacity; methods of mapping in range lands; range destroying rodents; grazing administration within the National forests; various systems of handling range lands within the United States and foreign countries; general range problems. *Prerequisite:* Animal Husbandry 1, 4, 30. *Second semester. Two credits.* Course must be taken simultaneously with Botany 58. Given in alternate years. To be given in 1930. Room 105, Agricultural Building. Wilson.

59. PROFESSIONAL JUDGING. *First semester. Laboratory, one period. One credit.* University Farm. Wilson. Fee, $1.50.

TEACHER TRAINING IN AGRICULTURE. *See Education.*

ANIMAL HYGIENE

College of Agriculture

ASSISTANT PROFESSOR VAWTER

50. ANIMAL HYGIENE. A lecture course covering the principles of livestock sanitation and first aid. *Prerequisite:* Zoology 51 and Bacteriology 51. *Second semester. Three credits.* Agricultural Building. Vawter.

ART

ASSOCIATE PROFESSOR LEWERS, HEAD OF DEPARTMENT

Requirements for a minor in Art; Art 1–2 (2 units), 3–4 (2 units), 51–52 (3 units), and 53–54 (3 units), and additional Junior-Senior work to make 18 units.

Requirements for a major in Art: Art 1–2 (2 units), 3–4 (2 units), 51–52 (6 units), and 53–54 (6 units), and additional Junior-Senior work to make 24 units.

Requirements for a special art teacher's certificate are listed elsewhere.

1–2. ELEMENTARY ART. The fundamental principles of form, color, and light and shade. Application of principles in drawing and painting in all mediums, pencil, charcoal, oil color, water color, and pastel. Drawing and painting from nature in landscape and still life. Fundamental principles of design. Applied design in manual arts. *Both semesters. One credit required each semester.* More credits may be elected. Education Building. Lewers.

3–4. INTERMEDIATE ART. A continuation of the work of Art 1–2, with addition of clay modeling, drawing, and painting from life. *Both semesters. Credits to be arranged.* Education Building. Lewers.

5–6. ART APPLIED TO THE HOME. (School of Home Economics.) The fundamental principles of form, color, and light and shade. Color and form studied from nature in landscape and still life. Color and line harmony as applied to dress, millinery, and house furnishing. Fundamental principles of design. Original designing and its application in all ways relating to the home. *Two credits required each semester.* Education Building. Lewers.

7–8. TEACHERS' COURSE. A continuation of the first year's course (Art 1–2) in all branches and its application to each grade in public school work. *Second semester. One credit.* Education Building. Lewers.

51–52. ADVANCED ART. The continuation of Art 3–4 in more advanced work. *Both semesters.* Education Building. Lewers.

53–54. ADVANCED ART. Continuation of Art 51–52 in more advanced work. *Both semesters. Credits to be arranged.* Education Building. Lewers.

For the history of Art, see Latin 41, 42, 43 and 44.

BIOLOGY

PROFESSOR FRANDSEN, HEAD OF DEPARTMENT
PROFESSOR LEHENBAUER
ASSOCIATE PROFESSOR MACK
MR. BROWN
MISS MILLER

The Department of Biology includes the following divisions: Bacteriology, Botany, Horticulture, Hygiene, Nature Study, and Zoology.

Bacteriology

51. GENERAL BACTERIOLOGY. A course of lectures and laboratory exercises on the morphology and life processes of the bacteria, with some references to allied organisms. The relationship of microorganisms to soil fertility, dairy products, water purity, sewage, and the production of disease will be considered. *Prerequisite:* Zoology 2, Botany 2, or Hygiene 7–8. *First semester. Lectures, two hours; laboratory, two periods. Four credits.* 212 Agricultural Building. Frandsen. Fee, $5.

Botany

Requirements for a minor in Botany: Botany 1 and 2, Zoology 2 and six hours of Junior-Senior work.

Requirements for a major in Botany: Botany 1 and 2, Zoology 2 and twelve hours of Junior-Senior work.

Students in the College of Agriculture are advised to take Botany 1, 52, 55, 61, and 64.

Students intending to take up Forestry should take Botany 1, 21, 52, 55, and 64.

1. MORPHOLOGY AND PHYSIOLOGY OF THE FLOWERING PLANTS. A study of the principles of botany. The laboratory work consists in the study of the structure, physiology, and adaptations of plants. For students who have not presented laboratory entrance Botany. *First semester. Two lectures; two laboratory periods. Four credits.* 110 and 210 Agricultural Building. Lehenbauer, Miller, Brown and Assistants. Fee, $3.

2. MORPHOLOGY AND PHYSIOLOGY OF THE NONFLOWERING PLANTS. A study of representative types of algæ, liverworts, fungi, mosses, ferns, and gymnosperms. The evolution of the plant kingdom. *Second semester. Two lectures;*

two laboratory periods. Four credits. 210 Agricultural Building. Lehenbauer. Fee, $3.

3. General Botany. (For students in the School of Home Economics.) A study of the structure and physiology of the higher plants and of selected types of the lower plants, such as bacteria, molds, mushrooms, and yeast. *First semester. Two lectures; one laboratory period. Three credits.* 110 Agricultural Building. Lehenbauer and Assistant. Fee, $2.

5. Botany. For students who have presented one year of Botany with laboratory for matriculation. Content of course same as Botany 1. *One lecture; two laboratory periods. Three credits.* 110 and 210 Agricultural Building. Lehenbauer and Assistant. Fee, $3.

21. Ecology. The geographical distribution of plants and plant structure in relation to environment. *Prerequisites* Botany 1. *First semester. Two lectures. Assigned readings and reports on field trips. Two credits.* 109 Agricultural Building. Lehenbauer.

52. Taxonomy. A systematic and comparative study of the principal families of flowering plants represented in the local flora with special reference to their field recognition characters. *Prerequisite:* Botany 1. *Second semester. Two lectures; two laboratory periods. Three credits.* 210 Agricultural Building. Lehenbauer. Fee, $2.

55. Plant Physiology. A more advanced study of plant nutrition, photosynthesis, transpiration and the environmental factors as they affect plant growth. *First semester. Two lectures; two laboratory periods. Four credits.* Alternates with Botany 61. 209 Agricultural Building. Lehenbauer. Fee, $3.

58. Botany of the Range. A study of the plants of the range, their distribution, requirements, methods of reproduction and limiting factors. Poisonous plants, their identification and distribution. This course must be taken simultaneously with Animal Husbandry 58. *Prerequisite:* Botany 1 and 52. *Second semester. Two credits.* Given in alternate years. To be given in 1930. Room 9, Agricultural Building. Lehenbauer.

61. Plant Breeding. A study of variations in plants, methods of selection and improving by the breeding of agricultural plants, Mendel's Law and its applications. *First semester. Lectures, three hours. Assigned readings, reports and laboratory demonstrations. Three credits.* Alternates with Botany 55. 209 Agricultural Building. Lehenbauer.

64. Plant Pathology. A study of the important diseases of economic plants, their causes, indentification, and control. *Second semester. Two lectures; two laboratory periods. Three credits.* Alternates with Horticulture 2. 209 Agricultural Building. Lehenbauer. Fee, $3.

71–72. Histology and Technique. The preparation of microscopic slides and a comparative study of plant tissues. *First or second semester. Credits to be arranged.* 210 Agricultural Building. Miller. Fee, $2 to $4 for each semester.

91–92. Advanced Botany. Special problems in some field of botany, physiology, pathology, histology, or taxonomy. Laboratory, assigned readings and reports. *Prerequisite:* Three years of botany. *Either semester. Credits to be arranged.* 210 Agricultural Building. Lehenbauer. Fee determined by type of laboratory work.

201–202. Thesis course for graduates.

Horticulture

2. Elements of Horticulture. A general survey of the principles of fruit growing, vegetable and ornamental gardening. *Prerequisite:* Botany 1. *Second semester. Lectures, two hours; laboratory and practical exercises in farm orchard, one afternoon. Three credits.* 4 Agricultural Building. Lehenbauer.

Hygiene

Requirements for a minor in Hygiene: Hygiene 2, 7–8, Zoology 2, Bacteriology 51. Requirements for a major in Hygiene: the above and six additional units of advanced work in Zoology or Bacteriology.

2. General Hygiene. Two lectures per week. Required of all Freshmen. *Second semester. One credit.* Frandsen and Mack.

4. Teachers' Hygiene. This course consists of lectures, assigned readings, and demonstrations covering the elementary principles of human anatomy and physiology, and paying particular attention to the hygienic applications. The problems of sex hygiene, including the control, the suppression and the prevention of venereal diseases, are discussed both in their individual and in their public bearings. Special attention is placed upon that phase of the subject

pertaining to school life, as ventilation, cleanliness, etc. *Second semester. Two lectures. Two credits.* 210 Agricultural Building. Mack.

7–8. PHYSIOLOGY. The general principles of animal physiology, with special reference to the human being. The laboratory work consists of the dissection of some vertebrate, microscopic study of tissues and organs, physiological experiments and demonstrations, and the study of anatomical and physiological models. Some work on microorganisms is included. *Both semesters. Lectures, two hours; laboratory, one period. Three credits each semester.* 110 and 210 Agricultural Building. Brown. Fee, $2.50 each semester.

53. RURAL HYGIENE. A course designed primarily for students in the College of Agriculture. Sufficient attention is given animal anatomy and physiology to make the laws of hygiene understood. Emphasis is placed upon matters pertaining particularly to country life, such as sanitation of farm buildings, disposal of garbage and sewage, water for human and animal use, house-flies and other disease carriers. *Prerequisite:* Zoology 2, Botany 1. *First semester. Lectures, three hours. Three credits.* 110 and 210 Agricultural Building. Frandsen.

Nature Study

1–2. GENERAL NATURE STUDY. The object of this course is two-fold: (1) To cultivate a better understanding and appreciation of natural phenomena with emphasis on the biological features; and (2) to prepare for the teaching of nature study in the public schools. It comprises the study of life histories, pond life, native birds, etc., and includes the making and care of aquaria, terraria, school garden, etc. *Both semesters. Two credits each semester.* 110 and 210 Agricultural Building. Mack. Fee, $1.

Zoology

Requirements for a minor in Zoology: Zoology 2 or 4, Zoology 9 or Hygiene 7 and 8 (Physiology), Botany 1, and six units of Junior-Senior work.

Requirements for a major in Zoology: Zoology 2, 9 (or Hygiene 7–8), Botany 1 or 2, and twelve units of Junior-Senior work.

Additional courses advised: Physics 1–2 (or admission credit), general chemistry, qualitative and quantitative analysis and organic chemistry; German 1–2 and 3–4.

2. GENERAL ZOOLOGY. An introductory course dealing with the general principles of the science. The laboratory work consists of the study of the structure, activities, and habits of a number of types representative of the principal animal groups, and chosen as much as possible from local forms. For students who have not presented laboratory Zoology for matriculation. *Second semester. Lectures, two hours; laboratory, two periods. Four credits.* 110 and 210 Agricultural Building. Frandsen and Brown. Fee, $4.

4. For students who have presented one year of Zoology with laboratory for matriculation. Content of course similar to Zoology 2. *Second semester. One lecture; two laboratory periods. Three credits.* Frandsen and Brown and ..... Fee, $4.

9. COMPARATIVE ANATOMY OF VERTEBRATES. Lectures on the progressive development of structures and functions from the lower to the higher vertebrates, leading up to human anatomy. Laboratory dissection of the dog-fish, salamander, and a mammal. *Prerequisite:* Zoology 2, or Hygiene 7–8. *First semester. Lectures, three hours; laboratory, two periods. Five credits.* 5 Agricultural Building. Frandsen. Fee, $5.

51. ANATOMY OF DOMESTIC ANIMALS. Lectures, textbook and reference assignments. Laboratory study of skeletons of domestic animals, and the dissection of a cat, dog, or sheep. *Prerequisite:* Zoology 2, or Hygiene 7–8 or 53. *First semester. Lectures, three hours; laboratory, one period. Four credits.* 5 Agricultural Building. Brown. Fee, $2.

53. ECONOMIC ZOOLOGY. Lectures dealing with the habits and life histories of the more important economic vertebrates, insects, worms, etc., in their relations to agriculture. *First semester. Lectures, two hours; laboratory, one period. Three credits.* 110 and 210 Agricultural Building. Brown. Fee, $1.

55. EVOLUTION. Lectures illustrated by lantern slides on the evidence and factors of organic evolution, with a discussion of the bearing of evolutionary principles upon science and life in general. *Second semester. Two credits.* 110 Agricultural Building. Frandsen.

63–64. EMBRYOLOGY. Lectures on comparative embryology of vertebrates. The laboratory work consists of the study of preparations of the frog, chick, pig, and human embryos at

various stages of development. Some training in the preparation of embryological material will be given. *Prerequisite:* Zoology 2 and 9, or Hygiene 7–8. *Second semester. Lectures, three hours; laboratory, two periods. Five credits.* 212 Agricultural Building. Frandsen. (Alternates with Zoology 65 and 66.) Fee, $2.

65. Histology. The microscope and accessory apparatus, histological methods, and technique. Comparative cytology of animal tissues. *Prerequisite:* Zoology 1 and 9, or Hygiene 7–8. *Second semester. Lectures, three hours; laboratory, two periods. Four credits.* 212 Agricultural Building. Frandsen. (Alternates with Zoology 64.) Fee, $4.

66. Histology. Same course as 65. *Second semester.*

91. Advanced Zoology. Special zoological problems. Major students may select some problem for investigation under the direction of the instructor. Library reading, laboratory work, and reports, with final results embodied in the form of a thesis. *First semester. Credits to be arranged.* 212 Agricultural Building. Frandsen. Fee determined by type of work.

92. Advanced Zoology. Continuation of course 91.

201. Thesis course for graduates.

CHEMISTRY

PROFESSOR SEARS, HEAD OF DEPARTMENT
PROFESSOR ADAMS
ASSOCIATE PROFESSOR HOSKINS
MR. LOUGH

Requirements for a minor in Chemistry: Either (for students without admission credit) courses 1–2, or (for students with one admission credit) courses 5, 6, and, in either case, courses 9, 10 and three additional units of Junior-Senior work.

Requirements for a major in Chemistry: Mathematics 9, and Physics 1a-b (or admission credit), and either (for students without admission credit in Chemistry) courses 1–2, or (for students with one admission credit) courses 5–6, and, in either case, courses 9, 10, 51–52, and 95–96, and three additional units of Junior-Senior work.

Requirements for the degree, Bachelor of Science in Chemistry: See outline for Course of Study, page 124.

1–2. Elementary Inorganic Chemistry. Lectures, recitations, and laboratory work covering the elementary principles of Chemistry. This course will cover all of the more common elements and their most important compounds, including their relation to each other and to the different

industries. Its purpose is to give the student sufficient acquaintance with the field of Chemistry so that he will be able to understand and appreciate its numerous applications to industry and to everyday life and at the same time prepare him for Chemistry 9. Designed for students who have not presented matriculation Chemistry. *Both semesters. Two lectures and two laboratory periods. Four credits each semester.* Chemistry Building. Sears and Staff. Fee, $6.

5–6. General Inorganic Chemistry. A course in general Chemistry covering all of the more common elements and their relation to each other. Use is made of the periodic table to correlate the facts and to show their relation to industry and to everyday life. Open to students who have presented matriculation Chemistry. *Both semesters. One lecture and two laboratory periods. Three credits each semester.* Chemistry Building. Sears and Staff. Fee, $6.

9. Principles of Inorganic and Analytical Chemistry. A lecture and laboratory course designed to give the student a knowledge of the fundamental principles underlying chemical change and to give him training in the methods of qualitative and a few of the more fundamental and simpler processes of gravimetric analysis. Numerous equations and problems involving chemical manufacture and the mass law will be assigned. *One lecture and three laboratory periods each week. Prerequisite:* Chemistry 2 or 6. *Either semester. Four credits.* Chemistry Building. Sears. Fee, $9.

10. Quantitative Analysis. A lecture and laboratory course covering the more important methods used in both gravimetric and volumetric analysis. Designed to train the student in the technique of quantitative analysis and to give him a knowledge of the principles and problems involved. *One lecture and three laboratory periods each week. Prerequisite:* Chemistry 9. *Second semester. Four credits.* Chemistry Building. Sears. Fee, $9.

25. Household Chemistry. (College of Agriculture.) A laboratory and lecture course open only to students in Home Economics. Deals primarily with the practical applications of chemistry to problems of the household. *Prerequisite:* Chemistry 5. *First semester. Two lectures and two laboratory periods. Four credits.* Lough. Fee, $6.

51–52. Organic Chemistry. A lecture and laboratory course dealing with the compounds of carbon. *Prerequisite:*

Chemistry 10 or Junior standing. *Both semesters. Two lectures; two laboratory periods. Four credits each semester.* 210 and 203 Chemistry Building. Adams. Fee, $6.

53. Advanced Organic Chemistry. (Graduate credit given with consent of instructor.) A lecture and laboratory course on special chapters in organic Chemistry. *Prerequisite:* Chemistry 51–52. *First semester. Two lectures and two laboratory periods. Four credits.* 210 Chemistry Building. Adams. Fee, $6.

61. Advanced Qualitative Analysis. A lecture and laboratory course designed to give a more intimate knowledge of the less common elements. Special emphasis will be given to a comparative study of properties and analytical relations, including the methods employed for their separation and detection. *One lecture and two laboratory periods. Prerequisite:* Chemistry 9 and 10. *First semester. Three credits.* 102 Chemistry Building. Sears. Fee, $6.

62. The Periodic Law. (Graduate credit given with consent of instructor.) A lecture and seminar course designed to give the student a rather intimate knowledge of the less common elements and their relation to the more common elements. A critical study is made of the more important periodic tables in the light of recent developments in atomic structure and the known properties of the elements. Practical use is made of the periodic law to correlate the facts of Chemistry. *Prerequisite:* Two years of college Chemistry. *Second semester. Two credits.* Chemistry Building. Sears.

63. Advanced Laboratory Practice. A laboratory course designed to give the student practice in careful quantitative work. Special work suited to the individual needs of the student will be taken up in inorganic, analytical, organic or physical Chemistry. *Prerequisite:* Two years of college Chemistry. *First semester. Two credits.* 204 Chemistry Building. Adams, Sears, Hoskins and Lough. Fee, $6.

64. Special Analytical Problems. A laboratory course designed to give the student training in commercial methods of analysis. Such substances as food, water, fuel, fertilizer, soil, insecticides, minerals, etc., may be taken up. *Prerequisite:* Two years of college Chemistry. *Second semester. Two credits.* Chemistry Building. Sears, Adams, Hoskins, Lough. Fee, $6.

67. Physiological Chemistry. (Graduate credit given with consent of instructor.) For students of chemistry, medicine, biology, bacteriology and nutrition. Lectures and recitations on the chemistry of carbohydrates, fats, proteins, body tissues, blood, secretions, putrefaction and the physiological processes such as digestion, absorption and assimilation of food, general enzyme action, metabolism and the fundamental principles of nutrition. The laboratory work consists of qualitative and quantitative experiments on the lecture material. *Prerequisite:* Chemistry 10 and 52. *Second semester. Two lectures, two laboratory periods. Four credits.* Chemistry Building. Lough. Fee, $6.

71. Advanced Analytical Chemistry. A laboratory course designed particularly for chemistry and mining students but open to all students interested in the nonmetallics. Analysis of such substances as gypsum, cement, borax, silicates, alkali, slag, etc., will be emphasized. *Prerequisite:* Chemistry 10. *First semester. Two credits.* Chemistry Building. Sears. Fee, $6.

72. Advanced Inorganic Preparations. (Graduate credit given with consent of instructor.) A laboratory and discussion course. The student will be expected to prepare a number of inorganic substances involving some of the more difficult reactions and technique. Special emphasis will be given to method, technique, and equations involved. *Prerequisites.* Chemistry 51. *Second semester. One recitation and two laboratory periods. Three credits.* 206 Chemistry Building. Adams. Fee, $6.

81–82. Physical Chemistry. (Graduate credit given with consent of instructor.) A lecture and laboratory course correlating facts and theories concerning chemical reactions, solutions, the structure of matter; gases, liquids and solids; energy; solutions; rate of reactions; vapor tension; osmotic pressure; conductance; ionization; thermochemistry; applications to problems of Chemistry and related sciences. Open to Juniors and Seniors who have completed two years of Chemistry and Mathematics 10. A knowledge of calculus is desirable. *Both semesters. Two lectures and one laboratory period. Three credits each semester.* 210 Chemistry Building. Hoskins. Fee, $3 each semester.

92. History of Chemistry. (Graduate credit given with the consent of the instructor.) A lecture course on the history and development of the science of Chemistry. *Prerequisite:* Two years of College Chemistry. *Second semester. Two credits.* Adams.

95–96. CURRENT CHEMICAL LITERATURE. (Graduate credit given with consent of instructor.) A seminar course designed to help the student become familiar with the various sources of chemical information as well as to afford him practice in summarizing such information for discussion. Each student will be required to present at least one report each semester upon an assigned topic. The class will meet not oftener than once each week for the presentation and discussion of assigned topics. *Prerequisite:* Two years of College Chemistry. *Both semesters. One credit per year.* May be repeated for credit. Chemistry Building. Staff.

100. THESIS COURSE FOR UNDERGRADUATES. Laboratory and library work on a special topic to be chosen by the student in consultation with instructors. *Prerequisite:* Chemistry 10, 51–52 or 81–82 and German, and recommended by the head of the department. *Second semester. Two credits.* 204 Chemistry Building. Adams, Sears, Hoskins and Lough. Fee, $6.

102. COLLOID CHEMISTRY. (Open to advanced undergraduates with the consent of instructor.) A lecture and laboratory course covering the principal physical and chemical properties of dispersed systems such as: methods of preparation, stability, precipitation, methods of measuring size of particles, electrical and optical properties. Practical application will be made to such problems in chemistry, physics, geology, metallurgy, and biology as will be of most value to those enrolled. *Second semester. One lecture and one laboratory period. Two credits.* Hoskins. Fee, $3.

200. THESIS COURSE FOR GRADUATE STUDENTS. Special problems for research chosen in consultation with some member of the department and carried on under his direction. No student will be admitted to this course who has not completed four years of work in Chemistry and graduated from an approved college. *Both semesters. Credits to be arranged.* 203 and 204 Chemistry Building. Adams, Sears, Hoskins and Lough. Fee, $3 per credit hour, according to work.

CIVIL ENGINEERING

College of Engineering

PROFESSOR BOARDMAN, HEAD OF DEPARTMENT
PROFESSOR BIXBY

2. MAP DRAWING. The work in this course consists of plotting engineering and topographic maps from field-survey notes. *First semester. Laboratory, one period. One credit.* Electrical Building. Bixby.

8. THE ELEMENTS OF CIVIL ENGINEERING. An outline of the general field included in Civil Engineering, followed by a brief discussion of a few of the fundamental principles involved in the following: Engineering computations, excavation and other volumes, elementary surveying, transportation engineering, structural engineering and hydraulics. The solution of many problems is required and numerous applications are pointed out of mathematics and the other fundamental sciences which form the basis of engineering. *Second semester. Two credits.* Electrical Building. Boardman.

11–12. ENGINEERING LITERATURE. The presentation and discussion of topics selected from current engineering literature. *Both semesters. One credit each semester.* Electrical Building. Boardman.

20. TECHNICAL REPORT. A systematic write-up of an approved technical subject in Civil Engineering. This course is designed primarily for civil engineering students and those registering in same will be required to obtain their assignments within the first two weeks after registration. Outlines and bibliography, together with a reasonable showing of progress, must be presented for approval within six weeks after registration. *Prerequisite:* English 1–2. *First semester. One credit.* Electrical Building. Bixby.

51–53. SURVEYING. Lectures, recitations and computations, covering the common types of surveying, elementary in the first semester and more advanced in the second semester with special emphasis on Polaris and sun observations for meridian, and topographic and mine surveying. *Prerequisite:* Mathematics 13. *Both semesters. Two credits each semester.* Electrical Building. Boardman.

52–54. SURVEYING LABORATORY. Field practice in the use and adjustment of surveying instruments and drafting room work in the reduction and plotting of the field notes. This work is made practical by the actual survey and mapping of a portion of the University grounds. This course accompanies Civil Engineering 51–53. *Both semesters. Two credits each semester.* Campus and Electrical Building. Bixby. Fee, $3 each semester.

55. Foundations and Substructures. A study of the temporary and permanent features of such construction. A considerable portion of this course deals with Portland cement concrete, its design, manufacture, and uses in substructures. The laboratory work includes the preparation of working plans of a specified structure, usually a concrete culvert. *Second semester. Lectures, two credits; laboratory, one credit; total, three credits.* Electrical Building. Boardman. (Alternates with C. E. 67.)

58. Sm. Summer Surveying. This course starts directly after the close of the regular college year in May. The work consists principally of topographic and mine surveying accompanied by related computations and mapping. The former involves careful base line measurement and triangulation for control, followed by topographic surveying by the plane table method. In the mine surveying, both surface and underground work is done and a mine map, showing the underground workings, is made by each student. Direct solar observations are taken for meridian and latitude, and special emphasis is given to computations. *Prerequisite:* C. E. 51, 52, 53, and 54. Four weeks. Fee, $20, including automobile transportation costs. Boardman and Bixby.

60. Highway Engineering. A detailed study is made of the location, construction, and maintenance of highways. *Second semester. Four credits.* Electrical Building. Bixby. Fee, $3.

63–64. Railroad Engineering. Lectures, recitations, and field work on the location and construction of railroads. Also a study of locomotive tractive power and train resistances and their effects on the economic location and operation of railroads. *Prerequisite:* Civil Engineering 51–52. *First semester. Lectures, three credits; laboratory, two credits.* Electrical Building. Bixby. Fee, $3.

67. Engineering Economics. Economic selection, sinking funds, salvage value, depreciation, estimating, etc. Illustrated by engineering problems. *First semester. Lectures, two credits.* Electrical Building. Boardman. (Alternates with C. E. 55.) Not offered in 1929–1930.

69. Graphic Statics. A course which covers the principles of graphic statics, and their applications to the analysis of stresses in statically determinate structures for various

conditions of loadings. *Second semester. Lecture, one credit; laboratory, one credit.* Electrical Building. Bixby.

72. Testing Materials Laboratory. The experiments are as follows: Tension tests on steel, wrought and cast iron; compression tests on wood, building stone, brick, cast iron, wrought iron, and steel; effects on the strength of mortar by varying the proportions of sand, water, and cement; tests on standard cement briquettes; cross-bending tests on wooden and steel beams; cross-breaking tests on standard cast-iron test bars; tests of small iron, steel, and wood columns. A carefully prepared report clearly stated is required of each test. *Prerequisite:* C. E. 74 must be taken as a prerequisite or at the same time as C. E. 72. *Second semester. Laboratory, one period. One credit.* Electrical Building. Bixby. Fee, $2.50.

74. Strength of Materials. A study of the behavior of materials under stress and a discussion of stress and strain due to bending, buckling, and torsion. The applications of the cardinal principles of mechanics to riveted joints, pipes, cylinders, beams, columns, and shafts. The principle of work and area moments applied to finding deflections and moments of continuous beams. An extended discussion covering the general relations between stress and strain, with applications to combined stress, composite beams, resilience, hooks, and fatigue of metals. *Prerequisite:* Mathematics 55. *Second semester. Lectures, three hours. Three credits.* Electrical Building. Gay.

75–76. Structural Analysis. A study of the determination of stresses in roof and bridge trusses and girders, and of the economic problems involved in the selection of the type of structure, materials to be used, length and number of bridge spans. *Prerequisite:* Mathematics 26. *Both semesters. Lectures, three credits first semester, two credits second semester.* Electrical Building. Boardman.

77–78. Structural Design. Application of courses 75–76 and the principles and standard practice methods of design to the designs of several common types of steel structures. Complete working drawings are made of at least two structures, one of them being a railroad plate girder bridge. *Prerequisite:* Civil Engineering 75–76. *Laboratory, three credits first semester, two credits second semester.* Electrical Building. Boardman.

85–86. Reinforced Concrete. The theory and practice of reinforced concrete design and construction. In the laboratory part of the course applications are made to the design of several types of structures, including a retaining wall and an arch bridge. *Prerequisite:* Mathematics 55 and Civil Engineering 74. *First semester, lectures, two credits; laboratory, two credits. Second semester, lectures, one credit; laboratory, two credits.* Electrical Building. Bixby.

90. Hydraulics. A study of the principles of hydraulics and hydrostatics, the pressure and buoyancy of water, and the laws of its flow through openings and in channels of various kinds. Especial emphasis is laid on the solution of numerous practical problems by the student. *Prerequisite:* Mathematics 25 and 26, Physics 1a, 1b and 2a, 2b, or Physics 3 and 4. *Second semester. Lectures, three hours. Three credits.* Electrical Building. Boardman. Fee, $1.

91. Sanitary Engineering. A combination course dealing with public water supplies and the sewerage and drainage of towns. Especial attention is given to methods of sewage disposal and to the purification of water. *Prerequisite:* C. E. 90. *Second semester. Lectures, three credits.* Electrical Building. Bixby.

94. Irrigation Engineering. A study is made of the collection, storage, and distribution of water for irrigation, with special reference to the structures involved. *Prerequisite:* C. E. 90. *First semester. Lectures. Three credits.* Electrical Building. Bixby.

96. Water-Power Engineering. A study is made of the more important problems of water-power development, including the characteristics of hydraulic motors affecting selection and installation. A study is also made of the costs and the feasibility of water-power projects. *Prerequisite:* C. E. 90. *Second semester. Lectures, three hours. Three credits.* Electrical Building. Sibley.

97–98. Hydrology. The occurrence of water in the atmosphere, on the earth's surface and beneath the surface. The understanding of some of the many divisions of this subject is essential to a proper planning for any utilization or control of water by man. *Prerequisite:* Junior standing. *Two credits each semester.* Electrical Building. Boardman.

99. Engineering Problems. This course consists of the working of assigned problems, the solution of which requires

the application of various phases of engineering practice. A complete report of the work done on each problem, including all necessary drawings, costs, estimates, and conclusions, must be furnished to the department. This course is intended as an optional substitute for a thesis. *Second semester. Two credits.* Electrical Building. Boardman.

100. Thesis. Thesis on an approved subject in which the student is especially interested. *Second semester. Two credits.* Boardman.

121–122. Advanced Structural Engineering. The analysis and design of one or more of the following types: Arch, cantilever, suspension and various types of movable bridges. *Prerequisite:* Civil Engineering 75, 76 and 77. *Lectures and laboratory. Four to six credits for the year according to work accomplished.* Electrical Building. Boardman.

199–200. Graduate Thesis. Advanced research work in the investigation of engineering materials or other engineering problems. *Both semesters. Credits to be arranged.* Electrical Building. Boardman.

THE CLASSICS

PROFESSOR CHURCH
PROFESSOR THOMPSON

Requirements for a minor in Classics: With no admission credits in Latin, Classics 1–2, 3–4, and six units; with two admission credits, Classics 3–4, and six units.

Requirements for a major in Classics: With no admission credits, Classics 1–2, 3–4, 7–8, and ten units; with two admission credits, 3–4, 7–8, and ten units.

Entrance credits in Latin above two, especially if they include Vergil's Æneid, will be accepted in meeting major and minor requirements.

The substitution of courses in Greek for equivalent courses in Latin will be permitted.

I. Language

Only the courses in Language can be used to satisfy the general language requirement in the University.

1. Latin

1–2. Beginning Latin. This course is designed to prepare for the reading of Vergil and also for admission to the professional schools. Comparative Language, Medical Latin and Law Latin are stressed. *Both semesters. For students entering without high school credit in Latin, five credits each semester.*

For students entering with one year credit in high school Latin, three credits first semester and five credits second semester.

For students entering with two years' credit in high school Latin, three credits second semester only. 203 Morrill Hall. Shaver.

3–4. VERGIL. Æneid. This course is intended for such students as present one or two years of Latin at entrance, but wish to continue the study in college. *Both semesters. Three credits each semester.* 203 Morrill Hall. Church.

5. CICERO. De Senectute. *First Semester. Three credits.* 203 Morrill Hall. Church.

6. HORACE AND CATULLUS. Latin Lyric Poetry. *Second semester. Three credits.* 203 Morrill Hall. Church.

Courses 5–6 given alternate years, alternating with 51–52. (Not given 1928–1929.)

7–8. LATIN PROSE COMPOSITION. Required of all students who have elected Latin as their major department, or who seek to be recommended as teachers of Latin. *Both semesters. One credit each semester.* 203 Morrill Hall. Church.

9. THE ROMAN NOVEL. Petronius, Trimalchio's Dinner. *Second semester. Two credits.* 203 Morrill Hall. Church.

101. SEMINAR FOR GRADUATES. (a) The study of the Roman burial formulæ, their development, and religious significance. (b) Comparative Mythology. Its religious, art, and literary forms.

2. GREEK

11–12. ELEMENTARY GREEK. Grammar, exercises, and Xenophon's Anabasis, Book I. An introductory course for all students who wish by somewhat concentrated effort to acquire in one year the ability to read ordinary Attic prose. *Both semesters. Six credits for the year.* (Given only if elected by five or more students.) 207 Education Building. Thompson.

13–14. PLATO AND HOMER. In the first semester, Plato's Apology and Crito, with selections from the other writings, will be read. In the second semester, Homer's Iliad, Books I–VI, will be read as an introduction to epic poetry, with as much attention as is necessary to the grammar and prosody of Homer, and to the Ionic dialect. *Both semesters. Three credits each semester.* (Given only if elected by five or more students.) 207 Education Building. Thompson.

15. GREEK TESTAMENT. Selections from the Gospels and Epistles. *First semester. Two credits.* (Given only if elected by five or more students.) 207 Education Building. Thompson.

16. GREEK LITERATURE—PHILOSOPHY. Reading of Plato's Phædo, with a brief study of the history of ancient philosophy. *Prerequisite:* Greek 1–2, and 3–4. *Second semester.*

A knowledge of Latin or Greek is not required for courses in Art and Literature.

II. ART

41. GREEK ART. Illustrated by lantern slides and reproductions. *First semester. Two credits.* 203 Morrill Hall. Church.

42. ROMAN TO MODERN ART. Illustrated by lantern slides and reproductions in color. *Second semester. Two credits.* 203 Morrill Hall. Church.

43–44. SUPPLEMENTARY COURSE IN APPRECIATION OF ART. Readings and reports. Open only to those who are taking or have taken Latin 41–42 or its equivalent. *Both semesters. One credit each semester.* 203 Morrill Hall. Church.

III. LITERATURE

51–52. COMPARATIVE CLASSICAL POETRY IN ENGLISH. The Epic, Lyric, Drama, and Pastoral, with supplemental reference to Classical and Teutonic Mythology and Modern Literature and Opera. *Both semesters. Two credits each semester.* (Alternate years; alternating with 5–6.) 203 Morrill Hall. Church.

DAIRY HUSBANDRY

College of Agriculture

PROFESSOR SCOTT, HEAD OF DEPARTMENT

1. DAIRYING. The composition and secretion of milk and causes of variation in its composition; the operation of the Babcock test as applied to milk and milk products; the various methods of cream-raising, including the study of the construction and operation of centrifugal separators; methods of making and marketing butter, with special reference to farm conditions, and the proper handling of milk on the farm will be discussed in the lectures. The laboratory work includes the testing of milk and other dairy products, operation of centrifugal cream separators, and the making and scoring of butter, and an observation of the essential points of the sanitary production and handling of dairy products

as shown in the college barn and dairy. *Second semester. Lectures, two hours; laboratory, one period. Three credits.* 105 Agricultural Building. Scott. Fee, $3.

5. MILKING MACHINES. Laboratory practice in milking with mechanical milkers. Practical work at the University Farm and observation of about six different types of machines operating near Reno. *Open to all students. Both semesters. Laboratory, one period. One credit.* Scott. Fee, $2.

53. MILK PRODUCTION. Dairy husbandry in its relation to the producer of dairy products rather than the manufacturer. The lectures deal with the problems of the dairy farmer, such as adaptations of the dairy breeds, selection, management, feeding of dairy cattle, dairy barns, and calf-raising. The laboratory includes the judging of dairy cattle, visits to the local dairy farms and the observation of systems of dairy management followed by them. *Prerequisite:* Dairying 1. *First semester. Lectures, two hours; laboratory, one period. Three credits.* 105 Agricultural Building. Scott. Fee, $3.

54. BUTTER-MAKING. Laboratory practice in the manufacture of creamery butter and ice cream. Instruction will cover sampling and testing of cream; pasteurizing and ripening of cream for butter-making, churning, with special attention to the factors that control the composition of butter; preparing butter for the market; the preparation and use of home-made and commercial starters; creamery accounts; determining the amount of water in butter; testing for oleomargarine; manufacture of ice cream, sherbets; ices, lacto. *Prerequisite:* Dairying 1. *Second semester. Lecture, one hour; laboratory, two periods. Three credits.* 12 Agricultural Building. Scott. Fee, $3. (This course will not be given unless elected by five or more students.)

55. DAIRY SANITATION. This course is the application of bacteriology to the problems of the producer and consumer of milk. It deals with the fundamental principles upon which are based sanitary production and handling of milk, cream-ripening and curing of cheese, the market milk industry; the relations of milk to the public health and the important relations of butter- and cheese-making. *Prerequisite:* Dairying 1 and Zoology 2. *First semester. Lectures, two hours; laboratory, one period. Three credits.* 12 Agricultural Building. Scott. Fee, $2.

56. CHEESE-MAKING. A study of the comparative and characteristics of common American and European cheese. The laboratory work consists of manufacturing the common types of hard and soft cheese. *Van Slyke:* Cheese-Making. *Prerequisite:* Dairying 1. *Second semester. Lecture, one hour; laboratory, two periods. Three credits.* 12 Agricultural Building. Scott. Fee, $3. (This course will not be given unless elected by five or more students.)

57. ADVANCED MILK PRODUCTION. Use of Dairy herd books; special feeding for high records; interpretation of official tests. *Prerequisite:* Dairying 1. *First semester. Lectures, two hours. Two credits.* 105 Agricultural Building. Scott.

59. PROFESSIONAL JUDGING. *First semester. Laboratory, one period. One credit.* University Farm. Scott. Fee, $1.50.

61. THESIS COURSE. Special problems in production or sanitation and city milk supply. Laboratory material is available through the University dairy herd and the dairies furnishing milk for the city of Reno. *Prerequisite:* Dairying 1 and 53 or 55. *Either semester. Two to six credits, depending on work done.* Scott.

ECONOMICS, BUSINESS, AND SOCIOLOGY

ASSOCIATE PROFESSOR SUTHERLAND, ACTING HEAD OF DEPARTMENT
ASSISTANT PROFESSOR BLACKLER
MR. WEBSTER
MR. (E. S.) BROWN
JUDGE SOUTER

Requirements for a minor: Six credits in Economics 1–2; twelve additional credits in the department, not less than six of which shall be in courses numbered above 50.

Requirements for a major: Sixteen credits in Economics 1–2, Economics 75–76, and Economics 91–92. Fourteen additional credits in the department, not less than eight of which shall be in courses numbered above 50.

Economics

1. PRINCIPLES OF ECONOMICS. An introduction to the economics of production, value and exchange, money and credit, business cycles, international trade, distribution of wealth, labor, transportation, agricultural credit and marketing, public finance and taxation. *Prerequisite:* Sophomore standing. *Either semester. Three credits.* Education Building. The Staff.

2. Principles of Economics. A continuation of 1. *Either semester. Three credits.* Education Building. The Staff.

3. Industrial History of Europe. The economic history of Europe in modern times, agricultural, industrial, and commercial development, rise of economic organization. *First semester. Two credits.* Open to Freshmen. Education Building. Webster.

5. Economic History of the United States. Introductory historical treatment of the economic development of America, the industrial revolution, agricultural, commercial, and industrial development, immigration, geographical determinism, land policy, the labor movement, taxation, railroads and government regulation, etc. Open to Freshmen. *Second semester. Two credits.* Education Building. Webster.

51. Public Finance. Public expenditure, classification of revenues, principles of taxation, growth of indebtedness, financial administration in peace and war, the connection between public finance and social reform. *Prerequisite:* Economics 1–2. *First semester. Three credits.* (Not given 1929–1930.)

52. Money and Banking. Economic and governmental problems centering in the use of money and credit, the inflation vs. stabilization movements and their connection with business and labor conditions. *Prerequisite:* Economics 1–2. *First semester. Three credits.* Education Building. Sutherland.

53. International Trade. Theory of international trade, history of the controversy between free trade and protection, the new interest in foreign trade. *Prerequisite:* Economics 1–2. *First semester. Three credits.* (Not given 1929–1930.)

55. Transportation. The growth and development of railway transportation in the United States; the organization, construction, and management of modern railway systems; the theory of rates; the relation of the railroads to the public; the general scope and importance of the railway problem at the present time. *Prerequisite:* Economics 1–2 and Business 41. *First semester. Three credits.* Education Building. Webster.

56. Insurance. A study of insurance institutions, and of the various kinds of property and life insurance. *Prerequisite:* Economics 1–2, Business 41. *Second semester. Three credits.* (Not given 1929–1930.)

61. Statistical Methods. Elementary statistical methods as used in business and in the social sciences. Scrutiny of data, defining of units, tabulation, index numbers, correlation, law of averages, graphical methods of presenting facts. *Second semester. Three credits.* Education Building. Webster.

64. Labor Problems. Modern issues concerning the wage-earning classes considered in the light of English and American history. A study of labor organizations with regard to wages, hours, conditions, control, labor of women and children, immigration, economic insecurity, unemployment, turnover, social insurance, employer's associations, government agencies, personnel administration, motives in industry. *Prerequisite:* Economics 1–2. *Second semester. Three credits.* Education Building. Sutherland.

65. Introduction to Economics and Business Administration. (College of Engineering.) *Prerequisite:* Junior standing. *First semester. Three credits.* Education Building. Sutherland.

66. Industrial and Financial Organization. (College of Engineering.) *Prerequisite:* Economics 65. *Second semester. Three credits.* Education Building. Sutherland.

75. Economics of the Business Cycle. A discussion of the business cycle in modern capitalistic society, with special reference to its historical, philosophical, political, social, industrial, commercial, and other casual relationships; application of economic theory, forecasting. Should be accompanied or preceded by Economics 91. *First semester. Two credits.* Education Building. Sutherland.

76. Thesis. Subject may be chosen from any field of economics, but must embody a comprehensive treatment of some problem with regard to the application of general economic theory. This course is designed to coordinate the subject matter of the preceding courses in Economics and Business. Should be preceded or accompanied by Economics 91–92. *Second semester. Two credits.* Education Building. Sutherland.

91. Advanced Economic Theory. Advanced study of the principles of demand and supply including costs; of the functions of the different agents of production; of wages, interest, rent, and profits; and of the means for the promotion of welfare. *First semester. Three credits.* Education Building. Sutherland.

92. History of Economic Thought. A study of the development and trend of economic thought in its historical setting. *Second semester. Three credits.* Education Building. Sutherland.

95. Seminar. Hours to be arranged with individual students. *First semester. One credit.* Education Building. The Staff.

96. Seminar. Hours to be arranged with individual students. *Second semester. One credit.* Education Building. The Staff.

Business

41. Fundamentals of Business Organization. An introductory survey course in business, covering: The business structure; the business executive; internal and external factors in management; personnel administration; finance; accounting as an aid to management; production; marketing; administration of risk; business management and the business cycle; law and its relationship to business management. Functionalized management will also be studied. Principles and problems. *Prerequisite:* At least Sophomore standing. *First semester. Three credits.* Education Building. Blackler.

46. Administration of Distribution. A study of the distribution of goods from the producer to the consumer. Study of demand and demand creation. Correlated material of markets and marketing; advertising; salesmanship and the economics of retailing will also be studied. Assigned case problems and research. *Prerequisite:* Business 41. *Second semester. Three credits.* Education Building. Blackler.

43–44. Elementary Accounting. Accounting theory and practice for single proprietorships, partnerships and corporations. Problems and practice sets. *Prerequisite:* At least Sophomore standing. *Two lecture periods and one laboratory period. Both semesters. Three credits each semester.* 202 Education Building. Blackler.

55–56. Advanced Accounting. Intensive study of the advanced theory of accounts and its application. Selected problems and readings. *Prerequisite:* Business 43 – 44. *Both semesters. Three credits each semester.* Education Building. Blackler.

65. Administration of Finance. Principles and problems of financing business enterprises of various sizes and character. The course will also consider the principles of investment from the standpoint of the individual as to how and when to make investments; how to read the financial page; the principles of sound investments. Assigned case problems and research. *Prerequisite:* Business 41. *First semester. Three credits.* Education Building. Blackler.

66. Administration of Production. Internal organization and control for different forms of business enterprise. Principles of purchasing. Budgetary control; forecasting and planning in management; financial and operating ratios in business control; systems of internal check. Public relations. *Prerequisite:* Business 41. *Second semester. Three credits.* Education Building. Blackler.

68. Fundamental Principles of the Law Practically Applied to the Professions, Business and Citizenship. A comprehensive investigation of the fundamental principles of the law, designed to provide the prospective engineer, architect, physician, or other professional or business man with an intelligent understanding of the legal problems which constantly arise in the practice of any profession or business; to inculcate a deeper respect and reverence for the law by developing an appreciation of its sources, its growth, its importance, and its administration; and finally, by so doing, to elevate and vitalize citizenship. *Second semester. Three credits.* 200 Agricultural Building. Souter.

95. Seminar in Business. *One hour. First semester.* Education Building. The Staff.

96. Seminar in Business. *One hour. Second semester.* Education Building. The Staff.

Sociology

1–2. Elementary Sociology. A general course in the principles of sociology. An examination of social institutions, activities, and problems. Origin and development of societies, institutions, cultures, the state, civilizations. Racial, cultural, and social evolution. Conditions of modern society. *Both semesters. Three credits each semester.* Education Building. Brown.

71. Introduction to Sociology. The social nature of man; climatic, geographic, and economic environment;

group relations; contacts, primary and secondary; morality and social control; population, its quantity and quality; heredity; the differential birth rate; culture and social progress; race. *First semester. Three credits.* Education Building. Webster.

72. Social Institutions. A detailed study of the more important institutions of our social organization; the family, religious institutions and origins, educational institutions, the state, private property, legal and political organizations, charity and charitable organizations, stratification, etc. *Prerequisite:* Sociology 71. *Second semester. Three credits.* Education Building. Webster.

95. Seminar. Hours to be arranged with individual students. *First semester. One credit.* Education Building. The Staff.

96. Seminar. Hours to be arranged with individual students. *Second semester. One credit.* Education Building. The Staff.

EDUCATION

PROFESSOR HALL, HEAD OF DEPARTMENT
PROFESSOR TRANER
ASSISTANT PROFESSOR RUEBSAM
MISS BERNASCONI
MR. BILLINGHURST
MISS TALBOY
MR. JEPPSON
MR. RUSSELL
COOPERATING TEACHERS

Requirements for a minor in Education: Psychology 5 and 10; Education 60, 63, 71, 75, 76, and two units to be arranged.

Requirements for a major in Education: Psychology 5 and 10; Education 60, 63, 71, 75, 76, and ten to twelve Normal School credits, depending upon the aim in view.

Requirements for a course leading to the two-year Normal School Diploma and the A. B. Degree: One year of normal school work in addition to the requirements for the A. B. Degree. The normal school work will be selected and arranged according to the especial needs of the candidate.

Requirements for a course leading to both the two-year Normal School Diploma and the High School Teachers Diploma: Fourteen units of normal school work in addition to the present requirement for the High School Teachers Diploma, 32 units in all. These fourteen units are to be selected and arranged according to the needs of the candidate.

Elementary Education

20. Principles of Teaching. For teachers in elementary schools. A study of the various types of classroom teaching to discover the principles of selection, organization and presentation of subject matter to children of the first six grades. *First year, second semester. Three credits.* 104 Education Building. Hall. Fee, $2.

23. Problems in Rural Education. A survey of Nevada school conditions, the needs of Nevada rural communities, and the opportunity and responsibility of the rural teacher for leadership among both children and adults are among the more important topics studied. *First year, first semester. Two credits.* 104 Education Building. Traner.

24. School Management and School Law. A consideration of the fundamental facts of school law and the fundamental problems of school organization from the point of view of the teacher in the elementary school. *Second year, second semester. One credit.* 103 Education Building. Billinghurst.

25. Observation of Teaching. Observation and discussion of specific classroom work as a preparation for practice teaching. *First year, first semester. One credit.* Public Schools. Ruebsam.

28. Supervised Teaching and Group Conferences. The selection and organization of subject matter and the technique of teaching. *One hour a day, five days a week. First year, second semester. Five credits.* 209 Education Building and Public Schools. Ruebsam, Hall, and Cooperating Teachers.

29. Supervised Teaching and Group Conferences. Continuation of Education 28. *One hour a day, five days a week. First semester of second year. Five credits.* 209 Education Building and Public Schools. Ruebsam, Hall, and Cooperating Teachers.

31. The Teaching of Arithmetic. A study of the modern aims in teaching arithmetic; of the effect of these aims on the selection and organization of arithmetic material for the different grades; and of the presentation of this material. *Second semester, first year. Two credits.* 209 Education Building. Ruebsam.

34. The Teaching of English. Principles underlying the selection, organization and presentation of subject matter for the first four grades and the study of children's literature for these grades. *First semester, first year. Three credits.* 209 Education Building. Ruebsam.

35. The Teaching of English. Principles underlying the selection, organization and presentation of subject matter for grades 5 to 8 and the study of children's literature for these grades. *First semester, second year. Three credits.* 209 Education Building. Ruebsam.

37. The Teaching of Geography. A study of the modern aims in teaching geography, with discussion of the selection, organization and presentation of suitable geographical material for the different grades. *First semester, first year. Two credits.* 105 Education Building. Hall.

41. Kindergarten Methods as Applied to Primary Work. Problems and projects dealing with constructive activities. *Second semester, second year. One credit.* 209 Education Building. Ruebsam. Fee, $1.

42. The Teaching of History and Civics. A consideration of the aims of teaching history and civics and the effect of these aims on the selection, organization and presentation of subject matter suitable for the grades. *Second semester, second year. Two credits.* 103 Education Building. Hall.

48. Educational Tests and Measurements. This course will consider the most serviceable tests and scales for measuring the elementary subjects. It is designed to assist teachers in judging and improving their instruction. The course will involve giving the tests, scoring, and interpreting the results. *Second semester, second year. One credit.* 104 Education Building. Traner. Fee, $1.

56. Scoutcraft. This course will deal with the theory and practice of Scoutcraft as presented by Boy Scouts of America, Girl Scouts, Camp Fire Girls, Girl Reserves, and similar organizations. Section 1, for women, Miss Bernasconi. Section 2, for men, Russell. *One credit. Section 1 given first semester only. Given each semester.* 103 Education Building.

Secondary Education

Note—Since the candidates for high school positions greatly exceed the number of vacancies open to inexperienced teachers, it is highly desirable that students qualify to do effective service in elementary schools. This would necessitate taking ten to twelve Normal School units including one semester of practice teaching. This work may be taken as early as the Sophomore year.

60. Problems of Secondary Education. This course involves the study of some of the major problems that confront the high school classroom teacher, as: the problem of evaluating student ability and achievement, adapting instruction to individual differences, the function and place of the high school in our educational system, and the educational values of high school subjects. *Second semester. Three credits.* Open to Juniors only. 104 Education Building. Traner. Fee, $1.

63. School Management and School Law. A consideration of the fundamental facts of school law and the fundamental problems of school organization and school hygiene from the point of view of the teacher in the secondary school. *First semester. One credit.* 104 Education Building. Billinghurst.

71. Principles of Teaching. For teachers in secondary schools. A study of the various types of classroom teaching to discover the principles of selection, organization and presentation of subject matter in secondary schools. To be taken in the Senior year. *First semester. Three credits.* 105 Education Building. Hall. Fee, $1.

75–76. Practice Teaching[1]. Required for candidates for the high-school teacher's certificate. This work will be done in Grades 7 to 12 of the Reno Public Schools under the direction of the Professor of Secondary Education, the teachers of Vocational Education, with the immediate supervision of the cooperating teacher in charge. Students must take particular care that they reserve ample time either in the forenoon or afternoon for the course. *Failure to do so may make the assignment for practice teaching impossible. Both semesters. Two credits each semester.* Traner and Cooperating Teachers.

84. Supervision in the Elementary Grades. This course is designed for those intending to become principals, supervisors, or administrators in education. Observation, readings and discussions. Open to qualified upper classmen.

[1]Practice Teaching may not be taken unless Education 71 has been taken or is taken at the same time.

Second semester. Two credits. 209 Education Building. Hall.

AGRICULTURE AND HOME ECONOMICS

75–76. SUPERVISED TEACHING. For candidates for the high school teacher's diploma in Home Economics, and to meet in part the requirements of the Smith-Hughes Act. Students must reserve ample time for this work. *Both semesters. Two credits each semester.* Traner, Talboy, and Cooperating Teachers.

86. PROBLEMS IN AGRICULTURAL EDUCATION. This course is a study of the most important problems that an agriculture teacher must meet: Selecting the subject matter for high school courses in agriculture and for farmer's short courses; preparing plans for teaching this subject matter; and making contact with the adult farmer. Open to Juniors and Seniors in the College of Agriculture to meet in part the requirements of the Smith-Hughes Act. *Second semester. Two credits.* 103 Education Building. Jeppson.

88. PROBLEMS IN HOME-MAKING EDUCATION. A study of the curricula, methods of teaching, and making home contacts; use of texts, references and selection of equipment; and determination of aims and goals to be reached in public school home-making courses. Discussion of courses of study to meet various needs. Open to Juniors and Seniors in the School of Home Economics to meet in part the requirements of the Smith-Hughes Act. *Second semester. Two credits.* Talboy.

COURSES OFFERED PRIMARILY FOR TEACHERS IN SERVICE

Time and place according to the convenience of the teachers. No fees for teachers in service.

101–102. RESEARCH COURSE IN THE PROBLEMS OF SECONDARY EDUCATION. This course is offered for advanced students and for teachers in service who wish to study intensively some topic in secondary education, or to make some original investigation of some secondary school problem. *Both semesters. Two credits each semester.* 208 Education Building. Traner.

121–122. SCHOOL SUPERVISION. A course intended for prospective supervisory officers. *Both semesters. One credit each semester.* 104 Education Building. Hall and Ruebsam. Given only upon request of a sufficient number of teachers.

ELECTRICAL ENGINEERING

College of Engineering

PROFESSOR S. G. PALMER, HEAD OF DEPARTMENT
MR. SANDORF

22. ENGINEERING REPORT WRITING. Practice in the writing of engineering reports from personal investigations, abstracting of engineering papers, and presentation of papers before engineering students. *One credit. Second semester.* Electrical Building. Palmer.

23. PRINCIPLES AND PRACTICE OF ELECTRICAL ENGINEERING. A course for Mining and other nonelectrical students, involving the principles of electric circuits and machinery and their practical application in engineering. *First semester. Three credits.* Electrical Building. Palmer.

24. ELEMENTS OF ELECTRICAL ENGINEERING. A beginning course in electrical engineering which is offered to both engineering and nonengineering students. This course is a study of the laws and properties of electric and magnetic circuits, electrical measuring instruments and the more elementary forms of electrical machinery. *Second semester. Two credits.* Electrical Building. Palmer.

51. DIRECT CURRENT MACHINERY. The fundamental principles, theory, characteristics, construction and operation of direct current machines and circuits, supplemented by electrical problems. *Prerequisite:* Physics 4 and 6, Mathematics 11, 13 and 14. *First semester. Three credits.* Electrical Building. Palmer.

52. ALTERNATING CURRENT MACHINERY. Theory and application of alternating currents in electrical circuits and machinery; representation of alternating currents by vectors and complex quantities. *Prerequisite:* E. E. 51. *Second semester. Five credits.* Electrical Building. Palmer.

53. ALTERNATING CURRENT MACHINERY. ADVANCED COURSE. A continuation of the preceding course, taking up the more advanced problems in the theory and characteristics of electrical circuits and machinery. *Prerequisite:* E. E. 52. *First semester. Three credits.* Electrical Building. Sandorf.

55–56. ELECTRICAL PROBLEMS. A course of electrical engineering problems for Senior electrical students; requires a knowledge of trigonometry, calculus, vectors, complex quantities, alternating current circuits and machinery. *Both semesters. Three credits total for the two semesters.* Electrical Building. Sandorf.

58. Electrical Design. A study of the principles involved in the design of electrical machinery. *Prerequisite:* E. E. 52 and 53. *Second semester. Three credits.* Electrical Building. Sandorf.

61–62. Electrical Engineering Laboratory. Instruction in the use and care of electrical instruments and apparatus. Elementary tests on direct and alternating current machinery. *Prerequisite:* Physics 3, 4, 5, and 6. Must be preceded or accompanied by E. E. 51 and either 52 or 72. *Both semesters. Lecture, one period; laboratory, one period. Two credits each semester.* Electrical Building. Sandorf. Fee, $5 per semester.

63–64. Electrical Engineering Laboratory. Advanced Course. The course is a continuation of the preceding one, and takes up the more advanced problems in electrical testing. *Prerequisite:* E. E. 51, 52, 61 and 62. *Both semesters. Three credits each semester.* Electrical Building. Palmer. Fee, $5 per semester.

65. Engineering Applications. A study of storage batteries, illumination, electric heating and other applications of electricity in modern engineering practice. An elective for Junior and Senior electrical students. *First semester. Three lecture periods. Three credits.* Electrical Building. Palmer.

66. Engineering Applications. A study of switchboards, oil circuit breakers, relays and other auxiliaries of modern electric power stations. An elective for Senior electrical students. *Second semester. Three lecture periods. Three credits.* Electrical Building. Palmer.

67. Telephone Engineering. The theory and application of circuits and equipment involved in the telephone plant. A course for Senior electrical students. *First semester. Two credits.* Electrical Building. Sandorf.

68. Telephone Engineering. A continuation of the preceding course, including a study of radio apparatus. *Second semester. Two credits.* Electrical Building. Sandorf.

72. Alternating Currents. A course for mechanical, mining and other students who are not required to take the advanced courses in electrical engineering. A study of the theory and application of alternating currents in electrical machinery. *Prerequisite:* E. E. 51, Mathematics 25 and 26. *Second semester. Three credits.* Electrical Building. Palmer.

73–74. Theory of Electrical Testing. A course intended to accompany the senior electrical laboratory courses, consisting of study and class discussions of theory and practice of testing electrical machinery and circuits. *Two credits each semester.* Electrical Building. Palmer.

77–78. Electrical Engineering Laboratory. An elective course for electrical engineering seniors. The student may select the work either in machinery or communication circuits but must present an outline of the proposed experiments and have it approved by the instructor. *One to three credits each semester.* Electrical Building. Palmer or Sandorf. Fee, $2.50 per credit.

80. Electrical Investigation. Original investigation of some electrical engineering problem and writing of report. The report is intended to be the equivalent of a thesis. Elective for Seniors in electrical engineering, who, in the opinion of the instructor, are qualified to undertake the work chosen and are particularly interested in it. A laboratory fee up to $10 may be required, depending on the work undertaken. *Second semester. One to three credits.* Electrical Building. Palmer or Sandorf.

ENGLISH LANGUAGE AND LITERATURE

PROFESSOR HILL, ACTING HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR RIEGELHUTH
ASSOCIATE PROFESSOR HIGGINBOTHAM
ASSISTANT PROFESSOR HARWOOD
MR. DUERR
MR. GRIFFIN
MRS. FERRIS

Requirements for a minor in English: English 44–45, and twelve additional units in courses 51 to 100.

Requirements for a major in English: English 44–45, and eighteen additional units in courses 51 to 100.

1–2. Composition and Rhetoric. The theory of rhetoric is developed from the study and analysis of English prose masterpieces, and the principles thus established are applied in daily and weekly themes. *Three sections. Both semesters. Three credits each semester.* Riegelhuth, Duerr, Harwood, Griffin and Ferris.

3–4. ADVANCED COMPOSITION. The study and practice of exposition, description, and narration. In this and the following course the aim is to develop the individual needs of the student, as well as to give him general training in writing. *Prerequisite:* English 1–2. *Both semesters. Three credits each semester.* 201 Stewart Hall. Harwood. (Offered in 1930–1931.)

8. SPEECH FUNDAMENTALS. The study of voice effectiveness and diction correctness based upon a general study of the vocal apparatus, with exercises in English phonetics and drills in enunciation and pronunciation. The course aims, by individual instruction, to improve the speaking voice and to correct faulty habits of speech. *Either semester. One credit.* 304 Morrill Hall. Duerr.

11–12. PUBLIC SPEAKING. The principles of effective public speaking studied and practiced through organized student discussions of contemporary controversial problems. Speech form and speech content are equally emphasized. *Both semesters. Two credits each semester.* 304 Morrill Hall. Duerr and Griffin.

16–17. ARGUMENTATION AND DEBATE. The study of the principles of argumentation with the preparation of briefs, the participation in class debates, and the presentation of argumentative talks. The study of thinking, and the expression of thoughtful opinions on current topics are stressed. *Both semesters. Two credits each semester.* 204 Stewart Hall. Griffin.

21–22. EXPRESSION. The oral interpretation of the forms of literature with special attention directed to diction, gesture, the voice, and platform poise. The course is recommended to beginning students in public speaking, teaching, and dramatic work. *Both semesters. Three credits each semester.* 304 Morrill Hall. Duerr.

25–26. NEWS-GATHERING AND WRITING. Study of news values, the elements of the news story and the gathering of news. Practical application of these principles in the reporting and writing of all types of news for Reno newspapers and those of surrounding cities. Discussions and laboratory work. Year course. Upon consent of the instructor, students may repeat the second semester of this course for credit, in which case the course will be designated English 26A, 26B, and so on. *Prerequisite:* English 1–2. *Both semesters. Three credits each semester.* 105 Education Building. Higginbotham.

41–42. MASTERPIECES OF ENGLISH LITERATURE. The reading and study of the more important specimens of English literature. Lectures, assigned readings, and oral and written reports. *Prerequisite:* English 1–2. *Three sections. Both semesters. Two credits each semester.* Stewart Hall. Riegelhuth and Harwood.

44–45. GENERAL HISTORY OF ENGLISH LITERATURE. The study of literary movements and the interpretation of representative authors. Lectures, assigned readings, and weekly themes. *Prerequisite:* English 1–2. *Both semesters. Three credits each semester.* Stewart Hall. Hill, Riegelhuth, and Harwood.

51. NEWS EDITING. Study of the principles of editing copy of all types. Practice in copyreading, headline writing, rewriting, and in similar editorial duties. Discussions and laboratory. *Prerequisite:* English 25–26. *First semester. Three credits.* 105 Education Building. Higginbotham.

52. ADVANCED REPORTING. Intensive work in collecting and writing news under actual newspaper office conditions. Designed to promote professional skill and speed. News of the city will be covered for Reno newspapers. *Prerequisite:* English 25–26. *Second semester. Three credits.* 105 Education Building. Higginbotham.

53. THE COMMUNITY NEWSPAPER. Study of the problems of journalism peculiar to the country weekly and the small city daily, especially as found in Nevada. *Prerequisite:* English 25–26. *First semester. Three credits.* 105 Education Building. Higginbotham. (Offered in 1930–1931.)

54. PROBLEMS IN JOURNALISM. Members of the class will outline and carry through a program of study in one or more of the special phases of journalism in which they may be interested. *Prerequisite:* English 25–26. *Second semester. Three credits.* 105 Education Building. Higginbotham. (Offered in 1930–1931.)

55. THE AMERICAN NEWSPAPER. Lectures and discussions on the history, functions, future, principles, problems and opportunities of the newspaper in the United States, and study of the profession of journalism. Open to Juniors

and Seniors. *First semester. Three credits.* 105 Education Building. Higginbotham.

56. News Editing. Editing of all types of newspaper copy, writing headlines, rewriting stories, practice in the art of make-up, and the study of the duties of a newspaper editor. Practical experience in editing copy. Discussions and laboratory work. *Prerequisite:* English 25–26, 44–45. *Second semester. Three credits.* 105 Education Building. Higginbotham.

57. Editorial Writing. The study of the interpretation of news and the writing of the newspaper and magazine editorial. Analysis of the responsibilities of the editorial writer to the publication, the community and the profession. *Prerequisite:* English 25–26. *First semester. Three credits.* 105 Education Building. Higginbotham. (Offered in 1930–1931.)

58. The Feature Article. The study and writing of the special feature articles for newspapers and magazines. *Prerequisite:* English 25–26. *Second semester. Three credits.* 105 Education Building. Higginbotham. (Offered in 1930–1931.)

59. Intensive work in exposition, description and narration to develop familiarity with these types. *First semester. Three credits.* 204 Stewart Hall. Hill.

60. Advanced Composition. The development of the higher types of writing. The course will be planned to bring out the special capabilities of the individual student, especially in narrative. *Second semester. Three credits.* 204 Stewart Hall. Hill.

61–62. Advanced Speech Composition. Formal oral discussions, and occasional addresses, based upon the study of contemporary literary, political, and sociological questions. Open to a limited number of students who have the consent of the instructor. This course may be repeated for credit 16a, 16b, etc. *Prerequisite:* English 11–12 or 16–17. *Both semesters. Two credits each semester.* 304 Morrill Hall. Duerr.

63–64. Oratory. Individual research work based upon the examination of backgrounds, methods, and ideals of modern oratory. British eloquence is studied the first semester and American eloquence the second. *Prerequisite:* English 11–12 or 16–17. *Both semesters. Two credits each semester.* 304 Morrill Hall. Duerr.

66. The English Essay. A study of the development of the essay as a literary form from Bacon to the present day. Reports and informal essays based on the study of representative British and American essayists and essay types. *Second semester. Three credits.* 104 Stewart Hall. Riegelhuth.

68–69. The English Novel. The study of the development of the novel from the early Nineteenth Century to the present day. *Both semesters. Three credits each semester.* 204 Stewart Hall. Hill.

70–71. American Literature. The study of American prose and poetry from the beginning of the Nineteenth Century to the present time. *Both semesters. Three credits each semester.* 204 Stewart Hall. Hill. (Offered in 1930–1931.)

72–73. The Modern Drama. Representative modern European and American dramatists. *Prerequisite:* English 44–45. *Both semesters. Three credits each semester.* 204 Stewart Hall. Hill. (Offered in 1930–1931.)

75–76. Shakespeare. The interpretation of representative plays. *Prerequisite:* English 44–45. *Both semesters. Three credits each semester.* 204 Stewart Hall. Hill.

77. The Bible as Literature. The study of the representative literary types found in the Old Testament. *Prerequisite:* English 1–2 and 41–42 or 44–45. *Second semester. Three credits.* 204 Stewart Hall. Hill.

78. Milton. Minor poems, dramas, and Paradise Lost. *Prerequisite:* English 44–45. *First semester. Three credits.* 204 Stewart Hall. Hill.

79. The Poetry of the Romantic Period, with emphasis on Wordsworth and Coleridge. *First semester. Three credits.* 104 Stewart Hall. Riegelhuth.

80. Tennyson and Browning. The study of the chief writings of Tennyson and Browning, with special emphasis of the "Idylls of the King," and "The Ring and the Book." *Prerequisite:* English 44–45. *Second semester. Three credits.* 204 Stewart Hall. Riegelhuth. (Offered in 1930–1931.)

81–82. Play Production. The reading, study, and production of representative modern plays, one-act and longer, with lectures, readings, and reports. Practice work is

offered in all the aspects of play production: management, lighting, scenery and costumes, directing, acting etc. Special work is given for prospective high school teachers. *Prerequisite:* Junior standing, or the permission of the instructor for Sophomores. *Both semesters. Three credits each semester.* Education Auditorium. Duerr.

85–86. THE ENGLISH DRAMA. A comprehensive survey of English drama, other than Shakespearean, from its beginnings to the Nineteenth Century. Assigned readings and written reports. *Prerequisite:* English 44–45. *Both semesters. Three credits each semester.* 201 Stewart Hall. Harwood.

94. CHAUCER. The Canterbury Tales. *Prerequisite:* English 44–45. *First semester. Three credits.* 204 Stewart Hall. Hill.

97–98, 99–100. HONORS FOR UNDERGRADUATES. Open only to Juniors and Seniors majoring in English who have attained an average grade of 2.0 in all their work. *One group each semester. One credit a semester.* Hill.

101–102. THESIS COURSE. Open only to graduate students. *Both semesters.* Hours to be arranged with individual students. *Three credits each semester.* Library. Hill.

GENERAL ENGINEERING

1. GENERAL ENGINEERING. Orientation. The course is designed to lay before the Freshmen engineering students upon entering the University the difficulties and rewards of college life and of engineering as a life profession.

One period a week deals with the University requirements for entrance, for residence, for graduation and for advanced degrees, stressing the need of and best methods of acquiring a good scholarship record, bringing out the benefits thereof, and kindred subjects.

One period a week is given to lectures by the engineering faculty on the course of study of each engineering school, the nature of work its graduates enter, and the drawbacks and possibilities of that branch of engineering, with the purpose of the lectures being to aid or confirm the student in his choice of engineering school. *First semester. Two lectures a week. One credit. Required of all Engineering Freshmen.* Carpenter and Engineering Faculty.

GEOLOGY

PROFESSOR JONES, HEAD OF DEPARTMENT
PROFESSOR CARPENTER
ASSOCIATE PROFESSOR GIANELLA

Requirements for a minor in Geology: Physics 1–2 (unless Physics is offered for admission), Chemistry 1 (unless Chemistry is offered for admission), Mineralogy 1 and 2, Geology 8–9, and six additional units in Junior-Senior courses.

Requirements for a major in Geology: Physics 1–2, or 3–4 and 5–6, Chemistry 5 and 6, Mineralogy 1–2, Geology 8–9, and twelve additional units in Junior-Senior courses.

Students expecting to follow Geology as their life work should consult with the head of the department as early as possible in their course and plan their work so as to lay an adequate foundation for further work in their specialty in a graduate school.

8. GENERAL GEOLOGY. A general discussion of geologic forces and their results, dealing chiefly with the dynamic and structural aspect of the subject. The interpretation of topographic maps. *Prerequisite:* At least Sophomore standing. *Either semester. Three credits.* Mackay School of Mines. Jones.

9. HISTORICAL GEOLOGY. An outline of the origin and history of the earth, including the diastrophic changes, stratigraphic relationships, and the description of the physical geography and life of the successive geological periods, with especial reference to the North American Continent. *Prerequisite:* Geology 8. *Either semester. Three credits.* Mackay School of Mines. Jones and Gianella.

10. ENGINEERING GEOLOGY. (College of Engineering.) A study of the forces active on and within the earth, and their results, with especial emphasis on their effects on engineering problems. The recognition of common rocks and minerals and the interpretation of topographic maps. *Second semester. Three credits.* Mackay School of Mines. Jones and Gianella.

11. HISTORICAL GEOLOGY. (College of Engineering.) A brief summary of the origin and history of the earth. *Prerequisite:* Geology 8 or 10. *Second semester. Three credits.* Mackay School of Mines. Jones and Gianella.

51. PETROLOGY. The study of rock-forming minerals and rocks in the hand specimen. Lectures on the characters, origin, and classification of rocks. *Prerequisite:* Geology 8 or 10, Mineralogy 1 and 2. *First semester. Two credits.* Mackay School of Mines. Jones.

52. Petrography. The study of rock-forming minerals and rocks under the microscope. *Prerequisite:* Geology 8 or 10, Mineralogy 1 and 2, Physics 1–2 or 10. *Second semester. Three credits.* Mackay School of Mines. Jones.

60. Economic Geology of the Nonmetals. A study of the occurrence, distribution, origin, and distinctive features of fuels and other nonmetallic rocks and minerals utilized commercially. *Prerequisite:* Geology 8, 9 or 10, Mineralogy 1–2. *Second semester. Three credits.* Mackay School of Mines. Jones and Carpenter.

61. Economic Geology of the Metals. The geology of ore deposits treating of their origin, mode of occurrence, alteration, and distribution; with a study of the more important mining camps in North America. *Prerequisite:* Geology 1–2 or 3, Mineralogy 1–2. *First semester. Three credits.* Mackay School of Mines. Jones.

70. Field Geology. Instruction in field methods, with practice in the investigation of a selected area in the vicinity of the University. *Prerequisite:* Geology 8 or 10; Mineralogy 1. *Second semester. One credit.* Jones.

71. Summer Field Geology. Two or more weeks are spent during the summer vacation in the mapping and study of one or more mining camps where both the surface and underground geology may be investigated. A concise report of the work, together with well-kept field notes and finished geological maps is required of each member of the class. *Prerequisite:* Geology 51 and 60 or 61. *Credits to be arranged.* Jones.

79. Geological Investigation. Original investigation of some geological problem. *Prerequisite:* Geology 8–9, or 10–11, 51, 52, and 60, or equivalent training. *First semester. Credits to be arranged.* Mackay School of Mines. Jones.

80. Geological Investigation. Continuation of Geology 79. *Second semester. Credits to be arranged.* Mackay School of Mines. Jones.

101. Graduate Course. The original investigation of geologic problems, with seminar for discussion of current geologic literature and special topics. *Credits to be arranged.* Mackay School of Mines. Jones.

HISTORY AND POLITICAL SCIENCE

PROFESSOR WIER, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR FEEMSTER
ASSOCIATE PROFESSOR HICKS

Requirements for a minor in History: History 5–6 and ten additional units in courses 51–100.

Requirements for a major in History: History 5–6 and sixteen additional units in courses 51–100.

Requirements for a minor in Political Science: Either History 79–80 or History 91–92; Political Science 1–2, and eight additional units in Political Science 51–100, or in History 73–74, 87–90, or in both.

Requirements for a major in Political Science: History 5–6 and either History 79–80 or History 91–92; Political Science 1–2, and fourteen additional units from Political Science 51–100, or History 73–74, 87–90, or in both, but not more than six of these fourteen may be in History.

For both majors and minors in History and Political Science choice is to be made according to aim in view and is to be approved by the head of the department.

Requirement for the department's recommendation for the teaching of History in high schools: A major or minor, including History 51, History 55–56, and History 71–72.

History 1–2 and 5–6 are designed to lay a foundation for the advanced courses in History and Political Science. History 1–2 is prerequisite to all other courses in History. Political Science 1–2 is prerequisite to all other courses in Political Science except 79–80.

History

1–2. History of the Americas. Against a broad European background the spread of civilization in America will be traced. The development of each geographical section will be presented and the relation shown of each section to America as a whole. Culmination of the study will be found in a survey of the Great Basin and the place of Nevada in that basin. The course will deal in a comprehensive way with the large movements of a political, economic, and social nature in the New World. It is intended to give a new and large American perspective. The Constitutions of the United States and of Nevada will be studied in fulfillment of the state legal requirement. *Either semester. Three credits each semester.* Regular Freshman History Course. 101 Stewart Hall. Wier, Hicks, and .....

3–4. American Expansion. Same course as 1–2 but without method instruction, and more advanced in character. For Sophomores who have previously taken "European

Civilization" as a Freshman course. *Both semesters. Three credits each semester.* 101 Stewart Hall. Wier, Hicks, and .....

5–6. EUROPEAN CIVILIZATION. The development of western civilization in Europe from the Roman Empire to the present time. Designed to furnish perspective for the understanding of the present-day world. *Both semesters. Three credits each semester.* 203 Stewart Hall. .....

51. THE TEACHING OF HISTORY. A study of the aims, methods, and materials for history teaching in secondary schools and colleges. Required for departmental recommendation for high school teaching of history. *First semester. Two credits.* 101 Stewart Hall. Wier.

53. INSTITUTIONAL RELATIONS OF WOMAN IN HISTORY. A study of woman's characteristics in relation to social and industrial life both in past centuries and at the present time. Especial emphasis on the vocations now open to women and the significance of college education in preparation for the same. Lectures on various vocations will be given by representatives of these professions and industries. Open to Freshmen women, as well as to all other women students. *First semester. Two credits.* 101 Stewart Hall. Wier. (Not given in 1929–1930.)

54. HISTORICAL GEOGRAPHY. The movements of population as influenced by geographical factors. Traces political development, particularly of Eurasia, and familiarizes the student with the map. Adapted to the needs of Normal students. *Second semester. Two credits.* 101 Stewart Hall. Wier. (Not given in 1929–1930.)

55–56. WESTWARD EXPANSION OF THE UNITED STATES. A study of the westward movement from the Atlantic to the Pacific and of the continuous influence of the West upon national and international affairs. Particular attention will be given to the political, economic, and social aspects of the occupation of the various sections. Required for departmental recommendation for high school teaching of history. *Both semesters. Two credits each semester.* 101 Stewart Hall. Wier.

57–58. HISTORY OF WESTERN AMERICA. The study of the development of the Pacific Slope during the Spanish, Mexican, and early American periods. Comparison made with

Atlantic Coast development. Study of legal and other institutions. Important as introduction to history of Nevada. *Both semesters. Two credits each semester.* 101 Stewart Hall. Wier. (Given on sufficient demand.)

59–60. LATIN AMERICA. This course will comprise an examination of representative States of South and Central America; their struggle for stability, their relations to each other and to the United States. Library readings will be assigned in the industrial development of Latin America and in the social and cultural character of Spanish-American civilization. Recommended for students of Spanish. *Both semesters. Two credits each semester.* Hicks.

62. PRE-HISTORY. A study of human civilization before the time of written records. (To alternate with History 54.) *Second semester. Two credits.* 101 Stewart Hall. Wier.

63. THE RENAISSANCE. This course deals with the development of the modern spirit beginning with the last quarter of the Thirteenth Century. The topics stressed are the rise of nationalism, the revival of the individual, of art, of science, of conscience, and the age of discovery. Lectures are given and reports made by students on assigned topics. Given on sufficient demand. *First semester. One credit.* (Not given in 1929–1930.)

64. THE REFORMATION. A continuation of History 63. This course deals with the Catholic Reformation and the Protestant Revolution. Some of the topics considered are humanism and heresy, the Elizabethan Age, the revolt from Rome of the several European countries, the social revolution, and the results of the Protestant Revolt. Lectures are given and reports made by students on assigned topics. Given on sufficient demand. *Second semester. One credit.* (Not given in 1929–1930.)

65–66. RESEARCH COURSE IN NEVADA HISTORY. A course designed to train students in research methods and at the same time give knowledge of Nevada history. *Both semesters. Credit to be arranged.* 101 Stewart Hall. Wier. (Indefinitely postponed until library materials are again available.)

67–68. HISTORY OF THE FAR EAST. This course includes a consideration of the more significant phases of internal developments in China and Japan, with special emphasis

on the international relations of these states one with the other and with European states. *Both semesters. One credit.* Room 104. Hicks. (Not given in 1929–1930.)

71–72. Ancient Civilization. A study of the rise of the institutions of civilization, of nationality, and of empire, culminating in Imperial Rome. This course is designed for those preparing to teach History or Latin, for classical students, and for all who desire a collegiate course in ancient civilization. *Both semesters. Two credits each semester.* 105 Stewart Hall. Feemster. (Not given in 1929–1930.)

73–74. Ancient Institutions and Roman Law. An introduction to historical jurisprudence in the survey of the chief legal codes in force in early history as the background of the modern world, Hebrew, Greek, Roman to the codification of Justinian, with major emphasis on Roman Law. Library references to Maine, Lee, Kocourek and Wigmore, and Vinogradoff will be available. The course coordinates with English Constitutional History. *Both semesters. One, two or three credits per semester.* 105 Stewart Hall. Feemster.

76. Medieval Civilization and Institutions. A study of the feudal system, the system of universal monarchy as embodied in the Holy Roman Empire, of the Church as the controlling force, etc. *Second semester. Three credits.* 101 Stewart Hall. Wier. (Given on sufficient demand.)

79–80. The French Revolution. Its causes and constitutional experiments. Studied from the European and American standpoint rather than as a French local crisis. *Both semesters. Two credits each semester.* 101 Stewart Hall. Wier. (Not given in 1929–1930.)

81–82. The Far East. The aim of this course is to give students a better understanding of the peoples of the Orient. The history of China and Japan is dealt with, stress being laid upon the relations of the western nations and the peoples of the two leading oriental countries especially since the middle of the Nineteenth Century. *Both semesters. Two credits each semester.* Hicks.

83. Russia and Her Neighbors. The course is essentially a study of modern Russia in the light of historical development. A standard work like Wallace is read and applied to Russia of today as a method of approaching the present Russian enigma. *First semester. Two credits.* 105 Stewart Hall. Feemster. (Not given in 1929–1930.)

85–86. The Middle Period: United States History from the Second War with Britain to the Rebellion of the Cotton States. A more intensive study from the standard historians and sources of the formative period of American political character as distinct from inherited Anglo-Saxon institutions. The rise of the protective tariff system, and fall of the national banking system and currency. Jacksonian democracy and the rise of the National Party system, United States hegemony in the rising group of western republics, expansion and territorial imperialism, the losing struggle of the Slave States to control Congress, political constitutional philosophy on the nature of the Union, nullification, the rise of the New Republican Party, the breakdown of Constitutional Federal Government and the appeal to the sword. *Both semesters. Two credits each semester.* 105 Stewart Hall. Feemster. (Not given in 1929–1930.)

87–88. English Constitutional History. A study of the rise of the English constitution out of the institutions of the medieval world. Comparison will be made with the contemporary institutions of the church, the Holy Roman Empire and the early French Monarchy. *Both semesters. Three credits each semester.* 105 Stewart Hall. Feemster.

89–90. Modern Constitutional History. A detailed examination of the founding of the United States of America. The movement will be compared with the contemporary constitutional efforts in Poland and the first French Republic. *Both semesters. Three credits each semester.* 105 Stewart Hall. Feemster. (Not given in 1929–1930.)

91. The Twentieth Century: The Rivalry of the Nations. An intensive prewar study. Not given for less than five students. Open to History majors and minors and those specially qualified. The course will trace world movements from the Spanish-American War to the outbreak of the War of 1914. *First semester. Two credits.* 105 Stewart Hall. Feemster.

92. The Twentieth Century: The Struggle of the Nations. A continuation of course 91. A critical study of war history and war historians, with source studies on selected topics. *Second semester. Two credits.* Feemster.

99–100. History Thesis Work. *Both semesters. Credits to be arranged.* 101 Stewart Hall. Wier.

199–200. Graduate Thesis. *Both semesters. Credits to be arranged.*

Political Science

1–2. COMPARATIVE GOVERNMENT. This course is to be regarded as introductory to the other courses in the department. A survey is made of the structure and chief features of the practical operation of the governmental systems of the United States, England, the leading countries of Europe, and certain typical countries of South America. *Both semesters. Two credits each semester.* 105 Stewart Hall. Feemster and Hicks.

51. STATE GOVERNMENT. A survey of the structure and workings of the state governments in the United States of America. The Governor, the Legislature, the Courts; constitutional changes as shown by the experience of other States. Attention will be given to the organization and function of state parties; also to the new movements in county organization. *First semester. Three credits.* 105 Stewart Hall. Feemster.

53. MUNICIPAL GOVERNMENT. An introduction to the problems, both of government and administration, which confront the municipalities of the United States. Reference is also made throughout to European experience. *First semester. Three credits.* 105 Stewart Hall. Feemster. (Not given in 1929–1930.)

64. INTERNATIONAL LAW. An elementary study of the principal topics, accompanied by examination of leading cases. *Second semester. Three credits.* 105 Stewart Hall. Feemster. (Not given in 1929–1930.)

66. INTERNATIONAL GOVERNMENT AND INSTITUTIONS. The course correlates with the course in International Law and will examine in the order of their rise, the Monroe Doctrine and the Pan-American System, the Hague Conferences and Court, The League of Nations and its organs and activities. *Second semester. Two credits.* Feemster.

79–80. THE CONSTITUTIONS OF THE UNITED STATES AND NEVADA. For Seniors of all colleges. *Both semesters. One credit.* Feemster.

85–86. COLONIAL EXPANSION. The history of the colonial acquisitions of the great nations and a comparative study of institutions developed therein, with special emphasis upon the United States. *Both semesters. Two credits each semester.* 101 Stewart Hall. Wier. (Given on sufficient demand.)

93–94. POLITICAL PROBLEMS. Open to accredited students in the department and by permission to intercollegiate debaters. Current controversial issues will be selected each semester for analysis and investigation in the best current departmental periodicals. *One-half to two credits per semester according to work done.* 105 Stewart Hall. Feemster.

99–100. THESIS.

199–200. GRADUATE THESIS. Library facilities are available in two subjects. The Constitutional Convention of 1787, and the diplomacy of the outbreak of the war of 1914. *Both semesters. Credits to be arranged.* Library. Feemster.

HOME ECONOMICS

College of Agriculture

PROFESSOR LEWIS, HEAD OF DEPARTMENT
[1]ASSOCIATE PROFESSOR BUOL
ASSOCIATE PROFESSOR POPE
ASSISTANT PROFESSOR SPRINGER

3. INTRODUCTORY COURSE. This course is designed (1) to give students a knowledge of the aims, ideals and accomplishments of Home Economics. (2) To assist them in forming correct habits of right living. *First semester. Lecture, one period. One credit.* 204 Agricultural Building. Lewis.

9. GENERAL HOME ECONOMICS. This course, offered for Normal School students, deals with the following units: Selection and care of clothing; rural home improvement; hot school lunch; and school hygiene. *First semester. Lecture, one hour; laboratory, two periods. Three credits.* 203 Agricultural Building. Lewis, Pope, Springer. Fee, $2.

15–18. CLOTHING. An elementary clothing course dealing with adaptation of commercial patterns and modifications of them; use of sewing machine with attachments and applications made in making of underwear and household problems; construction of dresses; study and working out of individual clothing budgets. *Both semesters. Laboratory, two periods. Two credits each semester.* 204 Agricultural Building. Pope. Fee, $2.

16. TEXTILES AND DESIGN. A study of textile fibers, processes of the manufacture of fabrics, simple tests; comparison and identification of manufactured products. The study

[1]Member of Agricultural Extension Staff.

of color and design as adapted to house and clothing. *Second semester. Lecture, one period; laboratory, one period. Two credits.* 204 Agricultural Building. Pope. Fee, $2.

31–32. Foods and Cookery. A study of foods from the standpoint of their composition, economy, selection, preparation and use. *Both semesters. Laboratory, two periods; lecture, one hour. Three credits each semester.* 203 Agricultural Building. Springer. Fee, $5.

33. Foods and Nutrition. This course is planned for the general student who desires to be intelligent on the problem of human nutrition. The source, composition and preparation of foods, also the energy, protein, mineral and vitamine requirements of the individual are considered. Dietary corrections of under and over weight and the general application of diet to health is emphasized. Not open to Freshmen. *First semester. Lecture, two periods. Laboratory, one period. Three credits.* 204 Agricultural Building. Lewis. Fee, $3.

34. Clothing and Textiles. This course deals with the study of textile fibers and simple tests—the study of sewing machines and use of patterns—the selection and care of clothes. Not open to Home Economics majors. *Second semester. Laboratory, two periods. Lecture, one period. Three credits.* 204 Agricultural Building. Pope. Fee, $0.50.

45. Related Art. This course includes a study of color and its application in plain and pattern dyeing, block-printing and articles made on the looms, as well as the principles underlying reed work and the making of construction problems. *Either semester. Laboratory, two periods. Two credits.* 108 Agricultural Building. Pope. Fee, $2.

49. Elementary Millinery. This course is designed to teach selection, making, care, and renovation of hats and trimmings. *First semester. Laboratory, two periods. Two credits.* 108 Agricultural Building. Pope. Fee, $2.

50. Advanced Millinery. Advanced problems based on work done in elementary course. *Second semester. Laboratory, two periods. Two credits.* 108 Agricultural Building. Pope. Fee, $2.

52. Principles of Extension Work. This course is designed to give a survey of rural conditions as they exist in the country today, with particular emphasis on Nevada. The importance of farmer movements and their relation

to national development will be touched upon. A history of the development of the land-grant colleges and agricultural extension work will be given, and particular emphasis placed on the organization of this work in Nevada. The farm, the farm home and rural community will be the basis for discussion, and short field trips will be made to observe the work of agricultural extension agents in near-by counties. The purpose of this course is to assist students to qualify for positions as county extension agents, boys and girls club leaders, local community leaders, etc. *To be given on sufficient demand. Second semester. Lecture, two periods. Two credits.* Buol and .....

54. Home Nursing. This course aims to give the students a knowledge of the general home care of the sick and invalids; the sick room, its equipment and care; various types of diseases, their symptoms and treatment; and the immediate care in accidents and emergencies. *Second semester. Lecture, one period. One credit.* 208 Artemesia Hall. Springer.

55. Foods and Cookery. This course includes a consideration of food from the standpoint of meal planning, marketing, cost, preparation, service, and field trips. The project work consists of an intensive study of types of food in which the individual is particularly interested. The lectures include a study of kinds, selection and care of linen, china and silver. *Prerequisite:* Home Economics 31–32. *Lecture, one period; laboratory, three periods. Four credits. First semester.* 203 Agricultural Building. Springer. Fee, $5.

66. Advanced Clothing. Costume design and tailoring. A study of line and proportion of the average human figure, together with a study of the principles of design, color and materials, forms the basis for designing garments for various types. The selection of a complete outfit including accessories, and the construction of the outer garments constitute the major part of the laboratory work. The history of costume and the stages in its development is presented. *Prerequisite:* Home Economics 15, 16, 18. *Lecture, one period. Laboratory, two periods. Three credits. Second semester.* 204 Agricultural Building. Springer. Fee, $2.

76. Child Care. A study of the development of the child from the beginning of life through adolescence. Habit formation; proper feeding, nursing of simple ailments. Open

to Juniors and Seniors only. *Second semester. Lectures, two periods.* 109 Agricultural Building. Springer.

81. Dietetics. Lectures on the function and nutritive value of foods; feeding of families, typical dietaries; comparative cost and nutritive value of foods; requirements according to age, health, and activity. *Prerequisite:* Home Economics 31–32, 55; Chemistry 26; Hygiene 7–8. *Second semester. Two credits.* 206 Agricultural Building. Lewis.

83. Dietetics Laboratory. Practice in the computing and measuring of 100 calorie portions of common foods, and preparation of meals according to definite dietetic requirements. *Prerequisite:* Home Economics 31–32, 55; Chemistry 26; Hygiene 7–8. *Parallel:* Home Economics 81–83. *Second semester. Laboratory, three periods. Three credits.* 203 Agricultural Building. Lewis. Fee, $5.

85. Special Problems in Foods. A course intended for advanced students capable of experimental and research work. *Prerequisite:* Home Economics 31–32, 55. *Either semester. Laboratory, two periods. Two credits.* 203 Agricultural Building. Lewis. Fee, $5.

86. Household Administration. The following units are discussed: The evolution of woman's work and her changing relations to society; the modern home, its equipment and scientific management; household budgets. Open to Juniors and Seniors only. *Second semester. Lectures, two periods. Two credits.* 204 Agricultural Building. Lewis.

87. House Decoration. Planning, decorating, and furnishing of homes, considering art, convenience, sanitation, and economy. *Prerequisite:* Art 5 and 6, Home Economics 16. *First semester. Lecture, one period; laboratory, two periods. Three credits.* 108 Agricultural Building. Lewis. Fee, $1.50.

88. Care of the House. A study of care of the house and its furnishings, making practical application of facts learned in Chemistry and Physics. *Prerequisite:* Physics 19; Chemistry 5. *First semester. Lecture, one period; laboratory, one period. Two credits.* 109 Agricultural Building. Pope. Fee, $1.

95. Special Problems in Clothing. A course designed for advanced students who wish to carry further the study of some problems suggested or touched upon previously in Home Economics work. This course is elective at discretion of the Instructors. *Either semester. Lecture, one period; laboratory, one period. Two to four credits.* 108 Agricultural Building. ..... Fee, $2.

Teacher-Training Courses in Home Economics. *See Education.*

MATHEMATICS AND MECHANICS

PROFESSOR HASEMAN, HEAD OF DEPARTMENT
ASSISTANT PROFESSOR SEARCY

Requirements for a minor in Mathematics: Mathematics 11, 13, 14, 25, 26, or their equivalent, and two additional units approved by the department.

Requirements for a major in Mathematics: Mathematics 11, 13, 14, 25, 26, 85, or their equivalent, and nine additional units approved by the department.

Mathematics 9 and 10 may be substituted for 11, 13 and 14 in the major and minor requirements.

5. Elementary Algebra. A thorough study of elementary algebra including quadratic equations. The course is designed to suit a variety of students, those having had practically no algebra and those having had as much as one year in the high school. This course will be required of students whose credentials permit them to take Mathematics 11, but who are unable to carry it. Such students will receive no credit for this course. *First semester. Two credits.* 204 Morrill Hall. Searcy.

7. Solid Geometry. The geometry of the plane, the cone, the prism, the pyramid, and the sphere. *Second semester. Two credits.* 202 Morrill Hall. Searcy.

9–10. Elementary Analysis. This course will cover algebra, trigonometry, and analytic geometry. It is designed for Freshmen who choose mathematics for their science requirement and students who expect to take a major or minor in mathematics. *Both semesters. Six credits.* 204 Morrill Hall. Haseman.

11. Advanced Algebra. A thorough review and drill in algebra, with special emphasis on the topics that will be most helpful in the higher courses in mathematics. This course is required of all engineering students. *First semester. Two credits.* 202 Morrill Hall. Haseman and Searcy.

13. Plane Trigonometry. A study of the trigonometric functions and indentities. Considerable time is devoted to the solution of triangles. This course is required of all Engineering students. *First semester. Three credits.* 202 Morrill Hall. Haseman and Searcy.

13A[1]. A review of the solution of equations, and the simplifying of fractions, graphing statistics, engineering data and functions. Practical solution of triangles, solution of vector problems applied to forces, velocities and accelerations. Study of the straight line, circle, parabola, ellipse and hyperbola. Graph of curves in polar coordinates. (College of Engineering.) *Second semester. Three credits.* Haseman.

14. ANALYTIC GEOMETRY. An analytical treatment of the properties of the straight line, circle, parabola, ellipse, and hyperbola. Polar coordinates, the transformation of coordinates, and the general second-degree equation in two variables will also be studied. *Second semester. Three credits.* 202 Morrill Hall. Haseman and Searcy.

25. DIFFERENTIAL CALCULUS. A thorough study of the fundamental principles of differential calculus with application to expansion in series, tangents and normals, curvature, indeterminate forms, maxima and minima. Illustrative examples of a practical nature are emphasized. *First semester. Three credits.* 204 Morrill Hall. Haseman.

25A[1]. ELEMENTARY DIFFERENTIAL CALCULUS. Its application to tangents, normals, rates, maxima and minima. (College of Engineering.) *First semester. Three credits.* Haseman.

26. INTEGRAL CALCULUS. The elements of integral calculus are first taken up in conjunction with certain topics in differential calculus not completed in the previous course. This is followed by the application of integration to areas of curves, areas of surfaces, volumes, moments of inertia, centers of gravity, etc. *Second semester. Three credits.* 204 Morrill Hall. Haseman.

26A.[1] Simple forms of integration. Application of integral calculus to areas, volumes, arcs, pressures, work, center of gravity, moment of inertia, rectilinear and curvilinear motion of particles. (College of Engineering.) *Second semester. Three credits.* Haseman.

28. MATHEMATICAL THEORY OF INVESTMENTS. *Either semester. Three credits.* 204 Morrill Hall. Haseman.

32. The application of mathematics, including integral calculus to the solution of practical problems arising in the various engineering departments. Required of all regular

[1]Practical courses to be substituted for the regular engineering courses by students having particular difficulty with mathematics.

engineering students who have had integral calculus. (College of Engineering.) *Second semester. Two credits.* Haseman.

35. SPHERICAL TRIGONOMETRY AND PRACTICAL ASTRONOMY. The solution of spherical triangles and the application of trigonometry to certain problems of practical astronomy. The theory and the use of the transit instrument. The determination of time, latitude and longitude. *Second semester. Two credits.* 202 Morrill Hall. Searcy.

40. DETERMINANTS AND THE THEORY OF EQUATIONS. The study of determinants and their applications. The theory of the quadratic, cubic, biquadratic, and the general algebraic equation. Approximation methods of solving equations of higher degree than the second. *Second semester. Two credits.* 204 Morrill Hall. Haseman.

55–56. ANALYTIC MECHANICS. Work in the resolution of forces, moment inertia, laws of motion, friction, dynamics of machinery, work and energy, and impulse. Special emphasis is given to practical problems. *First semester, three credits. Second semester, two credits.* 204 Morrill Hall. Haseman.

55A.[1] Methods of solution of practical problems in mechanics, including forces, friction, work and energy, and impulse. (College of Engineering.) *First semester. Three credits.* Haseman.

62. ENGINEERING MATHEMATICS. A general course in mathematics especially designed for electrical engineering students. *Steinmetz:* Engineering Mathematics. *Second semester. Two credits.* 204 Morrill Hall. Haseman.

70. SOLID ANALYTICAL GEOMETRY. A study of the plane, ellipsoid, paraboloid, hyperboloid, and the general equation of the second degree in three dimensional spaces. *First semester. Two credits.* 202 Morrill Hall. Searcy.

73. PROJECTIVE GEOMETRY. A synthetic development of the more fundamental projective properties of conic sections, including also an elementary treatment of hemographic systems, involutions, anharmonic ratios, and the principle of duality. *First semester. Two credits.* 202 Morrill Hall. Searcy.

[1]Practical courses to be submitted for the regular engineering courses by students having particular difficulty with mathematics.

75. History of Elementary Mathematics. Lectures and assigned readings on the history of the mathematical science. *First semester. Two credits.* 204 Morrill Hall. Haseman.

85. Differential Equations. Study of the ordinary and partial differential equations of the first and second orders with special attention to geometrical and physical applications. *First semester. Three credits.* 204 Morrill Hall. Haseman.

105. Theory of Functions of the Complex Variable. The fundamental operations applied to the complex number, the series, Riemann surfaces, etc. *Both semesters. Five credits for the year.* 204 Morrill Hall. Haseman.

110. Theory of Numbers. Lectures and reports. *Second semester. Three credits.* 202 Morrill Hall. Searcy.

115. Vector Analysis. A study of the Vector notation applied to problems of physics. *Second semester. Three credits.* 202 Morrill Hall. Haseman.

125–126. Advanced Calculus. A more rigorous study of the differential and integral calculus, with extensive applications to geometrical and physical problems. *Three credits, first semester. Two credits, second semester.* 204 Morrill Hall. Haseman.

130. Modern Geometry. A comprehensive treatment of homogeneous coordinates and abridged notation with their applications in investigating analytically metrical and projective properties of lines and conics. *Both semesters. Two credits.* Searcy.

135. Fourier's Series and Fourier's Integrals. A study of a few of the more important partial differential equations of physics. Development of the functions into cosine and sine series. *First semester. Three credits.* 204 Morrill Hall. Haseman.

150. Seminar. Library work and reports on various topics of mathematical interest. *Both semesters. Two credits each semester.* Haseman.

For the benefit of students desiring to make mathematics their major, or to take more advanced courses in mathematics, the following subjects will be offered at any time: Elliptic Integrals and Elliptic Functions, Differential Geometry, Partial Differential Equations, Calculus of Variations, Theory of Probabilities, Theory of Functions of a Real Variable, and Synthetic Geometry.

MECHANIC ARTS

College of Engineering

MR. ROCKLUND, HEAD OF DEPARTMENT
MR. CARROLL, ASSISTANT

1. Wood Work. The students are taught the use of hand and machine tools and the most approved processes and methods followed in engineering construction. The bench work includes the following operations: plowing, sawing, rabbeting, planing, notching, splicing, mortising, tenoning, dovetailing, framing, paneling, and the general use of carpenter's tools. A number of exercises in wood turning are given to all taking this course. *Sophomore year. Either semester. One credit either semester, according to requirements of the respective departments.* Mechanical Building. Rocklund. Fee, $4 per credit.

2. Forging. The work in forging includes exercises in heating, bending, drawing, upsetting, plain welding, butt welding, lap welding, ring welding, tee welding, etc. In steel forging the exercises include the making and tempering of punches, drills, chisels, annealing, casehardening, and the making of a complete set of machine-cutting tools for the student's future use in the machine shop. *Sophomore year. One or two credits either semester, according to the requirements of the respective departments.* 101 Mechanical Building. Carroll. Fee, $4 per credit.

3. Machine Shop. Bench and lathe work. Includes chipping, filing, scraping, and similar bench work, and turning, filing, and thread cutting. *First semester. Two credits.* Mechanical Building. Rocklund. Fee, $4 per credit.

4. Foundry Practice. Instruction is given in pattern making, molding, core making, and casting in brass and iron. Practically all of the castings used in the machine shop are made by the students in this course. *Sophomore year. Second semester. One credit.* Mechanical Building. Rocklund. Fee, $4 per credit.

5. Machine Shop. Drill, shaper, planer, milling-machine, grinder. The first part of the course includes instruction on the above machines, and the second part consists of the construction or erection of some more or less complex piece of machinery. *Second semester. Two credits.* Mechanical Building. Rocklund. Fee, $4 per credit.

6. Pattern-Making. Instruction is given in making of wood patterns for use in the foundry, introducing solid and

built-up patterns, also dry and green sand-cores, horizontal cores and core-prints, segment boxing, and the two- and three-part flask. *Sophomore year. Second semester. One credit.* Mechanical Building. Rocklund. Fee, $4 per credit.

7A–7B. MACHINE SHOP. An advanced course for engineers who wish to extend their knowledge of machine shop practice beyond the regular requirements. *Second semester.* 7A, *two credits.* 7B, *one credit.* Mechanical Building. Rocklund. Fee, $4 per credit.

MECHANICAL ENGINEERING

College of Engineering

PROFESSOR SIBLEY, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR LEWERS
MR. GAY
MR. BUERER

2. ELEMENTARY MECHANICAL DRAWING. Lettering, geometrical construction, isometric projection, working drawings of machine parts from copy and from models, tracing and blue printing. Required of all Freshmen. *First semester. Laboratory. Three credits.* Electrical Building. Gay.

3. FREEHAND DRAWING. Perspective drawings of machines and buildings. Perspective drawings from mechanical drawings. Memory drawings of machines. Isometric drawing. *First semester. One credit.* Education Building. Lewers.

6. DESCRIPTIVE GEOMETRY. Standard problems on the point, line, plane, curved surface and solid are taken up in lectures and in the drawing room. Special attention is paid to the application of these principles to the problems of the draftsman, and a large number of practical problems are given. *Prerequisite:* Mechanical Engineering 2 or 4. Mathematics 13, Plane and Solid Geometry. *Second semester. Laboratory, two periods; lecture, one period. Three credits.* Electrical Building. Gay.

21. TECHNICAL REPORT. A systematic write-up of three to four thousand words on some selected or assigned engineering topic. *One credit.* Sibley.

51. KINEMATICS. The kinematics of machinery, showing the laws which govern the velocity of moving parts, the correct forms of gear teeth, the manner of designing trains of mechanism. *Prerequisite:* Mechanical Engineering 2 and 6. *First semester. Three credits.* Electrical Building. Sibley.

53. MACHINE DESIGN. The study of the application of the laws of velocity, force, and strength of materials to the design of machinery; tooth and belt gearing, shafts, journals, hangars, cylinders, springs, bolts, keys, etc. *Prerequisite:* Mathematics, M. E. 6, and C. E. 72 and 74. *Second semester. Three credits.* Electrical Building. Sibley.

54. BOILERS AND ENGINES. An elementary study of boilers, prime movers, and their auxiliaries, from the standpoint of operation and testing. Includes a study of fuels and their combustion; the laws of steam and other gases which affect the operation of steam and gas engines and turbines. A large number of problems involving the power and efficiency of power-plant apparatus are solved. *Prerequisite:* Physics 4. *First semester. Lectures, three. Three credits.* Electrical Building. Buerer.

55–56. THERMODYNAMICS. A study of the thermodynamics of perfect gases, gaseous vapors, and steam, and their application to gas engines, air compressors, refrigerating machinery, steam engines and turbines. *Prerequisite:* Physics, Chemistry, Mathematics, and M. E. 54. *Both semesters. Three credits each semester.* Electrical Building. Sibley.

58. MECHANICS OF HEAT ENGINES. Inertia forces in the moving parts of reciprocating engines, fly-wheel design, valves and valve gearing, governors, aerodynamics. *Prerequisite:* Mathematics, Mechanical Engineering 53 and 54. *Second semester. Three credits.* Electrical Building. Sibley.

64. MECHANICAL LABORATORY. Introductory experimental engineering, calibration of pressure gages, thermometers, indicator springs. Tests for heating values of coal, gas and oil. Analysis of lubricants for viscosity, emulsification, etc. Flue gas analysis and calculations. Tests of automotive carburation and ignition systems. Slide valve setting and use of steam indicators. Reports include complete discussions of equipment and data. Preparation of the report is considered an important part of the course. *Prerequisite:* Physics 3 and 4, 5 and 6. Must be preceded or accompanied by Mechanical Engineering 54. *First semester. Lecture, one hour; laboratory, one period. Two credits.* Electrical Building. Buerer. Fee, $5.

65–66. MECHANICAL LABORATORY. Experimental engineering. Course 65, first semester, required and open only to

Seniors in Mechanical and Electrical Engineering. Course 66, second semester, is required of Seniors in Mechanical Engineering and open to Seniors in Electrical Engineering. Complete mechanical and thermal efficiency tests of reciprocating steam engines, steam turbine, steam boilers, gas and oil engines, refrigerating machines, air blowers and compressors, water turbines. Thorough analysis of operating characteristics and methods of testing required in report made on each experiment. *Prerequisite:* Mechanical Engineering 54, 65. Must be preceded or accompanied by Mechanical Engineering 55. *Both semesters. Lecture, one hour; laboratory, one period. Three credits each semester.* Electrical Building. Buerer. Fee, $5 each semester.

68. STEAM AND GAS POWER. This course consists of the general study of steam- and gas-power plants with equipments, including steam boilers, gas producers, steam and gas engines, and steam turbines with their accessories; study of the relative costs and advantages of different forms of prime movers, the combustion, handling and storage of fuels used in power plants. For students outside the Schools of Electrical and Mechanical Engineering. Preceded or accompanied by Physics 2 or 4. *First semester. Lectures, three. Three credits.* Electrical Building. This course will be combined with M. E. 54 until further notice.

71–72. ENGINEERING ECONOMIC PROBLEMS. Solution of problems taken entirely from actual engineering practice. It is intended to show the practical importance of engineering theory and to cultivate thoroughness in the examination and administration of engineering projects. *Both semesters. Two credits per semester.* Electrical Building. .....

74. INDUSTRIAL ORGANIZATION. A problem and design course for the study of industrial plant layout and organization for production. Considerable attention is paid to the theory and making of time studies. *Prerequisite:* Must be preceded or accompanied by Economics 66. *Second semester. Two laboratory and one recitation period. Three credits.* Electrical Building. .....

75. POWER-PLANT ENGINEERING. A study of the principles involved in the design, construction, and operation of steam- and gas-power plants for mills, factories, and electric generating stations. A lay-out of a plant to meet specified conditions is made in the drawing room. *Prerequisite:* E. E. 51 and 52, M. E. 54 and 64. *First semester. Two recitations and one laboratory period. Three credits.* .....

76. AUTOMOTIVE ENGINEERING. A brief course in the principles of the design and operation of gas engines as applied to motor vehicles. Carburetors, governing, ignition, lubricating systems. *Prerequisite:* M. E. 54. Elective for Juniors and Seniors. *Second semester. Two recitations. Two credits.* .....

78. AERODYNAMICS. An elementary course in the theoretical aspects of aeronautics. Study of aerodynamics, theory of flight, history and development of the art. Laboratory work so far as available equipment permits. *Prerequisites:* Mathematics, Physics, and Mechanics. *Second semester. Three credits.* Gay and Buerer.

80. THESIS. An original design or an investigation intended to give the student a knowledge of research methods in engineering. This course is elective at the discretion of the instructors in the department. *Second semester. Three credits.* Sibley or Assistants. Laboratory fee of $5 may be required.

METALLURGY

College of Engineering

PROFESSOR PALMER, HEAD OF DEPARTMENT
PROFESSOR CARPENTER
ASSISTANT PROFESSOR SMYTH

51. FIRE ASSAYING. Lectures, recitations, and laboratory work in assaying. Methods of assaying, systems of weights used, calculations and problems, equipment of assay laboratories, sampling, chemistry of assaying. The assay of gold and silver ores of the simpler types followed by the assay of difficult ores and metallurgical products. *Prerequisite:* Mineralogy 2, Chemistry 9 and 10. *First semester. Laboratory, three periods. Three credits.* Mackay School of Mines. Smyth. Fee, $15. Students who do not complete their laboratory work during the regular periods are required to pay an additional fee to cover the extra cost of such work. This fee will be $1 per laboratory period for each period the furnaces are used plus the cost of any chemicals, etc., used.

52. ADVANCED FIRE ASSAYING. A laboratory course designed to give the student routine practice in the work met in a commercial assay office. It will include practice

in both wet and fire assaying and determination of minerals. Not given for less than three students. *Prerequisite:* Chemistry 10; Metallurgy 51. *First semester. One credit.* Mackay School of Mines. Smyth. Fee, $5.

53. General Metallurgy. Lectures and recitations on the history of metals, chemical and physical properties of metals, the adaption of metals to industry, fuels, refractories, and pyrometry. *Prerequisite:* Chemistry 1 or 5. *First semester. One credit.* Mackay School of Mines. Smyth.

54. Engineering Metallurgy. Lectures and recitations for students registered in engineering schools other than the School of Mines. The course will cover the properties and uses of industrial metals and alloys, an outline of metallurgical processes, and the metallurgy of iron and steel. *Prerequisite:* Chemistry 6 and Physics 1a or 3. *Second semester. Two credits.* Mackay School of Mines. Smyth.

56. Metallography. This course is designed to cover the methods of preparation and microscopic examination of specimens of some of the common metals and alloys, illustrating the microstructure of pure metals and alloys, the effect of heat treatment in tempering and annealing, cooling curves, the detection of the presence of flaws and defects in metals, a study of welds, and the effects of strain and mechanical treatment. *Prerequisite, or taken with:* Metallurgy 55. *Second semester. Lecture, one hour; laboratory, two periods. Three credits.* Mackay School of Mines. Palmer. Fee, $1.

57. Metallurgy of the Minor and Rare Metals. Lectures and recitations on the metallurgy of minor and rare metals including the following: Antimony, arsenic, aluminum, bismuth, mercury, molybdenum, platinum, tin, and tungsten. *Prerequisite:* Metallurgy 55. *Second semester. One credit.* Mackay School of Mines. Palmer.

58. Ferrous Metallurgy. Lectures and recitations on the methods of producing iron and steel, the properties and uses of iron and steel, mechanical and heat treatment of steel, alloy steels, and the corrosion of metals. *Prerequisite:* Metallurgy 53. *Second semester. Two credits.* Mackay School of Mines. Smyth.

60. Metallurgy of Copper, Lead, and Zinc. Lectures and recitations on the metallurgy of copper, lead, and zinc. Properties of the metals and the more important alloys and compounds. Roasting, smelting, converting, leaching, and refining of copper; roasting, smelting, and refining of lead; leaching and smelting of zinc. Three months are devoted to the subject of copper and one month to lead and zinc. *Prerequisite:* Metallurgy 55. *First semester. Three credits.* Mackay School of Mines. Palmer.

65. Ore Dressing. Lectures, recitations, and laboratory practice in ore dressing. Laws of crushing, sizing, and concentration of ores, including flotation. Machines employed and practice in operating them. *Prerequisite:* Chemistry 9 and 10; Metallurgy 51 and 55. *Second semester. Lectures, two hours; laboratory, two periods. Four credits.* Mackay School of Mines. Palmer and Smyth. Fee, $5.

70. Metallurgy of Gold and Silver. Lectures, recitations, and laboratory exercises on the metallurgy of gold and silver. Physical and chemical properties of these metals and of their compounds and alloys. Methods of extracting the precious metals from their ores with special emphasis on the cyanide method. Refining gold and silver. *Prerequisite:* Metallurgy 51 and 65; Chemistry 10. *First semester. Lecture, one hour; laboratory, two periods. Three credits.* Mackay School of Mines. Palmer. Fee, $10.

71. Metallurgical Design. The design of a metallurgical plant including the preparation of working drawings of certain parts of this plant and the solution of the engineering problems connected with it. *Prerequisite:* To be taken at the same time or after completing Metallurgy 70 and Civil Engineering 74. *Second semester. Laboratory, two periods. Two credits.* Mackay School of Mines. Palmer.

72. Electrometallurgy. Lectures and recitations on electric smelting and the electrolytic processes involved in the metallurgy of the common and precious metals. To be taken at the same time or after completing Metallurgy 60 and 70. *Second semester. Two credits.* Mackay School of Mines. Palmer.

73. Problems and Seminars. This course covers common technical and economic problems related to the design, operation, and management of metallurgical plants, and a discussion of articles upon metallurgical subjects. Open only to students after they have completed metallurgical subjects

to the second semester of the senior year. *Second semester. Two credits.* Mackay School of Mines. Palmer.

74. NONMETALLICS. A lecture course on the preparation for market and the marketing of their products of such nonmetallics as cement materials, gypsum, limestone, magnesite, diatomaceous earth, borates, and others that are of importance in Nevada and the Pacific Coast States. *First semester. Two credits.* Mackay School of Mines. Carpenter.

79–80. PROJECT. This course will cover special work of a research nature in connection with some problem in ore treatment or metallurgical plant design. *Both semesters. Two credits.* Mackay School of Mines. Palmer. Deposit to be arranged according to work undertaken.

180. THESIS. Advanced research work in metallurgy. A graduate course. *Credits to be arranged.* Mackay School of Mines. Palmer. Deposit to be arranged according to work undertaken.

MILITARY SCIENCE AND TACTICS

COLONEL WILLIAM R. STANDIFORD, U. S. ARMY, COMMANDANT
FIRST LIEUTENANT HERBERT B. WILCOX, U. S. ARMY, INSTRUCTOR
SERGEANT GRANT H. HUSTIS, U. S. ARMY, INSTRUCTOR

The following courses of instruction are prescribed by the War Department for Infantry Units of the Reserve Officers Training Corps:

MILITARY 1–2. Basic Course, First Year—Practical and Theoretical. The National Defense Act and the R. O. T. C.; military courtesy and discipline; military hygiene and first aid; drill and command; rifle marksmanship; scouting and patrolling. Required of all first-year men students. *Three hours per week. Both semesters. One credit each semester.*

MILITARY 3–4. Basic Course, Second Year—Practical and Theoretical. Drill and command; musketry; automatic rifle; scouting and patrolling; combat principles (rifle squad). Required of all second-year students. *Three hours per week. Both semesters. One credit each semester.*

MILITARY 51–52. First Year Advanced Course (elective)—Practical and Theoretical. Map reading and military sketching; drill and command; machine gun; 37mm and 3″ mortar; combat principles (rifle section and platoon). *Five hours per week. Both semesters. First semester, two credits; second semester, three credits.*

MILITARY 53A. Advanced Camp Course. *Two credits.*

NOTE—Students taking advanced military and receiving a daily money allowance from the Government are required to attend a camp of instruction for a period of six weeks at the end of the third year. Under exceptional circumstances attendance at the camp may be deferred until the end of the fourth year. Students attending the advanced camp course receive pay at the rate of $21 per month from the United States Government.

MILITARY 53–54. Second Year Advanced Course (elective)—Practical and Theoretical. Military law and officers' reserve corps regulations; military history of United States and policy; administration (company); military field engineering; drill and command; combat principles (rifle and machine-gun company and howitzer-company platoon). *Five hours per week. Both semesters. Two credits, first semester; three credits, second semester.*

MILITARY BAND. Students enrolled in Military and assigned to the band will receive credit for required Military at the rate of one credit for each semester. Such students will be required to attend at least two periods of band practice and one military formation per week, and will attend military formations when the band is required for parades and other military ceremonies.

MINERALOGY

PROFESSOR JONES, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR GIANELLA

1. DETERMINATIVE MINERALOGY. The first few weeks are devoted to an elementary course in crystallography, followed by the determination of the more common minerals, chiefly by means of their physical properties, using such simple tests as are of easy application in the field. *Prerequisite:* Chemistry 5 and 6, or the equivalent. *First semester. Two credits.* Mackay School of Mines. Gianella. Fee, $2.

2. BLOWPIPE ANALYSIS. The determination of minerals by blowpipe analysis. *Prerequisite:* Chemistry 5 and 6, or the equivalent. *Second semester. Two credits.* Mackay School of Mines. Gianella. Fee, $3.

3. DESCRIPTIVE MINERALOGY. Lectures and recitations on the classification, salient properties, occurrence, genesis, and uses of the more important minerals, illustrated by typical specimens. *Prerequisite:* Mineralogy 1. *Second semester. Two credits.* Mackay School of Mines. Gianella.

51. Advanced Mineralogy. Advanced work in either blowpipe analysis, crystallography, or the determination of minerals under the microscope. *Prerequisite:* Mineralogy 1 and 2. *Either semester. One or two credits.* Mackay School of Mines. Jones and Gianella.

MINING

College of Engineering

DIRECTOR FULTON, HEAD OF DEPARTMENT
PROFESSOR CARPENTER
MR. COUCH

5. Practical Mining. Practical work in mining or metallurgy during the summer vacation. Such work must extend over a period of at least one month, and a satisfactory report must be prepared upon it. *Freshman, Sophomore, or Junior vacation. Required for graduation. No credit.*

45. Mining. Elementary mining lectures and recitations on the general principles and practice of mining. The course is designed to give others than mining students a brief insight into general mining practice. *Prerequisite:* Sophomore standing. *First semester, three credits.* Mackay School of Mines. Fulton and Carpenter.

51. Excavation. Lectures and recitations on the principles and practice of excavation, including earth excavation, rock drills and drilling practice, explosives and blasting practice, quarrying, tunneling, shaft sinking and boring. Stress is placed upon the underlying principles of physics and chemistry. *Prerequisite:* Physics 1a and 1b; Chemistry 5 and 6. *Junior year. First semester. Three credits.* 101 Mackay School of Mines. Carpenter.

52. Mine Plant. Lectures on the principles and practice of underground and surface haulage, hoisting, air compresion, mine drainage, ventilation and illumination. Stress is placed upon the underlying principles of physics and mechanics. *Prerequisite:* Physics 1a and 1b; Mathematics 55a. *Junior year. Second semester. Three credits.* 101 Mackay School of Mines. Carpenter.

61. Mining Methods. Lectures and recitations on the prospecting, development, and exploitation of mineral deposits, including underground metal mining methods in detail, with quarrying, coal mining, and placer mining methods in brief. *Prerequisite:* Mining 51 and 52. *Senior year. First semester. Three credits.* 101 Mackay School of Mines. Carpenter.

72. Mine Administration. Lectures and recitations on the business, sociology, and laws of mining, including organization of staff, problems concerning power, labor and supplies, purchase and sale of ores and metallurgical products, compensation and accident insurance, welfare work, accidents and their prevention, Federal and State mining laws with mine maps and models. *Prerequisite:* Mining 61. *Senior year. Second semester. Three credits.* Carpenter.

74. Mineral Industry Economics. Lectures and recitations on economic problems of mining and metallurgy and mine accounting, including incorporations and securities, depreciation, depletion, amortization, taxes, assessments and dividends, and laws governing the same, the costs of mining, milling, and marketing, and cost accounting methods. *Prerequisite:* Mining 61. *Senior year. Second semester. Three credits.* Carpenter and Couch.

89–90. Mining Project. Two laboratory periods weekly devoted to individual problems in mining, progressing from those of small properties to specific problems concerning shaft sinking, tunneling, or the like on a large scale, and finally to working of mines based upon those in actual operation in important mining camps. Stress is placed upon amplifying the subject matter of previous mining courses and in the methods of searching for, correlating, and presenting the data gathered and worked out. *Prerequisite:* Mining 51–52. *Both semesters. Two credits each semester.* Carpenter.

99–100. Mining Research. Research work in mining or some allied subject. An elective course for students who, in the opinion of the instructor, are capable of undertaking research. *Both semesters. Two credits each semester.* Mackay School of Mines. Fulton and Carpenter.

101. Mine Examination. Lectures on the examination of metal mines and prospects. Sampling, estimation of ore, valuation of properties, forms of reports. A graduate course open as an elective to undergraduates who are suitably prepared. *Either semester. Two credits.* 102 Mackay School of Mines. Fulton and Carpenter.

199–200. THESIS. Advanced research work in mining, metallurgy, geology, or some allied science. A graduate course. *Both semesters. Four credits each semester. Total course only accepted toward degree.* Mackay School of Mines. Fulton and Carpenter.

MODERN LANGUAGES

PROFESSOR CHAPPELLE, HEAD OF DEPARTMENT
PROFESSOR MURGOTTEN
ASSISTANT PROFESSOR WILLIAMS
ASSISTANT PROFESSOR GOTTARDI[1]
MR. BONASI
MR. KLINE

Requirements for a minor in a modern language: With no admission credit, 6 units. With two admission credits, 10 units. With four admission credits, 12 units.

Requirements for a major in modern language: With no admission credit, 12 units. With two admission credits, 16 units. With four admission credits, 18 units.

Requirements for a combined minor in Modern Languages (units in any *two* modern languages may be counted towards a combined minor): With no admission credit, 8 units. With two admission credits, 12 units. With four admission credits, 14 units.

Requirements for a combined major in Modern Languages (units in any *two* modern languages may be counted towards a combined major): With no admission credit, 14 units. With two admission credits, 18 units. With four admission credits, 20 units.

(The term "units," as used above applies only to units in courses numbered above 50.)

Students planning to present for graduation a combined major or minor in Modern Languages may be allowed to register for an extra hour of academic work in the Freshman year.

Students intending later to teach Modern Languages are urged not to restrict their courses to the minimum requirements for a major or a minor in the particular subjects. All such candidates are to confer with the head of the department.

Courses numbered above 50 and announced as offered in any year may not be given in that year unless there are at least seven candidates for the class.

In certain instances and by special permission of the head of the department, a given course numbered above 50 may be repeated for credit, provided that the entire content of the course differs from the one given previously under the same number. In such cases the course will be recorded with the catalogue number *plus* A (e. g. French 59–A).

The office of the Department of Modern Languages is 202 Stewart Hall.

Arabic

61–62. INTRODUCTION TO ARABIC. A study of the grammar of the written language. Lectures, assigned reading

[1]Absent on leave 1929–1930.

and reports on Mohammedan literature, history, and institutions. Open to advanced students of languages. *Both semesters. Two credits each semester.* 206 Stewart Hall. Murgotten.

101–102. SECOND-YEAR ARABIC. Grammar continued. Translation of selections from the Quran and Arat historians. *Prerequisite:* Arabic 61–62. *Both semesters. Two credits each semester.* (Not given in 1929–1930.)

French

1. FIRST YEAR FRENCH. Drill in the essentials of grammar. Elementary composition and conversation. *Either semester. Three credits.* Chappelle and Bonasi.

2. FIRST YEAR FRENCH (Continued). Grammar, composition and conversation. Translation of simple prose texts. *Prerequisite:* French 1 or one year of high school French. *Either semester. Three credits.* Chappelle and Bonasi.

3–4. SECOND YEAR FRENCH. Readings from modern French prose writers. A review of grammar. Conversation and composition. *Prerequisite:* French 1–2 or two years of high school French. *Both semesters. Three credits each semester.* Chappelle and Bonasi.

3A–4A. The same as French 3–4 with the exception that this class meets only once a week. Intended primarily for teachers in active service in the public schools. *Both semesters. One credit each semester.* Chappelle and Bonasi.

51–52. THE FRENCH NOVEL. Rapid reading of masterpieces of French fiction: Balzac, Sand, Mérimée, Zola, Daudet, etc. *Prerequisite:* French 3–4. *Both semesters. Two credits each semester.*

53–54. FRENCH POETRY. A study of the French lyric poets from Villon to contemporary writers. *Prerequisite:* French 3–4. *Both semesters. Two credits each semester.* 204 Stewart Hall. Chappelle.

55–56. INTERMEDIATE FRENCH COMPOSITION AND CONVERSATION. This course should be taken simultaneously with the first year of Junior-Senior reading courses in French. *Prerequisite:* French 3–4. *Both semesters. One credit each semester.* 203 Stewart Hall. Bonasi.

57–58. GENERAL SURVEY OF FRENCH LITERATURE. The history of French literature with detailed study of special periods. Assigned outside readings and reports on works

read. *Prerequisite:* Four credits of Junior-Senior work. *Both semesters. Two credits each semester.* (Not given in 1929–1930.)

59–60. Scientific French. Readings from standard French works on science and from recent numbers of French scientific magazines. This course is particularly recommended to premedical students and to those who intend to specialize in any one of the scientific fields. *Prerequisite:* French 3–4. *Both semesters. Two credits each semester.* 204 Stewart Hall. Chappelle.

69. French Classic Drama. A special study of the works of Corneille, Racine and Molière. *Prerequisite:* French 3–4. *First semester. Two credits.* 206 Stewart Hall. Murgotten.

70. French Romantic Drama. A study of the drama of the romantic school with special reference to the works of Victor Hugo. *Prerequisite:* French 3–4. (It is advised that students take French 69 before electing French 70.) *Second semester. Two credits.* 206 Stewart Hall. Murgotten.

73–74. Advanced French Composition and Conversation. Includes a study of French epistolary style and commercial correspondence. This course should be taken simultaneously with the second year of Junior-Senior reading courses in French. *Prerequisite:* French 3–4. *Both semesters. One credit each semester.* 203 Stewart Hall. Bonasi.

81–82. The Eighteenth Century in French Literature. A study of the works of Montesquieu, Voltaire, Rousseau, etc. *Prerequisite:* Four credits of Junior-Senior work. *Both semesters. Two credits each semester.* 204 Stewart Hall. Chappelle.

90. French Phonetics. A study of pronunciation on the basis of practical phonetics. This course is especially arranged for prospective teachers of French. *Prerequisite:* Two units of Junior-Senior work. *Both semesters. Two credits each semester.*

German

1. First Year German. A systematic study of grammar. *First semester. Three credits.* 206 Stewart Hall. Murgotten.

2. First Year German (Continued). Grammar and composition. Reading of easy prose and poetry. *Prerequisite:* German 1, or one year of high school German. *Second semester. Three credits.* 206 Stewart Hall. Murgotten.

3. Intermediate German. Grammar review. Reading of German short stories, with exercises in conversation and composition. *Prerequisite:* German 1–2, or two years of high school German. *First semester. Three credits.* 206 Stewart Hall. Murgotten.

4. Introduction to Scientific German. This course follows immediately upon German 3, but the texts chosen for reading will be such as to prepare for, and give practice in translating scientific German. *Prerequisite:* German 3, or three years of high school German. *Second semester. Three credits.* 206 Stewart Hall. Murgotten.

51–52. The German Novel. Rapid reading of masterpieces of German fiction: Scheffel, Baumbach, Sudermann, Thomas Mann. *Prerequisite:* German 3–4. *Both semesters. Two credits each semester.* 206 Stewart Hall. Murgotten.

57–58. General Survey of German Literature. The history of German literature with detailed study of special periods. Assigned readings and reports on works read. *Prerequisite:* Four credits of Junior-Senior work. *Both semesters. Two credits each semester.* 204 Stewart Hall. Chappelle.

69–70. German Classics. Reading and technical study of representative works of Lessing, Schiller, and Gœthe. *Prerequisite:* German 3–4. *Both semesters. Two credits each semester.* 206 Stewart Hall. Murgotten.

79–80. Advanced Composition. A study of German epistolary style, business correspondence, free composition. This course should be taken simultaneously with the Junior–Senior reading courses, and is required of majors in German. *Both semesters. One credit each semester.* 206 Stewart Hall. Murgotten.

Italian

1–2. First Year Italian. Grammar, composition, and conversation. Reading of modern Italian prose. *Both semesters. Three credits each semester.* 204 Stewart Hall. Chappelle.

51–52. The Italian Novel. Rapid reading of masterpieces of modern Italian fiction: Manzoni, Fogazzaro, Verga, etc. *Prerequisite:* Italian 1–2. *Both semesters. Two credits each semester.* (Not given in 1929–1930.)

53–54. Italian Literature of the Eighteenth and Nineteenth Centuries. Reading of important works of prose and poetry of the period, with a study of literary movements. *Prerequisite:* Italian 1–2. *Both semesters. Two credits each semester.* 203 Stewart Hall. Bonasi.

55–56. Intermediate Composition. *Prerequisite:* Italian 1–2. *Both semesters. One credit each semester.* 203 Stewart Hall. Bonasi.

Portuguese

61–62. Introduction to Portuguese. A study of grammar. Reading of texts on Brazilian subjects. Conversation based on the Brazilian norm. *Prerequisite:* Four units of Junior-Senior work in any *one* other Romanic language. *Both semesters. Two credits each semester.* 204 Stewart Hall. Chappelle.

Spanish

1. First Year Spanish. Drill in the essentials of grammar. Elementary composition and conversation. *Either semester. Three credits.* Williams and Kline.

2. First Year Spanish (Continued). Grammar, composition and conversation. Translation of simple prose and poetry. *Prerequisite:* Spanish 1 or one year of high school Spanish. *Either semester. Three credits.* Williams and Kline.

3–4. Second Year Spanish. Readings from modern Spanish writers. A review of grammar. Conversation and composition. *Prerequisite:* Spanish 1–2 or two years of high school Spanish. *Both semesters. Three credits each semester.* Chappelle, Williams, Kline.

3A–4A. The same as Spanish 3–4 with the exception that this class meets only once a week. Intended primarily for teachers in active service in the public schools. *Both semesters. One credit each semester.* Chappelle, Williams, Kline.

51–52. The Spanish Novel. Rapid reading of masterpieces of Spanish fiction: Galdós; Valdés; Ibáñez; etc. *Prerequisite:* Spanish 3–4. *Both semesters. Two credits each semester.* 201 Stewart Hall. Williams.

53. Commercial and Journalistic Spanish. Readings dealing primarily with Spanish-American social and economic conditions. *Prerequisite:* Spanish 3–4. *First semester. Two credits.* 201 Stewart Hall. Williams.

55. Commercial Correspondence. A composition course to accompany Spanish 53. *Prerequisite:* Spanish 3–4. *First semester. One credit.* 201 Stewart Hall. Williams.

56. Intermediate Spanish Composition and Conversation. This course should be taken with the first year of Junior-Senior reading courses in Spanish. *Prerequisite:* Spanish 3–4. *Second semester. One credit.* 201 Stewart Hall. Williams.

57–58. General Survey of Spanish Literature. The history of Spanish literature with detailed study of special periods. Assigned outside readings and reports on works read. *Prerequisite:* Four credits of Junior-Senior work. *Both semesters. Two credits each semester.* 201 Stewart Hall. Williams.

70. Modern Spanish Drama. A study of Spanish dramatic literature from the Golden Age to the Twentieth Century. *Prerequisite:* Spanish 3–4. *Second semester. Two credits.* 201 Stewart Hall. Williams.

79–80. Advanced Spanish Prose Composition and Conversation. This course should be taken simultaneously with the second year of Junior-Senior reading courses in Spanish. *Prerequisite:* Spanish 3–4. *Both semesters. One credit each semester.* Murgotten and Williams.

81–82. Spanish Classics. Literature of the Sixteenth and Seventeenth Centuries—Cervantes; Lope de Vega; Tirso de Molina; etc. *Prerequisite:* Four credits Junior-Senior work. *Both semesters. Two credits each semester.* 201 Stewart Hall. Williams.

MUSIC

PROFESSOR POST, HEAD OF DEPARTMENT

Requirements for a minor in Music: 1–2, 5, 10, 11–12, 50–51, 54–55, 57.

1–2. Music Reading and Ear Training (for elementary teachers and students preparing for Harmony). Learning to read by "sol-fa" system of simple unison and two-part folk songs in all keys and common rhythms. Notation, terminology, intervals, scales. *Both semesters. One credit each semester.* 204 Education Building. Post.

5. Public School Music Methods (for teachers who have had Music 1 and 2, or its equivalent). The aims and principles of music teaching in the kindergarten, elementary

and upper grades, and high school. Rote songs, folk songs, part songs, care of child voice, song leading, music appreciation, and music problems confronting the teacher generally. *First semester. Two credits.* 204 Education Building. Post.

10. Appreciation of Music (open to all University students. No previous training necessary). Content of music as found in some representative masterpieces from the point of view of the listener. Limited lectures, recitals in the classroom and the phonograph provide material for study. *First semester. Two credits.* 204 Education Building. Post.

11–12a. Women's Glee Club. Open to all women students. Membership limited to those who have been examined and approved by the Director. Representative selections from the best musical literature for women's voices will be studied and produced in one or more public concerts. *Two semesters. One-half credit each.* 204 Education Building. Post.

11–12a. Men's Glee Club. Open to all men students. Membership limited to those who have been examined and approved by the Director. Representative selections from the best musical literature for men's voices will be studied and produced in one or more public concerts. *Two semesters. One-half credit each.* 204 Education Building. Post.

15–16a. University and Community Little Symphony Orchestra. Open to all men and women students who play orchestral instruments, subject to examination and approval of the Director. Regular rehearsal is held each week and several public concerts are given during the year. Programs are made up of representative classical works of great composers of all periods. *Two semesters. One-half credit each.* 204 Education Building. Post.

17–18. Band. See under Military for a description of the requirements and credits for this work. Civilian members of the Band may receive corresponding credit in the Music Department if they meet those requirements. Post.

50–51. Harmony (open to all students who have had Music 1 and 2 or the equivalent). Study of scales, intervals, fundamental triads, seventh chords, in the major and minor modes. Ear training, keyboard drill, simple analysis, harmonization of melodies. Some original work. *Two semesters. Three credits each.* 204 Education Building. Post.

52. Advanced Harmony. Study of secondary sevenths, ninth chords, altered chords, modulation, suspensions and passing tones, analysis, original work. Continued ear training. Open to all students who have had Music 50–51, or the equivalent. *First semester. Three credits.* 204 Education Building. Post.

54–55(a and b). Glee Clubs. For description, see Music 11 and 12, A and B. *Prerequisite:* Music 11–12. *Two semesters. One-half credit each.* 204 Education Building. Post.

57. History of Music (open to all students. No technical knowledge required). The general history of music, considered from the standpoint of its evolution as a part of the development of civilization. Lecture course with collateral reading. Limited illustrations from representative works. *Second semester. Two credits.* 204 Education Building. Post.

59–60a. University and Community Little Symphony Orchestra. For description see Music 15–16a. *Prerequisite:* Music 15–16a. *Two semesters. One-half credit each.* 204 Education Building. Post.

63–64. Band. For general description, see Music 17–18. *Prerequisite:* Music 17–18. Post.

PHILOSOPHY

PROFESSOR THOMPSON, HEAD OF DEPARTMENT

Requirements for a major in Philosophy: Psychology 5, Philosophy 7 or 8 and 21, and 12 units in courses 51 to 100.

Requirements for a minor in Philosophy: Psychology 5, Philosophy 7 or 8 and 21, and 6 units in courses 51 to 100.

1. Introduction to Philosophy. A brief study of the problems of philosophy with the solutions suggested by the various schools. Designed both for the student who wishes a perspective for further work in philosophy, and for the student who desires a general knowledge of the scope and methods of philosophy. *No prerequisite. Either semester. Two credits.* Education Building. Thompson.

7. Deductive Logic. Terms, definition, division, syllogism and fallacies. Text, lectures and exercises. *No prerequisite. First semester. Three credits.* Education Building. Thompson.

8. Inductive Logic. The assumptions of induction methods of scientific investigation, fallacies, the tests of truth. Text, lectures and exercises. *No prerequisite. Second semester. Three credits.* Education Building. Thompson.

21. Ethical Theories. A study of the leading theories of moral principles and ideals. Among the topics discussed will be the concept of the good, duty, egoism, altruism, freedom, responsibility, and the doctrine of virtues. Open to Sophomores. *First semester. Three credits.* Education Building. Thompson.

22. Applied Ethics. The application of ethical theory to typical problems of institutional life, property, and the family. Open to Sophomores. *Second semester. Three credits.* Education Building. Thompson.

28. Social Ethics. A brief study of the fundamental ethical principles based upon concrete social problems. Required of Sophomores in the two-year Normal course. *Second semester. Two credits.* Education Building. Thompson.

51. History of Ancient Philosophy. A study of Greek and Roman Philosophy, and of Medieval Philosophy to the decline of scholasticism. *Prerequisite:* One course in Philosophy. *First semester. Two or three credits according to the work done.* Education Building. Thompson.

52. History of Modern Philosophy. A study of the problems and concepts of philosophy from Descartes to the present time. *Prerequisite:* One course in Philosophy. *Second semester. Two or three credits according to the work done.* Education Building. Thompson.

53–54. Philosophical Tendencies of the Present. A review and criticism of the main tendencies in present philosophical thought with reference to concrete social problems. Special attention will be given to absolutism, pragmatism, pluralism, and the philosophy of James. *Prerequisite:* One course in Philosophy. *Both semesters. Two credits each semester.* Alternates with Philosophy 51 and 52. Education Building. Thompson.

61. Introduction to Religion. A study of the forms and psychological aspects of religious experience with special reference to typical historic religions. *Prerequisite:* One course in Philosophy or Education 5. *First semester. Two to three credits according to work done.* Education Building. Thompson.

62. Philosophy of Religion. The meaning and validity of religious experience. Among the topics discussed will be the religious conception of God, the world, revelation, faith, prayer, evil, immortality. *Prerequisite:* One course in Philosophy and Psychology 5. *Second semester. Two or three credits according to the work done.* Education Building. Thompson.

83–84. Metaphysics. A constructive study of the problems of being, unity, order, and individuality, with practical applications of the theory developed. *Prerequisite:* Two courses in Philosophy and Psychology 5. *Both semesters. Two credits each semester.* Education Building. Thompson.

100. Research Course. The thesis may be selected in any field of Philosophy. For Seniors only. *Prerequisite:* The equivalent of a minor in Philosophy. *Either semester. Two credits.* Education Building. Thompson.

PHYSICAL EDUCATION

Men

ASSOCIATE PROFESSOR MARTIE
ASSISTANT PROFESSOR SCRANTON

Requirements for a minor in Physical Education: Courses 1, 2, 3, 4, or equivalent, 9, 10, and ten units in courses above 50. Participation in at least one major sport. In meeting the College requirement in Science and Mathematics, Hygiene 7 and 8 is strongly recommended.

1. Developmental Exercises. Physical examinations are required at the beginning of the semester. Strength tests are given at beginning and again at end of semester. Practical work consists in Mass Athletics; games selected with a view of developing alertness, coordination, muscular control, vigor and rythm. When the weather permits, the work is done out of doors. *Freshman year.* (Required.) *First semester. Two hours per week. One-half credit.*

2. Developmental Exercises. Continuation of course 1 with addition of calisthenics and light apparatus. *Second semester. One-half credit.*

3. Advanced Exercises. Strength tests will be continued as in Freshman year. Practical work consists in mat work, tumbling, heavy apparatus using long and short horse and buck. *Sophomore year.* (Required.) *First semester. Two hours per week. One-half credit.*

4. Advanced Exercises. Continuation of course 3. Heavy apparatus consisting of work with parallel bar, low and high horizontal bars, ladder and stall bar. *Second semester. One-half credit.*

By obtaining consent of the Director of the Department a student may elect any of the following sports as a substitute for the practical work in courses 1, 2, 3, and 4: Football, basket ball, track, tennis, volley ball, cross country and hand ball. *First semester. Two hours per week. One-half credit.*

5–8. Special Corrective Exercises. This course is designed for all Freshmen and Sophomores whose physical examinations show they are unfitted to take courses 1, 2, 3, and 4. *One-half credit for each semester's work up to and including four semesters.*

9. Advanced Work (paralleling courses 3 and 4.) *Aim:* To develop squad leaders and to assist men to qualify for a state certificate to teach physical education in high schools. *First semester. Three hours per week. One hour credit.* Martie.

10. Continuation of Course 9. *Second semester. Three hours per week. One hour credit.* Martie.

51. Football in Theory and Practice. A course of lectures and practical demonstrations for those who may wish to coach, or for players who are out for the varsity or for those who are interested in and wish a more intimate knowledge of America's greatest game. Open only to Juniors or Seniors who have had two or more years' college experience in this sport. *First semester. One lecture per week and one hour laboratory. Two credits.* Not given unless eight or more are enrolled. Scranton.

52. Basket Ball in Theory and Practice. A course of lectures and practical demonstrations in America's leading winter indoor sport. *Second semester. One lecture and one hour laboratory per week. Two credits.* The same conditions for enrollment must be met as in course 51. Martie

53. Treatment of Athletic Injuries. This is a course in first aid with special emphasis on common athletic injuries. It will include the various uses of tape, bandages, splints, etc. Time will be given to the study of the prevention of injuries such as sprains, charley horse, tackle shoulder, blood poison, blisters, etc., as well as treatment for same. *Three periods per week. Two credits. First semester.*

54. Track and Field Athletics. Lectures and demonstrations on each track and field event. *Second semester. One lecture and one hour laboratory per week. Two credits.* The same conditions for enrollment must be met as in course 51. Martie.

55. Playground. *Prerequisite:* Physical Education 53. A study of playground methods, apparatus, and organization. Special attention is given to group games for all ages. Also to the "Gang" problem as related to playground. *Three periods per week. Two credits. First semester.*

56. Anthropometry. This is a course in physical measurements and methods of detecting physical defects. It will include practical use of charts in connection with physical development. *Three periods per week. Two credits. Second semester.*

57. Officiating Major Sports. A careful study of the rules of football, basket ball, and track, with interpretations, methods of officiating, and characteristics of officials. *Three periods per week. Two credits. First semester.*

58. Administration and Organization of High School Athletics. A course covering high school competition in general, methods of organizing athletic associations and administration of same. *Three periods per week. Two credits. Second semester.*

PHYSICAL EDUCATION

Women

ASSOCIATE PROFESSOR SAMETH, HEAD OF DEPARTMENT
MISS BERNASCONI, INSTRUCTOR
MISS NELSON, ASSISTANT

Requirements for a minor in Physical Education: It is recommended that students desiring a minor in Physical Education fulfill their science requirement in Biology. It is also recommended that students interested in taking advanced dancing take Music 10 or its equivalent. Courses—Physical Education 1, 2, 3, 4, 10, 23, 24, 31, 32, 55, 56, 59, 60, and two years of participation in Athletics.

1. Dancing. Dancing, including clogging, interpretation, etc. *Three periods. One semester. One credit.* Gymnasium.

2. Gymnastics. Gymnastics, including marching, general posture training, etc. *Three periods. One semester. One credit.* Gymnasium.

3. Organized Games. Organized games, such as relays and simple games leading up to speed ball, and other games

of similar organization. *Two periods. One semester. One-half credit each semester.* Gymnasium.

4. Choice of a second semester's work in dancing, organized games, and gymnastics. Whenever a swimming pool is available the fourth semester's requirement in P. E. may be met by swimming. *Two periods. One semester. One-half credit each semester.* Gymnasium.

NOTE—P. E. 1, 2, and 3 may be taken in any order and are required for Freshmen and Sophomore women, as is also P. E. 4, which must be taken after P. E. 1, 2, and 3.

5–6. INDIVIDUAL OR ADAPTED GROUP GYMNASTICS. Individual or adapted group gymnastics, planned to meet specific needs such as correction for feet, abdomen, spine, etc. Required of all first and second semester students who, upon examination, show a need of it. *Four 20-minute periods a week. One credit each semester.*

7–8. Continuation of P. E. 5–6.

10. MATERIAL COURSE. Required of students in Education and of Physical Education minors. The object of this course is to give those who intend to teach, simple games, folk dances and setting-up drills suitable for use in the grades and enough theory to get an intelligent viewpoint on the physical education of the present day. There will be one lecture or recitation dealing with the meaning of Physical Education as a part of the life of the school child. The second period will be used for practical work. *Prerequisite:* Physical Education 1–2 or the equivalent. *Two periods. One semester. One credit.* Gymnasium. (Not offered in 1929–1930.)

23–24. PRINCIPLES OF PHYSICAL EDUCATION. Their development in relation to general education, health education, play, and recreation. *Prerequisite:* Home Ec. 33, or its equivalent. *First semester, one period; second semester, two periods. Three credits for the year.* (Not offered in 1929–1930.)

31–32. DANCING. Dancing, including national, folk and interpretative. Open to all who have had the equivalent of Physical Education 1–2. *Three periods. Both semesters. One credit each semester.* (Not offered in 1929–1930.)

53–54. ADVANCED DANCING. A continuation of Physical Education 31–32. This course will include interpretative dancing and the construction of at least one festival or pageant, as well as at least two dances. *Three periods. Both semesters. One credit each semester.* (Not offered in 1929–1930.)

55. KINESIOLOGY. *Prerequisite:* Physical Education 1–2 and 3. The chief object of this course is to familiarize the student with the mechanism of the human body, dealing particularly with the shoulder, girdle, spine, pelvis, and feet, so that the student will be prepared to study intelligently cases of round shoulders, spinal curvature, and flat feet. *Three periods. First semester. Three credits.* Gymnasium. (Not offered in 1929–1930.)

56. CORRECTIVE GYMNASTICS. Anthropometry and corrective gymnastics. *Prerequisite:* Physical Education 55. The course is intended to be a practical application of Physical Education 55. Students will be given the opportunity to prescribe exercises for students taking Physical Education 5–6, 7–8. Each student will be expected to measure at least two adults and three children. *Three periods. Second semester. Two credits. Gymnasium.* (Not offered in 1929–1930.)

59–60. THEORY AND PRACTICE OF DIRECTING TEAM SPORTS. *Prerequisite:* At least two years participation in college athletics. This course includes a study of the essentials of the technic and game forms leading up to soccer, hockey, volley ball, basket ball, and baseball. Actual practice in teaching and officiating is given. *Two lecture periods per week; two laboratory periods per week. Four credits for the year.*

61. THEORY AND PRACTICE OF DIRECTING INDIVIDUAL SPORTS. *Prerequisite:* At least two years participation in two of the individual sports in college. This course includes instruction in the essentials of fundamental technic, and methods of teaching the same in tennis, archery, track and swimming. The making and care of archery tackle is also included. *One lecture period per week; one laboratory period per week. One credit.*

62. A comparative study of athletic contests, with special emphasis on tournaments and playday forms; also outlines and source material for the use of directors of the physical education program in girls' camps. *One lecture period per week; one laboratory period per week. One credit.* To be taken after Education 56.

RECREATION. All women, whether registered for Physical Education courses or not, are given an opportunity to receive

instruction and to participate in soccer, hockey, tennis swimming (*$5.25 per semester; two times per week*), archery, rifle, volley ball, basket ball, and baseball or track. In addition to these activities *all* classes in floor work or dancing are open to any who wish to attend *without* University credit. The only requirements for these activities are physical fitness and regular attendance.

PHYSICS[1]

PROFESSOR HARTMAN, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR BLAIR
ASSOCIATE PROFESSOR LEIFSON

Requirements for a minor in Physics: Physics 53–54 and 55–56.
Requirements for a major in Physics: 53–54, 55–56, and four additional units approved by the department.
Requirement for a teacher's recommendation in Physics: a major or a minor in the department.

1A–2A. GENERAL PHYSICS. A course in general physics primarily for students in arts and science, medicine and agriculture. Lectures and recitations with experimental demonstrations and problem work. No credit for either semester of this course will be given unless accompanied by the corresponding course in Physics 1b-2b. *Prerequisite:* Plane Geometry. A knowledge of trigonometry is desirable. *Both semesters. Three credits each semester.* 201 Physics Building. Blair and Leifson.

1B–2B. GENERAL PHYSICS LABORATORY. A laboratory course to make the student an intelligent observer of medicine and agriculture. To accompany Physics 1a-2a. Experimental work, largely quantative in character and designed to illustrate fundamental physical principles and to develop skill and accuracy in the methods of physical measurement. No credit for either semester will be given unless accompanied by the corresponding course in Physics 1a-2a. *Prerequisite:* Plane Geometry. A knowledge of trigonometry is desirable. *Both semesters. One credit each semester.* 103 and 109 Physics Building. Blair and Leifson. Fee, $3.

3–4. GENERAL PHYSICS FOR ENGINEERS. Mechanics and heat, sound and light, and electricity and magnetism. Lectures and recitations are fully illustrated by experimental

[1]NOTE—The following courses in Physics are not offered in 1929–1930: Physics 1b–2b, 5–6, 55–56, 57–58, 63, 75–76.

demonstrations at the lecture table and by problems. *Prerequisite:* Mathematics 7, 11, 13, and 14, high school Physics or its equivalent, or Physics 1a–2a and 1b–2b. *Both semesters. Five credits each semester.* 201 Physics Building. Hartman.

5–6. PHYSICAL MEASUREMENTS. Experimental work of distinctly quantitative character is done in mechanics and heat, sound and light, and electricity and magnetism. The methods selected involve fundamental physical principles, and illustrate their most important applications. *Prerequisite:* Mathematics 7, 11, 13, and 14; Physics 1a–2a, 1b–2b or high school Physics. *Both semesters. Credits to be arranged, with a maximum of six credits for the course.* 103 and 109 Physics Building. Blair and Leifson. Fee, $3.

7. DESCRIPTIVE ASTRONOMY. A brief course in astronomy designed to acquaint the student with the most important facts relating to the heavenly bodies. The object of the course in general physics for students in arts and science, more common astronomical phenomena. Descriptive rather than mathematical in character. Not open to Freshmen and not accepted as part of Freshman science requirement. *Second semester. Three credits. Two scheduled periods and one evening hour per week to be arranged.* 201 Physics Building. Blair.

19–20. HOUSEHOLD PHYSICS. A course in general physics for students in home economics. The practical applications of physics in the home will be emphasized. *Prerequisite:* A thorough knowledge of elementary algebra and plane geometry. *Both semesters. Lecture, recitation and quiz, two hours; laboratory, one period. Three credits each semester.* 103 and 201 Physics Building. Blair. Fee, $3.

24. PRACTICAL CALCULATION. Graphical methods of determining the relationship between physical quantities. The adjustment of graphs to increase the accuracy of computed results. Practice in the arrangement of logarithmic calculation so that the minimum amount of labor is involved in the solution of complicated equations. Differential correction of results. Interpolation and the use of interpolation formula. Computation of probable error and estimation of accuracy of data and results. *Prerequisite:* Differential Calculus. *Second semester. One credit. One three-hour computing period per week.* Blair.

53–54. General Physics for Arts and Science Students of the Senior College. Mechanics and heat, sound and light, and electricity and magnetism. Lectures and recitations are fully illustrated by experimental demonstrations at the lecture table and by problems. *Prerequisite:* Mathematics 7, 13, and 14, high school Physics, or Physics 1a–2a and 1b–2b. *Both semesters. Five credits each semester.* 201 Physics Building. Hartman.

55–56. Physical Measurements. Experimental work of distinctly quantitative character is done in mechanics and heat, sound and light, and electricity and magnetism. The methods selected involve fundamental physical principles, and illustrate their most important application. *Prerequisite:* Mathematics 7, 13, and 14, Physics 1a–2a and 1b–2b, or high school Physics. *Both semesters. Credits to be arranged, with six credits as maximum for the course.* 103 and 109 Physics Building. Blair and Leifson. Fee, $3.

57–58. Electrical Measurements. Precise measurements of current electromotive force and power, with both alternating and direct current. Calibration of instruments, determination of resistance, capacity, mutual inductance, and self-inductance. Hysteresis. Photometry. Illumination. One hour each week will be devoted to discussion and reports. *Prerequisite:* Physics 53–54 and 55–56. *Either semester. One or two credits per semester.* 103, 109, and 201 Physics Building. Hartman and Leifson. Fee, $3.

59–60. Heat and Thermodynamics. Lectures and recitations accompanied by experimental work of a quantitative character. This course, together with Physics 61–62, is introductory to Mathematical Physics. Many of the more difficult subjects merely touched upon in Physics 1a-2a, 1b-2b, or 3–4, will be fully treated. (Alternates with Physics 61–62.) *Prerequisite:* Physics 1a–2a, 1b–2b, or 53–54 and 55–56, and Mathematics 14, 25, and 26. *Both semesters. Two credits each semester.* 201 Physics Building. Hartman.

61–62. Light and Physical Optics. Lectures; experimental illustration on selected topics in light, including discussion of wave theory, diffraction, interference, resolving power of optical instruments, dispersion and absorption, spectrum analysis, double refraction, and polarization. (Alternates with Physics 59–60.) *Prerequisite:* Physics 53–54 and 55–56; Mathematics 14, 25, and 26. *Both semesters. Two credits each semester.* 201 Physics Building. Hartman, Blair and Leifson.

63. Physical Optics. Laboratory exercises in connection with course 61–62. *First semester. Two credits.* 201 Physics Buildings, Hartman, Blair and Leifson. Fee, $3.

65–66. History of Physics. Lectures and recitations. Preparation of reports and discussion of assigned topics by members of the class. *Prerequisite:* Physics 1a–2a, 1b–2b, or 53–54, and 55–56. *Both semesters. One credit.* 201 Physics Building. Hartman.

68. Electric Lighting. The application of physical principles to the various problems of electric lighting, photometry, and miscellaneous applications of electricity. *Prerequisite:* Physics 53–54 and 55–56, and Mathematics 14, 25, and 26. *Second semester. Two credits.* 201 Physics Building. Hartman.

71–72. Electrical Theory of Matter. Lectures and experimental illustrations. Discussion of important topics in the fields of radiation and the structure of atoms and molecules. *Fall semester:* Vacuum tube technique, electrons and positive rays, spectrum analysis, Zeeman effect, Doppler's principle, liberation of electrons by light, and isotopes. *Spring semester:* Radioactive transformations, alphaparticle scattering, the Bohr theory of the hydrogen atom, critical potentials, spectra of molecules and compounds, and magnetic spectra. *Prerequisites:* General Physics, Integral and Differential Calculus. *Two credits each semester.* 201 Physics Building. Leifson.

73–74. Electromagnetic Theory. Introduction to the mathematical theory of electricity and magnetism. Solution of problems by exact reasoning from fundamental principles. *Prerequisites:* General Physics, Differential and Integral Calculus. *Either semester. Two credits.* 201 Physics Building. Leifson.

75–76. Glassblowing. A laboratory course of instruction in methods of making simple glass apparatus. *Either semester. One credit.* 107 Physics Building. Leifson. Fee, $5.

101–102. Mathematical Physics. An introduction to the more advanced mathematical analysis as applied to general physical problems. *Prerequisite:* Physics 53–54, 55–56, 57–58, and 59–60, and Mathematics 14, 25, 26, and 85. *Both*

semesters. One credit each semester. 201 Physics Building. Hartman.

103–104. THESIS WORK, and all special laboratory work not in the courses announced above. *Both semesters. Credits to be arranged.* 201 Physics Building. Hartman.

POULTRY HUSBANDRY

College of Agriculture

PROFESSOR SCOTT, HEAD OF DEPARTMENT

2. FARM POULTRY MANAGEMENT. Raising poultry under farm conditions. This course deals with the housing, raising of poultry, handling of stock for the market, and egg production, killing, dressing, diseases, hatching, and rearing of young chicks. Trips to local poultry farms. It is taught with special reference to farm conditions. *First semester. One lecture, one laboratory period. Two credits.* 105 Agricultural Building. Scott. Fee, $2.

4. JUDGING AND CULLING. This course deals with all the principal breeds of poultry as given in the American Standard of Perfection, which is used as a text. The laboratory work consists of judging such poultry as can be obtained in Reno and vicinity, examination of hens to estimate production, demonstrations in marketing and caponizing. *Second semester. One lecture, one laboratory. Two credits.* 105 Agricultural Building. Scott. Fee, $2.

6. INCUBATION AND BROODING. Practical work with incubators and brooders. *Laboratory, one period. One credit. Second semester.* Scott. Fee, $2.

8. TURKEY PRODUCTION AND MANAGEMENT. This course deals with the practical management of turkeys, primarily for meat production. No laboratory period is arranged for, but about two trips are planned each year, one at marketing time and one at hatching and breeding time. *Second semester. Two credits.* Text: Turkey Production and Management, by L. E. Cline. Scott. Fee, $2.

PSYCHOLOGY

PROFESSOR YOUNG, HEAD OF DEPARTMENT

Requirements for a major: Philosophy 1 or 2, Zoology 8, Sociology 71, Psychology 5, 51, 60, 62, 63, and six additional hours in the department.

Requirements for a minor: Psychology 5, 8 or 10, 62, and ten additional hours in the department.

2. HUMAN NATURE. A birdseye view of man's instincts, capacities and mental traits. The laws of learning and habit-formation are emphasized. The principal aims of the course are: (1) To furnish a basis for the development of an effective method of study; (2) to present the principles that should be recognized in the conscious building of character; and (3) to develop greater social sympathy and understanding. This course is open to Freshmen. *Second semester. Two credits.* Education Building.

5. GENERAL PSYCHOLOGY. An introductory course dealing with forms and laws of consciousness. Lectures, prescribed readings, term paper. Not open to Freshmen. Required for two-year Normal and high-school teacher's diplomas. *Either semester. Three credits.* Education Building.

8. PSYCHOLOGY OF CHILDHOOD. The development of consciousness through infancy and childhood, with special reference to the application of the principles of development to the training of children. Required for two-year Normal students. *Second semester. Two credits.* Education Building.

10. PSYCHOLOGY OF ADOLESCENCE. An intensive study of the characteristics dominant in the adolescent, with special emphasis upon applications to the work of the high-school teacher. Required for high-school teacher's diploma. *Second semester. Two credits.* Education Building.

12. PSYCHOLOGY OF OCCUPATIONS. A brief review of the fundamental principles of psychology, and a study of their applications in the chief industries and occupations of mankind. *Second semester. Two credits.* Education Building.

40. MENTAL HYGIENE. A consideration of the principles of psychology in their relationship to mental health and efficiency. *Second semester. Three credits.*

51. SOCIAL PSYCHOLOGY. A study of the applications of psychology to the group-life of society: Communities, parties, nations, mobs, amusements, etc. *Prerequisite:* Psychology 5, or its equivalent. *First semester. Two credits.* Education Building.

53. EDUCATIONAL PSYCHOLOGY. A survey of the native endowment of the individual—instincts, capacities and traits. An intensive study of the learning process and of the psychology of the elementary and high school subjects.

Prerequisite: Psychology 5 or its equivalent. *First semester. Three credits.*

55. ABNORMAL PSYCHOLOGY. A study of the abnormal mind in its relation to behavior. The theory of the unconscious mind, sleep, dreams, hypnotism, and obsessions are major topics in the course. *Prerequisite:* Psychology 5, or its equivalent. *First semester. Three credits.* Education Building.

57. PSYCHOLOGY OF ADVERTISING. An intensive study of the psychological laws which are basic in all effective advertising. *First semester. Two credits.*

59. MENTAL MEASUREMENTS. Lectures, practice, readings. Description of the more important tests of general intelligence and special ability, with some practice in testing, grading and interpreting results. Special attention will be given to the testing of school children, tests as a means of classifying employees, army personnel, etc. *First semester. Two credits.* Education Building.

60. COMPARATIVE PSYCHOLOGY. The genetic history of consciousness in animals, savages and civilized human beings. *Second semester. Two credits.* Education Building.

61. BUSINESS PSYCHOLOGY. A discussion and illustration of the mental laws upon which efficient buying, selling, advertising and management of men are based. *First semester. Two credits.* Education Building.

62. EXPERIMENTAL PSYCHOLOGY. A laboratory course in the application of scientific methods to the study of mental processes. Lectures, assigned readings, and laboratory. *Second semester. Three credits.* Education Building.

63. ADVANCED PSYCHOLOGY. An intensive study of selected problems. Lectures, readings and a term paper. *Prerequisite:* Psychology 5. *First semester. Two credits.* Education Building.

102. RESEARCH IN PSYCHOLOGY. The thesis subject may be chosen from the field of child study, social or experimental psychology. For graduate students and Seniors. *Prerequisite:* Psychology 5, and at least one course in the field in which the work is to be done. *Either semester. Two credits.* Education Building.

AFFILIATED ORGANIZATIONS

1. AGRICULTURAL EXPERIMENT STATION
2. AGRICULTURAL EXTENSION DIVISION
3. THE STATE ANALYTICAL LABORATORY
4. THE STATE MINING BUREAU
5. THE STATE HYGIENIC LABORATORY
6. LABORATORY FOR PURE FOOD AND DRUGS AND WEIGHTS AND MEASURES
7. THE STATE VETERINARY CONTROL SERVICE
8. UNITED STATES BUREAU OF MINES EXPERIMENT STATION

AFFILIATED ORGANIZATIONS

The Nevada Agricultural Experiment Station

Staff

Walter E. Clark, Ph.D., LL.D., President of the University.
Samuel B. Doten, M.A., Director and Entomologist.
[1]F. L. Bixby, C.E., Bureau of Public Roads, Irrigation Div., U.S.D.A.
George Hardman, M.S., Agronomist.
Robert Stewart, Ph.D., Collaborator in Soil Fertility.
V. E. Spencer, M.S., Associate in Soils Research.
Charles E. Fleming, B.S.A., Range Management.
Andrew Young, Assistant in Range Management.
Chester A. Brennen, B.A., Economist in Range Management.
Grant H. Smith, Jr., B.S., Assistant Economist.
Edward Records, V.M.D., Veterinarian.
Lyman R. Vawter, D.V.M., Pathologist.
F. B. Headley, Farm Development.
Robert Marion Clawson, B.S., Assistant in Farm Development.
Milton Howard, Statistician in Farm Development.
M. R. Miller, M.S., Chemist.
Matilda Marshall, Statistician in Farm Development.
Jean Hughes, Secretary to Veterinary Department.
Mrs. Martha Bruce, Illustrator and Secretary to Director.
Grace Costello, Secretary and Librarian.

Under provisions of the Hatch Act, approved March 2, 1887, the Agricultural Experiment Station was organized in December of that year. From the Hatch Fund the Experiment Station receives $15,000 annually, from the Adams Fund, created by the Adams Act of 1906, it receives a like amount and from the Purnell Fund, created by the Purnell Act, approved February 25, 1925, it received $20,000 during the fiscal year 1925–1926, and will receive $10,000 additional for each fiscal year thereafter until the total reaches $60,000 annually. None of these funds can be applied to teaching or to the work of Agricultural Extension, because the object of all three funds is the investigation by scientific methods of problems in the agricultural industry.

The Nevada Experiment Station has chosen problems for study in four fields:

I. The problems of the most effective use of a limited water supply in crop production.

[1]U. S. Department of Agriculture cooperating.

II. The problems of animal disease in the livestock industry of the State.

III. The problems arising from the depleted condition of Nevada ranges for sheep and cattle.

IV. The problems of small farm development in Nevada.

V. Economic problems in the Nevada cattle industry.

For 1928–1929 the active project list of the Station is as follows:

HATCH FUND

Entomology—

5. *Insects Injurious to Alfalfa.* 1916–Continuous. Project Leader, S. B. Doten.

Range Management—

24. *Methods of Increasing the Percentage of Lambs in Nevada Range Flocks.* 1919–Continuous. Project Leader, C. E. Fleming.

26. *Feeding and Finishing Range Ewes and Lambs.* 1920–Continuous. Project Leader, C. E. Fleming.

27. *Pasturage and Silage Production for Sheep.* 1920–Continuous. Project Leader, C. E. Fleming. Assisted by M. R. Miller and Andrew Young.

ADAMS FUND

Veterinary Science—

16. *Hemorrhagic Disease in Cattle.* 1914–Continuous. Project Leader, Dr. Edward Records. Assisted by Dr. L. R. Vawter.

36. *Lymphangitis in Cattle.* 1928–Continuous. Project Leader, Dr. Edward Records. Assisted by Dr. L. R. Vawter.

Range Management—

22. *Poisonous Range Plants.* 1916–Continuous. Project Leader, C. E. Fleming. Assisted by M. R. Miller, Dr. L. R. Vawter and Andrew Young.

PURNELL FUND

Range Management—

31. *Studies of the Economics of Cattle Production Under Nevada Ranch and Range Conditions.* 1927–Continuous. Project Leader, C. A. Brennen.

Irrigation—

29. *Studies in the Reclamation of Certain Desert Soils Under Irrigation from Artesian Wells in the Las Vegas Valley of Southern Nevada.* 1922–Continuous. Project Leader, George Hardman. Assisted by F. L. Bixby and Dean Robert Stewart.

Farm Development—

30. *Land Utilization nad Farm Development Studies.* 1925–Continuous. Project Leader, F. B. Headley. Assisted by R. M. Clawson.

32. *Test of Economic Efficiency of Alfalfa Hay as Sole Ration for Dairy Cattle and Its Relation to Sterility.* 1925–Continuous. Project Leader, F. B. Headley.

SOIL FERTILITY—

34. *An Attempt to Determine the Value of Nitrogen in the Unhumified Soil Organic Matter of Gypsum and Allied Desert Soils of the Las Vegas Valley of Southern Nevada.* 1926–Continuous. Project Leader, Dean Robert Stewart. Assisted by George Hardman.

35. *A Study of the Chemical and Physical Phenomena of the So-Called "Slick Spots," Impermeable Areas in the Gypsum Soils and Allied Soils of the Moapa and Las Vegas Valleys of Southern Nevada.* 1926–Continuous. Project Leader, Dean Robert Stewart. Assisted by George Hardman.

NEVADA AGRICULTURAL EXTENTION DIVISION

Cooperating Parties

THE PRESIDENT AND THE BOARD OF REGENTS OF THE UNIVERSITY OF NEVADA.

THE EXTENSION SERVICE OF THE UNITED STATES DEPARTMENT OF AGRICULTURE.

THE STATE AND COUNTY FARM BUREAUS.

Staff

WALTER E. CLARK, Ph.D., LL.D., President of the University of Nevada.

CECIL W. CREEL, B.S., Director.

THOMAS E. BUCKMAN, B.S., Assistant Director.

MARY STILWELL BUOL, B.S., Assistant Director.

VERNER E. SCOTT, B.S., Dairy and Poultry Specialist.

ALFRED L. HIGGINBOTHAM, M.A., Extension Editor.

LOUIS E. CLINE, B.S., Extension Agent, Churchill County.

MARTHA L. EDER, B.S., Extension Agent, Eureka, Lander and White Pine Counties.

JULIO C. GENASCI, B.S., Extension Agent, Douglas and Ormsby Counties.

LENA HAUKE, B.S., Extension Agent, Churchill and Lyon Counties.

MARK W. MENKE, B.S., Extension Agent, Elko County.

ORPHA A. MILLER, B.A., Extension Agent, Clark and Lincoln Counties.

THOMAS W. RAYCRAFT, B.S., Extension Agent, Humboldt and northern Lander Counties.

ALBERT J. REED, B.S., Extension Agent, Pershing County.

EDWARD C. REED, B.S., Extension Agent, Washoe County.

OTTO R. SCHULZ, B.S., Extension Agent, Lyon County.

HELEN STIMSON, B.S., Extension Agent, Elko County.

WILBUR H. STODIECK, B.S., Extension Agent, White Pine County.

CLAUDE R. TOWNSEND, Extension Agent, southern Eureka, southern Lander and White Pine Counties.

JOS. W. WILSON, B.S., Extension Agent, Elko and northern Eureka Counties.

JOHN H. WITTWER, B.A., Extension Agent, Clark and Lincoln Counties.

....., Extension Agent, Washoe County.

EDA L. CARLSON, Chief Clerk.

DOROTHY MCGEE, Stenographer.

BLANCHE PRADERE, Stenographer.

GLADYS GALLAGHER, Clerk.

Cooperative Extension Work in Agriculture and Home Economics is organized and conducted in Nevada under the provisions of the Smith-Lever Act of Congress, approved March 8, 1914, and the Capper-Ketcham Act of Congress, approved May 22, 1928. The Agricultural Extension Division as established under the Memorandum of Understanding with the U. S. Department of Agriculture dated September 8, 1914, as a "definite and distinct administrative division" of the University of Nevada, coordinate in rank and affiliating with the College of Agriculture and the Agricultural Experiment Station. All the extension activities of the College of Agriculture and the United States Department of Agriculture in Nevada are conducted through this division.

The nature of the work is defined in general terms by law as "the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise."

The work is annually outlined in written projects and budgets entered into by the cooperating parties. The major projects are Range Livestock, Dairying, Poultry, Crops, Home Improvement, Human Nutrition and Clothing. The organization for Extension Work in Nevada comprises an administrative and specialist staff resident at the University, and sixteen County and District Agents. Twelve Nevada counties have organized Farm Bureaus pursuant to Acts of the Legislature, approved April 1, 1919, and March 4, 1921. All extension work in these counties is conducted in cooperation with the Farm Bureaus.

The State Analytical Laboratory

Staff

Walter E. Clark, Ph.D., LL.D., President of the University
Walter S. Palmer, E.M., Director.
J Claude Jones, Ph.D., Geologist.
William I. Smyth, E.M., Chemist.
Vincent P. Gianella, M.S., Mineralogist.

The State Analytical Laboratory was organized at the University of Nevada in 1895 under the provisions of an Act approved on March 16 of that year. Its object is to assist the mining industry of Nevada by making free analyses of minerals and ores taken from within the boundaries of Nevada by its citizens, and by reporting to the senders the results of such analyses, together with the uses and market values of the substances submitted.

The routine assays and analyses are made by the chemist. The routine rock and mineral determinations are made by the mineralogist, with the geologist assisting with the unusual rocks and minerals. The director exercises general supervision over the work of the laboratory.

Samples and specimens are listed and distributed in the order in which they are received at the laboratory, and are analyzed essentially in this order, but reports do not go out in the same order since some assays take much longer than others. The results obtained by analysis are given upon the reports for all substances except gold and silver. All that the law permits is a statement that gold or silver is present in value above or below $5 per ton.

The records of the laboratory are open to inspection, but visitors will not be permitted to see copies of reports until sufficient time has elapsed for the original reports to reach the hands of the senders.

The State Mining Bureau

By Act of the Nevada Legislature of March 29, 1929, this Bureau of Mines of the State of Nevada was established, lodging supervision with the Board of Regents of the University of Nevada and granting for the biennium 1929–1930 an annual sum of $5,000. Under this Act it is the duty of the Board of Regents to select a Director and, upon the Director's nomination, such assistants and employees as necessary and to fix the compensation of these employees. The purposes of this Bureau are to conduct a mineralogical survey of the State, to catalogue both metallic and nonmetallic deposits, with addresses of the discoverer, owner or agent; to serve as a bureau of information and exchange in Nevada mining; to collect and publish statistics relative to Nevada mining; to prepare a bibliography of literature pertaining to Nevada mining and geology; to experiment in problems of Nevada concentration, dry placer, flotation methods, etc., and to publish the results; to collect geological and mineralogical specimens; to educate miners and prospectors through lectures and publications; to collect models, drawings and descriptions of appliances used in mining and metallurgical work; and to give consideration to such other kindred scientific and economic questions as in the judgment of the board shall be deemed of value to the people of the State.

The State Hygienic Laboratory

(Sierra and Fifth Streets)

Staff

Walter E. Clark, Ph.D., LL.D., President of the University.
Vera Lautenschlager, M.A., Acting Director.
Frances Owens, A.B., Bacteriologist.
Anna Hargrove, Part-Time Assistant.

The State Hygienic Laboratory was organized in 1909, under the provisions of an Act of the Legislature approved March 25 of that year. The object of the laboratory is to provide facilities for the laboratory diagnosis of infectious diseases and for research into the nature, cause, diagnosis, and methods for the control of such diseases. The services of the laboratory staff are rendered chiefly through the physicians, health officers, and health boards of the State.

The routine work of the laboratory consists chiefly of the examination of specimens for the diagnosis of tuberculosis, typhoid fever, diphtheria, malaria, gonorrhea, and syphilis. Outfits for the collection of specimens for the diagnosis of these diseases may be obtained by any physician without charge.

Examinations are also made for meningitis, sore throat, and other infectious diseases.

Bacteriological examinations of water are made for cities, schools, mining camps, railway companies, and other organizations. The laboratory has available a small number of containers for sending water samples. Officials desiring water examinations to determine whether or not the water is polluted with sewage material or is the source of disease should write to the Director of the laboratory for instructions. Samples of water to be examined for industrial purposes should be sent to the Laboratory for Pure Food and Drugs.

Advice and assistance will, on request, be rendered health officials in the control of outbreaks of infectious diseases and in securing a sanitary water supply.

Laboratory for Pure Food and Drugs and Weights and Measures

(Sierra and Fifth Streets)

Staff

Walter E. Clark, Ph.D., LL.D., President of the University.
Sanford C. Dinsmore, B.S., Commissioner.
Wayne B. Adams, B.S., Chemist.
Victor Cokefair, Inspector.
Ruth Shipaugh, Clerk.

An Act providing for the inspection and analysis of foods, drugs, and liquors, manufactured or offered for sale within the State, was passed by the 1909 session of the Legislature, and became effective on January 1, 1910. The state law is modeled after the National Food and Drugs Act of June 30, 1906, and provides that all rules, regulations, definitions, and decisions proclaimed by the Secretary of Agriculture for the enforcement of the national law shall be adopted by this department in the enforcement of the state law.

With such provisions Nevada receives valuable aid through the federal regulations, and avoids conflict with neighboring States having laws also modeled closely after the national Act. Uniformity in state and national laws, and cooperation among officials is much to be desired, and more can be accomplished under such conditions than by working under laws that are dissimilar or antagonistic to established regulations that have been in vogue in States maintaining food laws for a number of years.

The laws of this State, being similar to the national law, obviate the necessity of manufacturers providing special labels to meet any special requirements that otherwise might exist in this State. Often labels are submitted to this department for approval or correction so that they will comply with the Nevada food law.

An Act concerning and fixing standard weights and measures, and to regulate the sale of commodities or articles of merchandise according to such standards, was passed by the 1911 session of the Nevada Legislature and became effective January 1, 1912.

The standard weights and measures adopted by the Government of the United States have been adopted as the legal

standard of weights and measures throughout the State of Nevada. With this adoption Nevada receives aid through the federal regulations and promotes uniformity in state and national standards.

The 1923 session of the State Legislature passed what is known as the Fruit and Vegetable Standardization Act. The enforcement of the provisions of this Act was entrusted to the Department of Weights and Measures.

The measure was promulgated to promote, protect, further, and develop the agricultural interests of the State. It provides for the grading and standardization of all farm products and the issuing of federal-state certificates to any shipper desiring the service. A nominal fee is charged to cover actual expenses incident to shipping-point inspection and issuing certificates. The certificates issued, covering shipments of agricultural products, are absolute guarantees against loss by unscrupulous manipulation of the market, or damage caused by neglect of carrying companies. Complete information regarding this particular work may be obtained by addressing the Department.

The State Veterinary Control Service

Staff

Walter E. Clark, Ph.D., LL.D., President of the University.
Edward Records, V.M.D., Director.
Lyman R. Vawter, D.V.M., Pathologist.
Sievert Nelson, Laboratory Assistant.
Jean Hughes, Stenographer.

The State Veterinary Control Service was organized during 1915, under the provisions of an Act of the Legislature approved March 11, 1915. The object of this Department is to provide facilities for the routine diagnosis of communicable diseases of domesticated animals in the laboratory and the field, and to conduct research into the nature, cause, and means of control of such diseases, including the manufacture and distribution of special sera and vaccines for their control when these cannot be procured in the open market. This is intended to supplement the more elaborate research projects of the Department of Veterinary Science of the Agricultural Experiment Station and aid in the field work carried on by the State Board of Stock Commissioners and the State Board of Sheep Commissioners. From time to time bulletins and circulars dealing with the communicable diseases of domesticated animals and the most modern means of controlling the same are prepared and distributed.

The services of the staff are available to the veterinarians, livestock owners and ranchers of the State in connection with any problem coming within the scope of the work of this department.

DEPARTMENT OF COMMERCE

United States Bureau of Mines Rare and Precious Metals Experiment Station

Staff

Edmund S. Leaver, Met.E. Supervising Engineer and Metallurgist.
H. A. Doerner, B.S., Associate Chemist.
Charles W. Davis, B.S., Associate Chemist.
Jesse A. Woolf. B.S., Assistant Metallurgist.
Charles H. Herty, Jr., D.Sc., Physical Chemist.
William O. Vanderburg, E.M., Mining Engineer.
Harry F. McCray, Chief Clerk.

The Legislature of Nevada passed an Act in March, 1919, providing funds to house an experiment station of the United States Bureau of Mines at the University of Nevada. In June, 1920, the Bureau of Mines accepted the offer and agreed to establish one of its twelve field stations in the quarters provided by a building adjoining the Mackay School of Mines. This building provides office and laboratory facilities for the present staff of the Station, and allows for some future expansion of the work. The building was ready for occupancy in July, 1921, and was equipped during the succeeding three months.

The Nevada Station is known as the Rare and Precious Metals Experiment Station. The scope of the work embraces investigations on gold, silver, platinum, and the rare metals for the entire United States, and of other problems having especial importance for the mining and metallurgical industries of Nevada.

The laboratories and library of the Station will be found described elsewhere in this catalogue.

THE SUMMER SESSION

THE SUMMER SESSION, 1929

JUNE 17 TO JULY 26

The seventeenth annual Summer Session of the University of Nevada will begin Monday, June 17, 1929, and will continue through Friday, July 26, the session covering six weeks.

As heretofore the University of Nevada proposes to do all in its power to make the Summer Session one of inspiration, information, and recreation for all the teachers of this great State who are seeking a vacation which is both profitable and pleasurable.

THE DORMITORY

Manzanita Hall (for women) is a building of modern construction, of the very best equipment in ventilation, heating and lighting, and the rooms are comfortably furnished. The hall has accommodations for about seventy-five women. Children not admitted.

For the Summer Session the dormitory will open Saturday, June 15, 1929.

All women planning to live in the dormitory should bring with them towels, bed linen, and bedding. Only mattresses and pillows are furnished.

All residents of the dormitory must board at the dining hall.

Men students will have no difficulty in securing accommodations in private homes or in apartments.

THE UNIVERSITY DINING HALL

For the students of the Summer Session the University will open the University dining hall for breakfast Sunday morning June 16. Children will be admitted to the dining hall at the same rate as adults. The equipment and service are organized with a view of securing board and table service of the most acceptable character, and, unless students have relatives or friends in Reno with whom they want to make arrangements, they will find it very advantageous to share the community life of the dormitory and dining hall.

ADMISSION

No entrance examinations will be required. Instruction is open to any one of sufficient academic preparation to profit by it.

The Summer Session is not intended for high-school students. However, the policy will be continued of admitting high-school Juniors and Seniors to any courses for which they seem to the Director and instructors qualified.

CREDITS AND CERTIFICATION

No University credit is allowed for the various courses except for students who are duly qualified through graduation from an accredited high school or who meet the matriculation requirements in some other way. No one may register for more than six credits, except that Observation may be added. It is assumed that six credits of work will occupy the full time of the student, and, therefore, the custom of allowing auditors has been discontinued.

A student wishing to secure an elementary or high-school teacher's certificate may find it advantageous to meet a few of the requirements by summer school study. *Second grade* elementary certificates, good for three years, are granted to those who satisfy the entrance requirements of the University and complete one year of the normal course.

The courses in penmanship and bookkeeping will receive certificate credit but no college credit.

The course in stenography and typewriting is offered especially for prospective teachers of commercial subjects, and for others who have the approval of the instructor.

The following courses receive normal-school credit: Art Sm. 1; Education Sm. 23, Sm. 24, Sm. 26, Sm. 41, Sm. 48; English Sm. 1; Hygiene Sm. 4; Music Sm. 1, Sm. 5; Nature Study Sm. 1, and Psychology Sm. 5 and Sm. 8.

The following courses receive normal-school credit and certificate credit if Education Sm. 26 is taken and carried at the same time: Education Sm. 20, Sm. 31, Sm. 34, Sm. 37, and Sm. 42.

Courses carrying college credit in addition to those listed above are as follows: History Sm. 5; English Sm. 42; and Political Science Sm. 79–80.

THE DEMONSTRATION SCHOOL

HOURS—8:40–11:15

Great care has been given to the selection of teachers for the Demonstration School. This school is the center for all the method courses. Especial care will be given to make the Observation course valuable. The sessions last from

8:40 to 11:15, and every teacher should keep an hour free for observation within those limits. The school will consist of two rooms, with three grades each. The enrollment for each room will be limited to twenty children.

Effective methods of management, of selection and organization of subject matter, and methods of teaching with three-class groups of children will be demonstrated by very competent teachers. The primary grades will be in charge of Miss Ethel King, and the intermediate grades in charge of Mrs. Irene B. Frazier, both of whom taught in the University Elementary School in Berkeley and are now in the Cragmont School of that city. Observers will receive many valuable ideas for their next year's work in any type of school. Special emphasis will be laid upon the observation and study of individual difficulties by members of the class of Sm. 48, Educational Tests and Measurements.

Observation, Education Sm. 26, may be taken for one credit in addition to the six regularly allowed, and may be taken for credit by students who have already had one credit. Observation is required of all who expect certificate or normal-school credit for any of the method courses. For students already having two credits in Observation it is required without credit, as an essential part of each method course. Desultory observation is not considered particularly valuable and will be discouraged.

TEACHERS FROM OTHER STATES

Progressive teachers from other States are always welcomed by Nevada to positions for which they show superior qualifications if they can present a license from their own State to teach in the same grade of schools in which they seek appointment here. The State Board of Education is, however, quite insistent that these candidates should show that familiarity with Nevada conditions which is indispensable to their success in this school system. The acquaintance which is thus desired can be most easily established by attendance at the University Summer Session.

EXPENSES

Registration fee	$12.50
Registration fees for children in Demonstration School:	
Grades 1–3	3.00
Grades 4–6	6.00
Rooms for women, Manzanita Hall	10.00

Deposit for breakage	$5.00
[1]Board in University Dining Hall	[2]45.00
Textbooks	5.00–10.00
Art materials	2.50
Ed. Sm. 41	1.00
Excursions	5.00–10.00

ADVANCE RESERVATIONS

Each prospective student who desires to have room and board on the University campus is advised to make early reservation by application to Miss Mack, Dean of Women, accompanied by the sum of $10 room rent for the season. This sum will be returned in full if due notification is received of desire to cancel reservation on or before registration day, June 17.

REGISTRATION

It is important that students study the announcement of courses, consult the time schedule on page 13 and arrange to attend the classes selected at their first meetings.

No student may register for more than six credits, exclusive of Observation, Education Sm. 26.

ASSEMBLIES

Regular assemblies are scheduled for ten o'clock on Wednesdays. Entertaining and instructive lectures on important subjects by notable speakers will be presented. Music will be a feature of these assemblies.

RECREATION

The emphasis in the Summer Session will be placed upon study, yet there will be ample opportunities provided for excursions and other forms of recreation. Recreation programs for the entire student body will be arranged from time to time. A trip to Pyramid Lake is an annual feature of the Summer Session. Trips to Virginia City, Carson City, and other points of interest will be arranged on request.

Lake Tahoe is easily reached from Reno. Points of interest in and around Reno are the Nevada Historical Museum housed in the Nevada State Building in Powning Park, Idlewild and Wingfield Parks, with their respective recreational provisions, the Nevada Packing Company, Chism's

[1]There will be no rebate at all unless arranged with the director of the dining hall in advance.

[2]For the six weeks; $15 must be paid at the time of registration and the remaining $30 before July 3.

Ice Cream factory, the Model Dairy farm and plant, Steamboat Springs, and Bowers Mansion.

In Reno there is a Y. M. C. A. with many recreational advantages which are open to the men for a nominal fee, and a Y. W. C. A. where all women are given a hearty welcome. The churches of Reno will afford the summer student an opportunity to hear stimulating sermons and good music.

THE SUMMER SESSION

FACULTY

Regular University of Nevada Staff

WALTER E. CLARK, Ph.D., President of the University of Nevada.
JOHN W. HALL, M.A., Dean of the School of Education.
FRED W. TRANER, M.A., Director of the Summer Session.
R. C. THOMPSON, M.A., Professor of Philosophy.
THEODORE POST, M.A., Professor and Director of Music.
PAUL A. HARWOOD, B.A., Assistant Professor of English.
CHARLES LEROY BROWN, M.A., Instructor in Biology.
MAE WEISNER, B.S., Matron of Manzanita Hall.

Special Summer Session Staff

W. J. HUNTING, M.A., Superintendent of Schools, Lovelock, Nevada.
GEORGE L. DILWORTH, M.Di., Superintendent of Schools, Sparks, Nevada.
E. O. VAUGHN, B.S., Principal of Reno High School.
FRANCES GIDDINGS, M.A., Supervisor, Kindergarten-Primary Training, University of California at Los Angeles.
MRS. IRENE B. FRAZIER, Cragmont School, Berkeley.
ETHEL G. KING, Cragmont School, Berkeley.
MRS. C. W. DAVIS, formerly teacher of Art, Kinsley School, Kansas.
M. P. SHERMAN, Head of Commerce Department, Armijo Union High School, Fairfield, California.

COURSES OFFERED

Art

Sm. 1. PRIMARY AND ELEMENTARY ART. A general course designed to meet the needs of the rural and unsupervised grade teacher. Projects in color, design, and representation through the mediums of pencil, charcoal, tempera and oils. *Required for two-year Normal diploma. One hour daily. One credit.* Materials for this course will cost $2.50. 203 Education Building. Davis.

Biology

Sm. 4. HYGIENE. The object of this course is to enable the teachers to interest the children in good health, in the knowledge underlying it, and the practice and habits that will secure it. Discussions, assigned readings, and demonstrations. *Two credits. Required for two-year Normal diploma.* 210 Agriculture Building. Brown.

Sm. 1. NATURE STUDY. This course deals with the plant and animal life of Nevada in its relation to agriculture. The laboratory work consists of simple projects such as may be carried out by pupils in the rural schools. The discussions deal with the fundamental principles growing out of these projects. It is hoped that the members of this class may develop interest in, and ability to cooperate in, the club-work of the Farm Bureau. *Two credits. Required for two-year Normal diploma.* 210 Agriculture Building. Brown.

Commercial Courses

The following courses are offered as particularly helpful to rural teachers. The work will be adjusted to students of varying ability and experience. Students admitted only upon approval of the instructor.

Sm. BB. BOOKKEEPING. Study and practice in the elementary principles of bookkeeping intended for teachers in the rural schools and for prospective commercial teachers wishing an introduction to bookkeeping. *Certificate credit but no college credit.* Room 202 Education Building. Sherman.

Sm. CC. PENMANSHIP. Text: The Palmer Method of Business Writing. This course will cover the principles of the Palmer Method and practice. *No college credit. Certificate credit.* 202 Education Building. Sherman.

Education

Sm. 20. PRINCIPLES OF TEACHING. A study of the various types of class room teaching to discover principles of selection, organizations, and presentation of subject matter to children of the first six grades. *Two credits.* 103 Education Building. Traner.

Sm. 23. PROBLEMS IN RURAL EDUCATION. A survey of Nevada school conditions, the needs of Nevada rural communities, and the opportunity and responsibility of the rural school-teacher for leadership among both children and adults are among the more important topics studied. This course may be substituted for Education 23 provided that Sm. 26 is carried at the same time. *Two credits.* 207 Education Building. Dilworth.

Sm. 24. SCHOOL MANAGEMENT AND SCHOOL LAW. A consideration of the fundamental facts of school law and the fundamental problems of school organization and school hygiene from the point of view of the teacher in the elementary school. *Two credits. Required for the two-year Normal diploma.* 200 Education Building. Hunting.

Sm. 26. OBSERVATION OF PRACTICE TEACHING. This course will be required for students who register for method courses and who wish credit on certificates for such courses, or who wish to substitute the credit for the course in the regular semester. Students may register for this course in addition to six other units of work and without special permission. Students having credit in Education Sm. 25 may take Sm. 26 for an additional credit. *One credit.* 209 Education Building. Giddings, 9:35. 103 Education Building. Traner, 8:40.

NOTE—Students should bring all the books on method they possess. They should have special method books in the subjects they wish especially to observe.

Sm. 31. THE TEACHING OF ARITHMETIC. A study of the modern aims in teaching arithmetic, the effect of these aims on the selection and organization of arithmetic material for the different grades, and the methods of teaching. May be substituted for Education 31 provided Sm. 26 is carried at the same time. *Required for two-year Normal diploma. Two credits.* 211 Education Building. Vaughn.

Sm. 34. THE TEACHING OF ENGLISH. Principles underlying the selection, organization, and presentation of subject matter for the first four grades, and the study of children's literature for these grades. May be substituted for Education 34 provided Sm. 26 is carried at the same time. *Required for two-year Normal diploma. Two credits.* 209 Education Building. Giddings.

Sm. 37. THE TEACHING OF GEOGRAPHY. A study of the modern aims in teaching geography, with discussion of the selection, organization and presentation of suitable geographical material for the different grades. May be substituted for Education 37 provided Sm. 26 is carried at the same time. *Required for two-year Normal diploma. Two credits.* 211 Education Building. Vaughn.

Sm. 41. KINDERGARTEN METHODS FOR PRIMARY TEACHERS. *Required for the two-year Normal diploma. One credit.* 209 Education Building. Giddings.

Sm. 42. The Teaching of History and Civics. A consideration of the aims of teaching history and civics and the effect of these aims on the selection, organization, and presentation of subject matter. May be substituted for Education 42 provided Sm. 26 is carried at the same time. *Required for two-year Normal diploma. Two credits.* 207 Education Building. Dilworth.

Sm. 48. Educational Tests and Measurements. This course will consider the most serviceable tests and scales for measuring the elementary-school subjects. It is designed to assist teachers in judging and improving their instruction. The course will involve giving and scoring the tests, with special emphasis upon the interpretation of results. *Required for two-year Normal diploma. Two credits.* 207 Education Building. Dilworth.

English

Sm. 1. Composition and Rhetoric. The study of English as a means of self-expression and self-development. There will be written work in description and narration, analysis of examples of good writing, and discussion of grammatical questions. *Required for two-year Normal diploma. Two credits.* 200 Education Building. Harwood.

Sm. 42. Literature. Good reading in prose and poetry. A course in Appreciation. *Two credits.* 200 Education Building. Harwood.

HISTORY AND POLITICAL SCIENCE

History Sm. 5. European Background of American History. European life and institutions and their effect upon the discovery and development of the Americas. Those intending to enroll are urged to bring sixth-grade history books. *Two credits.* 200 Education Building. Hunting.

Political Science Sm. 79–80. United States Constitutional History. This course is arranged to meet the legislative requirement for the study of the Constitutions of the United States and Nevada. *Two credits.* 200 Education Building. Hunting.

Music

Sm. 1. Elements of Music. Learning to read and to sing the simple music appropriate for children of rural schools. Notation and terminology, intervals, and other technique growing out of the above work, as far as may be necessary and possible to equip teachers to handle the music in the rural schools. *One credit. Required for two-year Normal diploma.* 204 Education Building. Post.

Sm. 5. Methods. There will be some modification of this course to include the Appreciation of music from both the school room viewpoint and the general cultural standpoint. Attention will be given to modern methods in public school music and practical methods under special conditions. Presentation of new song material for children and the toy orchestra. *Two credits. Required for two-year Normal diploma.* 204 Education Building. Post.

Psychology

Sm. 5. Elementary Psychology. A course in general psychology dealing with the forms and laws of consciousness. Lectures and prescribed readings. *Required for two-year Normal and high-school teacher's diploma. Two credits.* 211 Education Building. Thompson.

Sm. 8. Psychology of Childhood. The development of consciousness through infancy and childhood, with special reference to the application of the principles of development to the training of children. *Required for two-year Normal students. Two credits.* 211 Education Building. Thompson.

SCHEDULE OF CLASSES

Summer Session, 1929

The Demonstration School will be in continuous session from 8:40 to 11:15. Lower grades, Room 105, King. Upper grades, Room 104, Frazier.

7:45—

Education Sm. 31.....Room 211, Vaughn
English Sm. 1.....Room 200, Harwood
Nature Study Sm. 1.....Room 210, Agriculture Building, Brown
Education Sm. 23.....Room 207, Dilworth

8:40—

Education Sm. 26.....Room 103, Traner
Education Sm. 37.....Room 211, Vaughn
Education Sm. 48.....Room 207, Dilworth
English Sm. 42.....Room 200, Harwood
Hygiene Sm. 4.....Room 210, Agriculture Building, Brown

9:35—

Education Sm. 20.....Room 103, Traner
Education Sm. 26.....Room 209, Giddings
Education Sm. 42.....Room 207, Dilworth
History Sm. 5.....Room 200, Hunting

10:30—

Education Sm. 24.....Room 200, Hunting
Education Sm. 34.....Room 209, Giddings
Music Sm. 1.....Room 204, Post
Psychology Sm. 8.....Room 211, Thompson

11:25—

Penmanship.....Room 202, Sherman
Education Sm. 41.....Room 209, Giddings
Political Science 79–80..Room 200, Hunting
Psychology Sm. 5.....Room 211, Thompson
Music Sm. 5.....Room 204, Post

1:30—

Bookkeeping.....Room 202, Sherman
Art Sm. 1.....Room 203, Davis

RECIPIENTS OF SCHOLARSHIPS AND HONORS
1928

The five REGENTS' SCHOLARSHIPS of $50 each for excellence in scholarship, awarded to

Josephine Arlang — Eillen K. Baldwin
Verdie L. Fant — Wilbur Stodieck
Evelyn M. Anderson

The ELLA SPRENGLE STUBBS SCHOLARSHIP of $100, awarded to
Thomas A. Jackson

The ALICE G. CLARK SCHOLARSHIP of $250, given by W. A. Clark, Jr., of Los Angeles, awarded to
Sheila Parker

The UNIVERSITY ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP of $25, awarded to
Nevada Coll

The LEWIS D. FOLSOM SCHOLARSHIP of $100, awarded to
Mark W. Menke

The ROSE SIGLER MATHEWS SCHOLARSHIP of $300, awarded to
Ione Smith

The THEODORA STUBBS FULTON MEMORIAL SCHOLARSHIP of $200, awarded to
Margaret Hartman

The ADOLPHUS LEIGH FITZGERALD SCHOLARSHIPS of $150 each, awarded to

Stanley Sundeen — Mildred V. Brown

The MARYE WILLIAMS BUTLER SCHOLARSHIPS of $50 each, awarded to

Helen Smith — Esther Sauer

The WOMEN'S ATHLETIC SCHOLARSHIP of $100, awarded to
Lucile Sanford

The AZRO E. CHENEY SCHOLARSHIP of $300, awarded to
Daniel Senseney

The GENERAL O. M. MITCHELL WOMAN'S RELIEF CORPS MILITARY SCHOLARSHIP of $50, awarded to
Raymond Germain

The ROBERT LEWERS SCHOLARSHIPS of $150 each, awarded to

W: Albert Davis — Clara Tomlin

The NEVADA BAR ASSOCIATION SCHOLARSHIP of $100, awarded to
George Vargas

The MRS. CARL OTTO HERZ ELECTRICAL ENGINEERING SCHOLARSHIP of $50, awarded to
David Van Lennep

The CHARLES H. MOORE DEBATING SCHOLARSHIP of $50, awarded to
Alan Bible

The CHARLES ELMER CLOUGH SCHOLARSHIPS of $160 each, awarded to

Neil Lamb — Lawrence Collins

The JAMES WARD GERMAN – KATHERINE MORRISON GERMAN SCHOLARSHIPS, awarded to

James Henrichs for $350 — Neil Austin for $150

The RACHEL RAND SCHOLARSHIPS of $50 each, awarded to

Kara Lucas — Leonard W. Sledge

The RENO CHAPTER WOMEN'S CHRISTIAN TEMPERANCE UNION ESSAY PRIZE of $20, won by
Dora Clover

The PHILO S. BENNETT PRIZE of ..... for the best essay on "The Principles of Free Government," awarded to
Joseph Henry Robinson

The HENRY ALBERT SENIOR PUBLIC SERVICE PRIZE of $25, awarded to
Vernon Cantlon

GOLD MEDAL

Awarded annually to that member of the graduating class who has maintained the highest average grade in scholarship throughout his or her college course, awarded to
Altha Pierson

Commissions as Second Lieutenants of Infantry, United States Army—Officers Reserve Corps:

Harney C. Archias — Kenneth K. Knopf
Rudolph A. Blum — Granville I. Leavitt
Cyrus K. Dam — Archie A. Watson

Seniors elected to the National Honor Fraternity of the PHI KAPPA PHI, election being based upon scholarship:

Arnold Benson
Leslie E. Clover
Arthur W. Gay
Cecil H. Gay
Frederick Mather Anderson
Vernon Cantlon
Herman F. Kaiser
Eva Bertrand Adams
Grace Witter Bassett
Margaret Lucile Beverly
Beverly Grey Bulmer
Margaret Ernst
Kathleen Anne Griffin
Marie Taylor Higginbotham
Forrest R. Holdcamper
Mabel T. Mariani
Frances Marie Nelson
Theodora Olmsted
Altha Pierson
Betty Sue Shaw
Ruth Delar Streeter
Frances Westfall

HONOR ROLL of those students whose names appeared on this roll both semesters of the year 1927–1928:

SENIORS

Mabel Mariani
Altha Pierson
Forrest Holdcamper
Beverly Bulmer
LaVerne Blundell
Eva Adams
Lucile Summerfield
Fred M. Anderson

JUNIORS

Helen Smith
Mrs. Wilda Talbot
David Van Lennep
Augustus F. Giberson
Eillen K. Baldwin
Evelyn M. Anderson
Mark W. Menke

SOPHOMORES

Nevada Coll
Leonard Sledge
Verdie L. Fant
Esther Sauer
Neil K. Lamb
Daniel Sensency
Alan Bible
William Sanford

FRESHMEN

Kirsten Boe
Cecelia Hawkins
Jean Hughes
Walter V. T. Clark
Euphemia M. Clark
Josephine Arlang

GRADUATES

Diplomas and Degrees were awarded on Commencement Day, May 14, 1928, as follows:

ELECTRICAL ENGINEER

Louis S. Leavitt

ENGINEER OF MINES

Donald C. Cameron

MASTER OF SCIENCE IN MECHANICAL ENGINEERING

Clarence Hammond Kent

MASTER OF SCIENCE IN CHEMISTRY

McKean Carter

MASTER OF SCIENCE IN MINING ENGINEERING

Lisle Rey Nolds Messer

MASTER OF ARTS IN HISTORY

Ruth V. Foster
Lawton B. Kline
Ida Mary Robinson
Chester M. Scranton
Ellen Evalinn Stitt

MASTER OF ARTS IN SPANISH

Edwin Eugene Williams

BACHELOR OF ARTS

Eva Bertrand Adams
Harney C. Archias
Lloyd L. Barrington (December 21, 1927)
Grace Witter Bassett
Anita Marie Becaas
Mae Isabel Bernasconi
Margaret Lucile Beverly
Rudolph A. Blum
LaVerne Blundell
Lois Bona
Lillian Browne
Beverly Grey Bulmer
Alice Jane Carney
Charles V. Carter
William Ennes Clawson, Jr.
Elizabeth Coleman
John Bruce Connelly, Jr.
Arthur R. Cox
Walter J. Cox
Catherine Adelle Curieux
Andres S. Denava
Donna E. Dove
Elsbeth A. Dove
William Holm Downey
Margaret Ernst
Helen Clare Fox
Maude Lillian Fulstone
Milton A. Gooding
Margaret Amy Goodman (July 30, 1927)
Hazel Greninger
Kathleen Anne Griffin
Bernard C. Hartung (December 21, 1927)
Ruth Geraldine Harvey

BACHELOR OF ARTS—*Continued*

Helen May Hibbert
Marie Taylor Higginbotham
Alfred Dufresne Hill
Forrest R. Holdcamper
Eleanor Jackson
Jean Jackson
(December 21, 1927)
Margaret Mary Jenkins
Bernice Johnson
Mabel Louise Jones
Dorothy Rutledge Kaeser
(December 21, 1927)
Frank Karlovsky
(December 21, 1927)
Granville Irving Leavitt
Isabel T. Loring
Juanita Lucile Lowe
Ainsley Holland Mabson
(December 21, 1927)
Mabel T. Mariani
Adele Anne Martin
Ethyl Cecilia McManus
Grace C. McNeil
(December 21, 1927)
Helen Shirley Medigovich
(July 30, 1927)
Ian Mensinger
Wayne G. Meroux
(December 21, 1927)
Mary Esther Moore
Frances Marie Nelson
Henry C. Nelson
Leonard W. Noblitt
Theodora Olmsted
Altha Pierson
Ellis R. Randall
Gertrude A. Reilly
Charles Renwick, Jr.
(July 30, 1927)
Virgil W. Ross
Lionel R. Scott
Betty Sue Shaw
James Addley Sherritt
Carol Katherine Smith
Harriet Gaddis Spann
Budd O'Neil Stevenson
Ruth Delar Streeter
Lucile Summerfield
Archie Arnold Watson
Frances Westfall
Roy Marion Whitacre
Emerson J. Wilson
Norton Earl Worden
(December 21, 1927)

BACHELOR OF SCIENCE

Gregory R. Adams
Frederick Mather Anderson
Vernon Cantlon
John L. Carlson
(December 21, 1927)
Leo F. Corvino
Edith M. Dowd
Olive Dorothy Dunn
George Frank Gadda
Herman F. Kaiser
(December 21, 1927)
Floyd Lamb
Frank Yearsley Leaver
(December 21, 1927)
Fawn S. Louie
Martin H. Melendy
Alice Mae Molini
George B. Pimentel
James W. Rice
(December 21, 1927)
William Stoddard Sawle
Genevieve Spencer
Wallace Erroll Taber
Harold F. Whalman
(As of the Class of 1922)

BACHELOR OF SCIENCE IN MINING ENGINEERING

Angus Y. Bethune
Wallace A. Coltrin
(December 21, 1927)
Augustus M. Dixon
Leland Hobart Hinckley
James Skene
(December 21, 1927)
Louis V. Skinner
(December 21, 1927)

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Harold Clark Amens
Arnold Benson
Emory C. Branch
Frank A. Burkham
Leslie E. Clover
Arthur W. Gay
Cecil H. Gay
Andrew N. Hanson
Walter J. Herz
(December 21, 1927)
Gordon O. Johnson
George K. Kallenbach
Kenneth Kermit Knopf
Lawrence S. Niswander
*Lynn R. Olson
Walter Ede Sellman
William J. Tavelle
Charles J. Watkins
John J. Welsh
Edward Norton Ziegler

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

F. Maxwell Ball
Florie A. Braghetta
Wayne Buerer
Serge E. Kondrashoff
George Corlys Lotz

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

John Walter Corvin
Joe Garcia, Jr.
Ralph E. Gignoux
Raymond Lloyd Huffman
Erwin P. Morrison
Victor J. Pimentel
Charles E. Wood

BACHELOR OF SCIENCE IN AGRICULTURE

Lem S. Allen
Ralston L. Crew
(December 21, 1927)
Thomas W. Raycraft
(December 21, 1927)
Otto R. Schulz
Shaler G. Wilder

BACHELOR OF SCIENCE IN HOME ECONOMICS

Katherine Mary Davidson

TEACHER'S DIPLOMA OF HIGH SCHOOL GRADE

Eva Bertrand Adams
Grace Witter Bassett
Anita Marie Becaas
Mae Isabel Bernasconi
Margaret Lucile Beverly
LaVerne Blundell
Lois Bona
Lillian Browne
Beverly Grey Bulmer
Alice Jane Carney

*Died August 19, 1928

TEACHER'S DIPLOMA OF HIGH SCHOOL GRADE—*Continued*

Elizabeth Coleman
Arthur R. Cox
Ralston L. Crew
Catherine Adelle Curieux
Katherine Mary Davidson
Elsbeth A. Dove
Olive Dorothy Dunn
Margaret Ernst
Ruth V. Foster
Maude Lillian Fulstone
Hazel Greninger
Kathleen Anne Griffin
Ruth Geraldine Harvey
Helen May Hibbert
Forrest R. Holdcamper
Jean Jackson
(December 21, 1927)
Margaret Mary Jenkins
Bernice Johnson
Mabel Louise Jones
Dorothy Rutledge Kaeser
(December 21, 1927)
Granville Irving Leavitt
Isabel T. Loring
Juanita Lucile Lowe
Mabel T. Mariani
Adele Anne Martin
Grace C. McNeil
(December 21, 1927)
Helen Shirley Medigovich
(July 30, 1927)
Alice Mae Molini
Henry C. Nelson
Theodora Olmsted
Altha Pierson
Gertrude A. Reilly
Ida Mary Robinson
William Stoddard Sawle
Otto R. Schulz
Lionel R. Scott
Genevieve Spencer
Ruth Delar Streeter
Archie Arnold Watson
Frances Westfall

TEACHER'S DIPLOMA OF GRAMMAR GRADE

Mildred Louyne Anderson
Evelyn Faye Boudette
Gladys Irene Brooner
Opal Curieux
Evelyn M. Fayhin
Thelma Gerber
Bethel Adelaide Goering
Mary E. Guthrie
Dorothy Marguerite Haviland
Martha Emilie Metscher
Louise Barbara Reil
Evelyn Mae Rogers
Maud Rothrock Williams
(July 30, 1927)

ENROLLMENT SUMMARY

COLLEGE OF ARTS AND SCIENCE

Seniors	110	
Juniors	142	
Sophomores	141	
Freshmen	202	
Graduate	46	
Unclassified	17	
Specials	9	
		667

NORMAL SCHOOL

Juniors	4	
Sophomores	6	
Freshmen	30	
		40

COLLEGE OF ENGINEERING

Mackay School of Mines—		
Seniors	4	
Juniors	10	
Sophomores	11	
Freshmen	12	
Graduate	3	
Specials	4	
		44
School of Mechanical Engineering—		
Seniors	4	
Juniors	4	
Sophomores	5	
Freshmen	20	
Graduate	1	
		34
School of Civil Engineering—		
Seniors	8	
Juniors	6	
Sophomores	10	
Freshmen	14	
		38
School of Electrical Engineering—		
Seniors	8	
Juniors	14	
Sophomores	18	
Freshmen	15	
Specials	1	
		56

COLLEGE OF AGRICULTURE

School of Agriculture—		
Seniors	12	
Juniors	3	
Sophomores	7	
Freshmen	12	
Graduate	1	
		35
School of Home Economics—		
Seniors	6	
Juniors	4	
Sophomores	9	
Freshmen	10	
Unclassified	1	
		30
		944
Total University		
Enrollment of Men	572	
Enrollment of Women	372	
		117
Total Summer School, 1928		
		1061
Total Enrollment		
Less names counted twice		24
		1037
Grand Total Enrollment		

ROSTER OF STUDENTS

GRADUATE

Fred M. Anderson	Arts and Science	Carson City
Gretchen Appel	Arts and Science	Reno
Anita Marie Becaas	Arts and Science	Reno
Agnes Bell	Arts and Science	Reno
Mildred Belmonte	Arts and Science	Reno
Lois S. Bicknell	Arts and Science	Reno
James F. Brown	Arts and Science	Sparks
Charles V. Carter	Arts and Science	Reno
Marion Clawson	Agriculture	Reno
Mrs. Gladys J. Crosby	Arts and Science	Reno
Helen Duffy	Arts and Science	Sparks
Alice Fortier	Arts and Science	Reno
George Gadda	Arts and Science	Reno
Mrs. Lyndel A. Greenwalt	Arts and Science	Reno
Helen Halley	Arts and Science	Reno
B. Marjorie Handy	Arts and Science	Berkeley, Calif.
Erastus A. Hansen	Arts and Science	Susanville, Calif.
Andrew Hanson	Arts and Science	Steamboat
Paul A. Harwood	Arts and Science	Reno
Edward C. Henry	Mines	Philadelphia, Pa.
Mrs. Nelle W. Hines	Arts and Science	Kingsley, Kan.
H. Francis Horton	Arts and Science	Redlands, Calif.
Rolla V. Johnson	Arts and Science	Sparks
Lewis Keheo	Arts and Science	Lovelock
Rochelle Kincaid	Arts and Science	Reno
Lawton B. Kline	Arts and Science	Reno
A. W. Lawrence	Mechanical Engineering	Reno
Adele Martin	Arts and Science	Reno
Alice Maxwell	Arts and Science	Reno
Alfred H. McConaughy	Arts and Science	Sparks
Mrs. Anne B. McNamara	Arts and Science	Sparks
Essie A. Morrell	Arts and Science	Reno
Mrs. Verna S. Paterson	Arts and Science	Reno
Altha Pierson	Arts and Science	Reno
Victor Pimentel	Mines	Reno
Natalie Proskey	Arts and Science	Reno
Edith Ruebsam	Arts and Science	Reno
Mrs. I. J. Sandorf	Arts and Science	Reno

Alwine Sielaff	Arts and Science	Reno
Mrs. Harriet Spann	Arts and Science	Reno
Budd O. Stevenson	Arts and Science	Reno
Edwin C. Streng	Arts and Science	Reno
J. Ralph Warren	Arts and Science	Reno
Mary Watt	Arts and Science	Reno
Inez Ray Wells	Arts and Science	Reno
Margaret Wheatley	Arts and Science	Reno
Mary Wilkinson	Arts and Science	Kingsley, Kan.
Jesse A. Woolf	Mines	Reno
Gertrude Wyckoff	Arts and Science	Reno
Gladys Wyckoff	Arts and Science	Reno
Anthony Zeni	Arts and Science	Reno

SENIORS

Robert E. Adams	Arts and Science	Sparks
Albert W. Alegre	Arts and Science	San Francisco
Mabel Aljets	Arts and Science	East Ely
John Babcock	Electrical Engineering	San Francisco
Harold A. Bailey	Arts and Science	Sparks
James C. Bailey	Arts and Science	Fallon
Eillen K. Baldwin	Arts and Science	Alturas, Calif.
George W. Barnes	Electrical Engineering	Reno
Ted D. Beach	Agriculture	Reno
Donald H. Bell	Arts and Science	East Ely
Sara H. Bell	Arts and Science	Reno
Donald Bernstein	Arts and Science	McGill
George S. Blum	Arts and Science	San Francisco
Margaret M. Bogart	Arts and Science	Reno
Jeanette Brown	Arts and Science	Reno
Raymond Browne	Civil Engineering	Reno
Solomon Bulasky	Arts and Science	Reno
Leland Burge	Agriculture	Midas
Douglas Busey	Arts and Science	Reno
Gladys Cafferata	Arts and Science	Reno
Alden Chace	Electrical Engineering	Reno
Tess Chambers	Arts and Science	Oakland, Calif.
Alpha Rulison Clark	Arts and Science	Reno
Saralee Clark	Arts and Science	Reno
Laurence Collins	Mechanical Engineering	Auburn, Calif.
Mabel Connor	Arts and Science	Reno
Alden Copeland	Arts and Science	Ruth
William E. Copren	Arts and Science	Sierraville, Calif.
Bernard Lee Couch	Arts and Science	Reno

Allen R. Crawford	Arts and Science	McGill
Garnett Cullom	Arts and Science	McGill
Walter Q. Cunningham	Arts and Science	Sparks
Cyrus K. Dam	Mechanical Eng.	Berkeley, Calif.
Michele DiRicco	Arts and Science	Ely
Mary K. Donohue	Arts and Science	Tonopah
Edward A. Ducker, Jr.	Arts and Science	Carson City
Helen M. Dunn	Arts and Science	Goldfield
William E. Dunn	Arts and Science	Fortuna, Calif.
Renée Duque	Arts and Science	Reno
Dorothy A. Eaton	Arts and Science	Reno
Herman W. Eaton	Arts and Science	Reno
Edythe E. Ebert	Arts and Science	Hayward, Calif.
Elbert Edwards	Arts and Science	Panaca
Edna Ericson	Arts and Science	Reno
Ernest C. Feland	Arts and Science	Reno
Laurence Fish	Mines	Benicia, Calif.
Romayne E. Foley	Arts and Science	Nevada City, Calif.
Douglas H. Ford	Arts and Science	Fallon
Carl L. Fuetsch	Arts and Science	Tonopah
Norma Gardella	Home Economics	Reno
Jiulio C. Genasci	Agriculture	Loyalton, Calif.
Serge Glyachenkoff	Mines	China
Ruth A. Gooding	Home Economics	Sacramento, Calif.
Frances L. Gorman	Arts and Science	Sutter Creek, Calif.
Jack B. Gregory	Arts and Science	Berkeley, Calif.
Leon W. Hainer	Arts and Science	Binghamton, N. Y.
Alice E. Halley	Arts and Science	Reno
Reynold F. Hansen	Electrical Engineering	Salinas, Calif.
Patricia C. Harding	Home Economics	Sparks
Ellen Harrington	Arts and Science	Fremont, Neb.
Margaret E. Hartman	Arts and Science	Reno
John J. Higginbotham	Arts and Science	Elko
Richard P. Hillman	Arts and Science	Sparks
Constance M. Holland	Home Economics	Reno
Vida M. Holt	Home Economics	Reno
Masakazu Hotta	Arts and Science	Japan
Martha Huber	Arts and Science	Tonopah
Mildred W. Hughes	Arts and Science	Reno
Thomas A. Jackson	Arts and Science	Goldfield
Alger J. Jacobs	Arts and Science	Elko
Herbert Jacobs	Arts and Science	Reno
Zenda Johns	Arts and Science	Sparks

Jack Kellogg	Arts and Science	Redwood City, Calif.
James W. Kouldus	Arts and Science	Reno
Marjorie M. Lane	Arts and Science	Berkeley, Calif.
Michael W. Lawlor	Arts and Science	Victor, Iowa
Claire Lehmkuhl	Electrical Engineering	Reno
Genevieve Leonard	Arts and Science	Gardena, Calif.
Louis Lombardi	Arts and Science	Reno
Inez E. Loomis	Arts and Science	Reno
Ernest Lorenzini	Civil Engineering	San Francisco
Kara Lucas	Arts and Science	Fallon
Alice Lunsford	Arts and Science	Reno
Elmer K. Lyon	Arts and Science	Winnemucca
Helen Mahoney	Arts and Science	San Francisco
Kathleen Malloy	Arts and Science	San Francisco
Hoyt Martin	Arts and Science	Reno
Whiting F. Martin	Agriculture	Taft, Calif.
Alden McCollum	Electrical Engineering	Reno
Mark Menke	Agriculture	Reno
Frank Metcalf	Arts and Science	Puente, Calif.
Laddie J. Miller	Arts and Science	Oakland, Calif.
Loretta Miller	Arts and Science	Fernley
Lester E. Mills	Agriculture	Logandale
Florence Mitchell	Home Economics	Reno
Robert A. Mitchell	Arts and Science	Reno
Lloyd Moon	Agriculture	Berkeley, Calif.
Warren L. Monroe	Arts and Science	Sparks
Barbara Morse	Arts and Science	Reno
Orville Moyes	Arts and Science	Stockton, Calif.
Frank K. Nelson	Civil Engineering	Reno
Marlin Newlove	Mines	Santa Cruz, Calif.
Clarence R. Newman	Arts and Science	Ely
Herold Newton	Agriculture	Bakersfield, Calif.
Blanchard Ernest Nichols	Mines	Modesto, Calif.
Gaylord Nichols	Arts and Science	Berkeley, Calif.
Sigvard J. Nielsen	Arts and Science	Reno
Mrs. Esther Breeze Oar	Arts and Science	Fallon
Beatrice Ott	Arts and Science	Nevada City, Calif.
Janet Pardee	Arts and Science	Visalia, Calif.
Sheila Parker	Arts and Science	Sparks
Thelma Pedroli	Arts and Science	Carson City
George L. Pettycrew	Arts and Science	Goldfield
Alden J. Plumley	Arts and Science	Reno
M. Alexander Pratt	Arts and Science	Los Angeles, Calif.

Walter Putz	Civil Engineering	Reno
Jean J. F. Rauzy	Arts and Science	Ogden, Utah
Homer J. Raycraft	Arts and Science	Gardnerville
Oltman Reil	Agriculture	Winnemucca
Harvey Reynolds	Civil Engineering	Reno
Comer Robertson	Arts and Science	Visalia, Calif.
Leonard Robertson	Electrical Eng.	Garberville, Calif.
Blanche Rogers	Arts and Science	Fresno, Calif.
Ellen Russell	Arts and Science	Deeth
Lucile Sanford	Arts and Science	Fallon
Dan Senseney	Arts and Science	Reno
Wyman Sexsmith	Arts and Science	Virginia City
Helen A. Smith	Arts and Science	Reno
Wallace S. Smith	Arts and Science	Elko
LaRue Snow	Home Economics	Lund
Weaver A. Solomon	Mechanical Eng.	Berkeley, Calif.
Lester L. Spinney	Civil Engineering	Fortuna, Calif.
Byron F. Stetler	Arts and Science	Reno
E. Randolph Stigen	Mechanical Eng.	Oakland, Calif.
Wilbur Stodieck	Agriculture	Gardnerville
Wilda Talbot	Arts and Science	Reno
Milton Taylor	Arts and Science	Loomis, Calif.
Mary Margaret Thompson	Home Economics	Elko
Thomas O. Towle	Arts and Science	Fallon
Helene R. Turner	Arts and Science	San Francisco
David Van Lennep	Electrical Engineering	Auburn, Calif.
Gene Ray Walker	Arts and Science	Sparks
Letus A. Wallace	Arts and Science	Winton, Calif.
Philip R. Weber	Arts and Science	Hollywood, Calif.
Milan J. Webster	Arts and Science	Reno
Elizabeth Weeks	Arts and Science	Wells
LeVerne Weir	Arts and Science	Wells
Carroll W. Westfall	Civil Engineering	Fresno, Calif.
Feriland Whitehead	Arts and Science	Las Vegas
Thomas H. Wigglesworth	Civil Engineering	Verdi
Harry O. Young	Arts and Science	Reno
Josef A. Zaruba	Arts and Science	San Francisco

JUNIORS

Ralph T. Adamson	Electrical Engineering	Lovelock
Robert W. Adamson	Mines	Reno
Jack Albin	Civil Engineering	North Fork
Evelyn Anderson	Arts and Science	Tonopah
Idel J. Anderson	Arts and Science	San Francisco

Derrill C. Angst	Electrical Eng.	Eureka, Calif.
Margaret Baird	Arts and Science	Ely
Fred S. Baldini	Arts and Science	Yerington
Walter Ballerstein	Electrical Engineering	Reno
R. Bruce Battin	Arts and Science	Mina
Beth Beemer	Arts and Science	Sparks
Aurora Belmonte	Arts and Science	Stewart
Alice Beninghoff	Arts and Science	Oakland, Calif.
Alan H. Bible	Arts and Science	Fallon
Bernice Blair	Arts and Science	Oakland, Calif.
Marjorie B. Blewett	Arts and Science	Berkeley, Calif.
Grant L. Bowen	Arts and Science	Carson City
Arthur Brewster	Arts and Sc.	Huntington Beach, Calif.
Frank L. Bristol	Mines	South Africa
Lucas Thurber Brockbank	Electrical Engineering	Reno
Gordon Brockway	Civil Engineering	Tacoma, Wash.
LaMonte R. Brown	Civil Engineering	Berkeley, Calif.
Norman Brown	Electrical Engineering	Chico, Calif.
Thomas E. Brown	Arts and Science	Orland, Calif.
Charles A. Browne	Arts and Science	Reno
E. Don Budge	Arts and Science	Bakersfield, Calif.
Kendal Bunker	Arts and Science	Bunkerville
C. Bertrand Burkham	Arts and Science	Reno
Mary June Byrnes	Arts and Science	Pittville, Calif.
Gretchen Cardinal	Arts and Science	Gardnerville
Clifford C. Carlson	Arts and Science	San Mateo, Calif.
Emery T. Chace	Arts and Science	Reno
Agnes K. Christensen	Normal	Sparks
Ernest Clays	Electrical Engineering	McGill
Nevada Coll	Arts and Science	Reno
William K. Collonan	Arts and Science	San Francisco
Helen C. Coverston	Arts and Science	Fallon
Lucy E. Crescenzo	Arts and Science	Reno
Carol W. Cross	Arts and Science	Sparks
Sylvia A. Crowell	Arts and Science	Carson City
Edward C. Cupit	Arts and Science	Reno
Donald S. Dakin	Arts and Science	Sparks
Jean de Berard	Arts and Science	Cucamonga, Calif.
Joseph A. DeReemer	Electrical Engineering	Sparks
Willard T. Douglas	Electrical Engineering	Reno
Helen Dunseath	Arts and Science	Reno
Adeline A. Duque	Arts and Science	Reno
Jane M. Eaton	Home Economics	Reno

Norman J. Ericson	Mines	Reno
Frank Estes	Arts and Science	Reno
Verdie L. Fant	Arts and Science	Lovelock
Ralph Farnsworth	Arts and Science	Berkeley, Calif.
Norman Farrell	Arts and Science	Reno
Herbert M. Faulkner	Civil Engineering	Alturas, Calif.
Harvey F. Flint	Arts and Science	Hollister, Calif.
Annie Mary Fowler	Arts and Science	Duarte, Calif.
Anna F. Frey	Home Economics	Reno
Russell C. Garcia	Arts and Science	Visalia, Calif.
Evelyn H. Gault	Arts and Science	Reno
Paul Gemmill	Mines	Pasadena, Calif.
Carl Gericke	Arts and Science	Fort Calhoun, Neb.
John F. Gilmartin	Arts and Science	Sparks
June Grantley	Arts and Science	Burlingame, Calif.
Geraldine Green	Arts and Science	Lakeport, Calif.
Marshall Guisti	Arts and Science	Goldfield
Jack Halley	Arts and Science	Reno
James Hammond	Arts and Science	Fallon
Mary Hancock	Arts and Science	Reno
Melville Hancock	Arts and Science	Reno
Florence Hanes	Arts and Science	Reno
Meredith Hawk	Mines	Lancaster, Calif.
William Herbert	Arts and Science	San Francisco
Gerda Hexem	Arts and Science	Ely
Inez Holmstrom	Arts and Science	Lovelock
Barbara Horton	Arts and Science	Carson City
Gwendolyn Ingram	Arts and Science	Reno
Helen M. Jenkins	Normal	Reno
Walter H. Jensen	Electrical Engineering	Vallejo, Calif.
Thomas Johnson	Arts and Science	Walnut Creek, Calif.
Walter D. Johnson	Arts and Science	Elko
Wilfred Jones	Arts and Science	Winnemucca
William C. Kinnon	Mines	Fallon
*Charles Kitzmeyer	Arts and Science	Carson City
Walden Kline	Arts and Science	Reno
Russell E. Laird	Mechanical Eng.	Bakersfield, Calif.
Dale D. Lamb	Electrical Engineering	Reno
Neil W. Lamb	Electrical Engineering	Reno
George W. Lang	Arts and Science	Lovelock
Maxwell Larsen	Agriculture	Ferndale, Calif.
Rudolph Larsen	Arts and Sc.	Mendocino City, Calif.

*Died October 16, 1928

Glenn J. Lawlor	Arts and Science	Reno
Alice A. LeMaire	Arts and Science	Battle Mountain
Jessie Leonard	Arts and Science	Virginia City
Bill A. Ligon	Mechanical Engineering	Reno
Harry Lipparelli	Arts and Science	Elko
Elizabeth Lippincott	Arts and Science	Reno
Mervyn O. Little	Arts and Science	Salinas, Calif.
Fred Lohse	Arts and Science	Fallon
Alvin Lombardi	Arts and Science	Reno
Keith D. Lucas	Arts and Science	Fallon
Duane E. Mack	Arts and Science	Minden
Grace Mahoney	Arts and Science	San Francisco
Mary Malloy	Arts and Science	Austin
Helen Mann	Arts and Science	Smith
Dan McKnight	Arts and Science	Reno
Robert Merritt	Arts and Science	San Francisco
Albert E. Miller	Arts and Science	Marysville, Calif.
Carroll D. Miller	Arts and Science	Reno
Norman Miller	Arts and Science	Woodland, Calif.
Frank L. Morrill	Arts and Science	Reno
Helen Morris	Arts and Science	Tonopah
Santos Murillo	Mines	Philippine Islands
Precious Nash	Arts and Science	Reno
Valborg K. Nelson	Arts and Science	Reno
Carol N. Newell	Arts and Science	Fortuna, Calif.
Albert Nichols	Arts and Science	Reno
Lois Nicolaides	Arts and Science	San Mateo, Calif.
Will J. Norton	Arts and Science	Reno
Alan Odell	Civil Engineering	Fallon
R. Mitchell Oliver	Arts and Science	Stockton, Calif.
Valborg Olsen	Arts and Science	Reno
Mary O'Neill	Arts and Science	Tonopah
Lucile Opdyke	Arts and Science	Fallon
Louise Oppio	Arts and Science	Sparks
Harold Overlin	Arts and Science	Las Vegas
Ernest Panelli	Arts and Science	Reno
Loran T. Pease	Arts and Science	Oakland, Calif.
Al Petersen	Arts and Science	Sparks
Brainerd Plehn	Mechanical Eng.	Berkeley, Calif.
Enid Porter	Arts and Science	Reno
Kenneth Pratt	Arts and Science	Reno
J. Elden Prewett	Arts and Science	Auburn, Calif.
Gladys Price	Normal	Reno

Katherine Priest	Arts and Science	Sparks
William A. Regentz	Arts and Science	San Francisco
Delbert Rey	Arts and Science	Reno
Paul Richards	Arts and Science	Millers
Emmett Riordan	Arts and Science	Lund
Kathryn Robison	Arts and Science	Sparks
Colin Ross	Arts and Science	Lovelock
Fred W. Roumage	Mines	Auburn, Calif.
Maizie Ryan	Arts and Science	Reno
Clara Samaniego	Arts and Science	Berkeley, Calif.
William C. Sanford	Arts and Science	Reno
Anna Sauber	Arts and Science	Loyalton, Calif.
Esther Sauer	Arts and Science	Carson City
Edwin Semenza	Arts and Science	Reno
George F. Sheats	Arts and Science	Reno
Florence Shedd	Home Economics	Reno
George Sherman	Arts and Science	Berkeley, Calif.
Leonard Sledge	Arts and Science	Reno
Edith Small	Arts and Science	Reno
Merle Smart	Electrical Engineering	Fallon
Ione Smith	Arts and Science	Petaluma, Calif.
Margaret L. Smith	Arts and Science	Oakland, Calif.
Darwin Sparks	Arts and Science	Reno
Arline Springmeyer	Normal	Carson City
Frank Stewart	Arts and Science	Mare Island, Calif.
George Stockle	Civil Eng.	Mountain View, Calif.
Chris B. Stockton	Arts and Science	Bakersfield, Calif.
Cecilia Sudden	Arts and Science	San Mateo, Calif.
Regina Sullivan	Arts and Science	Reno
Arthur Sutherland	Arts and Science	Reno
Leonard Sutherland	Arts and Science	Reno
Maryemma Taylor	Arts and Science	Gardnerville
Doris M. Thompson	Home Economics	Reno
Jack Thurston	Arts and Science	Reno
Ruth Tobin	Arts and Science	Garberville, Calif.
Evelyn Turner	Arts and Science	Reno
Fred Underwood	Arts and Science	Reno
Theodore Van Hoosear	Electrical Engineering	Oakland, Calif.
Harold Vaughan	Mines	Fallon
Calda Waite	Arts and Science	Portola, Calif.
Eloise Walker	Arts and Science	Sparks
John A. Walsh	Electrical Engineering	Reno
James A. Weathers	Arts and Science	Reno

Flora Weed	Arts and Science	Reno
William J. Weeden	Arts and Science	Menlo Park, Calif.
Mary Weeks	Arts and Science	Wells
Alfred Weger	Agriculture	Ukiah, Calif.
Marcellyn Wells	Arts and Science	Turlock, Calif.
Pauline Westover	Arts and Science	Reno
Wallace White	Mines	McGill
Edwin Whitehead	Arts and Science	Sparks
Thomas Wilson	Arts and Science	Reno
Frank Wittenberg	Agriculture	Reno
Maxwell Wright	Mechanical Engineering	Reno

SOPHOMORES

Alberta Adams	Arts and Science	Reno
Jack Adler	Arts and Science	Reno
L. Everett Appleton	Arts and Science	San Francisco
Josephine Arlang	Arts and Science	Goldfield
Blanche L. Armstrong	Arts and Science	Sparks
Neil H. Austin	Arts and Science	Lovelock
Julia Baldini	Arts and Science	Yerington
Loran Ballard	Arts and Science	Alturas, Calif.
Howard Ballinger	Arts and Science	Oakland, Calif.
Phylis R. Balzar	Arts and Science	Carson City
Mrs. A. M. Bangs	Normal	Los Angeles, Calif.
Horace Bath	Arts and Science	Ely
Clara S. Baumbach	Arts and Science	Elko
Geraldine Blattner	Arts and Science	Winnemucca
H. Elwood Boerlin	Agriculture	Hawthorne
Grace J. Bordewich	Arts and Science	Carson City
Roland Boyden	Electrical Eng.	Alhambra, Calif.
Thomas J. Brawley	Arts and Science	Reno
Glenn Bream	Arts and Science	Reno
Mildred V. Brown	Arts and Science	Reno
Gerry Brummond	Arts and Science	Cucamonga, Calif.
Charles E. Burgis	Arts and Science	San Francisco
Gordon Burner	Mechanical Engineering	Yerington
David Burns	Arts and Science	Sausalito, Calif.
Verna Butler	Arts and Science	Berkeley, Calif.
Clayton C. Byer	Arts and Science	Reno
Douglas Callaway	Arts and Science	Currant
Lois Carman	Arts and Science	Reno
José Cavan	Mechanical Eng.	Philippine Islands
Horace L. Church	Mines	Solano Beach, Calif.
Edna G. Clark	Arts and Science	Reno

Euphemia Clark	Arts and Science	Reno
Walter Clark	Arts and Science	Reno
Dora Clover	Arts and Science	Woodland, Calif.
Francis Coddington	Arts and Science	Yerington
Doris Conway	Arts and Science	Reno
Alyce Couch	Arts and Science	Reno
Norman Coughlin	Arts and Science	Reno
Lois Crane	Normal	Reno
Julia Cummings	Arts and Science	Orange, Calif.
John Curtis	Mines	Battle Mountain
Philip D. Daver	Electrical Engineering	Gardnerville
Bessie M. Davie	Arts and Science	San Francisco
William Albert Davis	Civil Engineering	Yerington
Phyllis Day	Arts and Science	Woodland, Calif.
Gerald J. deJong	Eectrical Engineering	San Francisco
Philip DeLongchamps	Arts and Science	Yerington
Mae Denevi	Arts and Science	Sparks
Frances Dieterich	Arts and Science	Reno
Harvey N. Dondero	Arts and Science	Hawthorne
Charles C. Drake	Arts and Science	Reno
Allen J. Duffy	Mines	Quartz Mountain
William J. Dumble	Electrical Engineering	Tonopah
George Dunow	Civil Engineering	Bowman, Calif.
Charles D. Eldridge	Arts and Science	Pasadena, Calif.
Howard Estes	Civil Engineering	Reno
Raymond A. Evans	Mechanical Engineering	East Ely
Fred R. Fader	Electrical Engineering	Reno
Eldridge Farnsworth	Arts and Science	Fallon
Ruth M. Fish	Normal	Reno
Louis Fleming	Arts and Science	Overton
Nelle I. Foster	Normal	Battle Mountain
Leonard Fox	Agriculture	Reno
Joseph R. Frazier	Arts and Science	Rupert, Idaho
Oscar Freitag	Arts and Science	Fallon
Attilio Genasci	Agriculture	Loyalton, Calif.
Raymond Germain	Arts and Science	Reno
Robert Geyer	Electrical Engineering	Reno
William Gibson	Civil Engineering	Gardnerville
Edward Ginsburg	Eectrical Engineering	Reno
George E. Gray	Electrical Engineering	Oakland, Calif.
Lincoln B. Grayson	Civil Engineering	Oakland, Calif.
Raymond Griffin	Arts and Science	Ely
Dorothy B. Grover	Arts and Science	Reno

Cassius Gustin	Arts and Science	Laws, Calif.
Claude Hammond	Mines	Oakland, Calif.
Florence Handy	Arts and Science	Berkeley, Calif.
Robert T. Harris	Arts and Science	Fallon
Robert D. Harrison	Arts and Science	Berkeley, Calif.
Cecelia Hawkins	Arts and Science	Reno
Perry Hayden	Arts and Science	Reno
Francis B. Headley	Electrical Engineering	Reno
Theresa M. Heath	Arts and Science	Reno
Nancy B. Heizer	Home Economics	Fallon
James R. Hendrichs	Arts and Science	Reno
Frances H. Hilborn	Arts and Science	Suisun, Calif.
Vernon Hirst	Arts and Science	Placerville, Calif.
H. Eugene Hoover	Arts and Science	Reno
Jack B. Hopkins	Arts and Science	Independence, Calif.
Joseph E. Horton	Arts and Science	Battle Mountain
Jean E. Hughes	Arts and Science	Reno
Marvin B. Humphrey	Agriculture	Reno
John Hutchison	Arts and Science	Reno
Donald H. Inskip	Arts and Science	Arcata, Calif.
Betty Jacobs	Arts and Science	Reno
Anna Jensen	Arts and Science	Reno
Dorothy Johns	Arts and Science	Sparks
Elizabeth Johnstone	Arts and Science	Reno
Clarence K. Jones	Electrical Engineering	Reno
Marian L. Jones	Arts and Science	Reno
Florence Kilgore	Arts and Science	Battle Mountain
Carleton King	Civil Engineering	Alhambra, Calif.
Alfred Kinne	Civil Engineering	Elko
Donald K. Knapp	Mines	San Diego, Calif.
Frank Koehler	Arts and Science	Mason
Edna Kramer	Arts and Science	Las Vegas
Fred LaVigne	Arts and Science	Reno
Stanley Leahigh	Arts and Science	Reno
Ora J. Lee	Home Economics	Kaolin
Marjorie Ligon	Arts and Science	Reno
Jack Lindly	Electrical Engineering	Stewart
Natalie Lipman	Arts and Science	Burlingame, Calif.
Arthur Lucas	Arts and Science	Fallon
Evelyn Madsen	Arts and Science	Reno
Rose Mahana	Arts and Science	Calexico, Calif.
Richmond Mann	Arts and Science	Eureka
Ethel Maraska	Arts and Science	Imlay

Leland Martin	Arts and Science	Wells
Wesley Martin	Agriculture	Reno
Gilbert Matthews	Electrical Engineering	Reno
Elliott McCloud	Arts and Science	Sparks
Joe T. McDonnell	Arts and Science	Reno
Lucille McKenney	Normal	Loyalton, Calif.
Edith McLaughlin	Arts and Science	Vallejo, Calif.
Marguerite McNeil	Arts and Science	Sparks
Edwin Michal	Mechanical Eng.	Round Mountain
Ethel Middleton	Arts and Science	Battle Mountain
Frances Millar	Home Economics	Yerington
Theodore H. Miller	Electrical Engineering	Reno
James Minor	Arts and Science	Berkeley, Calif.
John Molini	Arts and Science	Dyer
Adrian Morgan	Arts and Science	Warsaw, Ind.
Bernarr Moulton	Mines	Reno
Fred W. Morrison	Civil Engineering	Westwood, Calif.
Belva Murphy	Arts and Science	San Francisco
Leslie Murphy	Arts and Science	Deeth
Edmund Muth	Mines	Goldfield
F. Clark Nelson	Civil Engineering	Berkeley, Calif.
Marchand Newman	Arts and Science	Elko
Laurel Nichols	Mines	Reno
Hardy Odell	Mines	Las Vegas
Byron O'Hara	Arts and Science	Fallon
Ellen Olsen	Home Economics	Reno
Constance Orme	Arts and Science	Reno
Choki Oyama	Arts and Science	Salt Lake City, Utah
Irma Parker	Arts and Science	Sparks
Oren Peeler	Electrical Engineering	Fernley
Myrl R. Peters	Mechanical Engineering	Reno
Gwendolyn Pierson	Home Economics	Reno
Robert W. Prince	Mines	Oakland, Calif.
Roscoe Prior	Agriculture	Blocksburg, Calif.
Margaret Purdy	Home Economics	Sparks
Howard E. Quinn	Arts and Science	San Francisco
Edward L. Randall	Arts and Science	Reno
Albert Randolph	Arts and Science	Newcastle, Calif.
William Rau	Arts and Science	Las Vegas
Louise Rawson	Arts and Science	Reno
Gerald Reddy	Arts and Science	Sparks
Lestenna Regan	Arts and Science	Petaluma, Calif.
Myra Remington	Arts and Science	McGill

Emily Richards	Arts and Science	Reno
Joseph Henry Robinson	Arts and Science	Reno
Kenneth H. Robison	Arts and Science	Sparks
Lois Russell	Normal	Reno
Otto H. Rutledge	Arts and Science	Reno
Thomas J. Schnoor	Arts and Science	Walnut Creek, Calif.
Howard Sheerin	Arts and Science	Tonopah
Leland A. Sidwell	Mines	Los Angeles, Calif.
Walter Siegel	Arts and Science	Richmond, Calif.
Francis Silliman	Arts and Science	Watsonville, Calif.
Francis R. Smith	Electrical Engineering	Reno
Fred M. Smith	Arts and Science	Sparks
Faralie Smithson	Arts and Science	Ely
Claude Snooks	Civil Engineering	Mina
Phyllis Steinheimer	Arts and Science	Reno
Eber Steninger	Arts and Science	Elko
Lloyd E. Stites	Arts and Science	Reno
Alfred Stockton	Arts and Science	San Francisco
Fred Stoll	Arts and Science	Martinez, Calif.
Lucile Stone	Home Economics	Sparks
Stanley Sundeen	Electrical Engineering	Reno
Anna M. Thacker	Arts and Science	Reno
Alice Thomas	Arts and Science	Reno
Clara Tomlin	Arts and Science	Hawthorne
Robin Trimble	Arts and Science	Reno
Violet R. Tulloh	Arts and Science	Alameda, Calif.
Catherine Turrittin	Arts and Science	Reno
Roberta Turrittin	Arts and Science	Reno
George L. Vargas	Arts and Science	Reno
Ray H. Varney	Arts and Science	Thermopolis, Wyo.
Reno Vogliotti	Arts and Science	Reno
*Karl Voight	Agriculture	Lamoille
Cy Wainwright	Electrical Engineering	Reno
Jack Walther	Arts and Science	Reno
Jack Wardle	Electrical Engineering	Tonopah
Helen Webb	Home Economics	Berkeley, Calif.
Teddie Webb	Arts and Science	Reno
Doris Welsh	Arts and Science	Yerington
Edith West	Arts and Science	Overton
Martha Williams	Home Economics	Sparks
Cornelia Williamson	Arts and Science	Reno
Walter C. Wilson	Arts and Science	Carson City

*Died March 22, 1929.

Claude Winder	Arts and Science	Fallon
Gladys Wittenberg	Arts and Science	Reno
William Woodburn	Arts and Science	Reno
Amy Yarrington	Arts and Science	Sierraville, Calif.
Bruce Younger	Arts and Science	Berkeley, Calif.

FRESHMEN

Myron R. Adams	Arts and Science	Reno
George B. Adamson	Arts and Science	Reno
Ignatius Ahern	Arts and Science	Reno
Alice Allenbach	Arts and Science	Reno
Fernando Ambrose	Arts and Science	Berkeley, Calif.
Donna Anderson	Arts and Science	San Francisco
Marion Andreason	Normal	Virginia City
Norman Annett	Mines	Mina
Frances J. Armbruster	Arts and Science	Reno
Lewis M. Arnold	Arts and Science	San Francisco
Alice May Atkinson	Arts and Science	Watsonville, Calif.
Loren E. Atwood	Arts and Science	Placerville, Calif.
Bonnie Jean Austin	Arts and Science	Reno
Kenneth Austin	Arts and Science	Reno
Irvin Ayer	Arts and Science	Reno
Lester J. Bailey	Arts and Science	Sparks
Mary Baird	Arts and Science	Ely
Frances E. Baker	Home Economics	Sparks
Willis K. Baker	Arts and Science	Reno
Robert J. Bankofier	Agriculture	McDermitt
Roy Bankofier	Civil Engineering	McDermitt
William Bannnig	Civil Engineering	Los Angeles, Calif.
Jean Bartlett	Arts and Science	Reno
Roy L. Barton	Arts and Science	Sparks
Nick Basta	Arts and Science	Ely
Charles Bausch	Arts and Science	Alameda, Calif.
Harold Beale	Arts and Science	Los Angeles, Calif.
Matilda Belmonte	Home Economics	Stewart
Thomas C. Benney	Mechanical Eng.	San Francisco
Albert A. Bennett	Agriculture	Los Angeles, Calif.
Josephine Bernard	Arts and Science	Truckee, Calif.
Pauline Berrum	Arts and Science	Reno
Norris Bertrand	Arts and Science	Reno
Forrest M. Bibb	Arts and Science	Sulphur
Helen Blair	Home Economics	Fallon
Malcolm S. Blakely	Arts and Science	Reno

Norman Blundell	Arts and Science	Sparks
Arvin E. Boerlin	Agriculture	Hawthorne
Roxcena Bonham	Normal	Sparks
Charles L. Borchers	Arts and Science	San Jose, Calif.
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Francis Brown	Arts and Science	Reno
Richard N. Browne	Mechanical Eng.	Los Angeles, Calif.
Oscar Bryan	Arts and Science	Las Vegas
Cora Bryant	Home Economics	Bridgeport, Calif.
Bessie Bulasky	Arts and Science	Reno
Louis Bulasky	Arts and Science	Reno
Beale Cann	Arts and Science	Fallon
Edwin Cantlon	Arts and Science	Sparks
Alice Casey	Arts and Science	San Mateo, Calif.
Hilmer Caudel	Mechanical Eng.	Bay Point, Calif.
Leroy Chanslor	Electrical Engineering	Tonopah
Albert Chevalier	Arts and Science	Reno
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J. Gordon Cole	Mines	San Francisco
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Stephen W. Comish	Arts and Science	Elko
William Conroy	Arts and Science	Reno
Joseph Cook	Arts and Science	Elko
Mildred L. Cook	Arts and Science	Elko
Theodore Cooper	Civil Engineering	Denair, Calif.
Blanche Cosby	Arts and Science	Winnemucca
Ethelyn Coverston	Normal	Fallon
Allene Daniels	Arts and Science	Reno
George Davis	Civil Engineering	Reno
Julia DeKinder	Normal	Lovelock
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Clarence Dieterich	Arts and Science	Reno
Junius Dixon	Mines	Doyle, Calif.
Calvin J. Dodson	Electrical Engineering	Carson City
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Carl E. Dunn	Mechanical Engineering	Sparks
Lois Dunn	Arts and Science	Sparks

Robert E. Dutton	Agriculture	Las Vegas
Nellie Dwyer	Normal	Ursine
Margaret Ede	Arts and Science	El Centro, Calif.
Albert Edwards	Electrical Engineering	Reno
Edna Edwards	Normal	Panaca
William D. Egenhoff	Mines	Taft, Calif.
Carl H. Elges	Civil Engineering	Reno
Chester H. Elliott	Electrical Engineering	Reno
Mona Ennor	Arts and Science	Reno
Dorothy Ernst	Arts and Science	Fallon
Dwight Ewing	Agriculture	Merced, Calif.
Elaine Fairchild	Normal	Sparks
John Fant	Electrical Engineering	Lovelock
Edward Felion	Arts and Science	Reno
Merle Ferris	Normal	Reno
Wilma Fitzgerald	Arts and Science	Reno
John W. Flannery	Arts and Science	Los Angeles, Calif.
Fred Fletcher	Electrical Engineering	Reno
Granville Fletcher	Arts and Science	Las Vegas
Mary Fogliani	Normal	Ursine
James Foran	Arts and Science	San Francisco
Cephas Fort	Arts and Science	Reno
Virginia Fort	Arts and Science	Reno
Melva Fowler	Arts and Science	Reno
Margaret Frazier	Arts and Science	Reno
Stephen Fulkerson	Arts and Science	Fallon
Frances Fuller	Arts and Science	Reno
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Minter Harris	Mines	Covina, Calif.
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Brisbane Henderson	Mechanical Eng.	Redding, Calif.
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Golamae Johnson	Normal	Sierraville, Calif.
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Stanley E. Johnson	Arts and Science	Reno
Margaret S. Johnston	Arts and Science	Reno
Alfred Kaiser	Mines	Reno
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Myrtle Keema	Normal	Mason
Wilma Kennedy	Arts and Science	Reno
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Virginia Kirkley	Arts and Science	Reno
Irene Kitch	Normal	Kimberly

Telfer Kitchen	Civil Engineering	Reno
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Victor Kral	Civil Engineering	Reno
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James Dwight Leavitt	Arts and Science	Elko
Edgar Leonard	Arts and Science	McGill
Ethel Leonard	Arts and Science	Reno
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Clarence Meginness	Agriculture	Fernley
Janice Meradith	Arts and Science	San Gabriel, Calif.
Robert Merriman	Arts and Science	Reno
Vernon H. Mills	Agriculture	Logandale
Mary Minoletti	Normal	Eureka
Nancy Mitchell	Arts and Science	Reno
Walter Mitchell	Arts and Science	Tonopah
Matthew Mohorovich	Arts and Science	Jackson, Calif.
Lowell Monday	Arts and Science	Sparks
Helen Montrose	Arts and Science	Tonopah
Grace Moore	Normal	Eureka
Echo Morgan	Arts and Science	Fallon
Naudine Murphy	Arts and Science	Floriston, Calif.
R. Sutton Myers	Arts and Science	Berkeley, Calif.
Fred Needham	Civil Engineering	Auburn, Calif.
Dwight A. Nelson	Arts and Science	Reno
Olga Nelson	Arts and Science	Tonopah
Marion Nichols	Arts and Science	Reno

Katherine Norrid	Arts and Science	Reno
Donald B. O'Connell	Arts and Science	Reno
Ben Oliver	Mechanical Engineering	Suisun, Calif.
Harry Lee Oliver	Mechanical Engineering	Suisun, Calif.
Violet Oppedyke	Normal	Las Vegas
Matt G. Osborn	Arts and Science	Dixon, Calif.
Margaret Park	Home Economics	Gardnerville
Mildred Park	Arts and Science	Gardnerville
Manuel Pascua	Arts and Science	San Francisco
Harold Pearson	Civil Engineering	Richmond, Calif.
Tom Penrose	Arts and Science	Reno
John Perkins	Arts and Science	Yerington
Fred Perley	Civil Engineering	San Francisco
Fred Perrott, Jr.	Mechanical Eng.	Woodbridge, Calif.
Donald Perry	Arts and Science	Yerington
Elmer Perry	Arts and Science	Fairfield, Calif.
Constance Philips	Arts and Science	Reno
Theodore E. Philips	Arts and Science	Reno
Violet Phillips	Home Economics	Elko
Harold Phipps	Arts and Science	Yerington
Antone Poloni	Electrical Engineering	Sparks
Clarke Pomeroy	Electrical Engineering	Piedmont, Calif.
Raymond Poncia	Arts and Science	Sparks
Mariam Pratt	Home Economics	Sacramento, Calif.
John J. Prendiville	Civil Engineering	Reno
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Orvis Reil	Electrical Engineering	Winnemucca
Herman Riemann	Agriculture	Gardnerville
Gordon Robertson	Arts and Science	Reno
Mabel Robison	Normal	Baker
Robert W. Rossier	Arts and Science	Winnemucca
John Rossiter	Arts and Science	Reno
Maxine Roudebush	Normal	Sparks
Jerrett Rupley	Civil Engineering	Carson City
Roy Salsbury	Arts and Science	Reno
George L. Sanford	Arts and Science	Carson City
Margaret Sara	Normal	Eureka
James Savage	Arts and Science	Reno

Neil T. Scott	Arts and Science	Searchlight
Elizabeth C. Seeds	Arts and Science	Reno
Leona Sellman	Arts and Science	Reno
Verna Selmer	Arts and Science	San Francisco
James T. Settelmeyer	Mechanical Engineering	Gardnerville
Russell Sharp	Arts and Science	Oakland, Calif.
Frank Shepardson	Mechanical Engineering	Reno
Edgar Shepley	Arts and Science	Sparks
Gifford Shuey	Arts and Science	Reno
Alden Sibley	Mechanical Engineering	Reno
Eugene Slavin	Mechanical Engineering	Tonopah
Albert T. Smith	Arts and Science	San Mateo, Calif.
Belva Smith	Normal	McGill
Dale Smith	Arts and Science	Reno
Benjamin Solari	Arts and Science	Reno
Dixon SoRelle	Electrical Eng.	Bakersfield, Calif.
Mary Sourwine	Arts and Science	Reno
Aubrey Spark	Agriculture	Sparks
Adelbert States	Arts and Science	Eureka
Helen Steinmiller	Arts and Science	Reno
Ruth Stewart	Arts and Science	Reno
Virginia L. Stewart	Arts and Science	Van Nuys, Calif.
Lilian Stigen	Arts and Science	Oakland, Calif.
Carl K. Stoddard	Arts and Science	Reno
Marion Stone	Arts and Science	Reno
Marjorie K. Stout	Arts and Science	Sparks
Maurine Stromer	Arts and Science	Broken Hills
Wm. Harland Stuart	Arts and Science	Fallon
Oliven M. Sturla	Agriculture	Wadsworth
Albert O. Sutherland	Arts and Science	Reno
Harold Taber	Arts and Science	Reno
Florence Taft	Arts and Science	Reno
Pauline Tanner	Normal	Tonopah
Bruce Thompson	Arts and Science	Reno
Charles E. Thompson	Mines	Pioche
Maxwell Thompson	Electrical Engineering	Reno
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Leslie Tomley	Arts and Science	Hayward, Calif.
Daniel Trevitt	Arts and Science	Reno
Fred Trevitt	Arts and Science	Reno
Sam M. Trevitt	Arts and Science	Reno

Richard Tupper	Mines	Battle Mountain
Edward Usnick	Mechanical Engineering	McGill
Herndon Vaughan	Arts and Science	Fallon
Mae Vuich	Arts and Science	Tonopah
Inez Walker	Arts and Science	Sparks
Eugene Waller	Mechanical Engineering	Las Vegas
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Margaret Walts	Arts and Science	Reno
Margaret Watkins	Arts and Science	Reno
Mrs. M. J. Webster	Home Economics	Wells
Frederic Weeks	Agriculture	Fallon
Alfred Wilander	Arts and Science	Oakland, Calif.
Halsey Williams	Arts and Science	Ely
Olive Williams	Arts and Science	Reno
Fred W. Wilson	Arts and Science	Carson City
Wm. Alex Wilson	Arts and Science	Carson City
John D. Winters	Arts and Science	Sparks
Archie Wood	Arts and Science	Fallon
Bernard York	Mechanical Engineering	Hollywood, Calif.
Henrietta Youell	Arts and Science	Reno
Laurence Zoebel	Electrical Engineering	Reno
Jean Zuick	Arts and Science	Reno

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Clara Adams	Arts and Science	Sparks
Alvin Brown	Arts and Science	Reno
Mrs. Sydell N. Cohen	Home Economics	Pittsburgh, Pa.
Fred Cunningham	Arts and Science	Reno
Ruth Darrow	Arts and Science	Reno
Mary L. Gould	Arts and Science	Reno
Mercer Gregory	Arts and Science	Reno
Madeline Horgan	Arts and Science	Reno
Jack L. Kingsley	Arts and Science	Berkeley, Calif.
Doris Loyd	Arts and Science	Reno
Dolores Lozano	Arts and Science	Reno
Opal Martyn	Arts and Science	Reno
B. G. Moulton	Arts and Science	Verdi
Rose Marie Rey	Arts and Science	Reno
Ruth Shute	Arts and Science	Reno
Elizabeth P. Smith	Arts and Science	Reno
Francis A. Sullivan	Arts and Science	Des Moines, Iowa
Rose Taverna	Arts and Science	Reno

SPECIALS

William W. Boynton	Mines	Berkeley, Calif.
Clinton Casebolt	Arts and Science	Fallon
Edward L. Clark	Arts and Science	Reno
Terry Dorris	Arts and Science	Reno
Stephen Dubravac	Mines	McGill
Mrs. Dan Dunkle	Arts and Science	Reno
Elizabeth M. Galeppi	Arts and Science	Reno
Evalyn Gregory	Arts and Science	Reno
Frank Horton	Mines	Reno
Mrs. Ruth Hardy King	Arts and Science	Reno
Alan Mori	Mines	Carson City
Spencer Pors	Electrical Engineering	Reno
Frank Sutherland	Arts and Science	Reno
Mrs. Eugenia Wainwright	Arts and Science	Reno

SUMMER SCHOOL, 1928

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Fairy F. Adams	Sparks	Agnes Long	Oakland, Calif.
Christina Anderson	Elko	Mary Alice Loomis	Reno
Mrs. Ina Angus	Reno	Florence J. Lowry	Golconda
Jean Baird	Hollister, Idaho	Laura MacGillivray	Vinton, Cal.
Frances Barnes	Reno	Emily Marshall	Reno
John D. Bartlow	Reno	Lewis Mathis	Kimberley
Mrs. Lena Bateman	Tonopah	Elliott McCloud	Sparks
Mrs. Myrle Bennett	Reno	Mrs. Gussie McGinnis	Reno
Margaret Bogart	Reno	Mrs. Wm. R. McGowan	Reno
Gladys Bowler	Austin	Louvena R. McLean	Fallon
Thomas E. Brown	Orland, Calif.	Mrs. Verlie Meister	Fallon
Mrs. A. W. Cahlan	Reno	Elsie L. Miller	Reno
Mrs. Nelle E. Carman	Reno	Gladys E. Molineux	Yerington
Rose M. Chiara	Battle Mountain	Mrs. Elsie L. Moore	Yerington
Mrs. Alpha R. Clark	Reno	Theo Morgan	Fallon
Francis Coddington	Yerington	Burt G. Moulton	Verdi
Laila M. Conard	Reno	Josie Mullen	Redding, Calif.
Mabel Daily	Reno	Grace Muran	Reno
Laura L. Dearing	Reno	Vera Muran	Reno
Mae Denevi	Sparks	Valborg Nelson	Reno
C. Denise Denson	Reno	Virginia I. Olds	Yerington
Dessie I. Dorsey	Boise, Idaho	Ray L. Olinger	San Anselmo, Calif.
Leona Drake	Wells		
Emma Duarte	Winnemucca	Ruby J. Olson	Ottawa, Kan.
Margot Evans	Reno	Lucille Opdyke	Fallon
Modene Fenton	Reno	Adna Brown Orr	Reno

Ruby FitzGerald	Goldfield	Clare O'Sullivan	Reno
Thelma S. Flavin	Strawberry	Leona Paine	East Ely
Louise Fleming	San Francisco	Thelma Pedroli	Franktown
Mrs. Eva Flint	Reno	Clara B. Plumb	Milford, Calif.
Helen M. Fowler	Reno	Alice C. Poco	Reno
M. O'Ella Freeman	San Francisco	Gladys C. Price	Reno
Mrs. Claire Fuller	Tracy, Calif.	Mrs. Madge Raycraft	Carson City
Lillian Funk	Preston	Harriett W. Reagor	Reno
Norma Gardella	Reno	Ruby M. Reed	Elko
Mabel Gardiner	Oakland, Calif.	Mrs. Anna M. Roach	Sweetwater
Tillia Mae Gardner	Lund	Kathryn M. Robison	Sparks
Mercedes Gerald	Sparks	Lois Russell	Reno
Margaret Gilland	Live Oak, Cal.	Lena Scossa	Yerington
Myra B. Gott	Reno	Carmel Sheward	Stewart
Gladys E. Griffith	Kimberley, Ida.	Helen B. Shugrue	Reno
Isabella Griswold	Deeth	Mrs. Leah Shurtliff	Reno
Violet E. Hammond	Golconda	Mrs. W. S. Simonsen	Simonsen
Norine Hanna	Elko	Edith Small	Reno
Florence Hansen	Mill City	Mary F. Stewart	Yankton, S. D.
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		Lois K. Thompson	Sparks
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Mrs. Naoma G. Houser	Reno	Mrs. M. J. Webster	Reno
Marie M. Hyatt	Reno	Mrs. George F. Willis	Yerington
May Major Jack	Ogden, Utah	Mrs. Mary G. Winter	Reno
Helen Jenkins	Reno	Mrs. Agnes Woodworth	Gardnerville
Loene Kramer	Reno		
Maude Lear	Reno	Sadie Zannini	Reno

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