UNIVERSITY OF NEVADA BULLETIN

VOL. XXXIV MAY 15, 1940 No. 4

THE UNIVERSITY OF NEVADA ANNOUNCEMENTS

1940-1941

With Record for 1939-1940

BRING THIS BULLETIN WITH YOU WHEN YOU COME TO REGISTER

PUBLISHED QUARTERLY BY THE UNIVERSITY OF NEVADA
RENO, NEVADA

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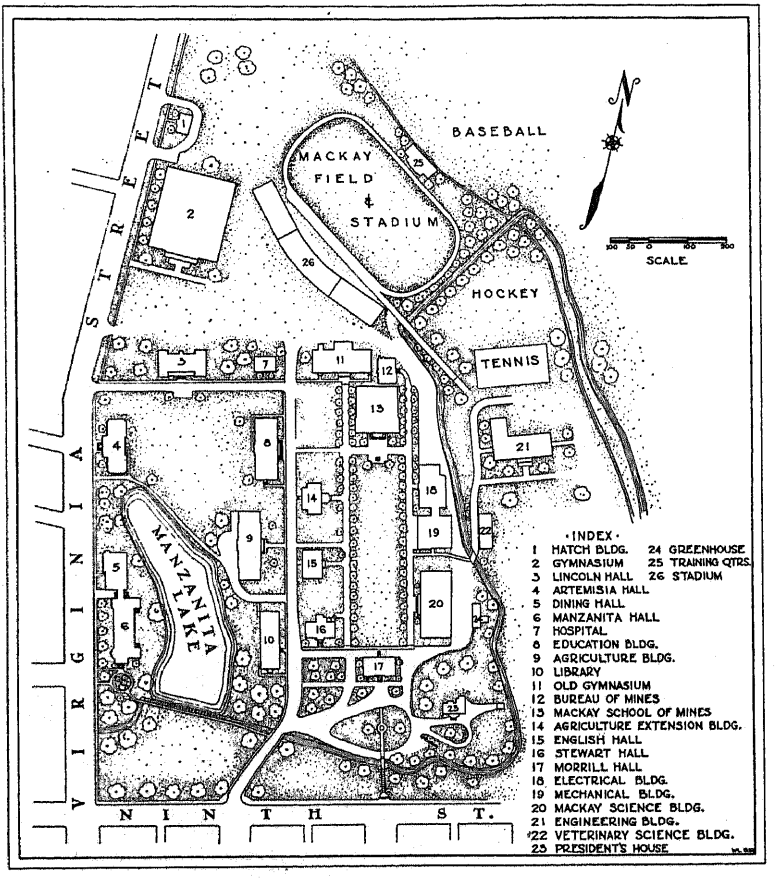
UNIVERSITY OF NEVADA
Campus Plan



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TYPOGRAPHICAL
UNION
LABEL
WASHOE

CONTENTS

OFFICE OF THE
BOARD OF REGENTS, UNIVERSITY OF NEVADA
RENO, NEVADA, APRIL 15, 1940

To His Excellency, E. P. CARVILLE, *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 1939–1940, 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:

SILAS E. ROSS,
Chairman.

CAROLYN M. BECKWITH, *Secretary.*

1940 - CALENDAR - 1940

JAN.

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1941 - CALENDAR - 1941

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UNIVERSITY CALENDAR

1940		FIRST SEMESTER
August 18	Sunday	Dormitories open to receive students
August 19	Monday	Registration of new students
August 20	Tuesday	Registration of old students
August 20–21	Tuesday-Wednesday	Orientation program for new students
August 21	Wednesday	Instruction begins
August 21	Wednesday, 8 p. m.	President's reception to new students
August 22–23	Thursday-Friday p. m.	Physical examinations and mental tests for new students
September 2	Monday	Labor Day
September 7	Saturday, 12 m.	Registration closes
October 9	Wednesday	Mid-semester reports are due
October 18–19	Friday-Saturday	HOME COMING
October 31	Thursday	Nevada Day
November 11	Monday	Armistice Day
Nov. 28–Dec. 1	Thursday-Sunday, inc.	Thanksgiving recess
Dec. 16–21, inc.		Semester examinations
December 21	Saturday, 12 m.	First semester closes
December 26	Thursday, 9 a. m.	Final grades must be on file with the Registrar

1941		SECOND SEMESTER
January 6–7	Monday-Tuesday	Matriculation and registration
January 8	Wednesday	Instruction begins
January 18	Saturday, 12 m.	Registration closes
March 5	Wednesday	Mid-semester reports are due
March 15	Saturday	Engineers' Day
April 5	Saturday	Mackay Day
April 11–13	Friday-Sunday	Easter recess
May 3	Saturday, 12 m.	Senior examinations end
May 5	Monday	Senior grades must be on file with the Registrar
May 5–10	Monday-Saturday, inc.	Semester examinations
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 Day
May 12	Monday	COMMENCEMENT DAY
May 14	Wednesday, 12 m.	Final grades must be on file with the Registrar
August 18	Monday	First semester of University year 1941–1942 opens

OFFICERS OF THE UNIVERSITY

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HON. SILAS E. ROSS (1945) ..... Reno
HON. FRANK WILLIAMS (1943) ..... Goodsprings
HON. A. C. OLMSTED (1941) ..... Wells

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MR. GEORGE H. TAYLOR, Secretary Emeritus ..... Reno
MISS CAROLYN M. BECKWITH, Secretary ..... Reno

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Student-Welfare Committee—GEORGE S. BROWN, ANNA H. WARDIN.

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WALTER E. CLARK, Ph.D., LL.D., President Emeritus.
CHARLES H. GORMAN, Comptroller.
MRS. JEANETTE RHODES, B.A., Registrar.
LOUISE M. SISSA, Emeritus Registrar.
MARGARET E. MACK, A.M., Dean of Women.
REUBEN C. THOMPSON, M.A., LL.D., Dean of Men.

THEA C. THOMPSON, Ph.B., Librarian.
JOSEPH D. LAYMAN, B.L., Emeritus Librarian.
WALTER S. PALMER, E.M., Curator of the Mackay Museum.
EDMUND S. LEAVER, Met.E., Superintendent, United States Bureau of Mines Experiment Station.
T. CLAIR HARPER, M.D., University Hospital Association Physician.
EUNICE GRIFFITHS, R.N., Matron University Hospital.
CLARA GARRISON, B.S., Matron of Manzanita Hall.
PAUL A. HARWOOD, M.A., Master of Lincoln Hall.

Colleges and Schools—

FREDRICK WOOD, 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.
FRED W. TRANER, Ph.D., Dean of the School of Education.
JAY A. CARPENTER, E.M., Director of the Mackay School of Mines.
HAROLD N. BROWN, Ed.D., Director of the Summer Session.

Public Service Division—

WALTER S. PALMER, E.M., Director of the State Analytical 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.
THOMAS E. BUCKMAN, M.S., Acting Director of Agricultural Extension.
JAY A. CARPENTER, E.M., Director, State Mining Bureau.

General Library Staff—

CLARE LOUISE JOHNSON, B.A., Cataloguer and Third Assistant Librarian.
MRS. DARYL JOHNSON, B.S., Loan Desk Assistant and Fourth Assistant Librarian.

Central Clerical Staff—

CAROLYN M. BECKWITH, Secretary to the President.
MRS. FREDA METCALF, Clerk, Comptroller's Office.
ALICE TERRY, Clerk, Comptroller's Office.
MRS. ADELAIDE STEINER, Clerk, Comptroller's Office.
GERALDINE N. HARDMAN, Departmental Stenographer.
MRS. GERALD DELANNOY, B.A., Registrar's Assistant.
ESTHER ROMANO, Clerk, Comptroller's Office.

OFFICERS OF INSTRUCTION[1]

University Faculty[2]

LEON WILSON HARTMAN, Ph.D., President.

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, *ibid.*, 1906–1909; Professor of Physics, University of Nevada, 1909–1938; Acting President, University of Nevada, 1938; President, *ibid.*, 1939–.

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

A.B., Ohio Wesleyan University, 1896; A.M., Ohio Wesleyan University, 1898; Ph.D., Columbia University, 1903; LL.D., Ohio Wesleyan University, 1918; LL.D., Nevada, 1938; Chevalier, Legion d'Honneur (France), 1937; 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.*, 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, *ibid.*, 1910–1917; Extension Lecturer in Economics, Columbia University, 1916–1917; President, University of Nevada, September, 1917–1938; President Emeritus, 1938–.

MAXWELL ADAMS, Ph.D., Emeritus Professor of Chemistry.

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, *ibid.*, 1917–1918; Dean of the College of Arts and Science, *ibid.*, 1918–1938; Vice President of the University, 1922–1939; Emeritus Professor, *ibid.*, 1939. (Deceased September 15, 1939.)

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

A.B., University of Michigan, 1892; Ph.D., University of Munich, 1901; LL.D., Nevada, 1937; Instructor in Latin and German, University of Nevada, 1892–1894; Assistant Professor of the Latin Language and Literature, *ibid.*, 1894–1895; Associate Professor of the Latin Language and Literature, *ibid.*, 1895–1896; Professor of Latin Language and Literature, *ibid.*, 1896–1918; Professor of the Classics, *ibid.*, 1918–1939; Emeritus Professor, *ibid.*, 1939–.

JEANNE ELIZABETH WIER, B.A., LL.D., Emeritus 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, *ibid.*, 1901–1906; Professor of History and Political

[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 assistants. Summer School and extension instruction is also excluded.

[2]The President, Vice President, Deans, Librarian, Registrar, and all other 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 in rank.

Science, *ibid.*, 1906–1917; Professor of History, *ibid.*, 1917–1921; Professor of History and Political Science, *ibid.*, 1921–1940; Emeritus Professor of History and Political Science, *ibid.*, 1940–.

PETER FRANDSEN, A.M., LL.D., Professor and Head of the Department 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, *ibid.*, 1902–1903; Professor of Zoology and Bacteriology, *ibid.*, 1903–1906; Professor of Biology, *ibid.*, 1906–.

HORACE PRENTISS BOARDMAN, C.E., Emeritus Professor of Civil Engineering.

B.S., University of Wisconsin, 1894; C.E., *ibid.*, 1911; Professor of Civil Engineering, University of Nevada, 1907–1939; Director of the Engineering Experiment Station, *ibid.*, 1921–1939; Emeritus Professor of Civil Engineering, *ibid.*, 1939–.

FREDERICK WESTON WILSON, M.S., Professor and Head of the Department of Animal Husbandry.

B.S., Kansas State Agricultural College, 1905; M.S., University of Illinois, 1913; Assistant Professor of Animal Husbandry, in charge of Farmers' Institute Work, University of Arizona Agricultural Experiment Station, 1905–1906; Associate Professor of Animal Husbandry, *ibid.*, 1908–1912; Professor of Animal Husbandry, *ibid.*, 1912–1913; Professor of Animal Husbandry, University of Arizona, 1913–1914; Professor of Animal Husbandry, University of Nevada, 1914–.

REUBEN CYRIL THOMPSON, M.A., LL.D., Professor and Head of the Department of Philosophy; Dean of Men.

B.A., McMinnville College, 1899; B.A., Harvard University, 1901; M.A., *ibid.*, 1902; LL.D., Linfield College, 1938; 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, *ibid.*, 1909–1910; Associate Professor of Latin and Greek, *ibid.*, 1910–1914; Professor of Latin and Greek, *ibid.*, 1914–1915; Professor of Philosophy, *ibid.*, 1915–; Dean of Men, *ibid.*, 1932–.

WALTER S. PALMER, E.M., Professor and Head of the Department 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, *ibid.*, 1913–1916; Professor of Metallurgy, *ibid.*, 1916–; Director, State Analytical Laboratory, 1925–.

ALBERT ELLSWORTH HILL, A.B., Professor and Acting Head of the Department of English.

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

JAMES REED YOUNG, Ph.D., Professor and Head of the Department 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, *ibid.*, 1917–1920; Professor of Psychology, *ibid.*, 1920–.

STANLEY GUSTAVUS PALMER, M.E., Professor and Head of the School 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, *ibid.*, 1917–1918; Professor of Electrical Engineering, *ibid.*, September, 1918–.

JOHN WILLIAM HALL, M.A., Emeritus Professor 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, 1920–1937; Emeritus Professor of Education, *ibid.*, 1937–.

FREDERICK H. SIBLEY, M.E., Professor and Head of the School 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, *ibid.*, 1921–.

ROBERT STEWART, Ph.D., Professor and Head of the Department 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, *ibid.*, 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 and Head of the School of Home Economics.

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

BENJAMIN FRANKLIN CHAPPELLE, Ph.D., Professor and Head of the Department 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; Officier d'Académie, 1934; Acting Head of the German Department, Dickinson College, 1910–1911; Instructor in French, Gettysburg College, 1911–1912; Head of the Department of Romanic Languages, *ibid.*, 1912–1916; Assistant Instructor in Romanic Languages, University of Pennsylvania, 1916–1917; Assistant Professor 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, *ibid.*, 1922–.

SAMUEL BRADFORD DOTEN, M.A., Professor of Agricultural Research and Director of the Nevada Agricultural Experiment Station.

B.A., University of Nevada, 1898; M.A., *ibid.*, 1912; Instructor in History and Mathematics, University of Nevada, 1899–1900; Instructor in Mathematics and Entomology, *ibid.*, 1900–1902; Assistant Professor of Mathematics and Entomology, *ibid.*, 1902–1903; Assistant Professor of Entomology, Meteorology, and Mathematics, *ibid.*, 1903–1905; Professor of Entomology, *ibid.*, 1906–1913; Entomologist and Director, Nevada Agricultural Experiment Station, 1913–; Professor of Agricultural Research, *ibid.*, 1922–.

EDWARD RECORDS, V.M.D., Research Professor of Veterinary Science and Director of the Veterinary Control Service.

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, University of Nevada, 1918–1922; Research Professor of Veterinary Science, *ibid.*, 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, *ibid.*, 1922–.

CECIL WILLIS CREEL,[1] B.S., D.Agr., Professor of Agricultural Extension and Director of the Nevada Agricultural Extension Department.

B.S., University of Nevada, 1911; D.Agr., Maryland, 1939; Agent, Bureau of Entomology, U.S.D.A., 1911–1912, detailed at Salt Lake City, Utah, and Agricultural Experiment Station, Purdue University, 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 and Head of the Department of Chemistry.

B.S., Drury College, 1908; M.S., University of Illinois, 1911; Ph.D., *ibid.*, 1914; Instructor in Chemistry, University of Illinois, 1914–1917; Instructor in Chemistry, University of Nevada, 1917–1918; Associate Professor of Chemistry, *ibid.*, 1918–1924; Professor of Chemistry, *ibid.*, 1924–1926; Head of the Department of Chemistry, *ibid.*, 1926–.

FRED W. TRANER, Ph.D., Dean of the School of Education; Professor of Education and Head of the Department of Secondary Education.

A.B., Beloit College, 1908; M.A., University of California, 1920; Ph.D., *ibid.*, 1930; Instructor in High School, Lancaster, Wisconsin, 1908–1909;

[1]On leave for calendar year 1940.

Superintendent of Schools, Lancaster, Wisconsin, 1909–1914; Instructor in Education, University of Nevada, 1915–1918; Assistant Professor of Education, *ibid.*, 1918–1920; Associate Professor of Education, *ibid.*, 1920–1924; Professor of Education, *ibid.*, 1924–; Head of Department of Secondary Education, *ibid.*, 1931–; Dean of the School of Education, 1937–.

JOHN ALLEN FULTON, E.M., Professor of Mining Engineering; Director, Mackay School of Mines and State Bureau 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, 1924–1939; Director State Bureau of Mines, 1929–1939. (Deceased October 9, 1939.)

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

A.B., Westminster College, 1907; A.M., Milikin University, 1909; Ph.D., University of Illinois, 1914; Instructor in Botany and Horticulture, University of Nevada, 1914–1916; Assistant Professor of Botany and Horticulture, *ibid.*, 1916–1917; Plant Physiologist, University of Illinois, 1917–1922; Associate Professor of Biology, University of Nevada, 1922–1925; Professor of Biology, *ibid.*, 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, *ibid.*, 1922–1926; Professor of Civil Engineering, *ibid.*, 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, *ibid.*, 1924–1926; Professor of Modern Languages, *ibid.*, 1926–.

JAY ARNOLD CARPENTER, E.M., Director, Mackay School of Mines, Professor and Head of the Department of Mining Engineering.

B.S., University of Nevada, 1907; E.M., Mackay School of Mines, *ibid.*, 1911; Instructor in Metallurgy, University of Nevada, Mackay School of Mines, 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, Mackay School of Mines, 1926–1937; Professor and Head of the Department of Mining Engineering, *ibid.*, 1937–; Acting Director, Mackay School of Mines, 1937–1938; Director, Mackay School of Mines and State Bureau of Mines, 1939–.

THEODORE H. POST, M.A., Professor and Head of the Department of Music; 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, Smith College, 1919–1921; 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–.

JOHN EDWARD MARTIE, M.P.E., Professor and Head of the Department of Physical Education for Men.

B.S., Central Missouri State Teachers College, 1923; M.P.E., Y. M. C. A. College, Springfield, Massachusetts, 1930; Instructor of Physical Education for Men, University of Nevada, 1923–1924; Assistant Professor of Physical Education for Men, *ibid.*, 1924–; Acting Head of Department, *ibid.*, 1924–1926; Associate Professor of Physical Education for Men, *ibid.*, 1926–1929; Head of Department and Professor of Physical Education for Men, *ibid.*, 1929–.

ELSA SAMETH, M.S., Professor and Head of the Department 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, *ibid.*, 1915–1918; Associate Professor, *ibid.*, 1918–1930; Professor of Physical Education for Women, *ibid.*, 1930–.

ALFRED LESLIE HIGGINBOTHAM, M.A., Professor of Journalism in the Department 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, *ibid.*, 1924–1926; Associate Professor of English, *ibid.*, 1926–1930; Professor of English, *ibid.*, 1930–1936; Professor of Journalism, *ibid.*, 1936–.

CHARLES ROGER HICKS, Ph.D., Professor and Acting Head of the Department of History and Political Science.

A.B., Clark University, 1915; A.M., Stanford University, 1922; Ph.D., Clark, 1931; 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.*, 1928–1931; Professor of History and Political Science, *ibid.*, 1931–; Acting Head of the Department, *ibid.*, 1940–.

FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science; Professor and Head of the Department of Mathematics.

A.B., University of Wisconsin, 1915; M.A., *ibid.*, 1916; Ph.D., *ibid.*, 1923; Instructor in Engineering Mathematics, University of Wisconsin, 1915–1917, 1919–1923; Head of Department of Mathematics, State Normal School, Indiana (Pennsylvania), 1923–1924; Lake Forest College, 1924–1925; Georgia Wesleyan College, 1925–1928; Hamline University (Minnesota), 1928–1932; Professor and Head of the Department of Mathematics, University of Nevada, 1932–; Dean of Arts and Science, *ibid.*, 1938–.

SIGMUND W. LEIFSON, Ph.D., Professor and Acting Head of the Department of Physics.

B.S., North Dakota State Agricultural College, 1922; 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.*, 1929–1935; Professor of Physics, *ibid.*, 1935–; Acting Head of Department, *ibid.*, 1939–.

VINCENT P. GIANELLA, Ph.D., Professor and Head of the Department of Geology.

B.S. in E.E., Oregon Agricultural College, 1910; B.S., Oregon School of Mines, 1911; M.S., Mackay School of Mines, University of Nevada, 1920; Ph.D., Columbia, 1937; Instructor in Metallurgy, University of Nevada, Mackay School of Mines, 1923–1924; Instructor in Geology, *ibid.*, 1924–1928; Assistant Professor of Geology, *ibid.*, 1928–1929; Associate Professor of Geology, *ibid.*, 1929–1935; Acting Head of the Department of Geology, *ibid.*, 1932–1935; Professor and Head of the Department of Geology, *ibid.*, 1935–.

ORAL EUGENE CLARK, Colonel, Infantry, United States Army. Professor of Military Science and Tactics.

Private, Corporal, Sergeant, Co. A 2d Infantry, Michigan National Guard 1903–1908; Second Lieutenant, Infantry, U. S. A., 1908; First Lieutenant 1916; Captain 1917; Major (temporary) 1918; Major (permanent) 1920; Lieutenant Colonel 1933; Colonel 1937; Graduate Advance Course, Infantry School 1923; Graduate, Command and Staff School, 1929; General Staff Corps Eligible List, 1929; Professor of Military Science and Tactics, University of Akron, Ohio, 1929–1931; Instructor, Manual Training in Carpentry, Cabinet-making and Masonry, Army Vocational School, Camp Gordon, Georgia, 1919–1920; Army extension school courses, 323d Infantry, 1923–1929; Special Troops and Staff, 38th Division, Indiana National Guard, 1934–1938; Commanding 21st and 22d Forestry Districts (CCC), Illinois, 1933–1934; Professor of Military Science and Tactics, University of Nevada, 1938–

ELDON WITTWER, Ph.D., Professor and Head of the Department of Agricultural Economics.

B.S., Nevada, 1922; Ph.D., Cornell, 1930; Teacher of Vocational Agriculture, Moapa Valley High School, 1922–1924; Instructor of Agricultural Economics, Cornell University, 1926–1930; Business Analyst and Economist, National Leather Company, 1930–1932; Business Analyst and Economist, Boston, 1932–1935; Economist, Firestone Tire and Rubber Company, Akron Ohio, 1935–1938; Associate Professor of Agricultural Economics, University of Nevada, 1938–1939; Professor of Agricultural Economics, *ibid*, 1939–.

Associate Professors[1]

KATHERINE LEWERS, Emeritus Associate Professor of Art.

Instructor in Freehand Drawing, University of Nevada, 1905–1907; Assistant Professor of Freehand Drawing, *ibid.*, 1907–1914; Associate Professor of Freehand Drawing, *ibid.*, 1914–1939; Emeritus Associate Professor of Art, 1939–.

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

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

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, *ibid.*, 1917–1922; Associate Professor of Biology, *ibid.*, 1922–; Dean of Women, *ibid.*, 1918–.

[1]Order of seniority in rank.

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, University of Nevada, 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–.

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; Instructor in History and Political Science, University of Nevada, 1915–1916; Assistant Professor of History, *ibid.*, 1917–1924; Associate Professor of History and Political Science, *ibid.*, 1924–1940. (Deceased March 9, 1940.)

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

A.B., Tabor College, 1902; A.M., Washburn College, 1904; Assistant in Alleghany 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, *ibid.*, 1924–1935; Associate Professor of Physics and Astronomy, *ibid.*, 1935–.

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, *ibid.*, 1925–1926; Associate Professor of Economics, Business and Sociology, *ibid.*, 1926–.

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

B.S., University of Nevada, 1921; M.S., *ibid.*, 1933; 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–; Acting Director of Agricultural Extension, 1940–.

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.*, 1919–1927; Associate Professor of Soils Research in Nevada Agricultural Experiment Station, 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.*, 1927–1929; Associate Professor of Home Economics, *ibid.*, 1929–.

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

D.V.M., Kansas State Agricultural College, 1918; M.S., Cornell University, 1931; Veterinary Inspector U. S. Bureau of Animal Industry, 1918; Assistant in Veterinary Pathology, Kansas State Agricultural College, 1918–1919; Instructor in Veterinary Pathology, *ibid.*, 1919–1920; Pathologist Nevada Agricultural Experiment Station, 1920–; Assistant Research Professor of Veterinary Science, 1922–1929; Associate Research Professor of Veterinary Science, 1929–.

JOHN R. GOTTARDI, M.A., Associate Professor of Modern Languages.

B.A., University of Nevada, 1921; M.A., *ibid.*, 1926; Instructor in Modern Languages, University of Nevada, 1922–1924; Professor of Modern Languages, San Rafael Military Academy, 1924–1926; Assistant Professor of Modern Languages, University of Nevada, 1926–1930; Associate Professor of Modern Languages, *ibid.*, 1930–.

PAUL ATKINS HARWOOD, M.A., Associate Professor of English and Master of Lincoln Hall.

B.A., University of Nevada, 1924; M.A., *ibid.*, 1929; In residence at Oxford University, England, as Nevada Rhodes Scholar, 1924–1927; Instructor in English, University of Nevada, 1927–1929; Assistant Professor of English, *ibid.*, 1929–1930; Associate Professor of English, *ibid.*, 1930–; Acting Master of Lincoln Hall, 1932–1936; Master of Lincoln Hall, 1936–.

MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.

B.S., University of Oregon, 1923; M.S., *ibid.*, 1925; Ph.D., University of Washington, 1928; Instructor in Chemistry, Oregon State College, 1928–1929; Instructor in Chemistry, University of Nevada, 1929–1930; Assistant Professor of Chemistry, *ibid.*, 1930–1933; Associate Professor of Chemistry, *ibid.*, 1933–.

WILLIAM I. SMYTH, E.M., Associate Professor of Metallurgy and Mining, 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.*, 1928–1933; Associate Professor of Metallurgy and Mining, and Analyst, *ibid.*, 1933–.

EDITH M. RUEBSAM, M.A., Associate Professor of Education.

B.A., Columbia, 1921; M.A., California, 1934; 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, 1925–1935; Associate Professor of Education, *ibid.*, 1935–.

IRVING JESSE SANDORF, M.S., Associate Professor of Electrical Engineering.

B.S., in E.E., University of Michigan, 1923; M.S., Nevada, 1931; Research Engineer, Development and Research Department, American Telephone and Telegraph Company, 1923–1926, 1927–1928; Instructor in Electrical Engineering, University of Nevada, 1928–1931; Assistant

Professor of Electrical Engineering, *ibid.*, 1931–1935; Associate Professor of Electrical Engineering, *ibid.*, 1935–.

CLAUDE CARSON SMITH, M.A., Associate Professor of History and Political Science.

A.B., Carson-Newman College, 1921; M.A., University of Oklahoma, 1924; Instructor in Social Science, Kansas City University, 1927–1929; Instructor in History and Political Science, University of Nevada, 1929–1930; Assistant Professor of History and Political Science, *ibid.*, 1930–1935; Associate Professor of History and Political Science, *ibid.*, 1935–.

MILAN J. WEBSTER, Ph.D., Associate Professor of Economics, Business and Sociology.

B.E., Nebraska Normal College, 1908; B.A., University of Nevada, 1929; M.A., *ibid.*, 1931; Ph.D., Colorado, 1934; Instructor in Education, Nebraska Normal College, 1908–1909; Instructor in Economics, Business and Sociology, University of Nevada, 1929–1931; Assistant Professor of Economics, Business and Sociology, *ibid.*, 1931–1935; Associate Professor of Economics, Business and Sociology, *ibid.*, 1935–.

HAROLD N. BROWN, Ed.D., Associate Professor of Education.

B.S., Kansas State Teachers College, 1923; A.M., Stanford, 1927; Ed.D., California, 1935; Teacher in Clifton, Kansas, Elementary Schools, 1918–1920; Superintendent of Tampa, Kansas, Schools, 1923–1926; Critic, Junior High School, Arizona State Teachers College, 1927–1930; Instructor in Summer Session, Kansas State Teachers College, 1928, 1937, 1939; Assistant Professor of Education, University of Nevada, 1930–1935; Associate Professor of Education, *ibid.*, 1935–; Director of the Summer Session, *ibid.*, 1940.

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

B.A., University of Nevada, 1924; M.A., *ibid.*, 1928; Instructor in Physical Education for Men, University of Nevada, 1928–1929; Assistant Professor of Physical Education for Men, *ibid.*, 1929–1936; Acting Head of Department, *ibid.*, 1929–1930; Associate Professor of Physical Education and Athletics for Men, 1936–.

CHARLES LEROY BROWN, M.A., Emeritus Associate Professor of Biology.

B.A., University of Nevada, 1912; M.A., *ibid.*, 1913; Instructor in Biology, *ibid.*, 1918–1929; Assistant Professor of Biology, *ibid.*, 1929–1936; Associate Professor of Biology, *ibid.*, 1936–1938; Emeritus Associate Professor, *ibid.*, 1938–.

RALPH A. IRWIN, Ph.D., Associate Professor of Psychology.

B.S., Kansas State Agricultural College, 1928; M.S., *ibid.*, 1929; Ph.D., Ohio State University, 1938; Instructor in Psychology, University of Nevada, 1929–1931; Assistant Professor of Psychology, *ibid.*, 1931–1937; Associate Professor of Psychology, Nevada, 1937–.

ERNEST L. INWOOD, Ph.D., Associate Professor and Head of the Department of Economics, Business and Sociology.

B.A., Nevada, 1927; Ph.D., California, 1935; Instructor in Economics, Nevada, 1930–1931; Instructor in Economics, The College of the City of New York, 1934–1938; Associate Professor of Economics, Business and Sociology, University of Nevada, 1938–; Head of the Department, 1939–.

LOUIS J. TITUS, M.S., Associate Professor of Agronomy.

B.S., Nevada, 1924; M.S., Cornell, 1931; Associate Professor of Agronomy, University of Nevada, 1939–.

Assistant Professors[1]

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

B.E., 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, *ibid.*, 1922–.

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

B.A., Utah Agricultural College, 1917; County Agricultural Agent, Unitah County (Utah), 1917–1921; County Agricultural Agent, Clark County, 1921–1923; District Extension Agent, Clark and Lincoln Counties, 1924–1936; County Extension Agent, Clark County, 1936–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1924–.

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, 1929–1936; County Extension Agent, Elko County, 1936–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1929–.

VERNER E. SCOTT, M.S., Assistant Professor of Agricultural Extension.

B.S., University of Wisconsin, 1911; M.S., Nevada, 1933; Instructor in Dairying, University of Nevada, 1912–1915; Acting Instructor in Animal Husbandry, *ibid.*, 1913–1914; Professor of Dairying, *ibid.*, 1919–1929; Professor of Dairying and Poultry, *ibid.*, 1929–1931; Dairy and Poultry Specialist, Agricultural Extension Department, 1915–1930; Extension Agricultural Economist, Agricultural Extension Department, 1930–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1932–.

LEWIS E. CLINE, M.S., Assistant Professor of Agricultural Extension.

B.S., in Agriculture, University of Missouri, 1905; M.S., in Agriculture, University of Wisconsin, 1907; Chemist, Missouri Food and Drug Commission, 1907–1908; Agriculturist, U. S. Department of Agriculture, 1914–1926; District Extension Agent, Churchill and Lyon Counties, Nevada, 1926–1930; Extension Agricultural Economist, University of Nevada, 1930–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1932–.

HELLEN M. GILLETTE, B.A., Assistant Professor of Agricultural Extension.

B.A., University of Montana, 1919; Assistant Instructor, Michigan Agricultural College, 1919; Instructor in Food and Dietetics, High School, Great Falls, Montana, 1920; Nutrition Specialist, American Red Cross, 1921–1924; Field Representative, American Red Cross, 1925–1928; Home Demonstration Agent, St. Louis County, Minnesota, 1929–1931; District Extension Agent, White Pine, Lincoln and Eureka Counties, 1932–; Assistant Professor of Agricultural Extension in the College of Agriculture, University of Nevada, 1932–.

[1]Order of seniority in rank.

ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business and Sociology.

B.A., Nevada, 1929; A.M., Brown, 1932; Instructor in Economics, Business and Sociology, University of Nevada, 1931–1935; Assistant Professor of Economics, Business and Sociology, *ibid.*, 1935–.

HAROLD CLARK AMENS, M.S., Assistant Professor of Mechanical Engineering.

B.S., Nevada, 1928; M.S., *ibid.*, 1933; Instructor in Engineering, University of Nevada, 1930–1935; Assistant Professor of Mechanical Engineering, *ibid.*, 1935–.

ROBERT STUART GRIFFIN, M.A., Assistant Professor of English.

B.S., Oregon State College, 1928; M.A., University of Southern California, 1935; Instructor in Public Speaking, Oregon State College, 1927; Instructor in English, University of Nevada, 1928–1936; Assistant Professor of English, *ibid.*, 1936–.

HARRY EUGENE WHEELER, Ph.D., Assistant Professor of Geology.

B.S., University of Oregon, 1930; M.A., Stanford University, 1932; Ph.D., *ibid.*, 1935; Field Assistant, United States Geological Survey, 1930; Recorder, United States Geological Survey, 1935; Instructor in Geology, University of Nevada, 1935–1936; Assistant Professor of Geology, *ibid.*, 1936–.

JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education for Men.

B.S., University of Arkansas; M.A., University of Iowa, 1936; Coach, Tupelo Military Institute, 1920–1922; Director of Physical Education and Athletics, Georgetown College, 1922–1925; Acting Director of Athletics and Head Coach of all Sports, University of Akron, 1925–1926; Coach and Director of Health and Physical Education, State Teachers College, Minot, North Dakota, 1926–1936; Assistant Professor of Physical Education and Athletics for Men, University of Nevada, 1936–.

LAWTON B. KLINE, M.A., Assistant Professor of Modern Languages.

B.A., University of Nevada, 1926; M.A., *ibid.*, 1928; Instructor in Modern Languages, University of Nevada, 1931–1937; Assistant Professor of Modern Languages, *ibid.*, 1937–.

WILLIAM C. MILLER,[1] M.A., Assistant Professor of English.

B.S., in Speech, University of Southern California, 1931; M.A., *ibid.*, 1932; Substitute Teacher, University of Southern California, 1931–1932; Instructor in English, University of Nevada, 1934–1937; Assistant Professor of English, *ibid.*, 1937–.

EMILY ROSS, M.A., Assistant Professor of Mathematics.

B.A., Stanford University, 1934; M.A., University of Nevada, 1935; Instructor in Mathematics, University of Nevada, 1935–1937; Assistant Professor of Mathematics, *ibid.*, 1937–1940.

JOHN PARK PUFFINBARGER, Ed.M., Assistant Professor of Education.

B.S. in Education, Kansas State Teachers College, 1926; Ed.M., University of Oklahoma, 1933; Teacher and Superintendent of Public Schools in Kansas and Oklahoma, 1915–1917, 1919–1933; Associate Professor of Education and Principal of Training School, State Teachers College, Durant, Oklahoma, 1933–1935; Assistant Instructor of Education, Kansas University, 1935–1937; Assistant Professor of Education, University of Nevada, 1937–

[1]On leave, 1939-1940.

ALICE B. MARSH, M.S., Assistant Professor of Home Economics.

B.S., Oregon State College, 1914; Professional degree, *ibid.*, 1933; M.S., Kansas State College, 1934; M.A., Ohio University, 1936; Instructor in Home Economics, University of Nevada, 1936–1937; Assistant Professor of Home Economics, *ibid.*, 1937–.

WINFIELD C. HIGGINS, B.S., Teacher Trainer, Vocational Agriculture Education.

B.S., Nevada, 1927; Diploma, National Recreational School, New York City, 1932; Instructor in Vocational Agriculture, Wellington, Nevada, 1924–1926; and at Ontario, Oregon, 1927–1931; Director, Boys' Program, Labor Temple, New York City, 1931–1932; Instructor in Vocational Agriculture and State Future Farmers Recreation Director, Hot Springs National Park, Arkansas, 1932–1937; Teacher Trainer, Vocational Agriculture Education, University of Nevada, 1937–.

DORIS NESBITT, M.S., Teacher Trainer, Vocational Home Economics.

B.A., University of Oklahoma, 1925; M.S., Iowa State College, 1932; Instructor in Home Economics, Marshall County High School, Alabama, 1925–1928; Andalusia High School, Alabama, 1928–1930; Las Vegas High School, Nevada, 1931–1937; Instructor in Home Economics and Home Economics Education, East Texas State Teachers College, summer of 1935; Teacher Trainer in Vocational Home Economics, 1937–.

RICHARD O. BASSETT, JR., Major, U. S. A., Assistant Professor of Military Science and Tactics.

Grad. Infantry School, Company Officers' Course, 1928; B.S., N. Y. State College of Forestry, 1916; Pvt. 21st Rct. Co. G. S. 1., July 20, 1917, to November 26, 1917; 2d Lieut. Infantry, Sec., O. R. C. November 27, 1917; accepted November 27, 1917; active duty November 27, 1917; vacated May 17, 1918; 2d Lieut. of Infantry May 1, 1918; accepted May 17, 1918; 1st Lieut., October 6, 1919; Captain, September 14, 1928; Major, November 1, 1937.

ANATOLE G. MAZOUR, Ph.D., Assistant Professor of History and Political Science.

A.B., University of Nebraska, 1929; M.A., Yale, 1931; Ph.D., California, 1934; Substitute Instructor, Stanford, 1934–1935 (and summer session); Instructor, *ibid.*, during Inter- and Summer Session, 1936; Acting Assistant Professor, Miami University, 1936–1937; Research Associate, University of California 1937–1938; Assistant Professor of History and Political Science, University of Nevada, 1938–.

SAMUEL BURBRIDGE BATDORF, Ph.D., Assistant Professor of Physics.

A.B., M.A., Ph.D., University of California, 1934, 1936, 1938; Instructor in Physics, University of Utah, spring of 1938; Assistant Professor of Physics, University of Nevada, 1938–.

EVERETT WHITE HARRIS,* M.S., Assistant Professor of Mathematics.

B.S. in E.E., Nevada, 1926; M.S. in E.E., Massachusetts Institute of Technology, 1932; In professional Engineering work in Massachusetts, Texas, and Nevada, 1926–1931, 1933–1938; Instructor in Mathematics, Nevada, 1938–1939; Assistant Professor of Mathematics, *ibid.*, 1939–.

FRED J. COLLINS,* M.A., Assistant Professor of Economics.

B.A., Nevada, 1932; M.A., Clark University, 1934; Instructor in Economics, *ibid.*, 1935–1939; Assistant Professor of Economics, *ibid.*, 1939–.

WARREN O. WAGNER, M.S., Assistant Professor of Civil Engineering.

B.S., Washington State, 1934; M.S., Michigan, 1936; Assistant Professor of Civil Engineering, University of Nevada, 1939–.

*Absent on leave, 1939–1941.

ELDON C. GRAFTON, M.S., Assistant Professor of Structural Engineering.

B.S., Washington State, 1926; C.E., *ibid.*, 1931; M.S., Illinois, 1933; Assistant Professor of Structural Engineering, Armour Institute, 1929–1934; Assistant Professor of Structural Engineering, University of Nevada, 1939–.

WILLIAM DWIGHT BILLINGS, Ph.D., Assistant Professor of Botany.

A.B., Butler University, 1933; M.A., Duke University, 1935; Ph.D., *ibid.*, 1936; Temporary Instructor in Botany, University of Tennessee, 1936–1937; Instructor in Botany, University of Nevada, 1938–1940; Assistant Professor of Botany, *ibid.*, 1940–.

EDWARD WALTON LOWRANCE, Ph.D., Assistant Professor of Biology.

A.B., M.A., University of Utah, 1930, 1932; Ph.D., Stanford, 1937; Rockefeller Research Assistant in Biology, Stanford University, 1934–1936, 1937–1938; Instructor in Biology, University of Nevada, 1938–1940; Assistant Professor of Biology, 1940–.

Instructors[1]

BERTRAND FRANKLIN COUCH, Instructor in Mine Accounting.

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

JACK TORNEY RYAN, Instructor in Shop Practice and Superintendent of Shops.

Instructor in Shop Practice and Superintendent of Shops, University of Nevada, 1931–.

CLARENCE J. THORNTON, B.S., Instructor in Poultry Husbandry.

B.S., Nevada, 1926; Instructor in Poultry Husbandry, University of Nevada, 1933–.

GEORGE ERNEST BROOKS, B.S., Instructor in Dairying.

B.S., Nevada, 1927; Instructor in Dairying, University of Nevada, 1933–.

WILLIAM HENRY DAVIDSON, B.S., Instructor in Mechanical Engineering.

B.S. in M.E., Case School of Applied Science, 1934; Instructor in Mechanical Engineering, University of Nevada, 1938–.

EVA B. ADAMS,[2] M.A., Instructor in English.

B.A., Nevada, 1928; M.A., Columbia, 1936; Instructor in English, University of Nevada, 1938–.

MICHAEL J. MCCORMICK, Sgt. D.E.M.L., Instructor in Military Science and Tactics.

Graduate U. S. A. Signal School, 1928; Graduate Infantry School, Fort Benning, Georgia, 1936; U. S. Marine Corps, 1923–1926; U. S. Army, Presidio of San Francisco, 1927–1938; Instructor in Military Science and Tactics, University of Nevada, 1938–.

HELEN JOSLIN, Instructor in Art.

Student, Cochran Art School, Washington, D. C., 1904–1910; Student, New York Art League, 1910–1911; Student, Summer Session, University of California, 1930; Student, State Teachers College (San Jose) summer of 1939; Instructor in Art, University of Nevada, 1939–.

RUTH IRENE RUSSELL, M.S., Instructor in Physical Education for Women.

B.S., Colorado, 1937; M.S., Oregon, 1939; Recreational Director and

[1]Order of seniority in rank. [2]On leave, 1940.

Playground Supervisor, Yellowstone National Park, summers of 1937 1938, and 1939; Instructor in Physical Education for Women, University of Nevada, 1939–.

LEONARD EDWIN CHADWICK, M.S., Instructor in Economics, Business, and Sociology.

B.S., California, 1935; M.S., *ibid.*, 1939; Instructor in Economics, Business, and Sociology, University of Nevada, 1939–.

LORING RIDER WILLIAMS, Ph.D., Instructor in Chemistry.

B.S., West Virginia Wesleyan, 1927; M.S., West Virginia, 1932; Ph.D., Illinois, 1939; Instructor, Alderson-Broaddus College, 1932–1934; Instructor in Chemistry, University of Nevada, 1939–.

ELBRIDGE PUTNAM VANCE, Ph.D., Instructor in Mathematics.

A.B., Wooster, 1936; M.A., Michigan, 1937; Ph.D., *ibid.*, 1939; Instructor in Mathematics, University of Nevada, 1939–.

WILLIAM GRAY PALM, B.S., Instructor in Mathematics.

B.S., Michigan State, 1935; Instructor in Mathematics, University of Nevada, 1939–.

CHARLES A. MACKENZIE, Ph.D., Instructor in Chemistry.

B.S., Guilford, 1935; M.S., Tennessee, 1936; Ph.D., Rutgers, 1939; Instructor in Chemistry, University of Nevada, 1939–.

RALPH A. BRENNINGER, M.A., Instructor in Foreign Languages.

B.S., Lafayette, 1933; M.A., Columbia, 1936; Instructor, Alabama Polytechnic Institute, 1938–1939; Instructor in Foreign Languages, University of Nevada, 1939–.

WILLIAM OLMSTEAD HOLMES, B.A., Instructor in English.

B.A., Nevada, 1936; Instructor in English, University of Nevada, 1940–.

J. RAYMOND BUTTERWORTH, M.A., Instructor in English.

B.A., Syracuse, 1933; M.A., Southern California, 1938; Instructor in English, University of Nevada, 1940–.

Lecturers, Fellows, and Assistants

MARGARET JENSEN, B.S., Assistant in Mathematics.

B.S., Nevada, 1938.

HENRIETTE MARIE GUFFLET OSGOOD, Assistant in French.

Brevet simple, Academie de Bordeaux, 1907; Brevet superieur, Universite de Paris, 1909; Head of the Department of French, Wildcliff Junior College, Swathmore, Pennsylvania, 1934–1937.

BERNARD WARD HOOPER, B.A., Fellow in Chemistry.

B.A., Pomona, 1939.

JOHN GEORGE YAPUNCICH, JR., B.A., Fellow in Chemistry.

B.A., Illinois, 1939.

AUDREY STEWART, B.A., Fellow in Physical Education for Women.

B.A., San Francisco State, 1939.

CHARLES LELAND HILL, M.S., Fellow in Chemistry.

B.S., Nevada, 1936; M.S., *ibid.*, 1938.

ARIEL FREDRIC, B.A., Lecturer in Secondary Education.

B.A., University of Wyoming, 1931.

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—
S. G. PALMER, C. R. HICKS, ELDON WITTWER.

Assemblies and Lectures—
R. S. GRIFFIN, C. C. SMITH, I. J. SANDORF.

Athletics—
F. W. WILSON, H. C. WHEELER, M. J. WEBSTER.

Campus Calendar—
MISS MACK, R. C. THOMPSON, T. H. POST, R. S. GRIFFIN, W. C. MILLER, E. SAMETH, J. E. MARTIE.

Campus and N. Y. A. Employment—
MISS MACK, P. A. HARWOOD, R. C. THOMPSON.

Catalogs; Rules and Regulations—
P. A. HARWOOD, F. WOOD, W. O. WAGNER.

Graduate—
R. STEWART, E. L. INWOOD, G. W. SEARS, R. A. IRWIN.

Health—
P. FRANDSEN, J. E. MARTIE, MISS SAMETH, COLONEL CLARK, E. W. LOWRANCE.

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

Orientation—
R. A. IRWIN, C. C. SMITH, E. C. GRAFTON.

Public Relations—
A. L. HIGGINBOTHAM, E. WITTWER, J. P. PUFFINBARGER, A. MAZOUR, T. H. POST.

Registration and Scholarship—
R. STEWART, F. H. SIBLEY, F. W. TRANER, J. A. CARPENTER, F. WOOD, MRS. RHODES.

Rhodes Scholarship Nominating Committee—
S. W. LEIFSON, R. C. THOMPSON, M. J. WEBSTER.

Schedules—
P. A. LEHENBAUER, H. C. AMENS, E. P. VANCE, E. C. GRAFTON.

Scholarships and Prizes—
J. A. CARPENTER, MISS LEWIS, G. W. SEARS, H. N. BROWN.

Student Affairs—
R. C. THOMPSON, MISS MACK, P. A. HARWOOD, M. W. DEMING.

Vocational Guidance—
R. A. IRWIN, W. D. BILLINGS, MISS RIEGELHUTH, W. H. DAVIDSON.

Chief Marshal of Formal Assemblies—
COLONEL CLARK, 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 $123,071.72, 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 purpose of endowment of the universities in the State. The fund from the sale of this land now amounts to $58,215.79.

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—Administration of President LeRoy D. Brown began. Student enrollment in 1887–1888 was 50. The faculty consisted of two members, President Brown and Professor Hannah K. Clapp. During the first year two additional members were added, and by the end of the second year the faculty numbered seven.

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 were 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—The first graduates from the State Normal School.

1889—The Administration of President Brown ended December 31.

1890—Administration of President Stephen A. Jones began on January 6.

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 on June 30.

1894—Administration of President Joseph Edward Stubbs began July 1.

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

1898—The first graduate in Civil Engineering.

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.

1901—The first graduates in Mechanical Engineering.

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 statue 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 as 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 Archer B. Hendrick began.

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

1915—The first graduates in Electrical Engineering.

1917—University Farm of 213 acres purchased.

1917—May 1, administration of President Hendrick ended.

1917—September 1, administration of President Walter Ernest Clark began.

1917—Mrs. W. A. Clark, Jr., established an annual scholarship of $250 in memory of her mother, Katherine Hays McManus, which, after Mrs. Clark's death, was continued by William Andrews Clark, Jr., in his wife's memory until his own death in 1934.

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 provides 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, now the Municipal Airport.

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

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, for five years, 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 was further increased $10,000 per year until the annual income reached $90,000 in 1929.

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, completely furnished, to University by Mr. William Andrews Clark, Jr., October 21. This building, including the gift furnishings, cost approximately $250,000.

1928—Mr. Clarence H. Mackay and his mother gave the University seven beautifully 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 Department was increased $20,000 per year beginning with July 1928.

1929—Construction begun on Mackay Science Hall. This $415,000 building, gift of Mr. Clarence H. Mackay, houses 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.

1929—Mr. Clarence H. Mackay gave $27,500 to enlarge the Stadium and refurnish the Training Quarters, presented the Walther Library of Desert Geology to the Mackay School of Mines and arranged to continue indefinitely the $18,000 a year to this School.

1930—Dedication and Presentation of Mackay Science Hall to the University by Mr. Clarence H. Mackay, October 24.

1931—Under Act of March 25, 1931, the Nevada Legislature transferred to the University of Nevada the land and buildings formerly used by the Nevada Historical Society.

1932—Mr. Clarence H. Mackay gave $150 to purchase a file of the Virginia Evening Bulletin covering the entire period of publication from July 6, 1863, to May 16, 1864. So far as is known this is the only complete file of this paper in existence.

1933–1940—Beginning with the summer of 1933 and continuing through 1940 repair and improvement projects were financed by

the various Federal Government Relief Administration Funds. Many campus buildings were repainted, roads were improved, retaining walls erected, the spur railway relaid over a better campus site, the Mackay Field improved, an addition made to the greenhouse, several laboratories and President's house rewired, ditch section concreted, sewer mains renewed and the campus, plant and grounds generally improved.

1934—Through the Federal Public Arts Project Committee for Nevada the University was presented with twenty-four charcoal drawings of Nevada Indian subjects by Robert Caples. These framed drawings are in the University Library.

1935—The Carnegie Corporation presented to the University a college music set consisting of a Capehart phonograph, 824 classified records, 251 scores and 129 volumes on music with cabinets for the records and the scores. This set is valued at $2,500.

1935—The Bankhead-Jones Act, passed in June 1935, authorized increased Federal Funds for resident teaching, agricultural extension and agricultural experimentation to all Land-Grant Colleges having these three divisions of service. The University of Nevada thereby is receiving added funds in all three of these lines of its service.

1935—The Regents, in June 1935, established the S. Frank Hunt Foundation with gifts of valuable mining stock, cash and automobiles made by Mr. S. Frank Hunt, discoverer of the Rio Tinto mine at Mountain City, Nevada. This foundation, in accord with the desire of the donor will cover the expenses of field trips for geologic study and for mineral prospecting by supervised groups of students of the Mackay School of Mines. In 1937 and 1939 Mr. Hunt made large additional gifts to the Hunt Foundation.

1936—Mr. Clarence H. Mackay purchased from the Evans Estate between twenty-six and twenty-seven acres of land adjoining the campus on the north. Final payment on this land was made late in 1937. This increases the campus acreage nearly fifty percent and thus assures ample acreage to meet the new needs of a long future.

1937—The Schools of Mining and Electrical Engineering were approved by the Engineers' Council for Professional Development.

1938—The University was approved in all departments by the Northwest Association of Secondary and Higher Schools.

1938—Administration of President Clark ended September 30, 1938.

1938—Mr. Clarence H. Mackay died November 12, 1938.

1938—Mrs. Ludovica D. Graham of Reno presented to the University, through the Department of Classics, the Cardinal Rampolla collection of Italian and other marbles and paid for its installation in the exhibit room of the University Library.

1938—Administration of Leon Wilson Hartman began October 1 as Acting President.

1938—The School of Mechanical Engineering was approved by the Engineers' Council for Professional Development.

1939—Administration of President Hartman began September 23, with formal inauguration December 15.

THE UNIVERSITY ORGANIZATION

A. College of Arts and Science.
   School of Education.

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

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

D. Affiliated Organizations.
   (a) Agricultural Experiment Station.
   (b) Agricultural Extension Department.
   (c) State Analytical Laboratory.
   (d) State Bureau of Mines.
   (e) Pure Food and Drugs Control and Weights and Measures.
   (f) State Veterinary Control Service.
   (g) United States Bureau of Mines Experiment Station.

E. Summer Session.

COLLEGES, SCHOOLS, AND AFFILIATED ORGANIZATIONS

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 or science may, upon application to the faculty, receive the degree of Bachelor of Science.)

Work in the following subjects is offered in the College of Arts and Science: Art, astronomy, biology, botany, business, chemistry, dramatics, economics, education, English, foreign languages, journalism, geology, history, mathematics, military science, music, philosophy, physical education, physics, political science, psychology, speech, sociology, and zoology.

SCHOOL OF EDUCATION

The responsibility for all teacher-training work in the State of Nevada for elementary and secondary schools rests upon the School of Education of the University of Nevada.

This school is a division of the College of Arts and Science, but has its own Dean and direct affiliations with the Colleges of Agriculture and Engineering. It offers to prospective secondary-school teachers a liberal and professional four-year course of study, leading to the bachelor's degree and a teacher's high school diploma, giving title to a teacher's high-school certificate. It also offers four-year courses which qualify for a first-grade elementary certificate and offers special training courses for future school principals and superintendents.

For the student who cannot remain continuously in the University for four years the School of Education offers a two-year course which entitles the student to be recommended for a first-grade elementary certificate. A one-year course is offered which entitles the student to be recommended for a second-grade certificate.

The Summer Session, organized to benefit present and prospective teachers, is conducted, under the direction of the School of Education, for six weeks in June and July, with a wide variety of liberal and professional courses which carry both University and State certificate credits. The Summer Session will be conducted June 17 to July 26, 1940.

During the Summer Session and during the regular term graduate courses are provided, leading to the Master of Arts Degree in Education.

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, or mining geologists, and a one-year graduate course leading to the degree of Master of Science in Mining Engineering, in Geology or in Metallurgy. 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, and in Civil Engineering. The shops are well equipped, and the laboratories offer most excellent facilities for practical work.

THE COLLEGE OF AGRICULTURE

The College of Agriculture curricula lead to the degree of Bachelor of Science in Agriculture with majors in Agricultural Economics, Preforestry, Vocational Agriculture, Range Management, Agronomy, Botany, General Agriculture, and Animal Husbandry. These are four-year courses, 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 four-year degree courses 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), from the Purnell Fund (1925), and from the Bankhead-Jones Act of 1935. 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 livestock, insect pests, plant diseases, and other problems of agricultural economics and practice.

AGRICULTURAL EXTENSION DEPARTMENT

Agricultural Extension, provided for by the Federal Smith-Lever Extension Act, the Capper-Ketcham Act, and the Bankhead-Jones Act 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.

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 Department, 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 domestic 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.

STATE BUREAU OF MINES

The State Bureau of Mines was created by the Thirty-fourth Session of the Legislature (approved March 29, 1929) to provide facilities for cooperation with the mineral industry of the State and to advance the development of the State's mineral deposits.

UNITED STATES MINES EXPERIMENT STATION

In 1920 the Rare and Precious Metals Station of the United States Bureau of Mines was moved to Nevada. From State funds a two-story and basement brick building, including offices, laboratories and library, was built on the University campus to house this Federal Mines Experiment Station. All experimentation for the whole United States in the fields of the rare and the precious metals is done at this Nevada Station. The Federal funds pay all salaries and equipment costs and the State, through the University of Nevada, bears costs of all needed heat, power and light. A working agreement between the United States Bureau of Mines and the University of Nevada provides for use of University laboratories and libraries by staff members of the Mines Station and for use of the station laboratories and library by staff members or advanced students of the University.

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 of a college or school 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 the 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 and 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.

DEAN OF MEN

The academic and the social welfare of the men students is under the special supervision of the Dean of Men. Jurisdiction over all

social matters and student organizations in which men students are concerned is given to the Dean of Men.

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 benefits; 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 25 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 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

[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.

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 twenty thousand inhabitants. It is located, at an elevation of 4,500 feet, in the beautiful valley of the 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 United 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 over eighty-six 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:

AGRICULTURE BUILDING—The Agriculture Building is a three-story structure of brick, with stone facings and trimmings, situated directly east of Manzanita lake. The first floor includes the administration offices, four classrooms, a large lecture room, a home economics laboratory, a biology laboratory, and the sewing laboratory. The second floor is devoted to the School of Home Economics and the Department of Biology, and includes the cooking laboratory, the model kitchen and dining room, and the biological laboratories. The basement includes

laboratories for dairying, farm crops, soils research (Experiment Station) and botany. (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, the University Band, and University-Community Orchestra, and by the Buildings and Grounds Department. This building was erected for the use of the Vocational Section of the Students' Army Training Corps. (1918)

AGRICULTURAL EXTENSION BUILDING—This is a two-story gray-stone building standing on the west side of the quadrangle. Fitted with laboratories and classrooms for chemistry, it was used for chemistry until the fall of 1930. Thoroughly renovated and remodeled on the interior, this building has been occupied from the beginning of 1936 by the Staff of the Agricultural Extension Service of the University. (1902)

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 Agriculture 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 and Psychology, and has the music room and other classrooms in education. (1920)

ELECTRICAL BUILDING—The Electrical Building, situated on the east side of the campus, is a two-story brick building, 50 x 110 feet. The first floor contains classrooms and the electrical laboratories. These laboratories are equipped with machinery for giving instruction in the several courses, such standard tests as are usually required being represented. The second floor contains the computing rooms, drafting rooms, radio laboratory and the classrooms of the several departments. (1912)

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). An addition was built with Federal Relief Funds in 1934.

GYMNASIUM—The Gymnasium is a brick building 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

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

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 one-story building is situated on the west side of the quadrangle, is constructed of brick and stone in conformity with the architecture of other buildings. It formerly housed the Library. During the summer of 1929 its interior was changed to six classrooms and an office, all now used for the work of the Department of English. (1913)

HATCH STATION—Hatch Station, as enlarged in 1926, is occupied by the Agricultural Experiment Station. The basement floor is occupied by the Department of Farm Development. The Department of Meteorology and the Station Library occupy the first floor. The second floor is occupied by the Departments of Entomology and Range Management and the offices of the Station Director. 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 two wards—one upon the west for men and one 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 University Health Service 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 three-story brick building, with present accommodations for seventy-two men. (1896)

MACKAY SCHOOL OF MINES BUILDING—The Mackay School of Mines Building, the gift of Mrs. John W. Mackay and Mr. Clarence H. Mackay, houses the Departments of Mining, Metallurgy and Geology. It is a dignified and spacious structure in the colonial style, occupying a space 112 x 118 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, mining laboratory and museum, lavatory, shower and locker rooms for the students, and the ore dressing laboratory.

On the first floor are the chemical laboratory, electric furnace laboratory, first mezzanine floor of the mill, assay laboratory, museum,

library, classrooms and offices of the Director, metallurgy department, and mining department.

On 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 Mackay Research Library, the mineralogy laboratory, maproom, petrography laboratory, petrography grinding and polishing room, classrooms and Mackay research room. (1908; enlarged, 1926)

MACKAY SCIENCE HALL—The Mackay Science Hall houses the Departments of Chemistry, Physics and Mathematics. It is a reinforced concrete, fireproof, brick and stone building, 170 x 80 feet in dimensions and having a full basement and a sub-basement of 1,600 square feet. The basement and sub-basement have laboratories and storerooms for chemistry and for physics. The two main floors have laboratories, classrooms, lecture rooms, storerooms and offices for chemistry, physics and mathematics. Ventilating fans occupy the attic story. (1930)

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 a two-story brick structure of 80 x 80 feet. It contains a machine shop, pattern shop, mechanical laboratories and drafting room, strength of materials laboratory and the laboratories of the Civil Engineering Department. (1897)

MINES EXPERIMENTATION BUILDING—This building stands 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 United States Rare and Precious Metals 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 Department of Philosophy, overflow classes in Foreign Languages and History and offices of the athletic coaches occupy the second floor. The third floor is used for offices of the Departments of Soil Conservation and Agricultural Economics of the U. S. Department of Agriculture and by drafting rooms and offices of the Division of Grazing of the U. S. Department of the Interior. All three agencies are working in cooperation with the Nevada Agricultural Experiment Station. The office and storerooms of the Superintendent of Buildings and Grounds and the University Post Office are in the basement. (1886)

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 Department of History and Political Science occupies the first floor. The second floor is occupied by the Department of Modern Languages. (1890)

STUDENT UNION BUILDING—This building and land formerly the property of the Nevada Historical Society, was given to the University by the 1931 Legislature. It is a story- and-a-half stucco building and houses the offices of the graduate manager, the A. S. U. N. President, the Publications Boards and a Student Lounge.

THE MACKAY FIELD AND TRAINING QUARTERS—A natural amphitheater 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. Later he purchased an additional twenty-six acres to the north of and adjacent to this tract. To care for other branches of athletics, such as basket ball and tennis, the Nevada Legislature of 1909 provided 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 the 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. 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. Originally, in 1909, there were seventeen tiers of concrete, with a colonnade for a covered grandstand in the rear and a seating capacity of about two thousand. In the summer of 1929, through an added gift from Mr. Mackay, this stadium was enlarged to a seating capacity of more than five 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.

VETERINARY SCIENCE BUILDING—This is a two-story brick and stone building situated on the east side of the campus directly east of the Mechanical Building. Remodeled on the interior in early 1936, this building now houses the Veterinary Control Service and the bacteriological and chemical laboratories of the University's Agricultural Experiment Station. (1913)

THE EXPERIMENT STATION FARM—East of the University campus lies the 60-acre farm given by the 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. (1917). Owing to the financial emergency, such use of this farm has been suspended since July 1931. Substitutional arrangements for using equipment and livestock of private dairy farms and equipment and flocks of private poultry farms have been in effect since July 1931 in connection with the dairy and the poultry courses.

LIBRARIES

GENERAL LIBRARY

The University Library, housed in the Alice McManus Clark Memorial Building, contains 63,210 bound volumes, excluding over 12,000 Federal documents not catalogued, 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. These publications include some two hundred leading cultural, scientific, and technical magazines and journals.

During the University year, excepting legal holidays, the Library is open from 7:45 a. m. to 9:30 p. m., Mondays to Thursdays, inclusive; 7:45 a. m. to 5 p. m., Fridays; 7:45 a. m. to 12 noon, Saturdays; 2 p. m. to 5:45 p. m., Sundays. Thanksgiving, Christmas and Easter vacation periods the Library is open daily from 8:30 to 4:30, except Sundays and legal holidays. It is closed evenings preceding University holidays. During the summer vacation the Library is open daily, excepting Sundays and legal holidays, from 9 a. m. to noon.

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 lent to them.

AGRICULTURAL EXPERIMENT STATION LIBRARY

The Agricultural Experiment Station Library, containing about 5,000 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 various Experiment Stations, 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 2,300 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. Professor R. D. Jackson's widow donated his reference and notebooks. Mrs. George Lloyd presented several valuable text and reference books. Senator Tasker L. Oddie presented several hundred copies of United States Geological survey and United States Bureau of Mines publications. Mrs. Vida Boyle, widow of Governor Emmet D. Boyle, donated several hundred maps of mining properties throughout the State. Thirty current periodicals are received. This library is open daily during the University sessions.

THE MACKAY RESEARCH LIBRARY

The Johannes Walther Library comprises about 7,000 papers on desert geology, paleontology, ore deposits and other geologic subjects. It is said to be the most complete library on desert geology in existence.

This library is in the Mackay research room on the second floor of the building. The room is well appointed with oak furniture and bookcases. It is lighted by skylights and windows.

The funds to buy the library and to fix up and furnish the research room were supplied by Mr. Clarence H. Mackay.

COMSTOCK MAPS

When the Comstock Merger suspended operations in 1927, the Mackay School of Mines was given all of its maps, both surface and underground. These maps cover all of the mines from the Caledonia on the south to the Con. Virginia on the north. Later a collection of maps covering the northend mines was donated to the collection.

The funds to build the big map case to file these maps in were supplied by Clarence H. Mackay in 1928.

In 1938 a valuable collection of Comstock maps belonging to the late Surveyor Moran were bought with funds collected from Comstock mining companies by Alan Bible (Nevada, 1930), and presented to the school.

The preservation of all of these maps has been of important economic value to the Comstock mining companies and they have been referred to many times by them, by historians, and others.

MINING EXPERIMENT STATION LIBRARY

The library of the U. S. Bureau of Mines Station at the University consists of between 4,000 and 5,000 volumes and pamphlets. The important mining and research periodicals are received, together with the publications of the Bureau of Mines.

SCHOOL MUSIC REFERENCE LIBRARY

Some 200 bound volumes and hand books of music materials for the elementary and high schools, including band and orchestra, class instruction of all grades, concert music, secular and sacred choral music of different periods, vocal arrangements for different ages, operettas, violin and piano teaching material is available in the music rooms and is especially valuable for students and teachers of public school music and for leaders of choral and instrumental groups.

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.

COUNTY AND STATE LIBRARIES

Besides the University libraries, members of the University have available the facilities of the Washoe County Public Library of 70,089 volumes and of the State Library at Carson City which has over 234,069 volumes, including over 49,995 volumes on law, constituting, because of the completeness of its early-day statutes of every State in the Union, one of the best law libraries in the United States. Books are mailed all over Nevada, especially to small communities which have no library facilities.

LABORATORIES

ARTS AND SCIENCE LABORATORIES

Biological—The Biology Department occupies part of the basement, part of the main floor and the north half of the second floor of the Agriculture Building. There are seven 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 elementary and advanced botanical laboratories; (4) the plant physiology and pathology laboratory; and (5) the anatomy laboratory. The first three are located on the second floor, two are on the main floor and 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, a greenhouse and field enclosure plots make possible a limited amount of work in plant physiology, ecology, and plant pathology.

Chemical—The Mackay chemical laboratory occupies the north half

of Mackay Science Hall. The large lecture room, department library, seminar and classrooms, occupying the central part of the building, give ample room for reference and other work connected with the laboratories. Four laboratories accommodating twenty-four students each and fitted with gas, water, electricity, individual desk hoods, etc., occupy the northeast portion of the basement and first floor for the use of general chemistry and qualitative analysis. In connection with these laboratories are two balance rooms and a hydrogen sulphide room. Above these laboratories, on the second floor, are situated the laboratories for quantitative analysis and organic chemistry. Each will accommodate twenty-four students working at the same time. They are fitted with gas, water, steam, vacuum, compressed air, alternating and direct current electricity, fume hoods, ovens, etc. A balance room and Kjeldahl digestion room are located close by.

In addition to these, smaller laboratories are provided for physical, physiological and advanced inorganic and organic chemistry. These are all equipped with gas, water, steam, compressed air, vacuum, electricity, fume hoods, etc., for advanced work and research in these fields. A dark room, refrigerator room, and large storerooms for supplies are provided. The dispensing room is situated on the first floor and connected with the other two floors by an electrically driven dumb waiter so that students working on any floor may be served conveniently and with little delay.

A furnace room, equipped with both gas and electric furnaces of various types, a grinding room with various grinding machinery and a shop and glass-blowing room are located in the basement.

Geological—The Department of Geology is 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 petropraphical 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. A dark room for photography is also provided for the department.

Music—A college music set was donated to the University by the Carnegie Corporation of New York City in 1935. It includes phonograph records, musical scores, books on music and one of the finest phonographs obtainable, an automatic Capehart.

In this set are 824 records representing all nations, periods, styles, vocal, choral and instrumental combinations. The earliest composition dates from ancient Greece and the latest includes modern compositions of contemporary composers.

The set includes 129 books of the best and latest musical biography, history, theory and criticism, and 251 scores corresponding to the records. All are alphabetically catalogued and classified in several ways for convenient reference.

The records, scores and the phonograph are available to the student body and the community for special reference use at available hours in the music rooms. The books are in the library.

In addition to this gift set the University has a considerable collection of reference books on music, biography, theory, history, encyclopedia, folk song, oratorio scores and song collections, together with some valuable records. Together with the book, score and record items of the Carnegie set these constitute a very comprehensive music library.

The University owns several instruments including a bass viol, bass horn, French and alto horns, kettledrums and other equipment available for students to use in the orchestra and band, and has the use of 30 band instruments furnished by the War Department.

Physics—The physics laboratory is located in the south wing of Mackay Science Hall. The various divisions of the laboratory occupy the sub-basement, a portion of the basement, and a special room for advanced work on the first floor of the building, as well as a radio laboratory in the attic.

In the sub-basement are located the storage-battery room containing 160 cells, a general storeroom, a constant temperature research room, and three smaller rooms for storing glass tubing and iron, wood and brass stock.

In the basement are located the department's photometry room, the generator room, the shop, the photographic dark room, the laboratory for general physics, the laboratory for electrical measurements, a spacious storeroom connecting and serving the two laboratories, and a steel and concrete vault for the storage of the better grade of electrical instruments belonging to the department.

Both of the laboratories contain distributing panels by means of which storage battery, generator, and alternating current power can be delivered to all the various outlets in the different laboratories and lecture rooms occupied by the department.

The photometry room is provided with a standard three-meter photometer bar equipped with a compound rotator and a Lummer-Brodhun photometer, and with a thirty-inch Ubricht sphere which is used in making measurements of spherical candlepower.

The generator room is provided with a switchboard to which is connected a constant potential charger, used in charging the storage batteries, a 10 kw. motor-generator set, and a special three-phase motor-generator set for experimental work. The switchboard is so connected to the storage batteries located in the sub-basement that one can secure voltages ranging from 2 to 220 volts for all the distributing panels of the department. In addition, current from the direct current generator at 125 volts can be supplied in all the laboratories and lecture rooms of the department. Through a distributing panel three-phase current of constant voltage up to 125 or 150 volts and of any desired frequency between approximately 40 and 90 cycles can be

furnished to any table or desk in the electrical measurements laboratory. The switchboard is also provided with switches for automatically starting the 10 kw. motor-generator set and the potential charger.

The department shop contains two motor driven lathes provided with taper attachment, change gears for cutting metric threads, and all the other accessories, hand tools for wood and metal work, including metric taps and dies, a small circular and linear dividing engine, an electrically driven drill press, a motor driven toolgrinder and polisher and work benches. Along one wall of the shop is a table especially adapted for a course in glass blowing given by the department. This table is provided with air, gas, and an oxygen tank outlet for use when working with pyrex glass.

The electrical measurements laboratory has wall desks around two sides of the room. These desks are provided with ample drawer space and with water, gas, direct and alternating current outlets. High sensitivity galvanometers are mounted over these desks at suitable points along the walls of the room. Four separate sets of piers in the center of the room provide tables which are free from vibration and upon which the experimenter can mount his sensitive apparatus. Each of these tables is provided with gas, and with direct current, single phase and three phase outlets. Among the electrical instruments available for student use in this laboratory are potentiometers, standard cells, standard resistances, standard inductances, standard condensers, standard voltmeters and ammeters, Wheatstone bridges, alternating current bridges and galvanometers, Kelvin bridges, Kohlrausch bridges, inductance bridges, etc. Many of these instruments have been tested at the Bureau of Standards and certificates certifying to their accuracy are on file in the department offices.

The laboratory for general physics is a spacious well-lighted room, having wall desks around three sides of the room. Two large laboratory tables, each equipped with sinks and electrical and gas outlets, extend north and south across the length of the room. These two tables are separated from each other at the middle of the room by a wide aisle which cuts across the room from west to east. Eight smaller desks, symmetrically placed in the room, two on each side of each of the large tables, constitute the remainder of the desk space of this laboratory. At either end each desk is provided with gas and alternating and direct current outlets.

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.

A Burroughs adding machine.

Electrical—The electrical laboratory contains equipment for making the experiments usually included in undergraduate courses in electrical engineering. The equipment is up-to-date and machines of 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. The main laboratory contains the following equipment:

Motor generator sets:

Synchronous motor/alternator, 45 hp./37½ kva.

Induction motor/3 wire direct current generator, 25 hp./20 kw.

Induction motor/direct current generator, 7½ hp./5½ kw.

Direct current motor/direct current generator, 5 hp./3¼ kw.

Induction motor/direct current generator, 15 hp./7 kw.

Induction motor/direct current generator, 15 hp./7 kw. (two sets).

Single phase induction motor/500 cycle alternator, 5 hp./2½ kw.

Single phase induction motor/direct current generator, 2 hp./1 kw.

Single phase induction motor, 1,500 volt direct current generator, ½ hp./500 watt, for communication laboratory.

Direct current motor/alternator, 10 hp./7½ kw. The alternating current unit has four interchangeable rotors and twelve armature terminals. Especially constructed for laboratory purposes.

Alternating current/alternating current, 15 kva/15 kva. Phase displacement, dynamometer set, constructed for laboratory purposes. Each unit has twelve armature terminals to permit the making of various types of connections.

Single units which may be tested singly or combined with other units are provided as follows:

Laboratory type, 10-kw. rotary converter with three special 5 kva. transformers, and control equipment.

Direct current motors, 3 hp. up to 25 hp.

Direct current generators, 2¼ kw. to 15 kw.

Single phase induction motors, 3 hp. to 10 hp.

Three phase induction motors, 5 hp. to 10 hp.

For the laboratory testing of the motors and generators named there are two switchboards, provided with controlling and metering equipment, and numerous single portable loading and control units, resistors, reactors and condensers.

The communications laboratory contains the following:

Telephone demonstration plant for two subscribers.

Mercury arc rectifier, 10–70 volts, 10 amperes.

Vreeland oscillator with condenser for frequency control.

Vacuum tube oscillator, beat frequency type, 20–9,500 cycles.

Impedance bridge for voice frequencies.

Artificial line of 25 sections, each a combination of resistances, inductances, and capacitances. Suitable switches are included by which the line can be made to simulate either a 10 gage telephone line or a No. 0 gage power line.

Short-wave radio transmitter for telephone and continuous wave operation.

Assortment of variable resistances and condensers for use in communications laboratory.

Vacuum tube voltmeter-milliammeter for the comparison of alternating currents of 300 to 5,000 cycles.

General Radio vacuum tube voltmeter.

General Electric two-element oscillograph.

R. C. A. cathode-ray oscillograph.

Mechanical—The mechanical power laboratory is equipped with main and auxiliary power generators on which can be performed a large number of fundamental regular course experiments, besides furnishing equipment for research and machine design problems.

This equipment includes the following:

An 80-hp. oil-fired Babcock and Wilcox boiler with injector and feed pump.

A 40-hp. Diesel engine connected to 100 hp. Sprague dynamometer.

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

A 5 x 5 vertical slide valve Baker Hamilton engine.

A 7-kw. Curtis turbo-generator.

A 7-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.

A 6-hp. vertical gas engine.

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

A Buick automobile engine.

A Chevrolet automobile engine.

In addition to the above are a number of small machines which may be set up temporarily for thesis or display purposes, also steam and gas indicators and calorimeters and other necessary instruments for power testing.

The mechanical laboratory on the second floor of the Mechanical Building contains equipment for determining the heat value of solid, liquid and gaseous fuels, coal analysis, oil distillation, lubrication testing, air flow measurements, coefficient of friction, and a wide range of instrument testing and calibration. The equipment in this laboratory includes:

One Parr adiabatic oxygen bomb calorimeter.

One Sargent gas calorimeter.

One Buffalo forge blower with motor.

Friction testing machine and motor.

One vacuum pump with motor.

One electric oven with controlling equipment.

One inclined friction plane.

One oil still.

Two Hays-Orsat gas analyzers.

One set of aviation meters and gages.

Equipment in the University equipment plant is available for certain tests.

Gas and electric heaters, balances, thermometers, hydrometers, barometers, gages and necessary equipment for their testing and calibration. Apparatus for testing lubricating oils, including Saybolt and Engler viscosimeters, surface tension, flash, fire and cold test equipment.

The mechanic arts laboratories, the machine shop and pattern shop, are all located in the Mechanical Building.

The machine shop on the main floor contains the following equipment: One 5-hp. motor-driven air compressor with receiver, one 16″ Whipp crank shaper, seven engine lathes, one 24″ planer, one No. 1 universal tool and cutter grinder, one No. 2 and one No. 1½ universal milling machine, one 20″ drilling machine, one 10″ drilling machine, one centering machine, nine bench vises, floor grinder, buffer and power hack saw, with complete equipment of hand tools, instruments and gages.

The facilities of the Galli Foundry are used for illustration and practice in foundry methods.

The pattern shop on the second floor contains one 18″ Variety saw bench, one self-contained motor-driven speed lathe, one 48″ jig saw, one 6″ jointer, a motor-driven grindstone, one disk sander, together with the necessary hand tools, benches and equipment necessary for the construction of small wood patterns.

MINING SCHOOL LABORATORIES

Assay—The fire assay laboratory in the Mackay Building is equipped with eight 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, Staudinger, Heusser, and Thompson.

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 Department of Geology is provided with reference collections illustrating ores, minerals, rocks, and fossils, with class collections for determination. Complete sets of United States Geological Survey publications and maps, most of the

State Geological Surveys publications, as well as those of many foreign surveys.

The mineralogical laboratory is well equipped for blow-pipe and chemical work, with a large collection of minerals for determination. Binocular microscopes and other accessories are also available.

The S. Frank Hunt Foundation field equipment consists of two automobiles, a 1½-ton truck, complete camping equipment for a party of eight students, two professors, cooks, etc.; complete engineering equipment suitable for topographic and geologic mapping, plotting, etc., and necessary prospecting equipment. This equipment makes it possible for an expedition to make field excursions of several weeks' duration comfortably.

This field work has been adequately financed by the Hunt Foundation so that all traveling and living expenses of the instructors and students is paid from these funds.

Numerous week-end excursions are made into the field during the school year, the expenses of which are also paid out of the Hunt Foundation.

Petrographic—The petrographic laboratory includes the following equipment:

One Sauvier & Boylston polishing machine; apparatus for hand polishing; rock saws; seven 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.

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. Centrifugal pumps circulate the pulps or pump them to waste.

The smaller equipment consists of two Jenney, one Ruth, one Callow and one Booth-Thompson flotation machines, 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. A fine grinding plant in enclosed circuit is available 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 Sauvier & 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; a Bausch & Lomb quartz spectograph; a Leitz ultropaque microscope; one Spencer metallurgical 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, a small arc melting furnace, and one General Electric motor generator rated at 220 volts, 20 amperes. 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 jack-hammer 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, anamometers, etc.

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, hydrometallurgy, electro-metallurgy, electrolysis, radio-activity and spectroscopy. Facilities are provided for handling large volume of fire assaying and chemical analyses requiring extreme accuracy.

The ore-dressing equipment is the best standard practice. The general metallurgical laboratories are equipped for test work covering known processes, and special apparatus is designed for proposed methods. Each research room is fitted for work on the particular problem

being studied. This requires frequent redesign and installation of needed set-ups which are often of original construction.

The latest model large-type spectograph is placed in a separate dark room for use in identifying or analyzing difficult substances.

New apparatus has been recently installed for aqueous electrolysis, electrolytic separation of fused baths and electrothermo treatment of ores at high temperatures on a scale of a fraction of a pound to several hundred pound lots.

AGRICULTURAL LABORATORIES

Dairy (Room 12, Agriculture 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—This laboratory is equipped for research and analytical work in chemistry. It is used for chemical work in relation to the agriculture of the State and to the research projects of the Agricultural Experiment Station.

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.

Soils Research Laboratory, Experiment Station. This laboratory is equipped for conducting research on soils and soil fertility. Its facilities provide for both macro- and micro-chemical analyses, as well as for the many chemical operations necessary in research work of this kind. A constant-temperature room for small plant cultures is a part of the equipment. Also, there is a small experimental greenhouse to accommodate pot cultures and other tests of soils by plant growth.

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

Food—The food laboratories are on the second floor of the south half of the Agriculture Building. They are well furnished with modern equipment, and accommodate twelve students. Adjoining the unit kitchen is a dining room suitably furnished for the use of meal service classes.

Clothing—The clothing laboratory is equipped with serving and drafting tables, sewing machines, and smaller equipment needed for the work of the classes in clothing. Twenty students can be accommodated in this room. Adjoining this laboratory is the garment fitting and locker rooms.

Applied Art—This laboratory, on the first floor of the Agriculture Building, is equipped with low tables and looms to accommodate twelve students.

There is one lecture room on the first floor of the Agriculture Building reserved for the exclusive use of the home economics department.

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 wall at the right 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 of 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 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 (1915), 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 have been made to the Mackay Museum, 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 anyone who wishes to inspect or study the various collections.

BIOLOGICAL MUSEUM AND COLLECTIONS

The biological museum is in the Agriculture 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 15,750 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 Mackay Science Hall. 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; samples of inorganic salts prepared by J. T. Baker Chemical Company; distillation products obtained from crude petroleum prepared by the Standard Oil Company, and zinc products prepared by the New Jersey Zinc Company.

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.

Following are some of the lectures given in 1939–1940:

COMMENCEMENT, 1939

May 13—Phi Kappa Phi Address, "The Divine Comedy," by Dr. Oswald W. S. McCall, Pastor, First Congregational Church of Chicago.

May 14—Baccalaureate Sermon, by Dr. McCall.

May 15—Commencement Address, "America's Quest for Security," by Dr. David P. Barrows of the University of California at Berkeley.

ASSEMBLY ADDRESSES

September 22—"The Deepest Issue of Our Time," by Dr. Paul F. Cadman, American Research Foundation.

October 5—"Impressions of an American Woman in South Africa," by Mrs. Helen Fulton Peterson, B.A., Nevada, 1910.

October 12—"Dramatization of English and French Folk Songs," by Anna Young of the San Francisco Opera Company.

October 13—"The Far-Eastern Conflict," by Dr. Kalfred Dip Lum, Special Envoy of the Central Government of China.

November 10—"The Significance of the Armistice of 1918," by the Honorable Samuel Platt of the Nevada State Bar Association.

December 15—"The University and the People," by Dr. Monroe E. Deutsch, Vice President and Provost of the University of California on the occasion of the Inauguration of President Hartman.

January 25—"Woman's Responsibility on the Campus," by Helene Turner Fuetsch of Reno.

February 1—Blind Champion Xylophonist, Pierce Knox; Seeing Eye Dog of Hilda Isles; Braille Alphabet Demonstration and Vocal Solos by Joe Hargreaves; performers and program under the auspices of the National Transcribers Society for the Blind at Palo Alto, California.

February 23—Phi Kappa Phi Day addresses—"Heads and Figureheads" and "The Education of the Gifted Student," by Dean Joel H. Hildebrand of the Chemistry Department of the University of California.

February 26—"Exploring Tropical Sea Floors," by Max Gene Nohl, World's Champion Deep-Sea Diver.

In addition to these lectures given under general University auspices, there were many other campus lectures and addresses given under particular auspices, notably a monthly series sponsored by the Faculty Club, a bimonthly series before the Rocks and Minerals Study Club, a series of addresses given before the Crucible Club, some of these being joint sessions with the Nevada section of the American Institute of Mining and Metallurgical Engineers, special lectures sponsored by the Association of American Chemists, and lectures and talking pictures sponsored by the "Deutscher Verein" and the "Cercle-Francais."

ORGANIZATIONS AND PUBLICATIONS

THE ALUMNI ASSOCIATION

The Alumni Association was organized in June 1895, to promote union and good-fellowship among the alumni, and to advance and protect the interests of the University of Nevada. All graduates of the University are recognized as members of the association, and former students are eligible to membership upon the graduation of the class in which they originally enrolled. Active membership is maintained by payment of the dues of the Association—$1 a year. A life membership is granted for $10, or payment of the annual dues for ten years. The association holds a combined business and social meeting each year during the homecoming celebration.

OFFICERS FOR 1939–1940

President, Angelo Urrutia, Care of Reno Printing Company, Reno, Nevada.
Vice President, Miss Blythe Bulmer, 128 Ralston Street, Reno, Nevada.
Secretary, Mrs. Louise Lewers, P. O. Box 1027, Reno, Nevada.

Executive Committee—Local—
Dr. Fred M. Anderson, Carson City, Nevada.
Bill Beemer, 16 E. 2d St., Reno.
Miss Helene Stark, 853 Lake St., Reno.
Hugo Quilici, First National Bank, Reno.
Elbert Walker, Sierra Pacific Power Co., Reno.
Forrest Bibb, Carson City, Nevada.
George Southworth, Jr., Southworth Company, Reno.
Francis (Tank) R. Smith, 1120 Evans Avenue, Reno.
Joe T. McDonnell (ex officio as Graduate Manager), University of Nevada, Reno.

Executive Committee—State—
Wesley Martin, Yerington, Nevada.
Jim Shaver, Winnemucca, Nevada.
Newt Crumley, Elko, Nevada.
Ray Germain, Tonopah, Nevada.
Al Reed, Lovelock, Nevada.
Lloyd Moon, Fallon, Nevada.
Horace Bath, Ely, Nevada.
Al Cahlan, Las Vegas, Nevada.
Duane Mack, Gardnerville, Nevada.

Executive Committee—Out-of-State—
Harold Hughes, 75 San Andreas Way, San Francisco, California.
George Duborg, Engineers Public Service Co., Inc., 90 Broad Street, New York.
Earle (Goldie) J. Holmes, Compton Junior College, Compton, California.
Oscar Bryan, Care of Nick Basta, 1632 Rhode Island Avenue, N. W., Washington, D. C.

There are active chapters of the Alumni Association in Los Angeles, New York City, Washington, D. C., and San Francisco.

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. 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 home varsity games, contests, or events under the University's management, and subscriptions to the U. of N. Sagebrush and the Artemisia and to the payment of his class dues.

THE UNIVERSITY HEALTH SERVICE

Beginning with the fall semester of the year 1940–1941, all students will be charged a Health Service Fee of $6 per semester. The funds obtained from this fee will be used to provide an enlarged health service for University students which is in accordance with the general practice of other colleges and in line with the recommendations of The American Student Health Association. All students will then be entitled to the following privileges and subject to the restrictions imposed by them:

1. A thorough medical and physical examination at the time of entrance with such subsequent examinations and check-ups as may seem desirable in order to ensure the individual's physical fitness for the scholastic and athletic program which the student would like to undertake.

2. Any student found on such examination to be suffering from some chronic or handicapping ailment which makes it unlikely that he can effectively carry on his studies will be advised accordingly and may be required to limit his activities.

3. Any student found to be a carrier of an infectious disease of such a nature as to make him a menace to the general health of the campus may be required to discontinue his work at the University.

4. Standard immunity tests for certain infectious diseases may be given, and when practicable and desirable, susceptible individuals may be immunized.

5. Any student who refuses to comply with any health regulation established by the State or local Boards of Health or by the University administration may be denied the privilege of registering or continuing work in the University.

6. Free daily consultation periods with the college physicians and nurses will be provided for all students who wish to consult about health matters. The chief object of these consultations is the detection of illness before it becomes serious. Students are urged to take advantage of it. The privilege should, however, not be abused by expecting unreasonable services at unreasonable times.

7. Any calls for medical or nursing service off the campus or at other than the regular consultation periods, or from other persons than those on the regular hospital staff, will have to be paid for by the individuals making the request.

8. A student injured or taken ill while on the campus will be given the necessary emergency attention without expense and other justifiable exceptions to rule 7 may be made by the health staff.

9. All necessary laboratory examinations, X-rays, prescriptions and medicines will be furnished without cost, provided they are authorized by the college physician.

10. In case of illness requiring hospitalization, the student will be

privileged the free use of the University Infirmary for a period not exceeding two weeks in any semester, including meals, medicine, treatment, visits of physician, and general nursing.

11. When an operation is advised or deemed necessary the student must make his own arrangements and assume the responsibility for the payment of all surgical, nursing, and hospital cost connected therewith.

12. In case of need students may make application through the Health Committee for financial assistance. At the end of the college year this committee in conference with the President may pro-rate such surplus as may be left in the Health Service funds towards meeting the expenses of such sickness.

13. The University assumes no responsibility for the payment for beds in other hospitals or for sickness expenses incurred without special authorization of the College Physician and the University Health Committee.

14. Some contagious disease cases cannot at present be cared for in the University Infirmary. Such patients may have to go to the county isolation hospital or be cared for at home under quarantine and at their own expense.

15. The failure to make use of the health services offered will not be accepted as a reason for exemption from the payment of the health service fee or for refunds therefrom in any semester.

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 CLUB

The Faculty Club is composed of the members of the staff and their wives. The meetings are held monthly in the home economics rooms of the Agriculture Building. At each meeting a lecture of general interest is given, followed by a social hour. The meetings are open to visitors.

AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

The Nevada Chapter of the American Association of University Professors meets informally seven or eight times during the University year to discuss questions of interest to the profession of university teaching and research. The objects of the association as defined in its constitution are: "To facilitate a more effective cooperation among teachers and investigators in universities and colleges, and in professional schools of similar grade, for the promotion of the interests of higher education and research, and in general to increase the usefulness and advance the standards and ideals of the profession."

Any member of the faculty who holds, and has held for three years,

a position of teaching or research with the rank of instructor or higher is eligible to become an active member of the association. Dues are $4 a year, including subscription to the Association's Bulletin.

For the profession of university and college teaching and research, the position and functions of the association are analogous to those of the American Bar Association and the American Medical Association in their respective fields.

THE ROCKS AND MINERALS STUDY CLUB

The Rocks and Minerals Study Club was organized in 1934 for any persons who are interested in the study of rocks and minerals. It holds regular meetings twice a month in the Mackay School of Mines Building. At the meetings reports are presented by members or instructors. Class work consists of the study of the common rocks and minerals, particularly those of Nevada. Whenever possible, field trips are taken to study interesting geological fields near Reno and to collect rocks, minerals and fossils for class study. The work is supervised by some of the members of the School of Mines staff.

THE ASTRONOMICAL SOCIETY OF NEVADA

The Astronomical Society of Nevada is an organization for all residents of Nevada interested in popular astronomy. The society holds monthly meetings on the campus with discussions by members, occasional addresses by prominent astronomers, and motion pictures on astronomical topics. One of the aims of the society is to build up the astronomical section of the University Library. (Founded in March 1935.)

HONOR AND HONORARY 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.)

Coffin and Keys—An honor society composed of members of the faculty and men elected annually from the upper classes who are considered leaders in student life and activity.

Blue Key—A national honorary, undergraduate, service fraternity composed of those upper classmen who have been leaders in University activities. This organization sponsors the annual Wolves' Frolic and the semiannual get-together dance at the beginning of each semester.

Block "N" Society—An honor society of men who have won the Block "N." Its purpose is to raise the standard of athletics and to promote good fellowship among alumni and resident members.

Gothic "N" Society—An honor organization of women, election to which is based on sportsmanship, sports, participation, health habits, sophomore rank, scholarship average of C or better, participation in at least one nonathletic organization, attendance at W. A. A. meetings

and practical unanimity of active members as to acceptability of candidate for election.

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.

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 and ability shown in the field of home economics.

Delta Delta Epsilon—This is an honorary musical fraternity for University band men and women which promotes and encourages better musicianship and scholarship in the band, assists in discovering new talent on the campus, sponsors loyal spirit and devotion to University events and promotes an increasing interest in University-Community music. Any student musician accepted as a permanent member of the band is eligible for election to the organization after serving one semester of apprenticeship. Honorary membership is extended to a few outstanding musicians associated with the campus who, by contributing their services, have rendered valuable service to the band.

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.

Scabbard and Blade—A national honorary military society founded on the basic idea that military service is an obligation of citizenship. The active membership consists of the cadet officers of the Reserve Officers' Training Corps at the various institutions. Its purposes are: To unite the Department of Military Science and Tactics of American Universities and Colleges into closer relationship; to preserve and develop the essential qualities of efficient officers; to promote good fellowship among cadet officers; and to prepare them to take an active and influential part in the community in which they may reside and to disseminate intelligent information concerning the military requirements of our national defense. The local company was organized May 14, 1929.

Chi Delta Phi—A national literary society for women, whose purpose is to form a body of representative women who, by their influence and their literary interests, will uphold the highest ideals of liberal education. (Charter granted April 1931.)

Kappa Tau Alpha—National fraternity honoring scholarship in journalism in institutions offering work of recognized professional standing in this field. Students are elected from the highest ten percent of the junior-senior journalism group. The Nevada chapter was established in the spring of 1936.

Forensic Key—This is an organization of men and women who have earned the official student body award for intercollegiate debate or oratory. All students are eligible to compete for places on the debate squad. Those who represent the University in intercollegiate debates and oratorical contests receive the award and automatically become eligible for membership in the organization. Local chapter established in 1933.

Alpha Epsilon Delta—An honorary premedical fraternity whose purpose is to encourage excellence in premedical work by furnishing a goal toward which the student may strive during the early semesters of the premedical career. Its purpose is to bind together similarly interested students. Membership is open to all students preparing themselves for the study of medicine, dentistry, nursing, or closely allied professions who have completed at least the work of the freshman year with an acceptable scholastic record.

The Nevada Sigma Xi Club. This organization is composed of members of the Society of Sigma Xi, national honorary scientific fraternity. Papers based on scientific research are presented by the members at regular meetings throughout the school year. (1939)

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 Women's Athletic Association—An organization which sponsors intramural athletics for women. It is a student organization administered by students. A member of the department faculty acting in an advisory capacity meets with the executive board. Meetings are conducted by the students, and no faculty member attends excepting by special invitation.

W. A. A. is a member of the Athletic Conference of American College Women which is a national organization with a membership of approximately 300 women's athletic associations in colleges and universities throughout the United States.

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.

The Crucible Club—This is an organization of mining, metallurgical, and geological students and faculty. The club meets once a month and is addressed by prominent members of the mining profession. The Crucible Club is a student branch of the Society of the American Institute of Mining and Metallurgical Engineers.

Electrical Engineering Club—The University of Nevada Branch, American Institute of Electrical Engineers, was organized in 1922. All students registered in electrical engineering are eligible to membership. Meetings are held monthly, at which time student technical papers are presented or the branch is addressed by some prominent member of the profession.

The Aggie Club—Founded by the agricultural students in 1909 is an active organization of men students and faculty members of the college. The club meets the last Wednesday of each month to carry on business and social activities.

The Mathematics Club—This is an organization composed of students interested in mathematics. Meetings are held monthly at which talks are made by students or faculty members on subjects of common interest.

Campus Players—Consisting of those members who have fulfilled the requirements for membership and have proved their ability to carry on the tradition of the theater and to make dramatic literature of all time a living library.

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.

The "Cercle Francais"—A club organized in 1935 for the special benefit of students of French. It offers opportunity for the practice of French conversation, provides entertainment and arranges for lectures based on French cultural topics.

The "Deutscher Verein"—An organization (1937) of special interest to students of German. Its purpose and activities are similar to those of the "Cercle Francais." Public lectures based on German cultural topics are included in its programs.

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 Epsilon (1917), Phi Sigma Kappa (1917), Alpha Tau Omega (1921), Sigma Phi Sigma (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), Beta Sigma Omicron (1931).

Lincoln Hall Association—The Lincoln Hall Association, established in 1914, is a social organization which draws its membership from men living in Lincoln Hall who are not affiliated with local chapters of Greek-letter fraternities.

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 are held monthly.

Christian Associations—The Young Women's Christian Association has a branch organization among the students with a membership of

*Theta Kappa Nu was merged with Lambda Chi Alpha (1939).

over one hundred University girls. 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.

Musical Organizations—Organizations for the promotion of vocal and instrumental music are heartily encouraged. The groups at present are the Campus Choral Club, the University-Community Little Symphony Orchestra, the University Band and small ensembles. Membership is open to both men and women in all these groups and may be carried on the regular program for credit hours, or as a volunteer membership and considered as one of the student's outside activities. In addition to the above-named groups, there are the Campus Music Association for the promotion of music interests among the students and the Listening Hour Group, devoted to the study of classic and modern musical literature as represented in the fine library of phonograph records.

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.

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.

Sundowners of the Sagebrush—Nevada's outstanding good fellowship organization is the Sundowners of the Sagebrush. It is composed entirely of men who are elected to membership, not because they have been outstanding in athletics, publications, or other academic activities, but because they have exhibited the characteristics of good fellowship. Membership is not restricted to undergraduate students, but faculty members as well as post-graduates are active in the organization.

The Newman Club—This is a nonsecret organization open to all students of the University. Its purpose is to impart religious instruction and to promote social contact among the Catholics who are enrolled at the University. There are approximately 250 Newman Clubs already established in colleges and universities of the United States.

The University of Nevada Press Club is a professional and social organization of students in journalism and members of the staffs of the campus publications. With a membership limited to thirty-five, elections are held twice each year. The club is among the most active in campus affairs.

UNIVERSITY PUBLICATIONS

The Bulletin—The Bulletin is the official publication of the University and is issued quarterly or oftener.

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

PHYSICAL EDUCATION AND ATHLETICS

REQUIRED PHYSICAL EDUCATION

Every student who is a candidate for graduation from the University will be required to complete the prescribed two-year (basic) course of physical education unless excused therefrom by proper authority.

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. 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, which 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.

To represent the University of Nevada in any athletic contest, whether in freshman or varsity sports, a student must be certified by the Faculty Athletic Committee as eligible for participation. No student on probation shall be eligible for participation in any freshman or varsity sport.

FACULTY ATHLETIC COMMITTEE

The duties of the Faculty Athletic Committee are as follows:

1. To approve the schedules of all sports, both freshman and varsity, when the number of contests and the days taken from classes by games and trips are not, in the opinion of the committee, considered excessive. Coaches shall submit their proposed schedules to the committee before making final contracts or agreements for games.

2. To certify the scholastic eligibility of intending participants in all sports, both freshman and varsity. Cases of ineligibility shall be reported both to the coaches and students concerned.

WOMEN

The purpose of this department is three-fold: First to develop skills which will make possible pleasurable participation in recreational activities; second to overcome remediable physical defects; third, to give the student who is interested in this field a scientific background upon which to base further study in physical education, and enough material drawn from current practices in physical education to qualify her to direct intelligently recreational activities in the elementary and high school.

All women in the University are given opportunity to engage in leisure time activities through the Women's Athletic Association, a student organization administered by students. A member of the department faculty acting in an advisory capacity meets with the executive board. She does not attend the general meetings except by special invitation. The activities sponsored by this organization are archery, badminton, baseball, basket ball, dancing, equitation, hiking, hockey, rifle, swimming, tennis, winter sports. The Women's Athletic Association sponsors interclass and interorganization competition in as many activities as possible.

Work in physical education is required of all freshman and sophomore women. Upon entering, and at the beginning of each year, medical and physical examinations are given in order to determine individual needs. As far as possible the department work is adapted to these needs.

Women taking these courses are required to provide themselves with the regulation gymnasium suit and shoes costing between five and six dollars. Students are advised not to purchase suits before coming to the University. A fee of one dollar per semester is charged for locker and laundry. Each student should provide herself with a combination lock.

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 at the University for the first time, students are required to take an examination to determine their *physical* fitness for enrollment in the Reserve Officers' Training Corps. The blank form prescribed for this examination may be obtained from the University Registrar.

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 colleges of the University 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 26 years of age. (See footnote.)

(b) Those who have had previous military training in 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.

(c) Aliens.

(d) Those physically unfit for military duty. Physical examinations are required on original enrollments in Basic and Advanced R. O. T. C. courses.

(e) Transfer students who enter this University with junior standing having completed freshman and sophomore work in an institution not requiring military training.

(f) Members of the active personnel of the Army, Navy or Marine Corps of the United States, Commissioned officers of the National Guard or Naval Militia, and Reserve Officers of the military forces (Army, Navy and Marine Corps) are ineligible.

Students excused from military training receive no credit toward advanced standing in military except in cases coming under (b) above.

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.

No student will be permitted to enroll in the basic course after he has attained his 26th birthday, nor will any student be permitted to reenroll or be continued in the advanced R. O. T. C. course at an age which would make his graduation therefrom impossible before the attainment of his 30th birthday.

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. **Cadets will be held to observance of these Regulations and of such orders and instructions as may be issued from time to time in connection with their military training.**

9. Upon registration, each cadet will familiarize himself with the Regulations for the Department of Military Science and Tactics.

HONORS AND AWARDS FOR MILITARY EXCELLENCE

Honor Graduates. Under existing Army Regulations, the University may designate certain members of the second year Advanced Course as "Honor Graduates," who may be permitted to compete for commissions in the Regular Army. The number is limited only by the qualifications outlined below. The term "Honor Graduate" applies to graduates of the University (in the current academic year) who are graduates of the Second Year Advanced Military Course in the current academic year or previous academic years, who are citizens of the United States, who have been selected by the President of the University for scholastic excellence and who have been designated as honor graduates by the Professor of Military Science and Tactics as possessing outstanding qualities of leadership, character, and aptitude for military service. They must be 21 years of age on or before the dates set for their appointments in the Regular Army. Those who are ineligible for appointment in the Regular Army in the year in which they are graduated in honor status because of non-age, will be permitted to compete for appointment with honor graduates in the first year subsequent thereto in which they attain the prescribed age. The designation as an honor graduate does not give the individual any claim or right to an appointment in the Regular Army. (Section 24e, National Defense Act, as amended by section 7, Act of Congress dated April 3, 1939, 53 Stat. 555, Group 3, Honor Graduates.)

For the past two years the University has been canvassed by representatives of the following Federal services, usually early in the second semester, viz:

a. Regular Army, for cadetships at the United States Military Academy and the Air Corps; appointments to commissions from among the honor graduates.

b. Regular Navy, for cadetships at the United States Naval Academy.

c. Coast Guard (Treasury Department), for cadetships to the United States Coast Guard Academy.

d. By Congressmen, for cadetships to the United States Military and Naval Academies.

e. In addition, a Regular Army Board has examined expectant graduates of the Advanced Military courses (prospective Second Lieutenants in the United States Army Reserve), for extended tours of active duty with the Army under the Thomason Act, which permits a small percentage of those accepted, after further competition, to become commissioned officers of that service.

Governor's Medal—Senate Bill No. 86, section 2 (2), adopted at the 1937 session of the Nevada Legislature, makes provisions for the presentation annually of a medal to be known as the "Governor's Medal,"

to that graduate of the first- or second-year basic course in the military department of the University of Nevada (R. O. T. C.) whose proficiency in military training, observance of the rules of military courtesy, and intelligent attention to duty, have received the approbation of the Professor of Military Science.

In accordance with the requirements of this Act, the name of the student entitled to this award will be transmitted by the Professor of Military Science and Tactics, through the University President, to the Governor of the State, on or about April 15 each year. Presentation will be made on the occasion of the final review of the cadet corps.

Reserve Officers' Association Medal—This medal, donated by the Reserve Officers' Association, Department of Nevada, is awarded annually to that member of the basic course, second year, having the best record for attendance and discipline throughout the two years of the basic course.

Gold Medal for Drill and Discipline—The basic course cadet most proficient in drill is determined in competition held near the end of the school year. Of the five most proficient, the cadet having the best record for the year in attendance and discipline will be awarded a gold medal, donated by Company C, 7th Regiment, Scabbard and Blade.

Other Medals and Prizes—For particulars as to other awards for which cadets are eligible, see current Regulations for 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 senior students who have received honorable mention in each of the several colleges, and in their full four-year course. Honorable mention is won by attaining a standing equivalent to 90 percent or better on the average in the full work of the senior year or of the four years. At the end of each semester the Faculty Scholarship Committee issues a scholarship honor roll, which includes the upper five percent of the undergraduate student body who have completed a minimum of fifteen semestral credits.

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 and who has taken to within 8 units of all his required work at the University of Nevada.

R. Herz & Brother, jewelers, of Reno, has generously made an annual gift of this gold medal since 1923. In the event of a tie, the University is privileged to buy the second medal at cost.

FRENCH MEDAL

(ESTABLISHED 1935)

A medal is awarded annually by the French ministry of Foreign Affairs, through the intermediation of the French Consul General at San Francisco, to that member of the graduating class who has shown high excellence in French courses throughout the junior and senior years and who, in the opinion of the head of the department of modern language, is most deserving of this honor.

PHILO SHERMAN BENNETT PRIZE

(ESTABLISHED 1909)

The Philo Sherman Bennett prize is the interest on a fund of four hundred dollars, given to the University by the Hon. Philo Sherman Bennett of New Haven, Connecticut. The prize is 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.

THE ALBERT SENIOR PUBLIC SERVICE PRIZE

(ESTABLISHED 1924)

This prize, founded by Dr. Henry Albert, formerly Director of the State Hygienic Laboratory, carries an annual value of twenty-five dollars and is being perpetuated in his memory by Mrs. Albert.

This prize is 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 chairman 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 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 lectures were 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, of Engineering, 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
DR. FRANK MORTON MCMURRY	1929–1930
DR. JAMES H. COUSINS	1930–1931
DR. ROBERT A. MILLIKAN	1938–1939

THE THEODORA STUBBS FULTON MEMORIAL FOUNDATION

In the spring of 1925 a friend of Mrs. Theodora Stubbs 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.

THE CLOVIS ALBERTA PRESTON MEMORIAL FOUNDATION

(ESTABLISHED 1929)

The above foundation of $50 to $150, annually, for books in the departments of French (50%) and history (50%) was established in the spring of 1929 by Mrs. Blanche Preston in memory of her daughter, Clovis Alberta Preston.

THE S. FRANK HUNT FOUNDATION

In the fall of 1934 Mr. S. Frank Hunt announced to the President of the University of Nevada and to the Director of the Mackay School of Mines that the first codicil of his will provides that the Mackay

*Suspended for the years 1931–1938 at the desire of the executor of the estate of the donor. Due to readjustment of plan, no lectures were given in 1939–1940.

School of Mines will receive ten percent of his estate. In making this announcement Mr. Hunt said he was not all wise and therefore could not lay down hard and fast rules for the use of these funds, but would leave their use largely to the discretion of the University authorities. Mr. Hunt said further that he was paying a debt he feels he owes Nevada for the thirty years' protection he and his possessions have had under the State's laws, thereby expressing his esteem for its citizens through this gift to our University.

In 1935 Mr. Hunt gave the Regents of this University for the School of Mines 10,000 shares of Mountain City Copper Company's stock; 15,000 shares of stock in the Tybo Lead Company; $5,000 in cash to defray expenses of field trips and equipment; a 1935 Ford V-8 de luxe station wagon and a 1935 Ford coupe for field use. In 1937 he made further cash contributions totaling $8,500 and in lieu of future provisions of his will he transferred to the Regents 10,000 additional shares of Mountain City Copper Company's stock along with 5,000 shares each of Combined Metals Reduction Company's and Prince Consolidated Mining Company's stock. With these gifts, the Regents established the S. Frank Hunt Foundation. In 1939 Mr. Hunt made another gift of $2,000 to cover the 1939 field trip. Mr. Hunt died January 13, 1940.

Complete instrument, travel, and camp equipment has been purchased, and the summer field geology and prospecting course has been given each summer since 1935.

As now planned, Mr. Hunt's gifts will provide opportunity for members of the staff of the Mackay School of Mines to take students or recent graduates of this school into the field, during several weeks of the summer vacation, set up camp and actually and actively study and map geological formations and structures of economic importance or prospect for minerals of economic importance. His gifts will also provide opportunity for shorter trips of visitation to mines or mills actually in operation, or week-end trips into the field in connection with courses in geology or mining. These field opportunities will be in line with Mr. Hunt's judgment that the day of the old-fashioned hit-or-miss, untutored prospector has gone and that these outworn Argonauts should be replaced by scientifically trained field geologists.

THE ARMANKO SENIOR LIBRARY PRIZES

The Armanko Office Supply Company offers two annual prizes, the first of sixty and the second of forty dollars worth of books at list price to be purchased by them for the students judged to possess the best and second best private library owned by a member of the senior class of the University of Nevada. The winning students may select the books to be awarded.

The winners shall be chosen each year, within the month before commencement, by a special faculty committee appointed by the President of the University. Either residents of Nevada or graduates of Nevada high schools shall be given preference. No student over twenty-six years of age is eligible to compete for these prizes. In selecting the winners the committee shall take into account the quality as well as the number of volumes in each library and shall give weight to the painstaking endeavor of the student in assembling his library

and to his judgment and taste in the selection of his books. The donor is willing to accept the affidavits of the Deputy Superintendents of Public Instruction and of high school principals for lists of books owned by seniors who are not resident in the Reno-Sparks district.

GINSBURG JEWELRY COMPANY AWARD

(ESTABLISHED 1939)

At the beginning of the second semester of each year the Ginsburg Jewelry Company of Reno offers an award of a fine watch of seventeen or more jewels to that man of the sophomore class in regular standing who has been in residence at the University for three semesters and whose name has been on the honor roll each semester. *This student must possess the outstanding scholarship record of his class.* The selection of the winner shall be made by the University Committee on Prizes and Scholarships.

A WORD TO DONORS

The University of Nevada will be greatly helped in its program of service to Nevada and to the Nation if it is given the aid of substantial general endowment funds. It can be helped too, at many points, by specific endowment gifts. In the hope that some donors may assure the University aid through their wills, usable forms, covering requests either for general or for specific gift endowments are here given:

FORMS OF BEQUESTS

GENERAL

I give and bequeath to the University of Nevada, located in the city of Reno in the Commonwealth of Nevada,.....dollars, to be used at the discretion of the Board of Regents of said University.

SPECIFIC

I give and bequeath to the University of Nevada, located in the city of Reno in the Commonwealth of Nevada,.....dollars in trust for the following uses and purposes; that is to say: (Here specify in detail the purposes.)

It is advisable for any one contemplating a bequest for charitable purposes to ascertain the requirements of the law in the State in which he resides, and to take especial pains to comply with such requirements.

The Federal Income Tax Law provides that premiums for life insurance with the University as irrevocable beneficiary are allowable deductions from gross income up to 15% of net income.

MRS. SIMON BARUCH UNIVERSITY PRIZE

For the purpose of encouraging research in the history of the South, the United Daughters of the Confederacy offer the Mrs. Simon Baruch university prize of one thousand dollars ($1,000) to be awarded biennially.

The competition is limited to undergraduates and graduate students of universities and standard colleges in the United States and those who shall have been students in such institutions within the preceding three calendar years, and proof of eligibility must be submitted with manuscript.

The prize will be awarded for an unpublished monograph or essay of high merit in the field of Southern history, preferably in or near the period of the Confederacy or bearing on the causes that led to the war between the States. Any phase of life or policy may be treated. If no essay of high merit shall be submitted in any competition the prize will not be awarded for that year.

Essays must be in scholarly form and must be based, partly at least, upon the use of source materials. Important statements should be accompanied with citations of the sources from which the data have been drawn and a bibliography should be appended. It is expected that essays will comprise not less than ten thousand words. In making the award the committee will consider the effectiveness of research, originality of thought, accuracy of statement, and excellence of style.

The prize will be paid in two installments of five hundred dollars each, the first at the time of the award, the second when the manuscript shall have been suitably printed. This arrangement is intended to promote the printing of the essay in substantial permanent form at the author's initiative. If such printing shall not have been done within two years from the time of the award, the second installment will be forfeited.

At least 9 copies of the printed essay shall be the property of the United Daughters of the Confederacy.

The next competition will close May 1, 1940, and before that time all essays must be in the hands of the chairman, Mrs. Livingston Rowe Schuyler, 520 West 114th Street, New York, N. Y. The award will be announced at the convention the following November.

Manuscripts will be returned express collect unless accompanied by postage, or unless the author should request they be retained by the chairman.

NEVADA LIVESTOCK PRODUCTION CREDIT ASSOCIATION AWARD

(ESTABLISHED 1940)

In 1940 the Nevada Livestock Production Credit Association of Reno, established annual awards of $75 and $25 for the best and second best papers written on the subject of financing of farming and/or stock raising from the angle of production.

Papers are to be not more than 2,000 words in length.

In order to be able to compete for these awards the student must have been registered in the College of Agriculture, University of Nevada, from the territory served by the donor association, which includes all of the State of Nevada and Mono and Alpine Counties and Sierra Valley, California, during the semester preceding the time fixed for granting the award, and shall have completed such semester.

Elimination contests shall be held by and under rules promulgated and administered by the College of Agriculture, to determine the two best papers prepared by qualified contestants. These papers are to be presented by the authors at the annual meeting of stockholders of the association, to be held on a date to be announced either in January or February 1941, decision as to the best and second best paper to be reached by the said stockholders. The awards will be made immediately following such decision. The papers so presented are to

become the property of the association, with full rights of publication.

Copies of the papers selected by the College of Agriculture to be presented at the said association meeting, shall be furnished to the association at least ten days prior to the date of the association meeting and the association shall have the right to disqualify any paper not meeting the conditions set forth above, in which event the next best paper shall be substituted.

SCHOLARSHIPS AND FELLOWSHIPS

For 1940–1941 the following scholarships are available:

1. REGENTS' SCHOLARSHIPS

A. (ESTABLISHED 1911)

Five Regents' Scholarships of $50 each, to be awarded annually to regular students, whose names have appeared on the honor roll both semesters of the year in which the award is made, 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 the following October, 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 in active service of the United States Army and Navy and their children.

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

C. (ESTABLISHED 1927)

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 one nation in this area receive this exemption within the same year; and provided, that each student who receives this privilege is a native-born citizen of the country from which he is admitted. It is understood that such students will be required to pay all other regular University charges.

2. 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.

3. 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.

4. THE ROSE SIGLER MATHEWS SCHOLARSHIPS
(ESTABLISHED 1920)

A 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 $6,900, and yields an annual income above $300. In 1931 Mr. Mathews presented to the University securities with face value of $3,300 with understanding the income from these shall go to him during his life and afterwards be added to the annual value of his scholarship. 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.

5. THE MARYE WILLIAMS BUTLER SCHOLARSHIP
(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 Committee on Scholarships and Prizes 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 B 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 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 committee and duly enrolled for the new year's work in the University of Nevada.

6. THE AZRO E. CHENEY SCHOLARSHIPS
(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 Committee on Scholarships and Prizes 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 who shall be certified by the head of the Department of English as being 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.

7. THE MRS. CARL OTTO HERZ SCHOLARSHIP
(ESTABLISHED 1926)

This scholarship as established early in 1926 by Mrs. Carl Otto Herz of Reno and for 1929 and 1930 was continued by Mr. Carl Otto Herz. At the 1930 commencement the heirs of Mrs. Herz presented to the University funds perpetually to endow this scholarship in her memory.

The income from this fund is to be awarded at the end of each University year by the University Committee on Scholarships and Prizes 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.

8. THE CHARLES ELMER CLOUGH SCHOLARSHIPS IN ENGINEERING
(ESTABLISHED 1926)

In the fall of 1926 Mr. Charles Elmer Clough of Reno funded two scholarships in engineering.

These two scholarships both carry an annual value of one-half of the income received from the Charles Elmer Clough Trust Fund during the calendar year from University commencement time to University commencement time, 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 October 1 and the other half on April 1, 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.

9. THE CARRIE BROOKS LAYMAN SCHOLARSHIP
(ESTABLISHED SPRING 1929)

This scholarship, established in memory of Carrie Brooks Layman, provides each year for ten consecutive payments of $20 each to a

worthy, self-dependent sophomore or upperclass 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 a son or grandchild of Mrs. Layman should enter the University of Nevada, then such son or grandchild shall have prior claim to this scholarship. During the earlier years of this scholarship payments were made to the winner by the donor through the Comptroller's office. The initial $20 payments of each semester shall be made on the winner's registration days in August and January 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.

10. PREMEDICAL–PRENURSING SCHOLARSHIP
(ESTABLISHED 1931)

This scholarship of one hundred dollars annual value, the gift of an anonymous donor, is to be paid fifty dollars each semester to that man or woman student, chosen by the University Committee on Scholarships and Prizes and the Head of the Department of Biology, as the worthiest student who has completed the freshman or sophomore year's course of the University of Nevada as a premedical or a prenursing student.

This scholarship shall be paid September 15 and January 15 following the award, provided the winner is duly enrolled in the sophomore year in this University, otherwise to an alternate satisfying the conditions and duly enrolled.

11. THE GRAND ARMY OF THE REPUBLIC SCHOLARSHIP
(ESTABLISHED 1934–1935)

The Woman's Relief Corps of the Department of California and Nevada in 1934 began the establishment at this University of a fund which now has a principal of $730.94 to be known as the Grand Army of the Republic Memorial Scholarship Fund. The interest of this fund is to be used for scholarships for men or women students who are descendants of soldiers or sailors of the Union Army of the Civil War.

During the past University year the income of this Relief Corps fund supplemented by gifts from the Nevada Relief Corps at Carson City, Reno and Virginia City provided a $50 scholarship to Merlyn Thompson, who qualified as a descendant of a Civil War Veteran.

12. THE WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM
(ESTABLISHED 1935)

Ethel Lunsford Frost and Harry J. Frost on the sixth day of May 1935, established this seventy-five ($75) dollar annual scholarship, to be known as the William S. Lunsford Scholarship in Journalism.

This scholarship is to be awarded to a man or woman student fulfilling all of the following requirements:

1. A worthy moral character.
2. An unusual talent and future promise in the field of journalism.

3. An average grade no less than the average grade of the University.

4. A student specializing in journalism.

5. A junior or senior during the University year the scholarship is held.

This scholarship shall be awarded by the University Committee on Scholarships and Prizes upon the recommendation of the professor in charge of journalism.

This same committee and the professor in charge of journalism shall choose an alternate, satisfying the same conditions.

This scholarship shall be paid to the winner, one-half on September 15 and the other half on January 15, following the award, provided the winner is duly enrolled in the University of Nevada; otherwise it shall be paid to the chosen alternate, provided he or she is so enrolled.

13. THE VERN F. HENRY MEMORIAL MASONIC SCHOLARSHIP

(ESTABLISHED 1935)

Mrs. Merle K. Henry, in memory of her husband, the late Vern F. Henry, established for five years, 1936 to 1941, inclusive, a Masonic scholarship of $50 annually. Any student is eligible for this scholarship if:

a. A son or daughter of a Mason holding membership in one of the just and duly constituted Masonic lodges in Nevada:

b. Has sophomore, junior or senior standing in the University of Nevada;

c. In actual attendance at this University when the scholarship is awarded;

d. In relationship with fellow students and faculty members shows a high degree in one or more of the following virtues: unselfishness, kindness, generosity, justice, charity, consideration, thoughtfulness, courage.

A committee of three shall choose one scholar each year, receiving recommendations from the University of Nevada Committee on Scholarships and Prizes but not bound by these recommendations in the selection. The committee shall consist of the Worshipful Master of Reno Lodge No. 13 F. and A. M., Professor Frederick W. Wilson of the University of Nevada, and a third member, who must be a Mason, selected by the two specified members. The winning scholar will be announced at commencement and the scholarship sum will be paid within thirty days after the enrollment of the student for the following year.

14. RAYMOND SPENCER SCHOLARSHIP

(ESTABLISHED 1937)

A scholarship established in 1937 by Isabelle Schuler Spencer, 1912, in memory of her husband, Raymond Spencer, also a graduate of the class of 1912, to be given to a student in the School of Electrical Engineering who is of good character and good scholarship and is self-supporting in whole or in part, and has earned junior or senior standing at the time of the award.

The scholarship carries an annual value of $250 to be paid in ten equal monthly installments and is to be annually created from the profits of the Spencer Lumber Company, Walnut Creek, California, as said business will allow. The initial payment will be on registration day of the first semester and will be followed by a like payment on the first day of each month, except in the month of January, when the payment will be made on registration day.

The student to receive this award shall be chosen by a committee of three, consisting of the Head of the School of Electrical Engineering, the Chairman of the Committee on Scholarships and Prizes and a third person to be named by these two. The student to whom the award is given must be enrolled in electrical engineering in the University of Nevada during the time the payments are being made. Otherwise the payments will be made to an alternate, chosen under the same conditions.

15. THE RENO LODGE OF ELKS CHET SCRANTON ATHLETIC SCHOLARSHIP

In the fall of 1937 the Reno Lodge of Elks established an athletic scholarship of $100. This scholarship is to be awarded at commencement to a man student under the following conditions:

The recipient shall be chosen by a committee of three Elks and the Director of Athletics of the University of Nevada, from a list of five nominated by Athletic Control Board. In order to be eligible for this scholarship the student shall not be a recipient of any other scholarship, shall have a good scholastic record, be a leader among the students, and be an athlete of good moral character.

The scholarship shall be paid in two installments of $50 each; the first payable the second Monday after registration in the fall and the second payable the second Monday after registration in January; provided, that in each instance the candidate is regularly enrolled in the University and has good scholastic standing.

An alternate shall be chosen to receive the scholarship in the event the accepted candidate does not return to school or is declared disqualified by the committee.

16. THE NEVADA STATE PRESS ASSOCIATION SCHOLARSHIP IN JOURNALISM

In 1938 the Nevada State Press Association established this scholarship of fifty dollars annually to assist and encourage worthy and promising Nevada students preparing for the profession of journalism.

It is awarded under the following conditions, as outlined by the executive committee of the press association:

The recipient

(a) Must be a graduate of a Nevada high school.

(b) Must be registered in the course in journalism or majoring in journalism.

(c) Must have revealed talent in this field.

(d) Must have shown proficiency and earnestness in the courses in journalism.

(e) Must have attained in all university work the average grade required for graduation.

(f) Must have at least one more year of University work to complete, and normally must have been registered as a student at the University for at least two consecutive years prior to the time of awarding the scholarship.

(g) Must be at least in part self-supporting and in need of financial assistance in order to continue University work.

The recipient of the scholarship shall be chosen by the Professor of Journalism, and it shall be awarded by the Committee on Scholarships and Prizes.

The scholarship shall be in the sum of $50, and shall be paid in two apportionments at the beginning of each of the two successive semesters following the award.

An alternate student selected by the Professor of Journalism shall become the recipient of the award in the event the student selected in the first instance fails to attend the University the following year.

17. THE MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS
(ESTABLISHED 1938)

In the summer of 1938 Major Max C. Fleischmann gave to the University of Nevada 5,000 shares of Standard Brands, Inc., the dividends from which are to be used to fund five annual scholarships.

The Fleischmann scholars are to be chosen by the Committee on Scholarships and Prizes. The scholarships are available to students who fulfill the following requirements:

1. Need financial assistance to the amount of the scholarship in order to attend the University;
2. Give promise of being a credit to the University upon graduation and are worthy of such assistance;
3. Show qualities of leadership and a spirit of cooperation by active participation in a student activity or activities.

One-third of the scholarship sum, approximating $400, will be payable September 10, December 10 and March 10 of each year, provided the winner is then enrolled in the University.

18. THE WOMAN'S CHRISTIAN TEMPERANCE UNION SCHOLARSHIPS
(ESTABLISHED 1938–1940)

In the University years 1938–1940 the Reno Woman's Christian Temperance Union established six scholarships of fifty dollars each as memorials to the following national and state leaders of the temperance movement: Frances E. Willard, the centennary of whose birth was celebrated in the spring of 1939, Lucy M. Van Devanter, Nettie P. Hershiser, Florence Humphrey Church and Alice Hitchcock Chism.

These scholarships are available only to students of good moral character, who neither smoke nor use intoxicating liquors, and whose scholarship is good.

The scholarships are payable one-half on September 15 and one-half on January 15 of each year and the winners are to be chosen by a committee of the Reno Union in consultation with the Chairman of

the Committee on Scholarships and Prizes of the University. The first award of these scholarships was made in January 1939.

19. THE NOBLE H. GETCHELL SCHOLARSHIPS
(ESTABLISHED 1938)

In the spring of 1938 Senator Noble H. Getchell established eight annual scholarships of $300 each for graduates of the Lander County high schools enrolled in the University of Nevada. These scholarships were made available for two students during the University year 1938–1939, to four students in 1939–1940, and will be available to six students in 1940–1941, and to eight students in 1941–1942 and thereafter. These scholarships are payable annually during each of the four undergraduate years for which the Getchell Scholar is registered at the University.

The announcement of the initial awards to each Getchell Scholar will be made at the commencement exercises of the Battle Mountain and the Austin high schools to the worthiest members of each graduating class of individual ability and need, who has not received another scholarship. The winners will be chosen by a committee consisting of the principals of the two high schools and the District Deputy Superintendent of Public Instruction. They shall be payable $75 each September tenth and January tenth and $25 each October, November, December, February, March and April tenth of the University year.

20. THE RITA HOPE WINER MEMORIAL SCHOLARSHIP
(ESTABLISHED 1938)

Established in the spring of 1938 by gifts from friends of Rita Hope Winer, this scholarship provides that, from the principal and the income, the sum of fifty dollars shall be annually awarded to the most deserving woman who, completing her junior year, is including in her work all the minimum required courses in the School of Education to entitle her to a high school diploma and who plans to be a public school teacher. The winner is to be chosen by the Dean of Education and the Chairman of the University Committee on Scholarships and Prizes. Beginning with 1939, the winner is to be announced at Commencement. The scholarship shall be paid by the Comptroller at the end of the enrollment period of the fall semester of each year, provided the winner is then enrolled as a University student.

21. THE GRAND LODGE OF THE INDEPENDENT ORDER OF ODD FELLOWS SCHOLARSHIP
(ESTABLISHED 1939)

In the summer of 1939 this fraternal order authorized the award of four annual scholarships not to exceed the sum of $150 each. The students who receive these awards shall be chosen by the I. O. O. F. after recommendations have been submitted to the Board of Trustees and the Scholarship Committee of the Grand Lodge by the Committee on Scholarships and Prizes of the University of Nevada. Two of these scholarships shall be awarded to young men and two to young women who meet the following requirements and are approved by the Scholarship Committee of the Grand Lodge of Nevada:

1. Must be the son or daughter of an Odd Fellow and a Rebekah in good standing in their respective subordinate lodges in the jurisdiction of the Grand Lodge of Nevada.
2. Must have the approval of the Scholarship Committee of the Grand Lodge of I. O. O. F. of Nevada.
3. Must be of good moral character.
4. Must be a graduate of a Nevada high school.
5. Must have spent the freshman year at the University of Nevada.
6. Must give promise of future achievement.
7. Must have received no other scholarship.

The scholarships will be payable to the respective winners, one-half on September 15 and one-half on January 15 following the awards, provided the winners are duly enrolled in the University of Nevada and are in good scholastic standing. Alternates shall be chosen to receive these scholarships in the event the accepted candidates do not return to school or are declared ineligible by the committee.

22. THE ROTARY CLUB OF RENO SCHOLARSHIP
(ESTABLISHED 1939)

In the summer of 1939 Reno Rotary Club No. 248 established an annual scholarship of $100 to be awarded early in the second semester of the academic year to either a man or a woman who has completed at least one semester's work in the University and is again enrolled, who possesses good character, a good scholastic record and is self-supporting in whole or in part, and who, after the grades for the first semester of the academic year are available, has been recommended to the officers of the Rotary Club of Reno by the Chairman of the University Committee on Scholarships and Prizes.

This scholarship is payable to the winner at the office of the Secretary of the Rotary Club of Reno in eight equal monthly installments of $12.50, due on the first business day of the months of September, October, November, December, February, March, April, and May.

23. CARSON CITY ROTARY CLUB SCHOLARSHIP
(ESTABLISHED 1939)

This scholarship shall consist of fifteen dollars per month during the school year of nine months.

Any student attending or planning to attend the University of Nevada from the area of the Carson City Rotary Club is eligible to receive this scholarship. Applications shall be submitted to the Rotary Club of Carson City before September 1 of each year by anyone desirous of obtaining this scholarship. From this list of applications the Club shall select as many names as it sees fit and forward this list to the University Committee on Scholarships and Prizes, the latter to select a recipient and an alternate for the scholarship from the list submitted.

Appointment will be made for one year only and must be renewed or reawarded at the end of that period.

This scholarship is to be awarded on the basis of general merit, with scholarship and financial need being given due consideration. The University Committee on Scholarships and Prizes shall have authority

to withdraw the scholarship at any time for unsatisfactory work or conduct.

The sum of fifteen dollars shall be sent each month by check to the Comptroller of the University who will transfer it to the scholar named by this club.

24. THE DAUGHTERS OF THE AMERICAN REVOLUTION SCHOLARSHIP

(ESTABLISHED 1939)

In the closing months of 1939 the Nevada Sagebrush Chapter (Reno) of the Daughters of the American Revolution established an annual scholarship of fifty dollars subject to the following conditions:

1. The scholarship is to be awarded either to a man or woman who shall be nominated by the University Committee on Scholarships and Prizes for character, leadership and scholastic attainment, upon the satisfactory completion of at least one year's work in the University.

2. Beginning with January 1940, twenty-five dollars will be given each semester, provided the winner is then enrolled for the work of the current semester. These awards will be payable January 15 and September 15 of the successive academic years at the Comptroller's office of the University.

25. THE CARL RAYMOND GRAY SCHOLARSHIPS IN VOCATIONAL AGRICULTURE

The Union Pacific Railroad offers annually a scholarship of $100 to a high school boy from each county served by the railroad who has completed satisfactorily a high school vocational agriculture course and who has the highest average rank in scholarship, supervised practice work, and leadership ability. The scholarship is awarded upon enrollment of the winner for a full four-year course in agriculture in the University of Nevada.

The winner is selected by a committee of three appointed by the State Supervisor of Agriculture.

The scholarship award will be paid as follows:

$50 upon completion of registration in the Agricultural College of the University; $25 upon registration for the second semester, and $25 upon registration for the third semester.

26. THE CARL RAYMOND GRAY SCHOLARSHIPS TO 4-H CLUB MEMBERS

The Union Pacific Railroad offers annually a scholarship of $100 in agriculture or home economics to one boy or girl 4-H club member in each county served by the railroad, for use in the College of Agriculture or the School of Home Economics of the University of Nevada.

The winner of the award shall be selected by a committee of three persons appointed by the State Director of Agricultural Extension, on the basis of quality and quantity of project work and records, and on the basis of character, interest, qualities of leadership, community activities, school activities, and scholastic standing.

Payment of the scholarship award will be made upon certification that the student has enrolled at the University for a course in agriculture or home economics. Payment will be made in three installments, the first installment of $50 to be paid upon registration and establishment of the student in the classes of the college; the second installment of $25 upon registration for the second semester; and a third installment of $25 upon registration for the third semester.

27. THE FIRST NATIONAL BANK OF NEVADA 4–H CLUB SCHOLARSHIP

The First National Bank of Nevada in January 1940 established a $200 scholarship in the University of Nevada, College of Agriculture, for the year 1940–1941, to be awarded to that Nevada 4-H Club boy or girl judged to be outstanding in 4-H Club work.

The scholarship winner will be chosen by two persons appointed by the Director of the Agricultural Extension Division of the University of Nevada and a third person named by the President of the First National Bank of Nevada.

Upon enrollment of the recipient in the University of Nevada, College of Agriculture, for a four-year course in agriculture or home economics, the scholarship will become available in four installments of $50 each to be paid one month after the beginning of each consecutive semester.

If the scholarship is not used by the winner within one year after the graduation of the winner from high school, it shall be awarded to an alternate.

28. EPSILON SIGMA PHI 4–H CLUB SCHOLARSHIP

In January 1940 the Nevada Chapter of Epsilon Sigma Phi, honorary society of agricultural extension workers, established the Epsilon Sigma Phi 4-H Club Scholarship of fifty dollars in the University of Nevada College of Agriculture.

The scholarship is awarded to that Nevada 4-H Club boy or girl who is chosen by two members of the staff of the University of Nevada Agricultural Extension Service selected by Epsilon Sigma Phi and the Dean of the College of Agriculture as having made the greatest achievement in his 4-H Club work.

The scholarship becomes available to the winner, within one year after his graduation from high school, upon his registration in the College of Agriculture of the University of Nevada, and one-half is paid one month after the beginning of both semesters of his first year.

29. THE RHODES SCHOLARSHIPS*

Special attention is called to the Rhodes Scholarships tenable at the University of Oxford. Since the majority of Rhodes scholars obtain standing at Oxford which enables them to take a degree in two years, appointments are made for two years in the first instance, with a possible third year for those whose record at Oxford and plan of study make such an award advisable.

*Suspended in 1939 account European war and scholars returned to the United States.

The stipend of a Rhodes Scholarship is fixed at 400 pounds (approximately $2,000) a year, but a Rhodes scholar should be prepared, if possible, to supplement this amount by at least $250 a year from his own resources.

The annual competition for Rhodes Scholarships has, since 1930, been organized by States and districts, there being eight districts of six States each. Nevada is grouped with California, Utah, Arizona, Colorado, and New Mexico to comprise the southwestern district. Each State Committee of Selection may nominate two candidates to appear before the District Committee which, in turn, may then select not more than four candidates to represent their respective States at Oxford.

Upon recommendation by his college or university, a prospective candidate may apply either in the State in which he resides or in the State in which he has received at least two years of his college education by the time of application.

A candidate to be eligible must: (a) Be a male citizen of the United States, with at least five years' domicile, and unmarried. (b) By the first of October of the year for which he is elected, have passed his nineteenth and not have passed his twenty-fifth birthday. (c) By the time of application have at least junior standing at some recognized degree-granting university or college of the United States.

The qualities which Rhodes specified in his will as forming the basis of selection are: (a) literary and scholastic ability and attainments; (b) qualities of manhood, truth, courage, devotion to duty, sympathy, kindness, unselfishness, and fellowship; (c) exhibition of moral force of character and of instincts to lead and to take an interest in his schoolmates; (d) physical vigor as shown by interest in outdoor sports or in other ways.

Some definite quality of distinction, whether in intellect, character or personality, or in any combination of them, is the most important requirement for a Rhodes Scholarship. Financial need does not constitute a special claim for consideration.

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

1907—Arthur Leonidas St. Clair, Deeth.
1908—William Scott Unsworth, Reno.
1910—Stanley Mayhew Wilton, Goldfield.
1911—Cedric Harding Beebe, Reno.
1913—Floyd Sherman Bryant, Sparks.
1914—Walter Clarence Jepsen, Verdi.
1917—Thomas Henry Edsall, Reno.
1919—Stanley M. Pargellis, Reno.
1921—Charles M. Chatfield, Reno.
1922—Leslie Maltby Bruce, Reno.
1923—Paul A. Harwood, Reno.
1925—John Ocheltree, Reno.
1926—Fred Siebert, Reno.
1928—Fred Anderson, Carson City.
1929—Francis Duborg, Reno.
1932—Alden Sibley, Reno.
1937—Russell W. McDonald, Reno.

Further information about Oxford and the Rhodes Scholarships may be secured by addressing Paul A. Harwood, Secretary of the Nevada Committee of Selection, University of Nevada, Reno, Nevada.

30. UNIVERSITY OF SAN FRANCISCO RESIDENT TUITION SCHOLARSHIP IN LAW

In 1935 the University of San Francisco began the annual gift of one year's free resident tuition in the first year of its Day Law School to a graduate of the University of Nevada, recommended by the President of the University of Nevada as being, in his judgment, well qualified scholastically and personally to profit by such scholarship.

BENEFICIARY AID

NATIONAL YOUTH ADMINISTRATION SCHOLARSHIP AID

Beginning with the spring semester of 1935 the National Youth Administration has made available Federal funds to cover scholarship jobs on the campus or in connection with public service in the community. These jobs are listed to yield approximately $15 per month to each student chosen. Applications should be made to Dean Margaret Mack, Chairman of the Faculty Committee on NYA employment. It is probable these funds will be made available for the University year 1940–1941, although no official assurance has yet been received.

LOAN FUNDS

The Nevada State Federation Scholarship Fund—The Nevada State Federation of Women's Clubs has established a scholarship fund to be lent to students of the University of Nevada in amounts varying to suit individual needs. The money thus lent is to be returned to the fund at the borrower's convenience without interest. Loans are 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 annual income of his residual estate to the University of Nevada after an annual $100 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 $6,000 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 lent to students on the basis of 4 percent interest until maturity. In practice, loans are not made to freshmen nor can a loan in excess of $150 be made to any one student.

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. Applications for campus employment should be made to Dean Margaret E. Mack, Chairman of the Campus Employment Committee. 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 $450, allowing only about $75 for personal incidentals, for each Nevada student. Students from other States should add $150 for tuition. (See page 99 for tabular estimate of expenses.)

It is clearly better, both for the individual student and for the common student life on the campus, that students 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 University year without the necessity of working for pay.*

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 IN HAND TO START THE YEAR. THE UNIVERSITY CANNOT DEFER FEES DUE TO THE UNIVERSITY.

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. *A two-thirds rebate is allowed on this nonresident tuition charge if the student formally withdraws within the first three weeks of any semester and a one-half rebate is allowed if the student withdraws between the end of the third week and the end of the eighth week. No rebate is allowed if the student withdraws after the end of the eighth week.*

Any student due to pay nonresident tuition who registers for seven or less credit hours in any one semester will be charged as nonresident tuition $10 for each credit hour in which he registers in lieu of the flat $75 nonresident charge per semester. In this special case, one-half of this nonresident tuition will be rebated if the student withdraws from the University within the first three weeks of the semester for which the student is registered. No rebate on this special tuition charge will be made if the student withdraws any time after the first three weeks of the semester.

There are three classes of applicants for enrollment entitled to exemption from this nonresident tuition:

I

Any applicant or student whose parents live in Nevada.

II

Those applicants who have themselves been resident in Nevada continuously for at least six consecutive months just prior to the opening date of the semester in which they matriculate in the University of Nevada.

III

Those individuals whose parents do not live in Nevada but who themselves are married persons, so soon as they shall have lived in Nevada as married persons for six full months.

The Board of Regents of the University has given instructions to the President concerning the first two classes of applicants and has set the University penalty for false testimony in relation to residence as follows:

CASE I

The President of the University is authorized and directed to grant exemption from nonresident tuition to any applicant for matriculation or to any student whose parents live in Nevada. "Parents" in this connection means both father and mother if both are living and are not legally separated. In case one parent is dead or if parents have been legally separated, this residence requirement may be satisfied by residence in Nevada of the one parent with whom the applicant is living. In case both parents are dead, the applicant may be exempt

from nonresident tuition on this basis only if the applicant's legal guardian lives in Nevada.

CASE II

The burden of proof is upon any applicant whose parents do not reside in Nevada to show that said applicant has been a bona fide resident of Nevada continuously for at least six full months just preceding the opening date of the semester in which he matriculates. The President of the University is authorized and directed, before granting tuition exemption to any applicant whose parents do not reside in Nevada, to require: (a) Every such applicant to furnish a sworn statement that he has satisfied the above residence requirement, and (b) every such applicant to furnish sworn statements testifying to the applicant's fulfillment of the above residence requirement from each of two established adult Nevada residents.

If in any case after the admission of a student receiving exemption from nonresident tuition in either of the above classifications the University receives clear evidence that materially false statements as to Nevada residence have been made in the sworn statements, then the President of the University is authorized and directed to expel such student from the University of Nevada.

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 fourth 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.

MATRICULATION FEE

Each new student must pay a matriculation fee of $5. This fee is paid once only by each student at the time of first enrollment in the University.

REGISTRATION AND INCIDENTAL FEES

A registration fee of $2.50 per semester and an incidental fee of $5 per semester are payable by each student enrolled for more than five credit hours.

UNIFORMS

Young women are required to provide themselves with a regulation gymnasium outfit costing about $5 or $6.

Students in cooking will provide themselves with two white uniforms, 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 Matron Miss Clara Garrison live in Artemisia Hall and have supervision over it. Miss Echo Loder is in charge of Manzanita Hall. Miss Garrison 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: (1) 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; (2) when parents have filed in advance a request that a freshman student be permitted to live with a student sister who has reached the age of 25 years. 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 for both semesters:

Room with roommate	$36.00
Single room	45.00
Suite with roommate	45.00
Double room used by one person	54.00

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 cancellation or withdrawal is made after the end of the first enrollment day, but before the end of the third week of the semester, two-thirds of the room fee will be rebated. If withdrawal is made after the end of the third week and before the end of the eighth week one-half of room fee will be rebated, and no rebate will be made if withdrawal occurs after the end of the eighth week.

No one can be given room in a dormitory until room rent for the semester 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.

*The University cannot accept any checks unless the full amount of the check is due to the University—that is, the University cannot pay over to the student any cash balance.

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: Bedding for single bed; 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 Sunday, August 18, 1940, to receive student residents for the University year 1940–1941.

Lincoln Hall—Lincoln Hall, the men's dormitory, has present accommodations for 72 men, and is under the direct supervision of the Master of Lincoln Hall, a resident member of the University faculty.

Application for residence in Lincoln Hall should be entered on the special application blank, which will be supplied by the Master of Lincoln Hall upon written request. All applications are considered in the order of their receipt.

To be honored, all applications must: (1) *Be on file with the Master of Lincoln Hall at least two weeks prior to the opening day of the semester;* (2) *be accompanied by a sum covering the room rent for the semester concerned.* Room rent is as follows for each semester:

Room with roommate	$40
Single room	50

NOTE—As only six single rooms are ordinarily available, early application for such accommodation is recommended.

Checks or money orders for room rent should be made payable to the Board of Regents.* Rent will be returned in full to the applicant if due notification is sent to the Master of Lincoln Hall, on or before the end of the first day scheduled for the applicant's enrollment, of desire to cancel the reservation. If cancellation or withdrawal is made after the end of the first day scheduled for the applicant's enrollment, but before the end of the third week of the semester, two-thirds of the room rent will be refunded. If withdrawal is made after the end of the third week, but before the end of the eighth week, one-half of the room rent will be refunded. If withdrawal is made after the end of the eighth week no refund will be allowed.

No one will be admitted to Lincoln Hall until his room rent for the semester has been paid.

All residents of Lincoln Hall are required:

(1) To abide by the regulations of the Hall as adopted by the Lincoln Hall Association, and approved by the Master of Lincoln Hall.

(2) To provide themselves with the following articles: One bedspread; at least two heavy blankets; one comfort; one pillow; one mattress protector, 3 x 6 feet, six towels; personal toilet articles. All clothing and personal property should be plainly marked with

*See footnote, p. 94.

the name of the owner. If window hangings or rugs are desired, they also must be supplied by the individual.

The University furnishes lights, heat, sheets and pillowcases (which it launders), beds and mattresses, mattress covers, dressers, tables and chairs. Equipment also is available for those who desire to do their own washing and ironing.

Lincoln Hall will open at 9 a. m. on Sunday, August 18, 1940, to receive students for the 1940–1941 University year. The Hall is closed between the first and second semesters.

THE UNIVERSITY DINING HALL

For the accommodation of the students the University conducts a Dining Hall under the supervision of a trained dietitian. Board and table service of a most acceptable character and at a reasonable figure is proffered. Students are charged $25 per month for board. 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 board at the Dining Hall will be expected to come with sufficient money to keep their board paid one month in advance.*

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 two weeks before the opening of any given semester. Nevadans making application later than such time will be accommodated if places are still open, but connot 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 cost of 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 at the beginning of the second semester.

ASSOCIATED STUDENTS MEMBERSHIP FEE

At the request of the Associated Students of the University the Board of Regents made the fee for membership in the student association a compulsory fee upon all students except:

1. Visitors.
2. Members of the University staff.
3. Nevada school teachers in active service.
4. Graduates of this or of any other four-year University course.
5. Students who are adult, bona fide Nevadans, registering for five or less semestral University credits.

It is understood that any student registering in any of the above exempt classifications has the *privilege* of paying the student fee and securing the benefits which accrue to the students. This fee of $12.50 per semester includes subscriptions to the U. of N. Sagebrush and, in the second semester, to the Artemisia, pays up each student's class dues and covers admittance to all regular Varsity athletic events and must be paid to the Comptroller at the time of registration.

UNIVERSITY FEES

Students enrolled for five or less semestral hours will pay a fee of $2 per credit hour and will also pay the matriculation fee. Students securing the privilege of visiting classes will be charged a fee of $1 per course credit hour.

TABLE OF TUITION CHARGES, FEES AND DEPOSITS PER SEMESTER

	Fees
Agricultural Engineering 10	$5.00
Agricultural Engineering 73	2.00
Agronomy 58	9.00
Animal Husbandry 4, 56, 61–62	3.00
Animal Husbandry 59	1.50

TABLE OF TUITION CHARGES, ETC.—*Continued*

	Fees
Art 1–2, 5–6, 53–54	1.00
Art 3–4	1.50
Associated Students Fee	12.50
Bacteriology 51, 52, 53	5.00
Biology 1, 2	3.00
Botany 1, 2, 3, 55	3.00
Botany 21, 64, 75, 76	4.00
Botany 22,	1.00
Botany 53, 54, 56	2.00
Change of registration per course (see page 107)	1.00
Chemistry 1, 2, 7, 8, 9, 10, 51, 52, 54, 55, 64, 71, 72, 74, 99, 100	8.00
Chemistry 25, 80, 81, 82	4.00
Chemistry 200 (fee per credit hour)	4.00
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, 61, 62	3.00
Dairy Husbandry 59	1.50
Dairy Husbandry 55	2.00
Deposit, General	10.00
Deposit, Military	10.00
[2]Diploma (Degree or certificate)	5.00
[3]Drawing Outfits	.20 to 30.00
Education 28–29, 38, 41, 43–44, 48, 73–74, 75–76	1.00
Electrical Engineering 61, 62, 63, 64	2.50
Electrical Engineering 67, 68, 70, 76, 77, 80, 85, 86	2.50 per credit
Farm Mechanics 11, 20, 32, 41, 53	3.00
For 5 or less hours	2.00 per credit
Geology 11, 51, 52, 55	2.00
Geology 12	3.00
Graduate fee for thesis binding	1.00
Health Service	6.00
[4]History Syllabus	25¢ to 1.00
Home Economics 31, 32, 55, 83, 85, 94, 57	5.00
Home Economics 15, 16, 18, 66, 67, 68, 95, 96	2.00
Home Economics 42, 88	1.00
Home Economics 45, 92	2.50
Home Economics 87	1.50
Hospital Association Membership	3.00
Library	.50
Matriculation (new students only)	5.00
Mechanic Arts 3, 6, 7, 11	5.00 per credit
Mechanic Arts 50	5.00
Mechanical Engineering 64, 65, 66, 80	5.00
Metallurgy 51	15.00
Metallurgy 68, 71	5.00
Metallurgy 56	2.50
Metallurgy 79, 80 (Fee according to work).	
Physical Education (laundry and locker)	1.00
Physics 1b, 2b, 19, 20, 57, 58, 63, 77, 78	3.00
Physics 5, 6, 55, 56, 103, 104	1.00 per credit
Physics 75, 76	6.00
Poultry 2, 8	2.00
Reexamination Fee	1.50

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

[2]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.

[3]See footnote 4, page 99.

[4]According to work being done.

	Fees
Special Examinations for Entrance or Advanced Standing, each	3.00
Teacher Appointment Service	2.50, 1.50
*Transcript of student record	1.00
Tuition to non-Nevadans	75.00
Visitors	1.00 per hour
Zoology 1, 2, 4, 70	4.00
Zoology 7, 8	2.50
Zoology 64	2.00
Zoology 91–94, 201 (fee determined by type of work).	
Zoology 9	5.00
Zoology 59, 60	3.00

Students should be prepared to pay any of the above charges due to the University at registration time.

REBATES ON TUITION OR FEES

REBATES on above semestral charges will be made as follows to students who withdraw: On all laboratory fees and on nonresident tuition, a rebate of two-thirds if withdrawal comes before the end of the third week, a rebate of one-half between the end of the third week and the end of the eighth week, and no rebate after the eighth week. On all other charges listed above there will be full rebate before the end of the third week and no rebate after.

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	$212.50	$225.00	$300.00
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.)	40.50	45.00	55.00
Fees (registration and incidental)	15.00	15.00	15.00
[5]Totals	$403.00	$445.00	$590.00

*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. No student may be graduated or be furnished with a transcript of record unless and until all accounts with the University have been fully paid.*

[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 TO THE UNIVERSITY

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.

METHODS OF ADMISSION

Evidence that a student has had desirable preparatory education, qualifying him for satisfactory study toward a degree, may be shown by:

(1) Examination in prescribed subjects.

(2) Certificate from an accredited high school or other secondary school.

(3) 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. A fee of $3 per each subject for which such special examinations are given must be paid to the University Comptroller in advance of the examinations.

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.

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.

Applicants, who have not been able to secure their credentials for

examination by the Admission Committee before or during the registration period, may file a petition with the committee or with the Registrar for temporary admission. Such petitions must contain the name and location of the preparatory school, a list of subjects taken with approximate grades, the college of the University in which the applicant desires to register, and the reason for the absence of credentials. Blanks for this purpose may be obtained from the Admission Committee during the regular registration days and from the Registrar during the remainder of the registration period. The committee will meet at the close of each regular registration day, and at some later time before the period of registration closes, for the purpose of considering these petitions, and meritorious cases will be permitted to register temporarily, pending the 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.

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.

Students who have been graduated from a full four-year high school and have completed additional work in a normal school, college or university may receive advanced standing as stated below.

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.

Graduates from a one-year professional course in an accredited normal school are allowed one year's credit on advanced standing in the College of Arts and Science only.

Graduates of a two-year normal school or junior college will in general be given two years' credit on advanced standing in the College of Arts and Science only. Such students, however, will be expected to fulfill all requirements for graduation, including the special requirements outlined for the freshman and sophomore years with the understanding that education may be used by normal school graduates to satisfy the social science requirement.

Students transferring from a recognized university, college, junior college, or normal school with 60 or more acceptable credits are not required to meet the requirements prescribed by this University for military training and physical education, but must meet all other requirements for graduation prescribed by their college (agriculture, arts and science, or engineering) and must have no entrance deficiencies.

ADMISSION OF PERSONS WHO ARE NOT CANDIDATES FOR DEGREES

1. SPECIAL STUDENTS. 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 student.

a. *Age.* No student under 21 years of age will be admitted as a special student, except by vote of the University Faculty.

b. *Credentials.* 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.

c. *Registration.* Special students 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. Special students are subject to all the rules relating to registration and scholarship.

d. *Two-year Limitation.* Special students 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.

e. *Obtaining Regular Status.* Special students may obtain regular status by removing entrance deficiencies as indicated on page 105.

A special student who has successfully carried the regular prescribed work of his college during four semesters and who has made an average of 2 grade points in all the hours for which he has been registered, except cases of W, and has no unremoved conditions or failures, will be allowed to matriculate as a regular sophomore student.

If he has made an average of 2.5 grade points for every hour for which he has been registered, except cases of W, and has no unremoved conditions or failures, he will be allowed to matriculate as a regular junior student.

2. VISITORS. With the consent of the President and the instructors concerned, regular visitors may be enrolled as such during the regular registration period. They shall be governed by the regular University rules and are due to pay a visitor's fee, or if nonresident, to pay all regular fees and tuition. 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. Nevada residents may visit in not to exceed two University courses.

REQUIREMENTS FOR ADMISSION TO REGULAR STANDING

1. FIFTEEN HIGH SCHOOL UNITS. Applicants for admission to regular standing in the University of Nevada must 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.

a. *Limited Freshmen.* High school graduates who have 13 or more but less than 15 acceptable high school units may be admitted as limited freshmen.

b. *Restricted Freshmen.* A restricted freshman is defined as one who presents 15 acceptable units but who is deficient in no more than 2 of the required units.

c. *Special Students.* Students who cannot present 13 acceptable high school units may register as special students if they can meet the other requirements for special students (see page 103).

2. ACCEPTABLE UNITS. Subjects acceptable for admission include the subjects numbered 1–32 on pages 105–106, but not to exceed the number of units there specified for each subject.

a. *Ten Academic Units.* Of the fifteen units required for admission at least ten must include subjects numbered from 1–20 inclusive on pages 105–106.

3. QUALITY UNITS—

a. *For Nevada Applicants.* Of the 15 acceptable units presented by applicants for admission to first-year standing who come from Nevada high schools or from Nevada families, six units must carry grades of 80 percent or better, and 4 of the 6 must be in subjects 1–20 inclusive (pages 105–106).

b. *For non-Nevadans.* Of the 15 acceptable units presented by applicants for admission to first year standing from States other than Nevada, ten units must carry grades of 80 percent or better, and 6 of the 10 must be in subjects 1–20 inclusive (pages 105–106).

4. SPECIFIC SUBJECT REQUIREMENTS. Of the fifteen units required for admission to regular standing each college makes its own specific subject requirements, as follows:

The College of Arts and Science

English, 3 units
Mathematics, 2 units

The College of Engineering[1]

English, 3 units
History, 1 unit
Plane geometry, 1 unit

[1]It is recommended that the entering student present all the subjects here listed, especially that of 1½ units of algebra, otherwise it is probable that he will be graduated in five years instead of four. Consult meaning of the term "restricted" freshman, and see also mathematics 15 and mathematics A.

It is advised that the electives include 2 units of foreign language, preferably modern language. In certain meritorious cases some entrance credit, not exceeding 1 unit, may be granted for practical experience.

Algebra, 1½ units
Solid geometry or trigonometry, ½ unit
Chemistry or physics, 1 unit

The College of Agriculture

English, 3 units
Social Science, 1 or 2 units
Mathematics, 2 units
Natural Science, 1 or 2 units

5. REMOVING ENTRANCE DEFICIENCIES—

a. *Time requirement.* All students, except special students, who may be admitted to the University with entrance deficiencies must remove these deficiencies before their second year of residence.

b. *Method.* Entrance deficiencies may be removed by either of the following methods:

(1) College credit may be canceled 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.

c. *Special students.* In addition to the methods described above, entrance credits will be canceled for special students, who can meet the scholarship requirements set forth in the paragraph on obtaining regular status, page 103.

SUBJECTS ACCREDITED FOR ADMISSION

Subject	*Units*[1]
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
6. Spanish (a)	1

[1]A unit represents a years' 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	SUBJECTS ACCEPTED FOR ADMISSION—*Continued*	*Units*
	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.	Commercial Law	½ to 1
12.	Commercial Geography	½ to 1
13.	Algebra (a)	1
	Plane Geometry (b)	1
	Advanced Algebra (c)	½
	Solid Geometry (d)	½
	Trigonometry	½
14.	General Science	1
15.	Physics	1
16.	Chemistry	1
17.	Physical Geography	½ or 1
18.	Botany	½ or 1
19.	Zoology	½ or 1
20.	Physiology	1
21.	Drawing	½ to 2
22.	Music	½ to 2
23.	Agriculture	½ to 4
24.	Home Economics	½ to 4
25.	Manual Training	½ to 3
26.	Shopwork	1 to 3
27.	Bookkeeping	½ to 3
28.	Stenography	½ to 3
29.	Typewriting	1 to 2
30.	Trades and Industries	½ to 4
31.	Vocational Work	1
32.	Commercial Arithmetic or Applied Mathematics	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.

REGISTRATION REGULATIONS

1. REGISTRATION PROCEDURE. In accordance with such specific regulations governing the procedure of registration as the Registration Committee may prescribe, the student must (a) secure his registration coupons from the Registrar, (b) secure the approval of the department or the professor for each course in which he wishes to enroll, (c) secure the approval of the adviser and the dean of his college, (d) in the case of women, the signature of the Dean of Women, (e) make out his class

cards, (f) present the registration card to the Registrar for computation of fees to be paid, and (g) present the card to the Comptroller and pay the fees. The Comptroller will retain the card and file it with the Registrar.

2. THE REGISTRATION PERIOD—

a. *Registration Days.* Preceding the beginning of instruction at the opening of each semester, two days are scheduled as the regular registration days.

b. *Completing Registration.* Each student shall complete his registration by 4 p. m. of the fourth day after he begins registration.

c. *Late Registration.* All registration must be completed by Saturday noon following Labor Day in first semester and by the end of the second week of the second semester except in special cases approved by the President.

3. FEES FOR DELAYS IN REGISTRATION—

a. *Delay in Completing Registration.* Each student who fails to complete his registration by 4 p. m. of the fourth day after he begins registration shall pay 75 cents for each day or fraction of a day thereafter until his registration is completed.

b. *Late Registration.* A fee of $3 shall be charged for registration after the two enrollment days but within the week including the enrollment days. A fee of $5 shall be charged anyone registering after the week including the enrollment days.

4. CHANGES IN REGISTRATION—

a. *Adding a Course.* After the registration coupon has been filed with the Registrar, a student may add a subject in accordance with the rules. No subject may be added after the end of the second week of the semester, except in special cases approved by the President.

To add a subject a student must secure the proper card from the Registrar, the signature of the professor of the course he wishes to add, and the approval of the dean of his college. He must then file the card with the Registrar.

b. *Withdrawal from a Course.* After the registration card has been filed with the Registrar, a student may withdraw from a course at any time, provided the withdrawal meets with the approval of the instructor concerned and of the dean of the college.

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 student is not officially withdrawn from the class until the instructor has received notice from the Registrar. The date of withdrawal shall be the date on which the slip is filed with the Registrar.

c. *Effect of Withdrawal on Scholarship.* When a student withdraws or is withdrawn from a course with the approval of the dean or of the Scholarship Committee, the withdrawal is recorded by using the symbol W. The symbol W is not a scholarship grade and shall not be used in any manner in determining a student's scholarship record.

5. Fees for Changes in Registration. After the registration coupon has been filed with the Registrar, a student who adds a subject or changes a subject in which he is registered, must pay a fee of $1 for each course. The fee will be omitted when the change is caused by faculty action or at the request of the Registration Committee.

6. Rebates of Fees on Withdrawals. In laboratory courses in which fees are charged, rebates of such fees on withdrawal will be made as follows: Two-thirds rebate if formal withdrawal is made before the end of a semester's third week; one-half rebate if formal withdrawal is made between the end of the third and the end of eighth week; no rebate in withdrawals after the eighth week.

7. Precedence of Certain Courses—

a. *Required Courses.* In registering, all students must give precedence to required courses in regular sequence; an elective course may not be retained to the exclusion of a required course. In no case may a required course be deferred beyond one year.

b. *Entrance Deficiencies.* All but "special" students are required to remove entrance deficiencies before their second year of residence. If this is not done, such students shall be placed on probation. 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. The registration of a student enrolled for the second time in courses in order to remove entrance deficiencies shall not be permitted to exceed a total of 15 hours.

c. *Failed Courses.* Any required subject in which a student has failed takes precedence over all other subjects in the arrangement of his program. Such a failed subject must be repeated in class as soon as the study is repeated in the University program.

8. Required Courses. Each student in registering must observe the specific course requirements in his particular college. He must also observe the following general University requirements and register for them in the specified year:

a. *English 1–2.* All students must register for English 1 and 2 in their freshman year.

b. *Physical Education.* Every student who is a candidate for graduation from the University will be required to complete the prescribed two-year (basic) course of physical education unless excused therefrom by proper authority. This basic course is scheduled for both semesters of the freshman and sophomore years.

c. *Military for Men.* Every male student who is a candidate for graduation will be required to complete the prescribed two-year (basic) course of military training unless excused therefrom by proper authority. This basic course is scheduled for both semesters of the freshman and sophomore years.

d. The State law of Nevada provides that no student shall receive

a diploma of graduation or a teacher's certificate without previously having passed a satisfactory examination upon the Constitution of the United States and of Nevada. Under this provision it is necessary for students to take at an appropriate time Political Science 79 and 80.

9. NUMBER OF HOURS TO BE REGISTERED—

a. *Regular Students.* Except in special cases each student is expected to register for the number of hours regularly prescribed by his college for the course which he has elected.

In the College of Engineering the regular prescribed course consists of 18 hours each semester; in the College of Agriculture, from 15½ to 17½ hours each semester; in the College of Arts and Science, 15½ hours each semester in the freshman and sophomore years, and 16 hours each semester in the junior and senior years.

b. *Special Students.* Special students must enroll for at least 10 hours of work each semester.

10. REGISTERING FOR A REDUCED NUMBER OF HOURS—

a. *Permissive Reduction.* 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.

b. *Compulsory Reduction.* Under the following conditions the student will not be permitted to register for the regular number of hours prescribed:

(1) 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.

(2) A student on probation shall not be allowed to register for more than 80 percent of the regular number of hours of his prescribed course.

(3) 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.

(4) The registration of a student enrolled for the second time in courses in order to remove entrance deficiencies shall not be permitted to exceed a total of 15 hours.

11. EXTRA HOURS—

a. In case a student during his previous semester received no condition or failure and received an average of 2 grade points for each hour for which he was registered, excepting cases of W, he may be permitted, at the discretion of the dean, to enroll in a maximum of three hours above that specified for his course.

b. The deans are allowed to grant a student an additional hour beyond the limit specified in the rules.

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

12. REGISTRATION IN COURSES NUMBERED 50 AND ABOVE. No subject with the number of 50 or more will be open to freshmen or sophomores without the permission of the dean of the college.

13. Registration for New Students—

a. *Orientation.* Registration in the fall semester for all new students includes a program of orientation during the first week.

b. Registration for all new students includes the taking of the physical examinations and mental tests scheduled during the first week.

14. Classification of Students. Two classes of students seeking college credit are recognized—regular and special:

a. *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.

(1) *Freshmen.* Limited freshmen are those high school graduates who can present 13 or more but less than 15 acceptable high school units. Restricted freshmen are those presenting 15 acceptable units, but are deficient in not more than 2 required units.

(2) *Sophomores, Juniors, Seniors.* A regular student is classified as a sophomore, junior, or senior when he has completed within 3 of the number of hours required in his course at the end of the freshman, the sophomore, or the junior year.

b. *A Special Student* 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.

15. Intramural Transfers—

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, effective at the time the transfer is made, the details of the transfer to be handled by the Registration Committee.

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.

16. Honorable Dismissal From the University. 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.

SCHOLARSHIP REGULATIONS

1. The Grading System—

a. *Marks Used.* The grading system shall consist of four passing grades, of condition, and of failure. The passing grades shall be designated in descending order of excellence as A, B, C, and D; a condition shall be marked E, and a failure F.

b. *Definition of Marks.* A means *excellent;* B, *good;* C, *fair;* D, *passing.* E for *condition* is a temporary mark and is to be used when the quality of the work is doubtful and further opportunity is desired for the student to demonstrate satisfactory achievement. E is also used when a student has for acceptable reasons been unable to complete the required work by the close of the semester.

2. GRADE POINTS. Each credit earned with a grade of A carries four grade points; a grade of B, three grade points; a grade of C, two grade points; a grade of D, one grade point; a grade of F, no grade points.

3. DETERMINATION OF FINAL GRADES. Each instructor will determine the final grade[1] of his students by any method he may consider best adapted to his course.

4. FINAL EXAMINATIONS. Final examinations shall be held at the end of each semester in all undergraduate courses except courses in which an examination is not practicable or appropriate. If a final examination is not given the class shall meet during the examination period and shall continue for at least one hour.

All students are required to take the final examinations in all their courses in which examinations are given, or attend the class meeting held in place thereof.

5. SCHOLARSHIP AVERAGE—

a. In determining scholarship average the sum of the grade points received for each hour for which the student is registered, excepting cases of W, shall be divided by the total number of hours for which the student is registered. In determining averages, E shall be counted as carrying no grade points.

b. When a student withdraws or is withdrawn from a course with the approval of the dean or of the Scholarship Committee, the withdrawal is recorded by using the symbol W. The symbol W is not a scholarship grade and shall not be used in any manner in determining a student's scholarship record.

6. CHANGING A PASSING GRADE—

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.

A course may be repeated for the purpose of changing the grade received but no additional credit can be gained by repeating a course.

7. REMOVING A CONDITION—

a. *Students Eligible.* No disqualified student may be issued a permit to remove a condition. A student not in residence may receive a permit only by vote of the faculty or permission of the President.

b. *Procedure.* 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, or under whom the deficient work is to be

[1]Final grades in any semester are not available to a student who is in arrears in his financial obligations to the University. As soon as the financial obligation is discharged, the grades become available.

completed, a statement from the Registrar saying that he is eligible and that the fee of $1.50 has been paid.

c. *Fee for Removing.* Application for the removal of a condition will not be accepted by the Registrar until a fee of $1.50 has been paid.

d. *Time for Removing.* A condition may be removed only during the next semester of residence after the condition is incurred. If a condition is not removed by the end of the first semester of residence thereafter, the Registrar shall record a grade of F.

The individual instructor may set the date on which the condition may be removed.

e. *Grade After Removing Condition.* Upon the removal of a condition, the grade of D shall be given excepting cases in which the condition resulted from illness or similar circumstances beyond the student's control.

8. Removing a Failure—

a. *Procedure.* 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 subject in which a student has failed takes precedence over all other subjects in the arrangement of his program.

b. *Failure in Elective Courses.* Failures in elective courses are not required to be made up.

9. Probation—

a. *Conditions Resulting in Probation—*

(1) A student must be passing in at least two-thirds of his work or he may be placed on probation, unless he can show to the satisfaction of the Faculty Committee on Scholarship that his unsatisfactory record is due to reasons for which he is not personally responsible.

(2) A student may be placed on probation any time his conduct warrants such action.

(3) A student who does not remove his entrance deficiencies before his second year shall be placed on probation.

(4) A student who has been suspended for one semester will be on probation for one entire semester when he returns.

b. *Penalties for Probation—*

(1) A student on probation shall not be allowed to register for more than 80 percent of the regular number of hours of his prescribed course.

(2) While on probation a student may not take part in any University exhibition or public contest (*i. e.,* intercollegiate athletic contests, debates, dramatics, etc.) or serve on the staff of any student publication, or become a candidate for any student office.

c. *Release from Probation.* Students placed on probation at mid-semester may be released from probation at any time during the remainder of the semester that they raise sufficiently the quality of their work.

10. SUSPENSION—

a. *Conditions Resulting in Suspension* —

(1) A student must be passing in at least one-half of his work or he may be suspended from the University, unless he can show to the satisfaction of the Faculty Committee on Scholarship that this unsatisfactory record is due to reasons for which he is not personally responsible.

(2) A student may be suspended from the University any time his conduct warrants such action, but only by action of the appropriate committee and with the approval of the President.

(3) A student who is on probation at the end of each of two consecutive semesters may be suspended from the University.

11. DISQUALIFICATION. A student who has twice been suspended shall not be permitted to register in this University.

12. REQUIREMENTS FOR GRADUATION

a. *Scholarship Requirements* —

(1) Students enrolled prior to August 1940: In order to graduate, every student enrolled in the University prior to August 1940 must earn 252 grade points. Each hour of 2.5 or above earned under the marking system in operation until August 1940 shall be counted as four grade points under the new system of grading.

(2) Students entering in the fall of 1940 and thereafter: In order to graduate, every student entering the University of Nevada in the fall of 1940 and thereafter, shall have an average of 2 grade points for each hour for which he has been registered, except cases of W.

b. *Credit-Hour Requirements*—

In the College of Arts and Science 126 credits are required for graduation.

In the College of Agriculture 126 credits are required for graduation.

In the College of Engineering 144 credits are required for graduation.

The value of a *credit is defined* as three hours of work per week for one semester.

c. *Subject Requirements.* In addition to specific subject requirements imposed by each college for its several courses, certain subjects are required by the University of all candidates for a degree. These courses as listed under Registration Regulations No. 8, page 108, are English 1 and 2; the two-year basic course in military science for men, and in physical education for both men and women, and Political Science 79 and 80.

13. MID-SEMESTER REPORTS. Instructors will report students at mid-semester whose grades are D, E, and F. When because of their mid-semester record students are subject to probation or suspension, they will be required to meet with the Scholarship Committee.

14. ADVANCED CREDITS. Students who have attained knowledge in a given field by experience or by study, other than in a recognized institution of learning from which transfer credits are available, may take an examination for advanced credit.

To take an examination for advanced credit the student 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 and that the necessary fee of $3 for the examination has been paid.

Application for such advanced credit must bear the recommendation of the head of the department concerned and be accompanied by the written examination on which the recommendation is based. The amount of credit to be granted on the basis of special examination will be determined by the Committee on Advanced Standing but will not exceed the regular work of one semester in the college in which the student is registered.

15. SUSPENSION FROM CLASS. 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 dean and of the committee concerned.

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 of 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 two diplomas are granted in any one year, the charge will be $5 for the first, and $4 for the second. The charge for a teacher's diploma, if received in addition to a baccalaureate diploma, is $1.

*No student may be graduated or be furnished with a transcript of record unless and until all accounts with the University have been fully paid.

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 is required of all candidates for the master's degree, and may be offered by candidates for the bachelor's degree in 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 8½ x 11 paper and bound in a 9 x 11¼ flexible backed cover. All maps and drawings or other illustration 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 sample title given on page 117.

GRADUATE WORK AT THE UNIVERSITY OF NEVADA

Admission—Qualified graduates of the University of Nevada or of other accredited institutions may register as graduate students. Registration as a graduate does not mean that a student will become a candidate for an advanced degree.

Registration—Students wishing to register for graduate study 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, except that they are exempt from payment of the A. S. U. N. semestral fee of $12.50 unless they choose to pay it.

Degrees—The University of Nevada offers the following advanced degrees for work done in residence: Master of Arts and Master of Science.

Requirements for the Master's Degree—A total of 24 credits in course units will be required. Of these, not less than 12 must be offered in the major field and not less than 6 in a minor subject. In addition to the above, a thesis, having a minimum value of 6 credits will be required in the major department.

Application for Admission to Candidacy—The applicant for admission to candidacy shall obtain a blank from the Graduate Committee and present his application to this committee not later than the end of the third week of the semester preceding that in which the degree is to be conferred. The application must contain the following information and it must have the signed approval of the major and minor professors:

1. The name of the school and of the department from which the student received the bachelor's degree; the title and date of the degree.
2. The major and minor subjects in which the advanced degree is sought.
3. The completed work for which the student has received graduate credit.
4. The work the student proposes to offer in order to satisfy the requirements.

Undergraduate Prerequisites—A student must have completed such undergraduate work as the department concerned, with the approval of the Graduate Committee, may require. The prerequisite for a graduate major normally amounts to an undergraduate major or its equivalent, and in no case may this prerequisite be less than the requirements for an undergraduate minor or its equivalent, in the department. If a student is deficient in undergraduate prerequisites he must make up such deficiencies.

Residence Requirement—

(a) For graduates of the University of Nevada: At least 12 semester hours of course work must be done in residence at the University of Nevada.

(b) For graduates of other accredited institutions: At least 16 semester hours of course work must be done in residence at the University of Nevada.

Advancement to Candidacy—After a student has completed at least 12 course units, acceptable for graduate credit at the University of Nevada, the Graduate Committee, on the written recommendation of his major and minor professors, may advance him to candidacy. Before such advancement, however, the applicant must submit to the committee the subject of his thesis and a brief outline of its probable content.

Courses—Courses numbered 50 to 100 may be offered for graduate credit, when they have been recommended by the head of the department concerned and approved by the Graduate Committee, and when they have not been offered previously for undergraduate credit. With respect to such courses, the graduate student must usually do more work than that which is required of an undergraduate registered in the same courses.

All courses numbered above 100 are essentially graduate courses.

Grades—Graduate credit will not be given when the grade falls below B.

Thesis—Each candidate for the master's degree will be required to prepare a thesis that will show scholarly attainment and ability to do independent work. The credit for the thesis shall be determined, upon recommendation of the major professor, by the special committee on final examination.

The title of the thesis shall conform to the following:

The Origin of the English Gilds

A Thesis Submitted to the University Faculty in Partial Fulfillment of the Requirements for the Degree of Master of Arts. (Science)

By

John Edwards Smith

Reno, Nevada

1941

At least two weeks before the date on which the degree is to be awarded, three copies of the thesis must be submitted to the Graduate Committee. It must be in final typewritten form on paper of approved quality and ready for binding when approved by the committee.

The University Library will attend to the binding of the thesis. A small fee will be charged for this service. The charges for binding must be paid to the University Comptroller before the committee will pass judgment on the thesis. In case the thesis should not be approved, any sums advanced for binding will be returned to the student. If approved, two copies of the thesis will be deposited by the committee in the University Library and one copy will be retained by the major department.

Examinations—

(a) Course examinations. There will be such course examinations as the individual instructors may require.

(b) Final examination. Not later than one week before the date of conferring the master's degree, the candidate will be given a general examination which may be oral, written, or both. It will cover his major work, his thesis, and his other courses. It will be conducted by a committee of five members of the faculty, one of whom shall be Director of Thesis, appointed by the Graduate Committee. The head of the department in which the major work is taken will be chairman of the committee. The date of the examination will be announced publicly. The examination will be open to members of the University staff and to guests invited by the major professor.

General Regulations—

1. Candidates for the master's degree may not at the same time be candidates for any other degree.

2. Correspondence and extension courses will not be accepted for credit towards the master's degree.

3. Members of the University staff who are employed on full-time salary may not register for more than 6 credits during one semester.

4. No graduate student may register for more than 16 credits (including thesis) during one semester.

5. All the requirements for the master's degree must be satisfied within a period of five calendar years preceding the granting of the degree.

6. The head of the major or minor departments may require a reading knowledge of a foreign language (usually French or German).

7. Undergraduates who lack less than 15 semester credits to complete the requirements for the bachelor's degree may enroll in approved courses for graduate credit, provided such credit is requested by the student and approved by the professor at the time of enrollment.

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

FACULTY

LEON WILSON HARTMAN, Ph.D., President of the University.
FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science, Professor of Mathematics.
PETER FRANDSEN, A.M., LL.D., Professor of Biology.
REUBEN CYRIL THOMPSON, A.M., LL.D., 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.
BENJAMIN F. CHAPPELLE, Ph.D., Professor of Foreign Languages.
GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.
FRED W. TRANER, Ph.D., Dean and Professor of Education.
PHILIP A. LEHENBAUER, Ph.D., Professor of Biology.
FRANCIS CLARK MURGOTTEN, Ph.D., Professor of Foreign Languages.
THEODORE H. POST, M.A., Professor and Director of Music.
JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education for Men.
ELSA SAMETH, M.S., Professor of Physical Education for Women.
ALFRED LESLIE HIGGINBOTHAM, M.A., Professor of Journalism.
CHARLES ROGER HICKS, Ph.D., Professor of History and Political Science.
SIGMUND W. LEIFSON, Ph.D., Professor of Physics.
VINCENT P. GIANELLA, Ph.D., Professor of Geology.
ORAL E. CLARK, Colonel, U. S. A., Professor of Military Science and Tactics.
KATHARINE RIEGELHUTH, A.M., Associate Professor of English.
MARGARET ELIZABETH MACK, A.M., Associate Professor of Biology.
GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and Astronomy.
EDWARD G. SUTHERLAND, A.B., Associate Professor of Economics, Business and Sociology.
JESSIE P. POPE, M.A., Associate Professor of Home Economics.
JOHN R. GOTTARDI, M.A., Associate Professor of Foreign Languages.
PAUL A. HARWOOD, M.A., Associate Professor of English.
MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.
CLAUDE CARSON SMITH, M.A., Associate Professor of History.
MILAN J. WEBSTER, Ph.D., Associate Professor of Economics, Business and Sociology.
EDITH RUEBSAM, M.A., Associate Professor of Education.
CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education for Men.
HAROLD N. BROWN, Ed.D., Associate Professor of Education.
RALPH A. IRWIN, Ph.D., Associate Professor of Psychology.
ERNEST L. INWOOD, Ph.D., Associate Professor of Economics, Business and Sociology.
ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business and Sociology.
ROBERT STUART GRIFFIN, M.A., Assistant Professor of English.
HARRY E. WHEELER, Ph.D., Assistant Professor of Geology.
JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education for Men.
LAWTON B. KLINE, M.A., Assistant Professor of Foreign Languages.
WILLIAM C. MILLER, M.A., Assistant Professor of English.
JOHN PARK PUFFINBARGER, Ed.M., Assistant Professor of Education.
ALICE B. MARSH, M.S., Assistant Professor of Home Economics.
RICHARD O. BASSETT, JR., Major of Infantry, U. S. A., Assistant Professor of Military Science and Tactics; Commandant of Cadets.
FRED J. COLLINS, M.A., Assistant Professor of Economics.
ANATOLE G. MAZOUR, Ph.D., Assistant Professor of History and Political Science.
SAMUEL B. BATDORF, Ph.D., Assistant Professor of Physics.
EVERETT W. HARRIS, M.S., Assistant Professor of Mathematics.

W. DWIGHT BILLINGS, Ph.D., Assistant Professor of Botany.
EDWARD W. LOWRANCE, Ph.D., Assistant Professor of Biology.
MRS. HELEN JOSLIN, Instructor in Art.
MICHAEL J. MCCORMICK, Sergeant, U. S. A., Instructor in Military Science and Tactics.
RUTH IRENE RUSSELL, M.S., Instructor in Physical Education for Women.
LEONARD EDWIN CHADWICK, M.S., Instructor in Economics, Business and Sociology.
LORING RIDER WILLIAMS, Ph.D., Instructor in Chemistry.
ELBRIDGE PUTNAM VANCE, Ph.D., Instructor in Mathematics.
WILLIAM GRAY PALM, B.S., Instructor in Mathematics.
CHARLES A. MACKENZIE, Ph.D., Instructor in Chemistry.
RALPH A. BRENNINGER, M.A., Instructor in Foreign Languages.
WILLIAM O. HOLMES, B.A., Instructor in English.
J. RAYMOND BUTTERWORTH, M.A., Instructor in English.
MADAME OSGOOD, Assistant in French.
MARGARET JENSEN, B.S., Assistant in Mathematics.
BERNARD WARD HOOPER, B.A., Fellow in Chemistry.
JOHN GEORGE YAPUNCICH, JR., B.A., Fellow in Chemistry.
AUDREY STEWART, B.A., Fellow in Physical Education for Women.
CHARLES LELAND HILL, M.S., Fellow in Chemistry.
ARIEL FREDRIC, B.A., Lecturer in Secondary Education.
MARIE DOONER, Secretary to the Dean.

AIM

The aim of the College of Arts and Science is twofold:

1. To lay a foundation for the professions, both learned and technical, and
2. To increase knowledge in and sympathy with the broader and cultural aspects of life.

ADMISSION REQUIREMENTS

For admission requirements, entrance subjects and the number of credits belonging to each, see pages 104–106.

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ARTS AND SCIENCE

In order to be recommended for the degree of Bachelor of Arts[1] a candidate must, first, have satisfied the requirements for admission; and, second, have gained credits in prescribed and elective courses aggregating 126 semester units, of which at least 40 must be in courses numbered 50 or above. These units are to be distributed as follows:

I. From two to six units in military and physical education as required by the University (pp. 68–70), and political science, 79–80 as required by the State law (p. 108).

II. A minimum of six units in English 1–2[2] shall be required of all students.

III. A minimum of sixteen units[3] in each of the three groups named below shall be required of freshmen and sophomores:

GROUP 1. French, German, Italian, Latin and Spanish. Four entrance units in not more than two languages will meet this requirement.

[1]Students who have majored in mathematics or science may, on petition to the faculty, be granted the degree of Bachelor of Science.

[2]Subject to provisions stated under course of study, p. 187.

[3]The fulfillment of these group requirements by substitution of high school units will, however, not reduce the number of regular college units required for graduation below 126.

A single year in a language will not be counted toward meeting the requirements unless one semester of that language be taken in college.

With three entrance units the requirements are three college credits in the same language or course 1–2 in another language.

With two entrance units: Course 3–4 in the same language or course 1–2 in another language.

With one entrance unit: Courses 2 and 3–4 in the same language.

With no entrance credit: Courses 1–2 and 3–4 in any one foreign language.

GROUP 2. History, political science, economics, sociology, philosophy, psychology, and for normal school graduates, education.

Each unit of high school history or social science, except commercial geography or commercial law, may be used to decrease the requirement in this group by four units, provided such decrease shall not exceed eight units.

GROUP 3. Mathematics, physics, chemistry, botany, zoology, geology and astronomy.

Each unit of high school science except general science and each year of high school mathematics, except first year algebra and plane geometry may be used to decrease the requirement of this group by 4 units.

IV. At least one major and one minor as described under junior and senior requirements, p. 122.

The specific group requirements under III, above, have been made not only to insure for each student an acquaintance with the different fields of knowledge but to form what is believed to be a sounder basis for a somewhat greater specialization during the junior and senior years. For this reason, these requirements should be completed during the freshman and sophomore years.

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
Military and P. E.	½ to 1½	Military and P. E.	½ to 1½
English 1	3	English 2	3
Foreign language, Social science, Natural science or mathematics, Elective	12 or 11	Foreign language, Social science, Natural science or mathematics, Elective	12 or 11
	15½		15½

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
Military and P. E.	½ to 1½	Military and P. E.	½ to 1½
Foreign language, Social science, Natural science or mathematics, Elective	15 or 14	Foreign language, Social science, Natural science or mathematics, Elective	15 or 14
	15½		15½

Courses open to freshmen and sophomores which may be used to fulfill the above requirements in the social science and natural science groups are listed below. In general, odd numbers are used for first-semester and even numbers for second-semester courses:

GROUP 2—Social Science—
- Economics 3, 5
- History 1–2
- Philosophy 1, 7, 8
- Political Science 1–2
- Psychology 2

GROUP 3—Natural Science or Mathematics—
- Botany 1, 2, 3
- Chemistry 1–2, 7–8
- Mathematics 5, 7, 11, 13
- Physics 1a–2a, 1b–2b, 7, 9–10
- Zoology 1, 2, 57, 58

Subjects requiring a prerequisite or not open to freshmen:
- Business Adm. 41, 43, 44, 48
- Economics 1, 2
- History 5–6
- Philosophy 21, 22, 28
- Psychology 5, 6, 10, 14, 40
- Sociology 1, 2, 20
- Botany 22, 25
- Chemistry 9–10
- Geology 8, 9, 10, 11, 12, 14
- Mathematics 14, 15–16, 18, 20 22, 23–24
- Physics 3–4, 5–6
- Zoology 9, 57, 58

Students over 26 years of age are excused from physical education and military.

No subject with the number of 50 or more will be open to freshmen or sophomores without the permission of the Dean.

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.[1]

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.

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.

Except as otherwise specified, all students, including transfers, before receiving the bachelor's degree from the College of Arts and Science must have fulfilled the above requirements.

JUNIOR AND SENIOR REQUIREMENTS

The function of the College of Arts and Science is three-fold: to provide for a broad cultural education, to prepare secondary school teachers and to prepare specialists. To accomplish these purposes, candidates for the baccalaureate degree must select courses totaling not less than forty hours' work in courses numbered 50 or above. These courses must be selected from a group of departments so as to include at least a major and a minor.

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

[1]The hour requirement for graduation from the College of Engineering is greater than that of either arts and science or agriculture. Engineers transferring to either of these two colleges must make 2½ more than the 126 hours required for graduation from arts and science and agriculture, respectively, for each semester they have been enrolled in engineering.

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.

For a major not more than 27 credits may be required within a department of which at least 12 credits must be in courses numbered 50 or above.

For a minor not more than 18 credits may be required within a department of which in arts at least 6 credits and in science at least 4 credits must be in courses numbered 50 or above.

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 shall 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 126 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 7	4	Chemistry 8	4
English 1	3	English 2*	3
Mathematics 15	5	Mathematics 16	5
Military 1	1	Military 2	1
Social Science	3	Social science	3
	16		16

*Subject to provisions stated under course of study, p. 187.

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 9	4	Chemistry 10	4
Mathematics 23	3	Mathematics 24	3
German 1	5	German 2	5
Econ. 1 or Bus. Adm. 41	3	Econ. 2 or Psych. 5	3
Military 3	1	Military 4	1
	16		16

Junior Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 51	4	Chemistry 52	4
Chemistry 71	3	Chemistry 80	3
Chemistry 95	0	Chemistry 96	1
Physics 1a	3	Physics 2a	3
Physics 1b	1	Physics 2b	1
German 9	3	German 10	3
Elective	2	Elective	1
	16		16

Senior Year

First Semester	*Units*	*Second Semester*	*Units*
Chemistry 81	3	Chemistry 82	3
Chemistry 75	2	Chemistry 72	2
Chemistry 95	½	Chemistry 76	2
Chemistry 99	2	Chemistry 92	2
Political science 79	1	Chemistry 96	½
Elective	7½	Chemistry 100	2
		Political science 80	1
		Elective	3½
	16		16

In addition to the above course of study, students will be required to fulfill the regular University requirements in physical education.

Students desiring to enter the field of chemical technology or chemical engineering should plan so that a considerable proportion of their electives may be selected from the College of Engineering, or if 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.

THE COURSE IN JOURNALISM

In its four-year professional Course in Journalism, the University of Nevada offers approved preparation for the journalistic vocations.

Based on the principle that a well-rounded education coupled with training in journalism is the best foundation for the profession, the Course in Journalism provides study in language, literature, the natural sciences, the social sciences, and the fine arts, as well as in journalism.

While designed to prepare for general newspaper and magazine work, the Course in Journalism is arranged to enable the student to fit himself, in addition, for special journalistic activities, such as advertising, freelance writing, public relations work, and so forth.

To complete the course in journalism, the student must present among the 126 units required for graduation:

1. Twenty-five credit hours in journalism, including journalism 21–22, news gathering and writing (6 credits); journalism 51–52,

news editing (4 credits); journalism 53, the evolution of the newspaper as a social institution (3 credits); and journalism 81–82, newspaper interneship (2 credits).

2. Twelve credit hours in English literature.

3. Twenty-five credit hours in the social sciences (history, political science, economics, business, sociology, psychology, and philosophy), selected so that they represent at least five of these subjects.

4. Five credit hours in the aesthetics.

5. The freshman and sophomore requirements of the College of Arts and Science.

University credits acquired in meeting the freshman and sophomore arts and science requirement in the social sciences may be counted toward this group requirement in the Course in Journalism.

In choosing subjects to meet the group requirements of the Course in Journalism, the student will be guided by the professor of journalism.

In each group, the following courses will be found best to furnish the student with a comprehensive background. Those starred are especially valuable:

Journalism—1–2, 54*, 56*, 65*, 67, 68, 79.

English Literature—68–69, 70*–71*, 72–73, 75*–76*, 77*, 78, 79, 80, 87–88, 95.

Social Science:

Business—41, 43–44, 48, 85.

Economics—1*, 2*, 3, 4, 5, 18*, 51, 61*, 64*, 73, 91, 92.

History—1–2, 5*–6*, 54, 57–58, 59*–60*, 62, 63*–64*, 77–78, 81–82*, 98.

Philosophy—1*, 51, 53*–54*, 61.

Political science—1*–2*, 51, 53*, 93–94.

Psychology—5*, 10, 51*, 55*, 61*, 65*, 70.

Sociology—1*, 2*, 50, 71*, 79*, 80*, 81, 83*, 84, 90*.

The Aesthetics:

Art—1–2.

English—11–12, 21–22, 23–24, 81–82.

Music—10, 57.

In general, the course for the four years will follow this outline:

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
Journalism 1	2	Journalism 2	2
English 1	3	English 2	3
Group 1 elective (if needed)	3–5	Group 1 elective (if needed)	3–5
Groups 2 and 3 electives	4–7	Groups 2 and 3 electives	4–7
Military and physical education	½–1½	Military and physical education	½–1½
Electives to make total of 15½ hours.		Electives to make total of 15½ hours.	

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
Journalism 21	3	Journalism 22	3
Group 1 elective (if needed)	3	Group 1 elective (if needed)	3
Groups 2 and 3 electives (as required)	7–8	Groups 2 and 3 electives (as required)	7–8
Elective or English literature	2–3	Elective or English literature	2–3
Electives to make total of 15½ hours.		Electives to make total of 15½ hours.	

Junior Year

First Semester	*Units*	*Second Semester*	*Units*
Journalism 53 or 65	3	Journalism 56 or 79	3
Journalism 51 or 67	2	Journalism 52 or 68	2
English literature	2 or 3	English literature	2 or 3
Social sciences	5	Social sciences	5
Political science 79	1	Political science 80	1
Elective	2	Elective	2
	16		16

Senior Year

First Semester	*Units*	*Second Semester*	*Units*
Journalism 81	1	Journalism 82	1
Journalism 65 or 53	3	Journalism 79 or 56	3
Journalism 67 or 51	2	Journalism 68 or 52	2
English literature	2 or 3	English literature	2 or 3
Social sciences	5	Social sciences	5
Elective	2	Elective	2
	16		16

In addition to the journalism laboratory facilities on the campus, students in journalism at the University of Nevada enjoy the use of the offices and plants of the Reno newspapers, the national press association bureaus, and commercial printing and engraving plants in the city.

Members of the staffs of the Reno Evening Gazette, the Nevada State Journal, the Reno bureaus of the United Press and the Associated Press, the Nevada Engraving Company, the Reno Printing Company, A. Carlisle and Company of Nevada, and the Silver State Press generously cooperate with the Course in Journalism, not only in making their facilities available but in the instruction itself.

The curriculum in journalism is listed on page 189 ff. of this announcement.

PRELEGAL COURSE

Students who intend to study law will find it advantageous to plan their college work in such a way as to permit the inclusion of essential prelegal subjects and to satisfy the University requirements for the B.A. degree.

The requirements of the leading law schools usually embrace: (1) social sciences, history, political science, economics, business and sociology; (2) foundation courses in English, including debate and public speaking; (3) logic; (4) psychology; and (5) Latin, French, or German.

For advice relative to the organization of his work, the student is referred to Professors Inwood, Griffin and Mazour, who are designated advisers of the prelegal students.

The leading law schools prefer that their students shall have completed four years of college work before entrance. Some, however, 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 analyses is also required by some and advised by others. Plane trigonometry and college algebra are required by a few schools and strongly advised to insure an adequate foundation for bio-physical and bio-chemical studies in the medical school.

PREMEDICAL COURSE

To permit the inclusion of all the essential premedical subjects and to satisfy the University requirements for the B.A. degree, the following arrangement of the course of study has proved a desirable one. Considerable variations from it are permissible:

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
English 1	3	English 2	3
General chemistry	4	General chemistry	4
Botany 3	4	Zoology 2	4
Military and physical education	½–1½	Military and physical education	½–1½
Elective to make total of	15½	Elective to make total of	15½

As electives the student should choose either the continuance of French or German if he has some entrance credits in these languages or he may elect a social science, preferably psychology in the second semester.

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
German 1	5	German 2	5
Chemistry 9	4	Chemistry 10	4
Zoology 9	4	Mathematics 22	4
Military and physical education	1½	Military and physical education	1½
Elective to make total of	15½	Elective to make total of	15½

Junior Year

First Semester	*Units*	*Second Semester*	*Units*
German, 2d year	3	German, 2d year	3
General physics	4	General physics	4
Organic chemistry	4	Organic chemistry	4
Bacteriology 51	4	Zoology 64 (embryology)	4
Political science 79	1	Political science 80	1
	16		16

Senior Year

Elective or approved credential from professional school.

The University will confer the degree of Bachelor of Arts or Bachelor of Science 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

For several years the University of Nevada has had an affiliation with the Stanford School of Nursing. This school has recently changed its requirements from three to two years of academic work and from two to three years in the Stanford School of Nursing. Upon completion of this five-year combination course the student receives both the degree of Bachelor of Arts and the Nursing Diploma. Other universities have adopted similar combinations. Students in the University of Nevada who wish to qualify for such a course may meet the academic requirements by taking the following curriculum in the first two years at the University of Nevada. Such students should present for entrance credit two units of a foreign language, preferably French or German, and one unit in chemistry.

TWO YEAR PRENURSING COURSE

First Year

First Semester	*Units*	*Second Semester*	*Units*
Botany 3	4	Zoology 2	4
English 1	3	English 2	3
Chemistry 1	4	Chemistry 2	4
Foreign language	3	Foreign language	3
Physical education	1	Physical education	1
Elective	½	Elective	½
	15½		15½

Second Year

First Semester	*Units*	*Second Semester*	*Units*
Zoology 57 (Physiology)	3	Zoology 58 (Physiology)	3
Zoology 9 (Anatomy)	4	History 2	3
History 1	3	Sociology	3
Psychology 5	3	Physical education	½
Physical education	½	Elective	6
Elective	2		
	15½		15½

If the student desires she may also qualify for a degree from the University of Nevada by taking a third year at the University of Nevada which should include any uncompleted requirements of the first two years and a sufficient number of additional upper division units to make a total of 96 semester units, with at least half of the

upper division requirements for a major and a minor and an average of 2 grade points for every hour for which she has been registered, except cases of "W."

The bachelor's degree will be conferred upon the satisfactory completion of a sufficient number of acceptable units in the nursing school to make a total of 126. Political Science 79–80 must be included.

TEACHERS' DIPLOMAS

For the requirements for a teacher's diploma see School of Education page 132 ff.

THE MASTER'S DEGREE

For the requirements for the master's degree, see page 115 ff.

THE SCHOOL OF EDUCATION

FACULTY

LEON WILSON HARTMAN, Ph.D., President of the University.
FRED W. TRANER, Ph.D., Dean of the School of Education; Professor of Education.
JOHN W. HALL, M.A., Emeritus Professor of Education.
THEODORE H. POST, A.M., Professor and Director of Music.
JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education for Men.
ELSA SAMETH, M.S., Professor of Physical Education for Women.
FREDRICK WOOD, Ph.D., Dean of Arts and Science; Professor and Head of the Department of Mathematics.
EDITH M. RUEBSAM, M.A., Associate Professor of Education.
HAROLD N. BROWN, Ed.D., Associate Professor of Education.
RALPH A. IRWIN, Ph.D., Associate Professor of Psychology.
J. P. PUFFINBARGER, Ed.M., Assistant Professor of Education.
MRS. HELEN JOSLIN, Instructor in Art.
W. C. HIGGINS, B.S., Teacher Trainer, Vocational Agriculture Education.
DORIS NESBITT, M.S., Teacher Trainer in Home Economics.
ANATOLE MAZOUR, Ph.D., Assistant Professor of History and Political Science.
ARIEL FREDRIC, B.A., Director of Washoe County Girl Scout Council.
MARGARET SNYDER, Secretary to the Dean.

COOPERATING TEACHERS

In the Reno High School—

ALBERT W. ALEGRE, M.A., Spanish, English.
BUD BEASLEY, B.A., History.
BLYTHE BULMER, B.A., English.
MARGARET ERNST, B.A., Mathematics.
DAVID FINCH, B.A., English.
MURIEL GOODWIN, B.S., Art.
GUILD GRAY, B.A., English.
KATHLEEN GRIFFIN, B.A., Commercial Subjects.
FRANCES HUMPHREY, B.A., English.
MARGUERITE HUGHES, B.S., Home Economics.
EFFIE MACK, Ph.D., History and Civics.
BRUCE MOORE, M.A., History, Economics.
NEVADA PEDROLI, B.A., Spanish.
RANDALL ROSS, B.A., Public Speaking, English.
ALWINE SIELAFF, B.A., Mathematics.
BUELAH SINGLETON, B.A., History.
EDWIN C. STRENG, M.A., Opt.D., Chemistry.
MILDRED KLAUS, B.A., Comm. Head Dept.

In the Sparks High School—

MILDRED HUBER, B.S., Home Economics.
EDWIN WHITEHEAD, B.A., History, Algebra.

In the Northside Junior High School—

LOIS BICKNELL, B.A., Mathematics, Spanish.
ANNA FREY, B.S., Arithmetic, Home Economics.
INEZ MACGILLIVRAY, B.A., English, Arithmetic.
VIOLET REBALEATI, B.A., English.
ESTHER SCOFIELD, B.S., Home Economics.
ELIZABETH SMITH, B.A., Geography.
NEVADA SOLARI, B.A., English, History.
WINIFRED THOMAS, B.S., General Science.

In the B. D. Billinghurst Junior High School—

GLADYS CAFFERATA, B.A., English, French.
HELEN DUNN, B.A., History, English, Geography.

HAZEL DURHAM, B.A., Art, English.
TED MOORE, B.A., Geography.
NEIL P. SCOTT, B.A., English, Physical Education.
HELENE STARK, B.A., English, Physical Education.
ANNA MAUD STERN, B.A., Spanish, History.
ROSE TAVERNA, B.A., English.
MARION TRABERT, B.S., Science, Mathematics.
MARY E. UNDERWOOD, B.S., Home Economics.

In the Reno Elementary Schools—

FAIRY ADAMS, Fourth Grade.
INA M. ANGUS, B.A., Second Grade.
REINE ASHLEY, Fifth Grade.
HELENE BANTA, Second Grade.
MARCELLE H. BARKLEY, B.A., Fourth Grade.
DAISY BENJAMIN, First Grade.
RITA CANNON, Principal Sixth Grade.
MAY CLARESSE, First Grade.
KATHRYN CLARK, Fifth Grade.
PEARL C. DOMINGUEZ, Principal Sixth Grade.
EDITH DUTEE, Sixth Grade.
MATILDA FERETTI, Fourth Grade.
TRUE GIFFORD, B.A., First Grade.
EILEEN HAFFEY, B.A., Third Grade.
HELEN HANLEY, Fifth Grade.
RUBEL HANSEN, Principal Sixth Grade.
MARGARET HARTMAN, M.A., First Grade.
ELSIE JOHNSON, Sixth Grade.
KATHRYN MARTIN, B.A., Second Grade.
MARY MATHEWS, B.A., Second Grade.
AGNES MAXWELL, B.A., Fourth Grade.
ELIZABETH MCCORMACK, B.A., Kindergarten.
ELEANOR MILLER, Third Grade.
ISABELLE MOE, Fifth Grade.
EDITH PEDDICORD, Fifth Grade.
BESSIE PERAZZO, Fourth Grade.
EVA POSVAR, Third Grade.
ELLINOR ROBINSON, First Grade.
DOROTHEA SHIDLER, B.A., Fifth Grade.
RENA SEMENZA, B.A., Kindergarten.
EMMA SMITH, Fourth Grade.
MAMIE TOWLES, Principal Sixth Grade.
OLIVIA TREANOR, Sixth Grade.
ALICE B. TWADDLE, B.A., Sixth Grade.
GRACE WARNER, Principal Sixth Grade.
EMILIE YPARRAGUIRRE, Fourth Grade.

TEACHER APPOINTMENT SERVICE

F. W. TRANER, Director.
MARGARET SNYDER, Secretary.

AIM

The School of Education aims principally to provide for undergraduate students, on the foundation of the broad and liberal education furnished them by the College of Arts and Science, a professional course of studies to equip them for successful teaching in the public schools of the State. To a limited extent it seeks also to offer advanced training for teachers in service who desire either to increase their efficiency in their present positions or to prepare for new and larger positions of responsibility.

For the welfare of the State it aims to provide well-trained teachers for the schools and to stimulate in the teaching personnel and the public a deeper interest in the promotion of good teaching practices and sound educational policies.

TYPES OF TRAINING PROVIDED

1. Elementary School Teaching. Because the teaching positions in Nevada are predominantly in the elementary schools, the most urgent responsibility of the School of Education is the preparation of teachers for rural and town elementary schools. It meets this responsibility by offering a broad training in the principles of elementary education and in teaching methods that equip the student for either the diverse tasks of the one-room school or the more specialized work of a single-grade room. Supervised teaching which constitutes the heart of all the teacher-training work is possible in the primary, intermediate, or junior high school grades.

2. High School Teaching. For students who desire to qualify for high school teaching, the School of Education provides in the junior and senior years courses in the principles and methods of secondary education and in supervised teaching in the important academic subjects in the high school. Such students must also present a major and a minor in high school subjects.

3. Advanced Professional Training. Advanced courses are offered in the evening and during Summer Sessions for the benefit of teachers in service who desire to renew certificates, to qualify for a higher grade of certificate, or to work for a Master of Arts degree.

Applicants for the Master's degree proposing to submit Education as a major or a minor should confer with the Dean of the School of Education before enrolling for graduate credit in any course. Failure to do so may mean enrollment in a course not approved for the Master's degree.

HISTORY AND ORGANIZATION

Training of teachers as a function of the University is almost as old as the University itself. In the first year of the University's life at Reno there were no courses for teachers, but before the year was over the Legislature passed an Act, approved February 7, 1887, providing for the establishment in the University of "a school for the instruction of teachers," and specifying that those worthily completing the course or a prescribed part of it should be granted teachers' certificates by the State Board of Education. In accordance with this Act the University established a normal course with the opening of the fall term in 1887.

The policy inaugurated by the Act of 1887 of granting certificates on the completion of the courses set up by the University has been consistently followed to the present time. There are now two distinct courses in operation, one for high school teachers and one for elementary teachers.

COURSES FOR HIGH SCHOOL TEACHERS' CERTIFICATES

It is possible to qualify for the high school teachers' certificate by either of two methods:

I. *The University High School Teachers' Diploma*

Students who meet the requirements for this diploma will be granted by the State Board of Education a certificate to teach in the high school any subject approved by the local school board, except the vocational subjects subsidized by the State and National government. For these

vocational subjects special certificates are required as indicated below.

To qualify for the University High School Teachers' Diploma, the student must meet the requirements for the B.A. or the B.S. degree and must complete 18 hours of professional work in education. For students who are not candidates for the vocational certificate, these 18 hours consist of the following courses: psychology 5 and 6, and education 24, preferably in the sophomore year; education 60 and 2 units in education 64, 65, or 66, preferably in the junior year; education 71, 75, 76, and 82, all of which must be taken in the senior year. One semester of practice teaching in the elementary school may be substituted for education 75 or for education 76.

Vocational Certificates. Students who have taken the required courses in agriculture or home economics and receive their degrees in those subjects may qualify for both the University High School Teachers' Diploma and for a vocational certificate.

For the home economics certificate the students are required to take the following courses: psychology 5 and 6, education 24, 60, 75, 76, 82, 88, and 89, and, following graduation, to do two weeks of cadet teaching under the direction of the State Department in one of the high schools of the State.

For the agriculture certificate the students are required to take the following courses: psychology 5 and 6, education 24, 60, 75, 76, 82, 86, and 87.

II. *State Board Requirements*

Under the regulations of the State Board of Education a high school certificate may be granted to any applicant who holds a B.A. or a B.S. degree from the University, and who has completed 18 semester hours in the field of professional education, including four semester hours of practice teaching. The majority of the hours in professional training must be in the secondary field.

Courses in the secondary field include psychology 6 and all courses listed under "Secondary Education" in the "Courses of Instruction" in this catalog.

COURSES FOR ELEMENTARY TEACHERS' CERTIFICATE

The most satisfactory course for elementary teaching will require four years and entitle the student to a bachelor's degree. Students entering the University with definite intent to remain four years and to take up teaching upon graduation should recognize that the opportunities in teaching are much more numerous in the elementary than in the secondary field. They should plan, therefore, from the first to follow a curriculum through the four years that will thoroughly equip them for an elementary position. Early consultation with the Dean of the School of Education is urgently recommended to such students.

There are three types of elementary teachers' certificates issued.

I. *Based on Four Years of Study*

A first grade elementary certificate valid for three years is issued to graduates of the University if they have completed 18 hours of professional courses in education. These 18 hours must include four hours of methods of teaching the elementary school subjects, four

hours of practice teaching in the elementary school, and a course in school law.

II. *Based on Two Years of Study: The Normal School Diploma*

A first grade elementary certificate valid for five years is issued to students who qualify for the normal school diploma. This diploma is granted by the University of Nevada to students who have earned 62 hours of credit in the College of Arts and Science, of which 30 must be professional courses in education. Usually these professional courses should include education 1, 34, 46, and two semesters of practice teaching: education 28, 29, 43, 44, 73, and 74.

For students entering the University with the expectation of qualifying for the normal school diploma in two years, the following program is suggested:

Freshman Year

First Semester	*Units*	*Second Semester*	*Units*
Education 1	2	Education 34	3
English 1	3	English 2	3
Physical education (women)	1	Physical education (women)	1
Physical education (men)	½	Physical education (men)	½
Military (for men)	1	Military (for men)	1
Education electives	5–6	Education electives	5–6
Other electives	4–6	Other electives	4–6

Sophomore Year

First Semester	*Units*	*Second Semester*	*Units*
Practice teaching	5	Practice teaching	5
Education 24	2	Education 46	2
Physical education	½	Physical education	½
Military	1	Military	1
Political science 79	1	Political science 80	1
Education electives	1–2	Education electives	1–2
Other electives	5–6	Other electives	5–6

III. *Based on One Year of Study*

A second grade certificate, valid for three years but not renewable, is issued to students who have earned 31 hours of credit at the University of Nevada, of which 15 hours must be professional courses in education. Students planning to qualify for this certificate will take the courses specified in the first year of the course for the Normal School Diploma, as above, but must take also education 24 and political science 79–80.

THE KINDERGARTEN-PRIMARY CERTIFICATE

This certificate will be issued to any applicant who holds a B.A. or a B.S. degree from the University and who has completed the prescribed professional work in education and in related subjects as follows:

Education: 16, 17, 18, 19, 24, 25A and B, 28, 29, 34, 41, and 53, or approved substitutes, totaling 29 hours.

Music: 1–2 or equivalent to prove ability to sing songs of kindergarten-primary level. The applicant must also pass tests to demonstrate ability to play on the piano music of kindergarten-primary difficulty.

Art: 3–4.

Physical education for women: 1, 2, 3, 4, and 9.

Graduates of the University who complete the above courses will also be entitled to the Normal School Diploma, described above.

SUPERVISED TEACHING

All supervised teaching facilities are provided in the public schools of Reno and Sparks through the courtesy of the school authorities in these two cities. By this arrangement students meet typical school problems and secure training for teaching under the most favorable conditions. In every instance the student is assigned to one of the regular teachers in the school system, designated as a cooperating teacher, who assigns to the student the material for teaching, checks his lesson plans, observes his teaching, and gives suggestions for improvement.

Each staff member of the Department of Education is likewise responsible for the supervision of a group of student teachers, making regular visits to observe the student's teaching, and holding conferences with the student and his cooperating teacher concerning the teaching. There is always a close cooperation between the department and the cooperating teacher.

PREREQUISITES FOR SUPERVISED TEACHING

To protect the interests of the public school children, great care is exercised in according the privileges of supervised teaching to students. Only those students who have shown by their previous record a satisfactory ability in scholarship, dependability and earnestness, and a real interest in the problems of education, are accepted for teaching. Any failure on the part of the student teacher to meet any requirement imposed may result in the immediate forfeiture of his teaching privilege.

THE TEACHER APPOINTMENT SERVICE

For the purpose of bringing school authorities who are looking for competent teachers into touch with promising candidates, the School of Education has maintained a teacher appointment service since 1923.

Only those candidates are accepted for enrollment with the appointment service whose ability and character are well known to the Department of Education. For those enrolled the appointment office secures all data possible, both personal and academic, and recommendations from persons in official positions competent to speak of the character or teaching ability of the candidate. This material is kept on file, and on request is sent to interested school authorities.

The only fees charged for the service rendered will be paid by the candidates at the time of enrollment to cover the necessary costs of postage, printing, and stenographic help. For the first set of five papers prepared a charge of $2.50, and for each succeeding set a charge of $1.50 will be made.

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.

FACULTY

LEON W. HARTMAN, Ph.D., President of the University.
FREDERICK H. SIBLEY, M.E., Dean of the College of Engineering; Professor of Mechanical Engineering.
WALTER S. PALMER, E.M., Professor of Metallurgy.
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., Director, Mackay School of Mines and Professor of Mining.
JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education for Men.
FREDRICK WOOD, Ph.D., Dean of Arts and Science; Professor of Mathematics.
SIGMUND W. LEIFSON, Ph.D., Professor of Physics.
VINCENT P. GIANELLA, Ph.D., Professor of Geology.
ORAL E. CLARK, Colonel, U. S. A., Professor of Military Science and Tactics.
KATHARINE RIEGELHUTH, A.M., Associate Professor of English.
GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and Astronomy.
PAUL A. HARWOOD, M.A., Associate Professor of English.
WILLIAM I. SMYTH, E.M., Associate Professor of Metallurgy and Mining.
MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.
IRVING J. SANDORF, M.S., Associate Professor of Electrical Engineering.
CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education for Men.
HAROLD CLARK AMENS, M.S., Assistant Professor of Mechanical Engineering.
ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics.
ROBERT STUART GRIFFIN, M.A., Assistant Professor of English.
HARRY E. WHEELER, Ph.D., Assistant Professor of Geology.
JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education for Men.
WILLIAM C. MILLER, M.A., Assistant Professor of English.
RICHARD O. BASSETT, JR., Major of Infantry, U. S. A., Assistant Professor of Military Science and Tactics; Commandant of cadets.
EVERETT W. HARRIS, M.S., Assistant Professor of Mathematics.
SAMUEL B. BATDORF, Ph.D., Assistant Professor of Physics.
ELDON C. GRAFTON, M.S., Assistant Professor of Civil Engineering.
WARREN O. WAGNER, M.S., Assistant Professor of Civil Engineering.
WILLIAM H. DAVIDSON, B.S., Instructor in Mechanical Engineering.
BERTRAND F. COUCH, Instructor in Mine Accounting.
JOHN TORNEY RYAN, Instructor in Shop Practice.
MICHAEL J. MCCORMICK, Sergeant, U. S. A., Instructor in Military Science and Tactics.
LORING RIDER WILLIAMS, Ph.D., Instructor in Chemistry.
ELBRIDGE PUTNAM VANCE, Ph.D., Instructor in Mathematics.
WILLIAM GRAY PALM, B.S., Instructor in Mathematics.
CHARLES A. MCKENZIE, Ph.D., Instructor in Chemistry.
J. RAYMOND BUTTERWORTH, M.A., Instructor in English.

BERNARD WARD HOOPER, B.A., Fellow in Chemistry.
JOHN GEORGE YAPUNCICH, JR., B.A., Fellow in Chemistry.
CHARLES LELAND HILL, M.S., Fellow in Chemistry.
MARGARET JENSEN, B.S., Assistant in Mathematics.
JEAN HENDERSON, Secretary to the Dean.

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 the 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 catalog.

ADMISSION REQUIREMENTS

An applicant who is deficient in more than two of the required entrance units will not be permitted to enter the Engineering College.

For admission requirements, entrance subjects, and the number of credits belonging to each, see page 104 ff. and footnote, p. 104.

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ENGINEERING

The degree of Bachelor of Science in (a) Mining 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 144 semester units.

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.

A student entering the College of Engineering who has passed the age of 26 years, when he is automatically excused from military training, shall also be excused from physical education, orientation, and hygiene.

COLLEGE OF ENGINEERING

MACKAY SCHOOL OF MINES

Freshman Year—First Semester		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Chemistry 7	General Inorganic Chemistry	2	2
Mathematics 15	Mathematical Analysis	..	5
General Engineering 5	Elementary Mechanical Drawing	2	..
*General Engineering 2	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 8	General Inorganic Chemistry	2	2
Mathematics 16	Mathematical Analysis	..	5
General Engineering 6	Descriptive Geometry	2	..
Geology 10	Engineering Geology	..	3
*Hygiene 2	Personal Hygiene	..	1
Military 2	Basic Course	1	..
Physical Education 2	Developmental Exercises	½	..
			19½

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
Geology 11	Determinative Mineralogy	2	..
Chemistry 9	Qualitative Analysis	2	2
Geology 9	Historical Geology	..	3
Military 3	Basic Course	..	1
Physical Education 3		½	..
		4½	14
			18½

Sophomore Year—Second Semester			
Chemistry 10	Volume Analysis	2	2
Mathematics 26	Integral Calculus	..	3
Physics 4	General Physics for Engineers	..	5
Metallurgy 4	Engineering Metallurgy	..	2
Geology 12	Blowpipe Analysis	2	..
Geology 14	Descriptive Mineralogy	..	2
Military 4	Basic Course	..	1
Physical education 4		½	..
		4½	15
			19½

Junior Year—First Semester			
Mining 51	Excavation	..	3
Metallurgy 51	Assaying	3	1
Mathematics 55	Analytic Mechanics	..	3
Civil Engineering 51 and 52	Surveying	2	2
Geology 51	Petrology	1	1
Elective		..	2
		6	12
			18

*Courses marked with an asterisk 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.

Junior Year—Second Semester

		LAB.	LEC.
Mining 52	Mine Plant	..	3
Metallurgy 66	Ore Dressing	..	2
Metallurgy 68	Ore Dressing	2	..
Geology 60	Economics Geology Nonmetallic	..	3
Civil Engineering 53 and 54	Surveying	2	2
Geology 52 (or Metallugry 56)	Petrography (Metallography)	2	1
		6	11
		17	

Summer Work

Civil Engineering 58	Summer Surveying	Four Weeks

Senior Year—First Semester

Geology 61	Economic Geology of Metals	..	3
Mining 61	Mining Methods	..	3
Metallurgy 71	Hydro-Metallurgy	1	2
Metallurgy 61	Pyro-Metallurgy, nonferrous metals	..	3
Political Science 79		..	1
Project in Mining 79, Metallurgy 79 or Geology 79		2	..
Civil Engineering 72	Testing Materials	1	..
Civil Engineering 74	Strength of Materials	..	3
		4	15
		19	

Senior Year—Second Semester

Mining 72	Mine Administration	..	3
Mining 74	Mineral Industry Economics	..	3
Civil Engineering 90	Hydraulics	..	3
Electrical Engineering 75	Electricity in Mining	..	3
Political Science 80		..	1
Project in Mining 80, Metallurgy 80 or Geology 80		2	..
		2	13
		15	

School of Mechanical Engineering

Freshman Year—First Semester

		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Chemistry 7	General Inorganic Chemistry	2	2
Mathematics 15	Mathematical Analysis	..	5
General Engineering 5	Elementary Mechanical Drawing	2	..
General Engineering 1	Orientation	..	1
Military 1	Basic Course	1	..
Physical Education 1	Developmental Exercises	½	..
			16½
General Engineering 2	Freehand Drawing	1	..
			17½

Freshman Year—Second Semester

English 2	Composition and Rhetoric	..	3
Chemistry 8	General Inorganic Chemistry	2	2
Mathematics 16	Mathematical Analysis	..	5
General Engineering 6	Descriptive Geometry	2	..
Military 2	Basic Course	1	..
Physical Education 2	Developmental Exercises	½	..
			15½
Hygiene 2	Personal Hygiene	1	..
Geology 10	Engineering Geology	..	3
			19½

Freshman Electives: M. E. 19, 20, 21; M. A. 3; C. E. 2; Econ. 3, 5.

Sophomore Year—First Semester

		LAB.	LEC.
Physics 3	General Physics for Engineers	..	5
Physics 5	Physical Measurements	2	..
Mathematics 25	Differential Calculus	..	3
Mechanical Engineering 19	Mechanical Engineering Literature	..	1
Military 3	Basic Course, second year	1	..
Physical Education 3	Advanced Exercises	½	..
			12½
Civil Engineering 51–52	Elementary Surveying	2	2
Mechanics Arts Option			1–3
			17½–19½

Sophomore Year—Second Semester

Physics 4	General Physics for Engineers	..	5
Physics 6	Physical Measurements	2	..
Mathematics 26	Integral Calculus	..	3
Mechanical Engineering 20	Mechanical Engineering Literature	..	1
Mathematics 55	Analytic Mechanics	..	3
Military 4	Basic Course, second year	1	..
Physical Education 3	Advanced Exercises	½	..
			15½
Mechanics Arts Option			1–3
Elective			1–2
			17½–18½

Sophomore Electives: Geol. 11, 12; M. E. 30, 41, 42; M. A. optional, M. A. 3, 5, 6, 50; Met. 4; C. E. 53, 54.

Junior Year—First Semester

Mathematics 56	Analytic Mechanics	..	2
Mechanical Engineering 51	Kinematics	2	1
Mechanical Engineering 54	Engines and Boilers	..	3
Mechanical Engineering 64	Power Laboratory	3	..
Civil Engineering 74	Strength of Materials	..	3
			14
Civil Engineering 72	Testing Materials	1	..
Management Option			2–3
Elective			1
			18–19

Junior Year—Second Semester

Mechanical Engineering 55	Analytic Mechanics	..	3
Mechanical Engineering 65	Mechanical Laboratory	3	..
Civil Engineering 90	Hydraulics	..	3
Mechanic Arts 6	Pattern Shop	..	1
Mechanical Engineering Option		..	2–3
Mechanical Engineering 52	Advanced Kinematics	2	1
Engineering Optional		..	3
			18–19

Junior Electives: Management optional, B. A. 3, 41, 43; Econ. 1, 66; C. E. 67; M. E. optional—M. E. 70, 74, 75, 77a-b, 78, 80; Engineering optional—C. E. 75, 76, 55, 69, 91, 92, 97–98, Met. 4, 56; E. E. 62, Courses in Mathematics and Physics.

Senior Year—First Semester

Mechanical Engineering 56	Thermodynamics	..	3
Mechanical Engineering 57	Machine Design	1	2
Electrical Engineering 51	Direct Current Machinery	..	3
Electrical Engineering 61	Electrical Laboratory	1	1
Mechanical Engineering 66	Advanced Mechanical Laboratory	3	..
Political Science 79	Constitutions of the U. S. and Nevada	..	1
			15
Engineering Optional		..	3
			18

Senior Year—Second Semester		LAB.	LEC.
Mechanical Engineering 58	Machine Design	1	2
Electrical Engineering	Alternating Current Machinery	..	3
Political Science 80	Constitutions of U. S. and Nevada	..	1
			7
Mechanical Engineering Optional		3–6	
Engineering optional		..	3
Nonengineering		2–5	
			18

Courses below first line may be substituted for certain others on the written consent of Departments concerned. Options may be filled from any of the options of the previous years.

School of Electrical Engineering

Freshman Year—First Semester		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Chemistry 7	General Inorganic Chemistry	2	2
Mathematics 15	Mathematical Analysis	..	5
General Engineering 5	Elementary Mechanical Drawing	2	..
*General Engineering 2	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 8	General Inorganic Chemistry	2	2
Mathematics 16	Mathematical Analysis	..	5
General Engineering 6	Descriptive Geometry	2	..
*Geology 10	Engineering Geology	..	3
*Hygiene 1	Personal Hygiene	..	1
Military 2	Basic Course	1	..
Physical Education 2	Developmental Exercises	½	..
			19½

Sophomore Year—First Semester			
Physics 3	General Physics for Engineers	..	5
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	..
Military 3	Basic Course, second year	..	1
Physical Education 3	Advanced Exercises	½	..
Elective		..	1
			17½

Sophomore Year—Second Semester			
Physics 4	General Physics for Engineers	..	5
Physics 6	Physical Measurements	4	..
Mathematics 26	Integral Calculus	..	3
*Metallurgy 4	Engineering Metallurgy	..	2
Military 4	Basic Course, second year	..	1
Physical Education 4	Advanced Exercises	½	..
Elective		..	2
			17½

*See footnote, p. 138.

Junior Year—First Semester		LAB.	LEC.
Electrical Engineering 51	Direct Current Machinery	..	3
Electrical Engineering 61	Electrical Engineering Laboratory	1	1
Electrical Engineering 57 or Physics 73	Electricity and Magnetism	..	2
Mechanical Engineering 54	Engines and Boilers	..	3
Mechanical Engineering 64	Mechanical Laboratory	..	2
Mathematics 85	Differential Equations	..	2
Mathematics 55	Analytic Mechanics	..	3
Elective		..	2
			19

Junior Year—Second Semester			
Electrical Engineering 52	Alternating Current Machinery	..	3
Electrical Engineering 56	Alternating Current Circuits	..	2
Electrical Engineering 62	Electrical Engineering Laboratory	1	1
Mechanical Engineering 55 or Physics 59	Thermodynamics or Heat and Thermodynamics		3 or 2
Civil Engineering 90	Hydraulics	..	3
Mathematics 56	Analytic Mechanics	..	2
Elective			2 or 3
			17

Senior Year—First Semester			
Electrical Engineering 53	Alternating Current Machinery	..	3
Electrical Engineering 63	Electrical Engineering Laboratory	2	2
Electrical Engineering 67	Communication Engineering	1	2
*Civil Engineering 72	Testing Materials Laboratory	1	..
Civil Engineering 74	Strength of Materials	..	3
Mechanical Engineering 57	Elementary Machine Design	1	2
Political Science 79	Constitutions of U. S. and Nevada	..	1
			18

Senior Year—Second Semester			
Electrical Engineering 54	Electrical Design	..	3
Electrical Engineering 64	Electrical Engineering Laboratory	2	2
*Electrical Engineering 68	Communications Engineering	1	2
Physics 57	Electrical Measurements	2	..
Political Science 80	Constitutions of U. S. and Nevada	..	1
Economics 66	Introduction to Economics and Business	..	3
Elective		..	2
			18

School of Civil Engineering

Freshman Year—First Semester		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Chemistry 7	General Inorganic Chemistry	2	2
Mathematics 15	Mathematical Analysis	..	5
General Engineering 5	Elementary Mechanical Drawing	2	..
*General Engineering 2	Free Hand 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 8	General Inorganic Chemistry	2	2
Mathematics 16	Mathematical Analysis	..	5
General Engineering 6	Descriptive Geometry	2	..
Geology 10	Engineering Geology	..	3
Hygiene 2	Personal Hygiene	..	1
Military 2	Basic Course	1	..
Physical Education 2	Developmental Exercises	½	..
			19½

Sophomore Year—First Semester		LAB.	LEC.
Mathematics 25	Differential Calculus	..	3
Physics 3	General Physics for Engineers	..	5
Civil Engineering 51–52	Elementary Surveying	2	2
Civil Engineering 69	Civil Engineering Drawing	2	..
Civil Engineering 20	Technical Report	1	..
Civil Engineering 60	Highway Engineering	..	2
Physical Education 3	Advanced Exercises	½	..
Military 3	Basic Course	1	..
			18½

Sophomore Year—Second Semester			
Mathematics 26	Integral Calculus	..	3
Physics 4	General Physics for Engineers	..	5
Civil Engineering 53–54	Advanced Surveying	2	2
Mathematics 55	Analytic Mechanics	..	3
Metallurgy 4	Engineering Metallurgy	..	2
Military 4	Basic Course	1	..
Physical Education 4	Advanced Exercises	½	..
			18½

Junior Year—First Semester			
Mathematics 56	Analytic Mechanics	..	2
Civil Engineering 63–64	Railroad Engineering	2	3
Civil Engineering 75	Structural Analysis	1	2
Mechanical Engineering 54	Heat Power Engineering	..	3
Civil Engineering 72	Strength of Materials	1	..
Civil Engineering 74	Strength of Materials	..	3
Political Science 79	Constitution of U. S. and Nevada	..	1
			18

Junior Year—Second Semester			
Civil Engineering 55	Foundations and Sub-Structures	..	2
Civil Engineering 76	Advanced Structural Analysis	..	2
Civil Engineering 90	Elementary Fluid Mechanics	..	3
Civil Engineering 92	Elementary Fluid Mechanics Problems	1	0
Civil Engineering 94	Irrigation Engineering	..	3
Electrical Engineering 75	Elements of Electrical Engineering	1	2
Political Science 80	Constitution of U. S. and Nevada	..	1
Electives	Electives	..	2
			17

Senior Year—First Semester			
Civil Engineering 67	Engineering Economics	..	2
Civil Engineering 77	Structural Design	2	1
Civil Engineering 85	Reinforced Concrete	2	2
Civil Engineering 87	Contracts and Specifications	..	3
Civil Engineering 97	Hydrology (A)	..	3
Electives	Electives	..	3
			18

Senior Year—Second Semester			
Civil Engineering 78	Structural Design	2	1
Civil Engineering 86	Reinforced Concrete	2	1
Civil Engineering 91	Sanitary Engineering	..	3
Civil Engineering 98	Hydrology (B)	..	3
Civil Engineering 99	Engineering Problems		
or	or		
Civil Engineering 100	Thesis	2	..
Electives	Electives	..	3
			17

THE COLLEGE OF AGRICULTURE

1. THE SCHOOL OF AGRICULTURE
2. THE SCHOOL OF HOME ECONOMICS

FACULTY

LEON W. HARTMAN, Ph.D., President of the University.
ROBERT STEWART, Ph.D., Dean of the College of Agriculture; Professor of Agronomy.
PETER FRANDSEN, A.M., LL.D., Professor of Biology.
FREDERICK WESTON WILSON, M.S., Professor of Animal Husbandry.
RUEBEN CYRIL THOMPSON, M.A., LL.D., Professor of Philosophy.
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, M.P.E., Professor of Physical Education for Men.
ELSA SAMETH, M.S., Professor of Physical Education for Women.
FREDRICK WOOD, Ph.D., Dean of Arts and Science; Professor of Mathematics.
VINCENT P. GIANELLA, Ph.D., Professor of Geology.
ORAL E. CLARK, Colonel, U. S. A., Professor of Military Science and Tactics.
ELDON WITTWER, Ph.D., Professor of Agricultural Economics.
KATHARINE RIEGELHUTH, A.M., Associate Professor of English.
MARGARET ELIZABETH MACK, A.M., Associate Professor of Biology.
GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and Astronomy.
EDWARD G. SUTHERLAND, A.B., Associate Professor of Economics, Business and Sociology.
JESSIE P. POPE, M.A., Associate Professor of Home Economics.
PAUL A. HARWOOD, M.A., Associate Professor of English.
LYMAN R. VAWTER, D.V.M., Associate Research Professor of Veterinary Science.
MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.
MILAN J. WEBSTER, Ph.D., Associate Professor of Economics, Business and Sociology.
CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education for Men.
RALPH A. IRWIN, Ph.D., Associate Professor of Psychology.
ERNEST L. INWOOD, Ph.D., Associate Professor of Economics, Business and Sociology.
LOUIS TITUS, M.S., Associate Professor of Agronomy.
HAROLD CLARK AMENS, M.S., Assistant Professor of Mechanical Engineering.
ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business and Sociology.
ROBERT STUART GRIFFIN, M.A., Assistant Professor of English.
JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education and Athletics for Men.
WILLIAM C. MILLER, M.A., Assistant Professor of English.
RICHARD O. BASSETT, JR., Major of Infantry, U. S. A., Assistant Professor of Military Science and Tactics; Commandant of Cadets.
MRS. ALICE B. MARSH, M.S., Assistant Professor of Home Economics.
EVERETT W. HARRIS, M.S., Assistant Professor of Mathematics.
SAMUEL B. BATDORF, Ph.D., Assistant Professor of Physics.
W. DWIGHT BILLINGS, Ph.D., Assistant Professor of Botany.
EDWARD W. LOWRANCE, Ph.D., Assistant Professor of Biology.
JACK L. RYAN, Instructor in Shop Practice.
CLARENCE J. THORNTON, B.S., Instructor in Poultry Husbandry.
GEORGE ERNEST BROOKS, B.S., Instructor in Dairying.
MICHAEL J. MCCORMICK, Sgt., U. S. A., Instructor in Military Science and Tactics.
RUTH IRENE RUSSELL, M.S., Instructor in Physical Education for Women.

LEONARD EDWIN CHADWICK, M.S., Instructor in Economics, Business and Sociology.
LORING RIDER WILLIAMS, Ph.D., Instructor in Chemistry.
ELBRIDGE PUTNAM VANCE, Ph.D., Instructor in Mathematics.
WILLIAM GRAY PALM, B.S., Instructor in Mathematics.
CHARLES A. MACKENZIE, Ph.D., Instructor in Chemistry.
RALPH A. BRENNINGER, M.A., Instructor in Foreign Languages.
J. RAYMOND BUTTERWORTH, M.A., Instructor in English.
CHARLES LELAND HILL, M.S., Fellow in Chemistry.
BERNARD WARD HOOPER, B.A., Fellow in Chemistry.
AUDREY STEWART, B.A., Fellow in Physical Education for Women.
JOHN GEORGE YAPUNCICH, JR., Fellow in Chemistry.
ANN GAMBLE, Secretary to the Dean.

AIM

The aim of the School of Agriculture is to give such training in scientific and vocational agriculture as will furnish a well-rounded education.

EQUIPMENT

AGRICULTURE BUILDING—For description of Agriculture Building see page 38.

UNIVERSITY FARM—The University Farm, comprising 200 acres is located three miles south of Reno along the Virginia road.

DAIRY—The laboratory in the Agriculture Building, equipped with machinery and apparatus, furnishes opportunity for instruction in methods of handling milk and dairy products, as milk testing, butter making, and the marketing of milk.

SHOPS—Two shops have been fitted up for carrying on instruction in farm mechanics. One shop, in rear of Lincoln Hall, includes forges and other equipment for farm blacksmithing, tools and equipment for plumbing, soldering, cold metal, machinery, and gas engine repair.

Another shop located above the machine shop in the Mechanical Engineering Building is equipped for farm carpentry, painting, glazing, ropework, and building construction. Actual practice is an outstanding objective in all phases of farm mechanics work.

GREENHOUSE. A greenhouse is available to students for laboratory work in courses in botany and horticulture. A large room is devoted to experimental work in plant physiology, ecology, etc., while other rooms in the greenhouse make available materials for laboratory work in the beginning courses.

THE HERBARIUM. The herbarium of the College of Agriculture contains at the present time approximately 19,000 sheets, representing, in large part, collections made in Nevada. This herbarium is probably the most complete collection of Nevada plants in existence and additional new plants of the State are being added from year to year. It is located in the Agriculture Building and is administered by the botany staff. Approximately 13,000 of the specimens were collected as a cooperative project with the Bureau of Plant Industry of the U. S. D. A., the Works Progress Administration participating. This collection of mounted plants is used as a source of information concerning the character and distribution of the plants in the State, as a reference for checkng the identification of plants received from

people within the State and also as demonstration material in student's class work.

ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of credits belonging to each, see page 105 ff.

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN AGRICULTURE

The degree of Bachelor of Science in Agriculture with majors in general agriculture, agricultural economics, preforestry, range management, agronomy-botany, animal husbandry and vocational agriculture will be conferred upon students who satisfactorily complete the full course of study in the selected major field in the School of Agriculture, aggregating 126 semester units.

Candidates for the degree of Bachelor of Science in Agriculture must present satisfactory evidence of at least twelve weeks' actual farm experience before they will be recommended for the degree.

COLLEGE OF AGRICULTURE

Courses of Study

General Courses in Agriculture

Definition of a Major in the College of Agriculture—

To complete a major in the College of Agriculture means that a student has not completed a given number of hours in a specific department, but that he has completed a prescribed curriculum in a given field in the college.

AGRICULTURAL CURRICULUM

FRESHMAN YEAR		*1st Sem.*	*2d Sem.*
Military 1–2	Basic Course, 1st year	1	1
Physical Education 1–2	Developmental Exercises	½	½
Chemistry 1–2	General Inorganic	4	4
Botany 3	General Botany	3	..
Animal Husbandry 1	Breeds of Livestock	3	..
English 1–2	Composition and Rhetoric	3	3
Agronomy 1–2	Soil Conservation and Forage Crops	2	3
Zoology 2	General Zoology	..	4
		16½	15½
SOPHOMORE YEAR			
Military 3–4		1	1
Physical Education 3–4		½	½
Agricultural Economics 1–2		3	3
Geology 8		3	..
Agronomy 4		3	..
Animal Husbandry 4–30		4	3
Botany 22		..	4
Dairying 1		..	3
Electives		1	1
		15½	15½
JUNIOR YEAR			
Dairy Husbandry 53		3	..
Agricultural Electives		8	8
Electrical Engineering 47		2	..
Nonagricultural Electives		..	5
Open Electives		2	2
		15	15

SENIOR YEAR	1st Sem.	2d Sem.
Political Science 79–80	1	1
Agricultural Electives	7	7
Nonagricultural Electives	3	3
Open Electives	4	4
	15	15

The following course of study is designed for students intending to enter the field of forestry or of range management. It includes the fundamental subjects required in forestry schools and makes it possible, upon completion of the course, to obtain a degree in forestry in a professional school of forestry in from one and one-half to two years:

PREFORESTRY AND RANGE MANAGEMENT

SOPHOMORE YEAR		1st Sem.	2d Sem.
Military 3–4	Basic Course	1	1
Physical Education 3–4	Advanced Exercises	½	½
Agricultural Economics 1–2	Principles of Economics	3	3
Botany 21–22	Morphology and Taxonomy	4	4
Geology 8	General Geology	3	..
Mathematics 22	General Mathematics	..	4
Botany 53	Dendrology	4	..
English 11	Speech	2	..
Elective	Preforestry	..	3
		17½	15½

Range management students must register in Animal Husbandry 3 and 30. Botany 21 and 53 are not required of range management students.

JUNIOR YEAR			
Physics 1a–1b	General Physics	4	4
Civil Engineering 51	Surveying	4	..
Zoology 59–60	Entomology and Wildlife Ecology	3	3
Agronomy 7	Soils	3	..
Botany 55	Plant Physiology	..	3
Economics 56	Land Economics	..	2
Botany 54	Agrostology	..	3
Civil Engineering 2	Map Making	..	1
		14	16

SENIOR YEAR			
Political Science 79–80	Constitutions of U. S. and Nevada	1	1
Botany 75–76	Ecology	4	4
Business Administration	Accounting	3	3
Botany 64 or 56	Plant diseases—Poisonous plants	..	4
Elective		5	3
Agronomy 60	Pasture Management	3	..
		16	15

Range management students must register in Animal Husbandry 58. Business Administration 43–44 is not required of range management students.

AGRONOMY–BOTANY

SOPHOMORE YEAR		1st Sem.	2d Sem.
Military 3–4	Basic Course	1	1
Physical Education 3–4	Advanced Exercises	½	½
Chemistry 9–10	Analytical Chemistry	4	4
Agricultural Economics 1–2	Principles of Economics	3	3
Botany 21	Morphology and Development of Plants	4	..
Agronomy 5	Field Crops	3	..
Mathematics 22	General Mathematics	..	4
Botany 22	Taxonomy	..	4
		15½	16½

		1st Sem.	2d Sem.
JUNIOR YEAR			
Physics 1a–1b	General Physics	4	4
Zoology 59–60	Entomology and Wildlife Ecology	3	3
Agronomy 7	Soils	3	..
Botany 56	Weeds, Poisonous Plants, and		
or	Seed Test	..	..
Botany 64	Plant Diseases	..	4
Agricultural Economics 56	Land Economics	..	2
Botany 55	Plant Physiology	..	3
Civil Engineering 51	Surveying	4	..
Elective		1	..
		15	16
SENIOR YEAR			
Chemistry 51–52	Organic Chemistry	4	4
Geology 8	General Geology	3	..
Agronomy 62	Soil Fertility	..	2
Political Science 79–80	Constitutions of U. S. and Nevada	1	1
Agronomy 60	Pasture Management	3	..
Agricultural Economics 52	Agricultural Economics	..	3
Agronomy 76	History of Agriculture	..	3
Agronomy 63	Land Values	3	..
Elective		2	2
		16	15

AGRICULTURAL ECONOMICS

		1st Sem.	2d Sem.
SOPHOMORE YEAR			
Military 3–4	Basic Course	1	1
Physical Education 3–4	Advanced Exercises	½	½
Agricultural Economics 1–2	Principles of Economics with Application to Agriculture	3	3
Agricultural Economics 45	Farm Accounting	3	..
Agronomy 7	Soil Management	3	..
Mathematics 22	General Mathematics	..	4
Animal Husbandry 3–30	Livestock Judging and Feed	4	3
English 11–12	Speech	2	2
Sociology 50	Rural Sociology	..	2
		16½	15½
JUNIOR YEAR			
Agricultural Economics 57	Marketing of Agricultural Products	3	..
Agricultural Economics 56	Land Economics	..	2
Psychology 5	General Psychology	..	3
Geology 8	General Geology	3	..
Agricultural Economics 64	Cooperative Organizations	..	2
Physics 1–2	General Physics	4	4
Agricultural Economics 55	Rural Finance	2	..
Elective		4	5
		16	16
SENIOR YEAR			
Political Science 79–80	Constitutions of U. S. and Nevada	1	1
Agricultural Economics 76	Farm Management	..	3
Agricultural Economics 65	Agricultural Prices	2	..
Economics 52	Money and Banking	3	..
Agronomy 63	Farm Land Values	3	..
Agricultural Economics 52	Agricultural Economics Policies	..	3
Elective		7	7
		16	14

VOCATIONAL AGRICULTURE

		1st Sem.	2d Sem.
SOPHOMORE YEAR			
Military 3–4	Basic Course	1	1
Physical Education 3–4	Advanced Exercises	½	½
Agronomy 5	Field Crops	3	..
Animal Husbandry 3–30	Livestock Judging and Feeding	3	3
Agricultural Economics 1–2	General Economics	3	3
Poultry 2	Farm Poultry Management	3	..
Dairy 1	Dairying	..	3
Botany 22	Taxonomy	..	4
Farm Mechanics 1–20	Blacksmithing, General Mechanics	2	2
		15½	16½
JUNIOR YEAR			
Agronomy 6–62	Soil Management and Soil Fertility	3	2
Psychology 5–6	General Psychology	3	3
Animal Husbandry 58	Range Management	..	5
Farm Mechanics 41–32	Machinery and Equipment	2	2
Poultry 8	Turkey Production	3	..
Dairy 53–55	Dairy Products and Sanitation	3	3
Animal Husbandry 57	Livestock Management	..	3
		14	18
SENIOR YEAR			
Education 50–82	Prob. 2d Ed. and Noninstruct.	3	2
Education 63	School Management and Law	2	..
Education 87–86	Prob. and Methods of Voc. Agri.	3	2
Education 75–76	Practice Teaching	2	2
Farm Mechanics 75	Teaching Farm Mechanics	2	..
Political Science 79–80	Constitutions of U. S. and Nevada	1	1
Agricultural Economics 45	Irrigation and Drainage	3	3
Agricultural Economics 66	Farm Accounting and Farm Management	..	4
		16	14

ANIMAL, DAIRY, AND POULTRY HUSBANDRY

		1st Sem.	2d Sem.
SOPHOMORE YEAR			
Military 3–4	Basic Course	1	1
Physical Education 3–4	Advanced Exercises	½	½
Agricultural Economics 1–2	General Economics	3	3
Botany 22	Taxonomy	..	4
Animal Husbandry 3	Livestock Judging	4	..
Animal Husbandry 30	Livestock Feeding	..	3
Dairy Husbandry 1	Dairying	3	..
English 11–12	Speech	2	2
Animal Husbandry 52	Genetics	..	3
Poultry 1	Farm Poultry Management	3	..
		16½	16½
JUNIOR YEAR			
Agronomy 5	Field Crops	3	..
Animal Husbandry 58	Range Management	..	5
Animal Husbandry 53	Registration	..	1
Civil Engineering 51	Surveying	4	..
Animal Husbandry 56	Advanced Livestock Judging	3	..
Agronomy 60	Pasture Management	..	3
Animal Husbandry 63–64	Animal Husbandry Literature	2	2
Elective		4	4
		16	15

SENIOR YEAR		1st Sem.	2d Sem.
Political Science 79–80		1	1
Animal Husbandry 50	Animal Hygiene	..	3
Animal Husbandry 55	Advanced Livestock Feeding	3	..
Animal Husbandry 66	Livestock Management	..	3
Dairy Husbandry 55	Dairy Sanitation	3	..
Dairy Husbandry 57	Advanced Milk Production	..	2
Farm Mechanics 9–20		2	2
Elective		6	4
		15	15

QUALIFICATION OF TEACHERS OF VOCATIONAL AGRICULTURE

A graduate of the College of Agriculture who desires to teach vocational agriculture in this State must fulfill the following requirements:

A. *Farm Experience.* The teacher of vocational agriculture must have had actual farm experience. Preference will be given to those graduates who have lived and worked upon a farm until the age of 18 years. In any case, the graduate must have had experience equal to two years after reaching the age of fourteen years.

B. *Education.* All Agricultural College graduates who wish to qualify as teachers of vocational agriculture in Nevada should arrange to complete the courses as outlined for vocational agriculture education given on page 133. It is essential that vocational agriculture teachers have a broad training foundation in animal and plant production courses, agricultural economics, marketing and farm mechanics. The animal production courses include dairy and poultry.

a. All Agricultural College graduates who wish to qualify as teachers of vocational agriculture in Nevada must also have not less than 18 semester hours of credit in educational subjects, including courses in "Special Methods of Teaching Vocational Agriculture" and "Observations and Practice Teaching of Vocational Agriculture" and certain other educational subjects as specified by law for certification of teachers.

SCHOOL OF HOME ECONOMICS

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN HOME ECONOMICS*

AIM

The aim of the School of Home Economics is to raise the ideals of home-living, 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 homemakers, 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. After completing beginning courses in home economics, home problems are required to give students this experience.

*Six of the seven units of elective courses in each of the above statements must be in courses numbered 50 or above.

All students in the University are required to take political science 79-80 for graduation.

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.

Eighteen units are required for a minor in Home Economics. For a minor in clothing and textiles the student must have Home Economics 15, 18, 16, and 45, with 7 hours of electives.*

For a minor in home management the student must have Home Economics 31, 32, 16, 45, and 7 hours of electives.*

EQUIPMENT

School of Home Economics: For detailed description, see page 54.

COURSES OF STUDY

General Course

		LAB.	LEC.
Freshman Year—First Semester			
English 1	Composition and Rhetoric	..	3
Chemistry 1	Elementary Inorganic	2	2
Physical Education 1	Freshman Practice	1	..
Home Economics 3	Introductory Course	..	2
Horticulture 1	Elements of Horticulture	2	1
Home Economics 31	Food Preparation	2	1
			16
Freshman Year—Second Semester			
English 2	Composition and Rhetoric	..	3
Chemistry 2	Elementary Inorganic	2	2
Physical Education 2	Freshman Practice	1	..
Home Economics 32	Food Preparation	2	1
Home Economics 16	Textiles	1	2
Art 5	Art Principles	2	..
			16
Sophomore Year—First Semester			
English 11 or 41	Public Speaking or Literature	..	2
Physics 19	Household Physics	1	2
Physical Education 3	Sophomore Practice	½	..
Home Economics 15	Clothing	2	1
Home Economics 45	Related Art	2	.
Chemistry 25	Elementary Organic	1	2
Psychology 5	General Psychology	..	3
			16½
Sophomore Year—Second Semester			
English 12 or 42	Public Speaking or Literature	..	2
Physics 20	Household Physics	1	2
Physical Education 4	Sophomore Practice	½	..
Home Economics 18	Clothing	2	1
Home Economics 42	Food Economics	..	2
Chemistry 26	Elementary Physiological	..	3
Electives		3	..
			16½
Junior Year—First Semester			
Zoology 57	Physiology	1	2
Home Economics 55	Meal Planning	3	1
Home Economics 54	Care of Health and Disease	..	2
Home Economics 87	House Decoration	2	1
Electives		3	..
			15

*See footnote on page 150.

Junior Year—Second Semester

		LAB.	LEC.
Zoology 58	Physiology	1	2
Home Economics 66	Advanced Clothing	2	1
Home Economics 81	Nutrition	..	3
Home Economics 83	Dietetics	1	..
Philosophy 22	Applied Ethics	..	..
Electives		..	2
			15

Senior Year—First Semester

Home Economics 86	Household Administration	..	2
Economics 1	Agricultural Economics	..	3
Electives		10	..
			15

Senior Year—Second Semester

Home Economics 88	Household Equipment	1	1
Home Economics 76	Child Development	..	2
Economics 2	Agricultural Economics	..	3
Electives		9	..
			16

Minors may be chosen in any department of the University by completing the requirements.

DIETITIANS COURSE OF STUDY

Freshmen and sophomore years the same as the regular home economics course.

Junior Year—First Semester

		LAB.	LEC.
Zoology 57	Physiology	1	2
Home Economics 55	Meal Planning	3	1
Home Economics 54	Care of Health and Disease	..	2
Electives		6	..
			15

Junior Year—Second Semester

Zoology 58	Physiology	1	2
Home Economics 94	Experimental Cookery	2	..
Electives		10	..
			15

Senior Year—First Semester

Home Economics 76	Child Development	..	2
Home Economics 86	Household Administration	..	2
Home Economics 92	Diet Therapy	1	1
Sociology 1	Principles of Sociology	..	3
Bacteriology 51	General Bacteriology	2	2
Agricultural Economics 1	Principles of Economics	..	3
			16

Senior Year—Second Semester

Home Economics 88	Household Equipment	1	1
Home Economics 98	Institution Management	..	3
Home Economics 96	Quantity Cookery	2	1
Electives		7	..
			15

INSTITUTION MANAGEMENT

Freshmen and sophomore years the same as the regular home economics course.

Junior Year—First Semester

		LAB.	LEC.
Zoology 57	Physiology	1	2
Home Economics 55	Meal Planning	3	1
Home Economics 54	Care of Health and Disease	..	2
Home Economics 87	House Decoration	2	1
Electives		..	3
			15

Junior Year—Second Semester		LAB.	LEC.
Zoology 58	Physiology	1	2
Education 60	Problems of Secondary Education	1	2
Home Economics 81	Nutrition	..	3
Home Economics 83	Dietetics	3	..
Home Economics 94	Experimental Cookery	2	..
Electives		..	2
			16

Senior Year—First Semester			
Sociology 1	Principles of Sociology	..	3
Bacteriology 51	General Bacteriology	2	2
Agricultural Economics 1	Principles of Economics	..	3
Home Economics 76	Child Development	..	2
Education 60	Problems of Secondary Education	..	3
or	or		
Education 89	Methods of Teaching	..	..
			15

Senior Year—Second Semester			
Home Economics 88	Household Equipment	1	1
Home Economics 96	Quantity Cookery	2	1
Home Economics 98	Institution Management	..	3
Electives			7
			15

COURSE OF STUDY FOR TEACHERS IN VOCATIONAL HOME ECONOMICS WITH A MAJOR IN HOME ECONOMICS AND A MINOR IN EDUCATION.

The requirements for teaching Vocational Home Economics in Nevada are met by taking the general home economics course (p. 151) and the following electives in the School of Education:

Sophomore Year—Second Semester		LEC.
Psychology 6	Elementary Educational Psychology	3
Education 24	School Management and Law	2

Junior Year—Second Semester		
Education 60	Problems of Secondary Education	2

Senior Year—First Semester		
Education 89	Methods in Teaching Vocational Homemaking	3
Education 75	Supervised Teaching	2
Education 88	Problems in Homemaking Education	2

Senior Year—Second Semester		
Education 76	Supervised Teaching	2
Education 82	Noninstructional Responsibilities of the High School Teacher	2
Total		18

INFORMATION FOR STUDENTS PREPARING TO TEACH HOME ECONOMICS

The State plan for Nevada home economics education requires Nevada graduates who have a major in Home Economics and a minor in Education to increase their experience in teaching by spending one to three weeks in full-time participation in a school that has a functioning vocational program under the guidance of an experienced vocational teacher.

Courses open to non-home economics majors:

Home Economics 3, introductory course.
Home Economics 15–18, clothing.
Home Economics 16, textiles.
Home Economics 31–32, food preparation.

Home Economics 33, food and nutrition.
Home Economics 42, food economics.
Home Economics 45, related art.
Home Economics 54, care of health and disease.
Home Economics 76, child development.
Home Economics 86, household administration.
Home Economics 87, house decoration.
Home Economics 88, household equipment.

COURSES OF INSTRUCTION

On the following pages, listed under their respective headings, are given all the courses in which instruction is offered by the University. These 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.

COURSE OFFERINGS

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.

DEPARTMENT OF AGRICULTURAL ECONOMICS

PROFESSOR WITTWER, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR TITUS

1. PRINCIPLES OF ECONOMICS WITH APPLICATIONS TO AGRICULTURE. An introduction to the economics of production, value and exchange, money and credit, business cycles, international trade, distribution of wealth, labor, transportation, agricultural credit, marketing and public finance with special emphasis on their application to agriculture. *Prerequisite:* Sophomore year. *First semester. Three credits.* Wittwer.

2. PRINCIPLES OF ECONOMICS WITH APPLICATIONS TO AGRICULTURE. A continuation of 1. *Second semester. Three credits.* Wittwer.

45. FARM ACCOUNTING. A study of various survey forms and types of record books. Actual farm records will be used and the various factors which make for successful farming criticized and studied. *First semester. Three credits.* Titus.

52. AGRICULTURAL ECONOMIC POLICY. A study of economic policy and practice in connection with such problems as farm tenancy and ownership, taxation, tariff, foreign trade, insurance, farm labor, production, and price control. *Prerequisite:* Agricultural Economics 1 and 2. *Second semester. Three credits.* Wittwer.

55. RURAL FINANCE. Fundamental principles of credit and finance as applied to agriculture. Credit requirements of agriculture, existing agencies for supplying credit and ways and means of utilizing them; strength and weakness of present credit system and proposals for reform. *Junior year. First semester. Two credits.* Wittwer.

56. LAND ECONOMICS. Deals with the underlying principles pertaining to urban, agricultural, mineral, forest, range, and other types of land in their social setting. Attention is focused on land resources, their classification, valuation, and use and related problems of finance, including taxation and rents. *Prerequisite:* Agricultural Economics 1 and 2. *Second semester. Two credits.* Wittwer.

57. MARKETING OF AGRICULTURAL PRODUCTS. A study of the organization, functions and operations of the market structure and of marketing enterprises with special reference to the distribution of agricultural products. *Junior year. First semester. Three credits.* Wittwer.

64. COOPERATIVE ORGANIZATIONS. A study of the development of cooperation in agriculture in the United States and foreign countries. Analysis of principles and problems peculiar in cooperative associations. The organization, financing and management of different types of cooperative marketing and purchasing associations. *Junior year. Second semester. Two credits.* Wittwer.

65. AGRICULTURAL PRICES. A study of prices of farm products in relation to agricultural and industrial conditions. Factors determining prices. Price trends. Adjustment of production to price changes. Price stabilization. Prices and market grades. Price policies. Market quotations. *Senior year. First semester. Two credits.* Wittwer.

71. CURRENT ECONOMIC PROBLEMS. A course designed to acquaint the student with some of the major economic problems of our present

day. *Prerequisite:* Agricultural Economics 1 and 2 or consent of instructor. *First semester. Two credits.* Wittwer. For credit only in the College of Agriculture.

76. FARM MANAGEMENT. 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; the management of fields; crops and manures. *Prerequisite:* Senior standing. *Second semester. Three credits.* Titus.

199–200. THESIS COURSE IN AGRICULTURAL ECONOMICS. *Either semester. Credit to be arranged.* Wittwer.

AGRONOMY

College of Agriculture

PROFESSOR STEWART, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR TITUS
MR. THORNTON

1. SOIL EROSION AND CONSERVATION. A study of soil erosion conditions throughout the United States from an agronomic point of view. A study of the influence of high soil productivity and protective vegetative covering of the soil is emphasized as a means of controlling soil erosion and its conservation. Also stresses the importance of contour strip cropping and terracing on sloping lands. The use of hay and pasture grasses and legumes in controlling soil erosion is emphasized. *First semester. Lectures, two hours. Two credits.* Agriculture building. Stewart.

2. 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. *Second semester. Lectures, three hours. Three credits.* Stewart.

5. FIELD CROPS. An advanced study of the principal cereal crops—corn, wheat, oats, barley, rye, rice, sorghum, etc. *First semester. Lectures, three hours. Three credits.* Stewart.

7. 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 erosion, drainage, and irrigation. *Prerequisite: Sophomore standing. First semester. Lectures, three hours. Three credits.* Stewart.

54. IRRIGATION AND DRAINAGE. A study of the principles of irrigation. Sources of water supply; measurements 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.* Titus.

60. PASTURE MANAGEMENT. Grazing management of tame and native pastures, poisonous plants, and methods of eliminating losses. *Second semester. Three credits.* Stewart.

61. SOIL ANALYSIS. A laboratory course involving a study of the chemical analyses of soils. Determination of humus, organic matter, nitrogen, phosphorus, potassium, etc. A study is also made of the so-called quick tests for determining the fertilizer requirements of soil. *Prerequisites:* Senior standing, Chemistry 9 and 10. *Second semester. Laboratory course, three periods. Three credits.* Stewart. Fee $9.

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 productivity and best uses of Nevada soils and their improvement. *Prerequisite:* Agronomy 6. *Second semester. Lectures, two hours. Two credits.* Given alternate years. Stewart.

63. FARM LAND VALUES. A lecture and field laboratory course dealing with physical properties of soils and crop adaptations, State water right laws, duties of water, acreage water charges in various sections of the State, possible acreage productions, carrying capacity of pastures, crop farm income and expenses, possible returns from sheep, dairy, livestock and poultry units, plating farms from deed descriptions, how to determine values of farm lands, methods of farm taxation, history, forming and operation of irrigation district, average crop and livestock sales prices. *First semester. Three credits.* Thornton.

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. *Second semester. Three credits.* Stewart.

92. SOIL-SURVEY METHODS. Summer Field Course. Methods of mapping and classifying soils, the preparation of soil, reports; field work in soil surveying and field studies of the profile of representative Nevada soils. *Prerequisite:* Agronomy 5. *Four to six credits.*

94. RANGE SURVEY METHODS. Summer Field Course. Methods of mapping and classifying range areas of range lands, the preparation of range reports, field work in range surveying, and field studies of representative Nevada ranges. *Prerequisite:* Junior standing in Range Management. *Four to six credits.*

96. AGRONOMIC SURVEY METHODS. Summer Field Course. Methods of mapping and classifying forage, pasture, and field crop areas. Preparation of agronomic reports. Field work in crop surveying and field studies of representative Nevada farm areas. *Prerequisite: Junior standing. Four to six credits.*

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.

Farm Mechanics

11. FARM BLACKSMITHING. Instruction and laboratory practice in the heating, bending, shaping, and welding of mild steel. Forging and

tempering of tool steel; general farm blacksmithing. *First semester. Two credits.* Titus. Fee $3.

20. FARM UTILITIES. General mechanics including rope work, blocks and tackle, belts, pulleys, pipe fitting, farm plumbing, soldering, sheet metalwork, farm pumps, water supply, and sewage disposal. *Second semester. Two credits.* Titus. Fee $3.

32. FARM MACHINERY AND EQUIPMENT. A study of the construction, operation, care, and repair of farm machinery and equipment. *Second semester. Two credits.* Titus. Fee $3.

41. FARM CARPENTRY. Elementary drawing, use and care of wood working tools, general farm carpentry, painting, glazing, farm building construction, blue print reading, cost estimating. *First semester. Two credits.* Titus. Fee $3.

53. FARM GAS ENGINES AND TRACTORS. The development, principles of operation, care, and repair of farm gas engines and farm tractors. Demonstrations and practice in the operation of farm tractors will be given whenever practicable. *First semester. Two credits.* Titus. Fee $3.

85. METHODS OF TEACHING FARM MECHANICS. A course designed for students preparing to meet the qualifications of agriculture and farm mechanics instructors in high schools. The organization and administration of a farm mechanics course, including objectives, course content, lesson planning, and teaching methods. *First semester. Two credits.* Titus.

ANIMAL HUSBANDRY

College of Agriculture

PROFESSOR WILSON, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR VAWTER
MR. BROOKS
MR. THORNTON

Animal Husbandry

1. BREEDS OF LIVE STOCK. The origin, development, characteristics, and uses of types and breeds of range and ranch animals. For illustration, the animals owned by the department and livestock ranches in the vicinity will be used, also lantern slides of typical animals of the various types and breeds. *First semester. Three credits.* Agriculture Building. Wilson.

3. LIVESTOCK JUDGING. Practice in judging livestock to gain familiarity with the points of excellence in the various breeds and types of range and ranch animals. *Prerequisite:* Animal husbandry 1. *First semester. Lectures, two hours; laboratory, two periods. Four credits.* Wilson. Fee $3.

30. LIVESTOCK FEEDING. The principles underlying and problems connected with the feeding of range and ranch animals. *Prerequisite:* Animal husbandry 1 and 4. *Second semester. Lectures, three hours. Three credits.* Wilson.

50. ANIMAL HYGIENE. A lecture course covering the principles of livestock sanitation and first aid. *Prerequisite:* Bacteriology 51. *Second semester. Three credits.* Vawter.

52. 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 ranch and range animals, studied with special reference to their application to breeding of range animals. *Prerequisite:* Zoology 2. *Second semester. Lectures, three hours. Three credits.* Wilson.

53. 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.* Wilson.

55. ADVANCED LIVESTOCK FEEDING. Continuation of animal husbandry 30. *Prerequisite:* Animal husbandry 30. *First semester. Lectures, three hours. Three credits.* 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.* Wilson. Fee $3.

57. LIVESTOCK MANAGEMENT. A study of the problems confronting the ranch and range; calculating profits under various conditions; systematic keeping of records of livestock operations; selection of animals for the feed yard, show ring, market, and butcher. *Prerequisite:* Animal husbandry 1, 4, 30. *Second semester. Three credits.* 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; botany 22. *Second semester. Five credits.* Wilson.

59. PROFESSIONAL JUDGING. *First semester. Laboratory, one period. One credit.* Given in alternate years. Wilson. Fee $1.50.

61–62. ANIMAL HUSBANDRY. Thesis course. Special problems in animal production and management. Problems relative to the open range under the provisions of the Taylor Grazing Act. *Prerequisite:* Animal husbandry 1, 4, 30, 51, 55, 57, 58. (May take this course with course 58.) *Either semester. Four to six credits.* Wilson. Fee $3.

63–64. ANIMAL HUSBANDRY LITERATURE. (Graduate credit given with the consent of the instructor.) A seminar course designed to help the student become familiar with the various sources of livestock information as well as to afford him practice in presenting such information for discussion. *Prerequisite: Junior standing. Both semesters. Two credits each semester.* The course may be repeated in the senior year for the same credit. Wilson.

Ed. 86. TEACHER TRAINING IN AGRICULTURE. *See Education.*

Dairy Husbandry

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 husbandry of dairy products. *Second semester. Lectures, two hours; laboratory, one period. Three credits.* Brooks. Fee $3.

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.* Brooks. 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, sherbert, ices, lacto. *Prerequisite:* Dairying 1. *Second semester. Lecture, one hour; laboratory, two periods. Three credits.* Brooks. 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. Lecture, one hour; laboratory, one period. Two credits.* Brooks. Fee $2.

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.* Wilson.

61–62. THESIS COURSE. Special problems in production or sanitation and city milk supply. Laboratory material is available through the dairies furnishing milk for the city of Reno. *Prerequisite:* Dairying 1 and 53 or 55. *Either semester. Two to six credits.* Wilson. Fee $3.

Poultry Husbandry

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. *Second semester. Two lectures, one laboratory. Three credits.* Thornton. 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. *First semester. Two credits.* Thornton. Fee $2.

ART

MRS. JOSLIN, ACTING HEAD OF DEPARTMENT

1–2. ELEMENTARY FREEHAND DRAWING. Principles of drawing, values and perspective taught in freehand drawing of casts. In monochrome. Also rapid figure sketching in charcoal, conti and pencil. *Both semesters. Two credits per semester.* Education Building. Joslin. Fee $1.

3–4. MODERN TRENDS IN ART EDUCATION. Techniques of handling art media—finger paint, clay, easel paint, chalk, watercolor, etc. Planned especially for elementary grade teachers who wish to use new methods in art teaching. *Both semesters. Two credits per semester.* Education Building. Joslin. Fee $1.50.

5–6. ART STRUCTURE AND COMPOSITION. Principles which underlie all art. Study of color and design and the application of both to the problems of the home economics student. *Both semesters. Two credits per semester.* Education Building. Joslin. Fee $1.

51–52. BEGINNING WATERCOLOR. The technique and handling of watercolor in still life and landscape.

BEGINNING OIL PAINTING. To be decided. *Both semesters. Three credits per semester.* Education Building. Joslin.

53–54. ADVANCED FREEHAND DRAWING. Drawing from still life and casts in preparation for later work in portrait and life class. Education Building. *Both semesters. Three credits per semester.* Joslin. Fee $1.

BIOLOGY

PROFESSOR FRANDSEN, HEAD OF DEPARTMENT
PROFESSOR LEHENBAUER
ASSOCIATE PROFESSOR MACK
ASSISTANT PROFESSOR BILLINGS
ASSISTANT PROFESSOR LOWRANCE

The department of biology includes the following divisions: Bacteriology, botany, horticulture, hygiene, and zoology.

Requirements for a minor in biology: Zoology 2 (4 credits), botany 1 (3 credits); botany 2 (3 credits) or botany 22 (4 credits); and 6 additional credits of which 3 must be in botany and 3 in zoology in courses above 50.

Requirements for a major in biology: Botany 1 (3 credits), botany 2 (3 credits), botany 22 (4 credits), zoology 2 (4 credits), zoology 59 (3 credits),

zoology 60 (3 credits) and 6 additional credits from courses in the department numbered 50 or above.

Students who intend to teach in secondary school are advised to take the combination minor or major in biology rather than the major or minor in either subject alone.

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 physiology 57–58. *First semester. Lectures, two hours; laboratory, two periods. Four credits.* 212 Agriculture Building. Frandsen. Fee $5.

52–53. SPECIAL BACTERIOLOGY. *Two to four credits.* Given in alternate years for four or more students. 212 Agriculture Building. Frandsen. Fee $5.

Biology

1–2. A course presenting those aspects of biology which will prepare for appreciative understanding of plant and animal life; also to form a foundation for study in other fields requiring a general knowledge of life phenomena. *Two lectures, one laboratory. Three credits each semester.* 103 Agriculture Building. Mack. Fee $3.

Botany

Requirements for a minor in botany: Botany 1 (3 credits), botany 2 (3 credits), botany 22 (4 credits), zoology 1 (3 credits), and 4 additional credits in the division of botany in courses numbered 50 or above.

Requirements for a major in botany: Botany 1 (3 credits), botany 2 (3 credits), botany 21 (4 credits), botany 22 (4 credits), zoology 1 (3 credits), and 8 additional credits in the division of botany in courses numbered 50 or above.

A year of chemistry is recommended for majors or minors in the division of botany.

Students planning to enter the field of forestry and range management should consult course of study listed in College of Agriculture.

1. INTRODUCTORY BOTANY FOR ARTS AND SCIENCE STUDENTS. The structure and physiology of the flowering plants. *First semester. Two lectures; one laboratory period. Three credits.* 109 and 9 Agriculture Building. Billings. Fee $3.

2. INTRODUCTORY BOTANY. The evolutionary study of plants as illustrated by representative types from the algae, fungi, mosses, ferns and seed plants. *Second semester. Two lectures; one laboratory period. Three credits.* 103 Agriculture Building. Lehenbauer. Fee $3.

3. INTRODUCTORY BOTANY FOR AGRICULTURAL AND PREMEDICAL STUDENTS. The fundamentals of plant growth and development of plants in relation to man and animals. *First semester. Two lectures; one laboratory period. Three credits.* 9 Agriculture Building. Lehenbauer. Fee $3.

21. THE STRUCTURE AND DEVELOPMENT OF THE SEED PLANTS. A detailed study of their morphology and histology in relation to function. *First semester. Two lectures; two laboratory periods. Four credits.* 8 Agriculture Building. Lehenbauer. Fee $4.

22. TAXONOMY. A systematic and comparative study of the principal families of flowering plants represented in the local flora and the indentification of plants by means of manuals. *Prerequisite:* Botany 1 or 3. *Second semester. Two lectures; two laboratory periods. Four credits.* 9 Agriculture Building. Billings. Fee $1.

27. ELEMENTS OF FORESTRY. A general course dealing with the history and principles of forestry, and the economic and social importance of forests. *First semester. Two lectures and assigned readings. Two credits.* 110 Agriculture Building. Alternates with botany 53. Billings.

53. DENDROLOGY. The study of trees, their identification, classification, distribution, silvicultural requirements and uses. The identification of wood specimens. *Prerequisite:* Botany 22. *First semester. Two lectures; two laboratory periods. Four credits.* 8 Agriculture Building. Alternates with Botany 27. Billings. Fee $2.

54. RANGE AGROSTOLOGY. The study of grasses, and practice in identification. Particular emphasis is given to range grasses. *Prerequisite:* Botany 22. *Second semester. One lecture; two laboratory periods. Three credits.* 8 Agriculture Building. Billings. Fee $2.

55. PLANT PHYSIOLOGY. A study of the activities of plants: absorption, photosynthesis, respiration, digestion, growth, plant responses, etc. *Prerequisite:* Botany 1 or 3. *Second semester. Two lectures; one laboratory period. Three credits.* 8 Agriculture Building. Lehenbauer. Fee $3.

56. AGRICULTURAL BOTANY. The study of weeds and poisonous plants, their identification, growth habits, and their control. Weed seeds and their identification. Seed testing. Pure seed laws and their application. *Prerequisite:* Botany 1 or 3, and botany 22. *Second semester. Two lectures; one laboratory period. Three credits.* 103 Agriculture Building. Lehenbauer. This course alternates with botany 64. Fee $2.

64. MYCOLOGY AND AN INTRODUCTION TO PLANT PATHOLOGY. The study of fungi and bacteria. Diseases of economic plants, their causes, identification and control. *Prerequisite:* Botany 1 or 3. *Second semester. Two lectures; two laboratory periods. Four credits.* 8 Agriculture Building. Lehenbauer. This course alternates with Botany 56. Fee $4.

75. PLANT ECOLOGY. HABITAT FACTORS. The relationship between native vegetation and environmental factors such as light, water, temperature, biotic, and soil, and the measurement of these factors. *Prerequisite:* Botany 22 and 55. *First semester. Three lectures; one laboratory. Four credits.* 8 Agriculture Building. Billings. Fee $4.

76. PLANT ECOLOGY. PLANT COMMUNITIES, SUCCESSION, AND INDICATOR PLANTS. The study of plant associations and their changes. The use of indicator plants in recognizing overgrazing, soil conditions, and forest sites. *Prerequisite:* Botany 75. *Second semester. Three lectures; one laboratory. Four credits.* 8 Agriculture Building. Billings. Fee $4.

91–92. BOTANICAL PROBLEMS. Special problems in some field of

botany. Assigned readings and reports. *Prerequisite:* The equivalent of two years of botany. *Either semester. One to four credits each semester.* 8 Agriculture Building. Lehenbauer and Billings.

93–94. BOTANICAL SEMINAR. The presentation by students of reviews and discussion of assigned reports of research in botanical literature. *Prerequisite:* Nine hours of botany and consent of instructors. *Both semesters. One meeting per week. One or two credits.* 7 Agriculture Building. Lehenbauer and Billings.

201–202. Thesis course for graduates.

Horticulture

1. HORTICULTURE. Plant propagation and ornamental horticulture. The principles of propagation. The culture and care of plants. The principles of ornamental gardening. *First semester. Three lectures and demonstrations; assigned readings. Three credits.* 9 Agriculture Building. Lehenbauer.

Hygiene

2. GENERAL HYGIENE. Two lectures per week. Elective for freshmen. *Second semester. One or two credits. Men*, Frandsen; *women*, Mack.

Zoology

Requirements for a minor in zoology: Zoology 2 (4 credits), botany 1 or 2 (3 credits), zoology 57–58, or zoology 9 (4 credits), 6 credits in the zoology division in courses numbered 50 or above.

Requirements for a major in zoology: Zoology 2 (4 credits), botany 1 or 2 (3 credits), zoology 57–58, or zoology 9 (4 credits), with 12 additional credits in the zoology division in courses numbered 50 or above.

Additional courses advised: Physics 1–2 (or admission credit), general chemistry, qualitative and quantitative analysis and organic chemistry; German 1–2 and 3–4.

1. 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. This course is intended mainly for those who wish to satisfy the freshman-sophomore laboratory science requirements without any idea of majoring in the subject. *Either semester. Lectures, two hours; laboratory, one period. Three credits.* 110 and 211 Agriculture Building. Frandsen and Lowrance. Fee $4.

2. GENERAL AND COMPARATIVE INVERTEBRATE ZOOLOGY. Content of course similar to zoology 1, but requiring more individual laboratory work and with more stress placed upon the comparative invertebrate aspects. This course should be taken by all those who plan to major in either zoology or biology. *Second semester. Two lectures and two laboratory periods. Four credits.* Frandsen and Lowrance. 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. *First semester. Lectures, three hours; laboratory, two periods. Four credits.* 5 Agriculture Building. Frandsen. Fee $5.

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. No prerequisite for juniors and seniors. Open to sophomores who have had one year of college biology. *First semester. Two credits.* 110 Agriculture Building. Frandsen.

57–58. PHYSIOLOGY. Principles of animal physiology, with special reference to the human being. Laboratory work and special assignments are arranged to meet separately the needs of (1) general and home economic students, and (2) premedical and prenursing students. Zoology 1, 2, or Biology 1, and Chemistry 1 and 2 should precede this course. A knowledge of general college physics and of analytical and organic chemistry is desirable for the premedical students. The course is designed for third and fourth year students, but it is open to a limited number of competent second year students. *Both semesters. Lecture, two hours; laboratory, one period. Three credits each semester.* 110 and 210 Agriculture Building. Lowrance. Fee $2.50 each semester.

59. GENERAL ENTOMOLOGY. A course adapted to those interested in insect life histories, their classification, economics and control. Field trips will be taken to collect the insects and to discover their places of hiding, hibernation and transformation. The laboratory work is differentiated to meet the needs of (1) general students and prospective teachers, and (2) range and forestry students, and majors in biology. *Prerequisite:* Zoology 2, or a working knowledge of the subject. *First semester. Lectures, two hours; laboratory, one period.* Agriculture Building. Lowrance. Fee $3.

60. WILDLIFE ECOLOGY. This course is especially designed for teachers, naturalists, field workers and those preparing for biological survey work. It includes a study of the classification, economic and ecological interests of reptiles, birds and mammals of special interest to range and forestry students. Occasional field trips will be taken. *Prerequisite:* Zoology 2 or 59. *Second semester. Lectures, two hours; laboratory, one period. Three credits.* Agriculture Building. Lowrance. Fee $3.

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 57–58. *Second semester. Lectures, three hours; laboratory, two periods. Four credits.* 212 Agriculture Building. Frandsen. Fee $2.

68. HISTOLOGY. The microscope and accessory apparatus, histological methods, comparative cytology. *Prerequisite:* Zoology 2. A knowledge of physics and organic chemistry is desirable. *Second semester. Three lectures. Two credits.* 212 Agriculture Building. Frandsen.

70. HISTOLOGY. Laboratory course. Methods of micromanipulation. Preparation of slides and recognition of tissues. *Prerequisite:* Zoology 2 and 9, or 57–58. *Second semester. Two laboratory periods.* Lowrance. Fee $4.

91–94. 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. *Both semesters. Credits to be arranged.* 212 Agriculture Building. Frandsen. Fee determined by type of work.

201. Thesis course for graduates.

CHEMISTRY

PROFESSOR SEARS, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR DEMING
MR. MACKENZIE
MR. WILLIAMS
MR. HILL
MR. HOOPER
MR. YAPUNCICH

Requirements for a minor in chemistry: Chemistry 1–2 or 7–8 (8 credits), 9–10 (8 credits), and 4 additional credits in the department in courses numbered 50 or above.

Requirements for a major in chemistry: Chemistry 1–2 or 7–8 (8 credits), 9–10 (8 credits), 51–52 (8 credits) and 95–96 (1 credit), and 3 additional credits in the department in courses numbered 50 or above.

The following courses are recommended but not required: Physics 1a-1b.

Requirements for the degree Bachelor of Science in Chemistry: See outline for Course of Study, page 123.

1–2. GENERAL 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 any student who desires a first course in college chemistry. *Both semesters. One lecture; two recitations; two laboratory periods. Four credits each semester.* Mackay Science Hall. Sears and Staff. Fee $8.

7–8. GENERAL INORGANIC CHEMISTRY. A course involving the same general field as that covered in chemistry 1–2, but greater emphasis is given to problems and equations as a preparation for more advanced work in chemistry. Designed primarily for students in engineering and for those registering in the course leading to the degree of Bachelor of Science in Chemistry, but open to others who desire a more complete knowledge of fundamentals. *Both semesters. One lecture, two recitations and two laboratory periods. Four credits each semester.* Mackay Science Hall. Sears and Staff. Fee $8.

9–10. PRINCIPLES AND PRACTICE OF ANALYTICAL CHEMISTRY. A lecture and laboratory course designed to give the student a knowledge of the fundamental principles underlying chemical changes and their application to qualitative and quantitative analysis. The laboratory work will involve the techniques of semimicro qualitative analysis and accurate quantitative analysis by both volumetric and gravimetric methods. Numerous equations and problems involving the mass law

and calculations needed for quantitative determinations will be assigned. *Two lectures and two laboratory periods each week. Prerequisite:* Chemistry 2 or 8. *Both semesters. Four credits each semester.* Mackay Science Hall. Williams. Fee $8.

25–26. ORGANIC CHEMISTRY FOR STUDENTS OF HOME ECONOMICS. (College of Agriculture.) A lecture and demonstration course in elementary organic chemistry. Special emphasis will be placed on the organic chemistry of foods and other materials used in the household. Open only to students of home economics. *Prerequisite:* Chemistry 1 and 2. *Both semesters. Three lectures. Three credits each semester.* Mackay Science Hall. MacKenzie.

51–52. ORGANIC CHEMISTRY. A lecture and laboratory course dealing with the compounds of carbon. *Prerequisite:* Chemistry 10. Outstanding students who have completed chemistry 9 or its equivalent may register for this course with consent of instructor. *Both semesters. Two lectures; two laboratory periods. Four credits each semester.* Mackay Science Hall. MacKenzie. Fee $8.

53. ADVANCED ORGANIC CHEMISTRY. (Graduate credit given with consent of instructor.) A lecture course of advanced topics in aliphatic organic chemistry. Modern theories will be discussed with particular emphasis placed on the physical aspects of the subject. *Prerequisite:* Chemistry 51–52. *First semester. Two lectures. Two credits.* Mackay Science Hall. MacKenzie.

54. QUALITATIVE ORGANIC ANALYSIS. (Graduate credit given with consent of instructor.) A lecture and laboratory course. A study of the methods available for the detection and indentification of organic compounds. *Prerequisite:* Chemistry 52. *Second semester. Two lectures and two laboratory periods. Four credits.* Mackay Science Hall. MacKenzie. Fee $8.

55. ADVANCED ORGANIC CHEMISTRY. (Graduate credit will be given with consent of instructor.) A laboratory course designed to give the student training in the methods of quantitative organic analysis. Included in the course will be methods of analysis of combustion; the determination of organic halogen; active hydrogen by the method of Tschugaeff and Zerevitinoff molecular weight determinations by the Rast method. Whenever possible, semimicro methods will be used. At the request of a sufficient number of students, biochemical analyses will be included with, or substituted for, the above analytical procedures. *Prerequisite:* Chemistry 52. *First semester. Two laboratory periods. Two credits.* Mackay Science Hall. MacKenzie. Fee $8.

64. SPECIAL PROBLEMS. A laboratory course designed to give the student training in various special fields. Water and gas analysis, potentiometric titrations, conductometric titrations, analysis of foods, minerals, etc., may be taken up. To be arranged by consultation with the head of the department. *Any semester. Two credits.* Mackay Science Hall. Sears and Staff. Fee $8.

71. ADVANCED ANALYTICAL CHEMISTRY. A lecture and laboratory course designed particularly for chemistry and mining students but open to all students desiring a more complete knowledge of analytical

methods. *Prerequisite:* Chemistry 10. *First semester. One recitation and two laboratory periods. Three credits.* Mackay Science Hall. Sears. Fee $8.

72. ADVANCED INORGANIC PREPARATIONS. (Graduate credit given with consent of instructor.) A laboratory 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. Formal reports involving the laboratory procedure and literature concerned will be required on all preparations. *Prerequisite:* Chemistry 75 and may accompany or follow Chemistry 76. *Second semester. Two laboratory periods. Two credits.* Mackay Science Hall. Sears. Fee $8.

74. CHEMISTRY OF THE RARER METALS. (Graduate credit given with consent of instructor.) A laboratory course designed to give a more intimate knowledge of the elements. Emphasis will be given to their analytical relations and to the preparation and properties of the metals and their more important compounds. *Prerequisite:* Three years of college chemistry. *Second semester. Two laboratory periods. Two credits.* Mackay Science Hall. Sears. Fee $8.

75–76. ADVANCED INORGANIC CHEMISTRY. (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 periodic law and 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:* Three years of college chemistry. *Both semesters. Two credits each semester.* Mackay Science Hall. Sears.

80. INTRODUCTION TO PHYSICAL CHEMISTRY. A lecture and laboratory course designed to illustrate the application of physical methods to chemical problems. Although designed primarily for students of chemistry, it is particularly suitable for engineers, premedics and others who wish a short introductory course. The subject is developed on the basis of the kinetic molecular theory of matter, reserving the thermodynamical treatment for chemistry 81–82. *Prerequisite: Chemistry* 10 and mathematics 16, or their equivalent. *Second semester. Two lectures and one laboratory period. Three credits.* Mackay Science Hall. Deming. Fee $4.

81–82. PHYSICAL CHEMISTRY. A lecture and laboratory course based on the application of the laws of physics to chemical problems. Many of the topics introduced in chemistry 80 are here more rigorously developed on the basis of the laws of thermodynamics and the kinetic molecular theory. *Prerequisite:* Chemistry 80, physics 2A, mathematics 24. Outstanding students who have completed Chemistry 10, or its equivalent, and who have had adequate training in mathematics and physics, may, with consent of the instructor, enroll in Chemistry 81 without the prerequisite Chemistry 80. *Both semesters. Two lectures and one laboratory period. Three credits each semester.* Mackay Science Hall. Deming. Fee $4.

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.* Mackay Science Hall. Sears.

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 two reports 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. Mackay Science Hall. Staff.

99–100. Thesis Course for Undergraduates. A laboratory and library course based on a special topic chosen from inorganic, analytical, organic or physical chemistry. Careful quantitative work is stressed. To be arranged by consultation with the instructors. *Prerequisite:* Chemistry 10, 52 and 80, German, and recommendation by the head of the department. *Both semesters. Two credits.* Mackay Science Hall. Sears and Staff. Fee $8.

101. Advanced Physical Chemistry. A lecture course dealing with the thermodynamic functions, and their partial derivatives. The method employed is essentially that of G. N. Lewis. *Prerequisite:* Chemistry 82. *First semester. Two lectures. Two credits.* Mackay Science Hall. Deming.

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.* Mackay Science Hall. Sears and Staff. Fee $4 per credit hour, according to work.

CIVIL ENGINEERING

College of Engineering

PROFESSOR BIXBY, ACTING HEAD OF DEPARTMENT
ASSISTANT PROFESSOR AMENS
ASSISTANT PROFESSOR GRAFTON
ASSISTANT PROFESSOR WAGNER

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.

11–12. Engineering Literature. The presentation and discussion of topics selected from current engineering literature. *Both semesters. One credit each semester.* Electrical Building.

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 not later than one week 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. ELEMENTARY SURVEYING. A study of the elements of plane surveying, including study of the construction and use of instruments, applications in differential and profile leveling; transit traverse surveys and computation of areas; stadia surveying and mapping; and public land surveys. *Prerequisite:* Mathematics 15. *First semester. Two credits.* Grafton.

52. ELEMENTARY FIELD SURVEYING. Field practice in the use of surveying instruments, including the use of tapes; survey of traverse, stadia traverse, differential, and profile leveling with plotting of profile; plotting of all data taken during field surveying operations; plotting of stadia notes and drawing in contours on map. *Prerequisite:* Civil Engineering 51 concurrently. *Two laboratory periods. Two credits.* Electrical Building. First semester. Bixby.

53. HIGHER SURVEYING. A continuation of C. E. 51. A study of field astronomy for engineers; care and adjustment of surveying instruments; triangulation and precise level control nets for large-scale mapping projects; plane table mapping, and mine surveying. *Two lecture periods. Second semester. Prerequisite:* C. E. 51. *Two credits.* Grafton.

54. HIGHER FIELD SURVEYING. A continuation of C. E. 52. Adjustment of surveying instruments; survey of triangulation network; baseline measurement with standardized tape, with application of temperature and sag correction; topographic survey of portion of campus with stadia board and transit; mapping of stadia survey. *Prerequisite:* C. E. 52–53. *Second semester. Two credits.* Electrical Building. Bixby.

55. FOUNDATIONS AND SUBSTRUCTURES. A study of the principles and practices of design and construction of bridge, dam, and building foundations, reservoir sites, etc., and relation of geology to various structures. *Two lectures. Two credits. Second semester.* Electrical Building. Bixby.

58. SUMMER SURVEYING. This course starts the first day after Commencement in May. The work consists of topographic surveying, involving careful base-line measurement and triangulation for control, followed by topographic surveying by plane table method. Mine surveying including both surface and underground workings as surveyed by each student. Most of the computations of field surveys are made during the evening following each day's work. *Prerequisite:* C. E. 51, 52, 53, and 54. *Four weeks.* Fee $20, including automobile transportation costs. Bixby and Amens.

60. HIGHWAY ENGINEERING. A detailed study is made of the location, construction, and maintenance of highways. *First semester. Two lectures. Two credits.* Electrical Building. Bixby.

63–64. ROUTE SURVEYING. Lectures, recitations, and field work on the location and construction of railroads and highways. Also a

study of tractive power and train resistance and their effects on the economic location and operation of railroads. *Prerequisite:* C. E. 51, 52, 53, and 54. *First semester. Lectures, three credits; field laboratory, two credits.* Electrical Building. Bixby. Fee $3.

67. ENGINEERING ECONOMICS. The principles of cost comparison and technique of estimating costs, including economic selection, depreciation, salvage value, sinking funds, etc., illustrated by typical everyday problems selected from all fields of engineering. *Prerequisite:* Junior standing. *Two lectures. Two credits.* Electrical Building. Wagner.

69. CIVIL ENGINEERING DRAWING. This course is designed to train students to plat field notes of topographic surveys, surveys of towns and rural areas. Also the platting from dimensional notes such structures as bridges, buildings, retaining walls, dams, etc. *First semester. Two laboratory periods. Two credits.* Electrical Building. Wagner.

72. TESTING MATERIALS LABORATORY. The experiments are as follows: Study of various testing machines and accessories for testing metals, cement, concrete and wood; tension tests on steel and cements; compression tests of concrete; tests of wood columns; end compression of short wood test specimens; flexure tests of small wood beams; tests of cements; screen tests of sands; specific gravity tests of cements, sand, and aggregates. A carefully prepared report, clearly stated, with required computations, must follow each test. *Prerequisite:* C. E. 74 must be taken as a prerequisite or concurrently with C. E. 72. *First semester. Laboratory, one period. One credit.* Testing Laboratory. Mechanical Building. Bixby. Fee $2.50.

74. STRENGTH OF MATERIALS. A study of the physical properties of engineering materials in relation to behavior under stress. Applications of the principles of mechanics to engineering design, including axial stresses and deformations; flexure in homogeneous and composite beams; sheering stresses and deformations; design of steel tanks; riveted and welded joints; compression members; combined bending and direct stress; stresses in hooks and curved beams; torsional stresses and deformations and design of shafts; resilience and impact stresses; deflection in beams; stresses in continuous and restrained flexural members; applications of photo-elasticity to study of stress concentrations; and theories of failure of materials. *Three lecture periods. Three credits. Prerequisites:* Physics 3 and 4; Math. 25, 26, and 55. Electrical Building. Grafton.

75. STRUCTURAL ANALYSIS. A study of basic principles of stress analysis applied to various types of statically determinate structures, including the analysis of frames, girders, and various types of trusses by algebraic methods; principles of graphical analysis and applications to problems in equilibrium and analysis of trussed structures; analysis of live load stresses in highway and railroad bridges by the use of influence diagrams and by conventional algebraic methods; and discussion of various common types of bridge and building trusses. *Two lectures and one laboratory period. First semester. Three credits.* Electrical Building. Grafton.

76. ADVANCED STRUCTURAL ANALYSIS. A continuation of C. E. 75.

A study of the principles of stress analysis as applied to structures of statically indeterminate types, including deformations and deflections in structures by graphical and algebraic methods; analysis of statically indeterminate trusses; methods of analysis of arches, rigid frames, and other closed ringed structures by algebraic computation; and solution of continuous and multiple girders and frames by methods of successive approximation. *Two lecture periods. Two credits. Second semester. Prerequisites:* C. E. 74 and 75. Electrical Building. Grafton.

77. STRUCTURAL DESIGN. Application of the principles of analysis and design to steel structures, including a study of structural members, details, and connections, and computation of design notes and preparation of design drawings for steel framing for a building and for a plate girder bridge. *One lecture and two laboratory periods. First semester. Three credits. Prerequisites:* C. E. 76. Electrical Building. Grafton.

78. STRUCTURAL DESIGN. A continuation of C. E. 77. Complete analysis and design, including computation of design notes and preparation of design drawings for a railway or highway steel truss bridge. *One lecture and two laboratory periods. Second semester. Three credits. Prerequisites:* C. E. 77. Electrical Building. Grafton.

85. REINFORCED CONCRETE DESIGN. A study of the theory and practice of reinforced concrete design and applications to typical design problems, including design and stress analysis of various types of structural members; the design of details in reinforced concrete; computation of design notes and preparation of design drawings for beam, girder, and flat types of floor framing; and design of columns; preparation of schedules for reinforced concrete building construction. *Two lecture and two laboratory periods. Four credits. First semester. Prerequisites:* C. E. 76. Electrical Building. Grafton.

86. REINFORCED CONCRETE DESIGN. A continuation of C. E. 85. Applications of principles of design to additional types of reinforced concrete structures, including design of retaining walls; study of methods of stress analysis for statically indeterminate types of reinforced concrete structures; computation of design notes and stress analysis of a reinforced concrete arch bridge; and design and stress analysis of a continuous girder viaduct by method of moment distribution. *One lecture and two laboratory periods. Three credits. Second semester. Prerequisites:* C. E. 85. Electrical Building. Grafton.

87. ENGINEERING CONTRACTS AND SPECIFICATIONS. The fundamental law of contracts as it applies to engineering, together with the essentials of correct specifications and the interpretation of the technical terms commonly found therein. A great part of the material covered is presented especially for engineering students in the form of interesting, representative cases. A short period is devoted to employment, ethics and other engineering relations. *Prerequisites:* Junior standing. *First semester. Three credits.* Wagner.

90. ELEMENTARY FLUID MECHANICS. The fundamental principles of the mechanics of fluids and their application to practical engineering problems. The study includes: physical properties, fluid statics,

kinematics and dynamics of fluid flow, friction, flow through pipes, flow in open channels, hydraulic turbines, centrifugal pumps, etc. *Prerequisite:* Math. 55. *Three lectures. Three credits. Second semester.* Electrical Building. Wagner.

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. *Three lectures. Three credits. Second semester.* Electrical Building. Bixby.

92. ELEMENTARY FLUID MECHANICS PROBLEMS. This course consists of one laboratory period per week and is devoted to the solution of problems (supplementing those given in C. E. 90) for the purpose of augmenting the students' skill in practical applications. *Prerequisite:* Enrollment in C. E. 90. *Second semester. One credit.* Electrical Building. Wagner.

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:* To be taken concurrently with C. E. 90. *Three lectures. Three credits. Second semester.* Electrical Building. Bixby.

97. HYDROLOGY (A). The fundamental principles of hydrology and its related problems of climatology, stream flow, and run-off, underground water, water rights, etc., from the standpoint of western conditions. Practical field and office problems. *Prerequisite:* Junior standing. *Three lectures. Three credits. First semester.* Electrical Building. Wagner.

98. HYDROLOGY (B). Conduit distribution systems, pumps, water supply, and purification, storage reservoirs, snow surveying, flood control, etc. Practical field and office problems. *Prerequisite:* Junior standing. C. E. 97 is not a prerequisite to this course. *Three lectures. Three credits. Second semester.* Electrical Building. Wagner.

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. Wagner.

100. THESIS. Thesis on an approved subject in which the student is especially interested. *Second semester. Two credits.* Electrical Building. Wagner.

110. HYDRAULICS OF OPEN CHANNELS. The hydraulics of uniform and nonuniform flow, together with applications of latest available research to open channel problems. Such topics are treated as sub- and super-critical flow, hydraulic jump, surges and wave phenomena, backwater and dropdown curves; delivery of canals, etc. *Prerequisite:* Elementary fluid mechanics, C. E. 90. *Second semester. Two or three credits.* Electrical Building. Wagner.

111. ADVANCED HYDRAULICS. Dimensional analysis, model similitude, water hammer, cavitation, wave and surge motion, use of flow

net, turbulence, resistance of submerged bodies, etc., depending upon the trend of interests of those enrolled. *Prerequisite:* C. E. 90. *First semester. Two or three credits.* Electrical Building. Wagner.

112. HYDRAULIC MACHINERY. The theory, construction, installation, operation, and characteristics of hydraulic turbines, centrifugal pumps, and other hydraulic machinery. Special emphasis is placed upon their proper selection to meet specified conditions. Actual field tests will usually be made. *Prerequisite:* C. E. 90. *Two or three credits. Second semester.* Electrical Building. Wagner.

113–114. ADVANCED WORK IN HYDRAULIC ENGINEERING. Special problems in hydraulics or related fields will be arranged to meet the needs of students wishing to do advanced work in this field. *Prerequisite:* C. E. 90. *Either semester. Credits to be arranged.* Electrical Building. Wagner.

121. ADVANCED STRUCTURAL DESIGN. A study of theory and practice of design and stress analysis in advanced types of structures, in both concrete and structural steel, including a study of current methods of analysis of statically indeterminate structures. The following are among the subjects considered: Two-hinged rigid frames, subways and large culverts, continuous beams and continuous girder viaducts, a study of influence diagrams as applied to statically indeterminate structures, effect of variable section in structural members, effect of foundation conditions and abutment rotations and displacements, and a discussion of classical methods of statically indeterminate structural analysis. *Prerequisites:* C. E. 78 and 86. *Two or three credits. First semester.* Electrical Building. Grafton.

122. ADVANCED STRUCTURAL DESIGN. A continuation of C. E. 121. The following additional subjects are considered: Multiple rectangular frames, including wind stresses in tall buildings, secondary stresses in bridge trusses, continuous arches on elastic piers, continuous and long span bridges, moveable bridges, and suspension bridges, a study of rigidity of various bridge types. *Two or three lecture periods. Second semester. Prerequisite:* C. E. 121. *Two or three credits.* Electrical Building. Grafton.

199–200. GRADUATE RESEARCH OR THESIS. Original theoretical and experimental investigation, designed to give training in methods of research, to serve as theses, and to yield contributions to scientific knowledge. Open only to properly qualified graduate students with the approval of the staff member concerned. *Both semesters. Credits to be arranged.* Wagner.

ECONOMICS, BUSINESS, AND SOCIOLOGY

ASSOCIATE PROFESSOR INWOOD, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR WEBSTER
ASSOCIATE PROFESSOR SUTHERLAND
ASSISTANT PROFESSOR PLUMLEY
MR. CHADWICK, INSTRUCTOR

Requirements for a minor in economics: Economics 1–2 (6 credits); 12 additional credits in the department, not less than 6 of which shall be in courses numbered 50 or above.

Requirements for a major in economics: Economics 1–2 (6 credits), economics 91–92 (6 credits), business administration 43–44 (6 credits), and 9

additional credits in the department, which shall be in courses number 50 or above.

Requirements for a major in sociology: Economics 1–2 (6 credits), sociology 1 (3 credits), sociology 71 and 90 (6 credits) and 12 additional credits which shall be in sociology courses numbered 50 or above.

The following courses are recommended but not required for minors and majors in economics: Philosophy 7–8, psychology 5–51, 61–64, mathematics 18–20, French and German.

Economics

1. PRINCIPLES OF ECONOMICS. An introduction to economic theory. *Prerequisite:* Sophomore standing. *Either semester. Three credits.* Education Building. The Staff.

2. PRINCIPLES OF ECONOMICS. A continuation of 1. *Second semester. Three credits.* Education Building. The Staff.

3. INDUSTRIAL HISTORY OF EUROPE. The economic history of Europe during ancient, medieval and modern times. *Two credits.* (Not given in 1940–1941.)

7. ECONOMIC GEOGRAPHY. Resources and industries of the world with special reference to their bearing on geographic specialization and international trade. *First semester. Two credits.* Open to freshmen. Education Building. Inwood.

10. ECONOMIC HISTORY OF THE UNITED STATES. Introductory historical treatment of the economic development of America. *Second semester. Two credits.* Open to freshmen. Education Building. Inwood.

17. CONSUMPTION ECONOMICS. Not open to freshmen. *First semester. Two credits.* Education Building. Plumley.

51. PUBLIC FINANCE. Public expenditures and sources of public revenue. *Prerequisite:* Economics 1–2. *First semester. Three credits.* Education Building. Sutherland.

53. MONEY AND BANKING. *Prerequisite:* Economics 1–2. *First semester. Three credits.* Education Building. Plumley.

54. PUBLIC UTILITIES. The development, organization, characteristics and legal status of public service enterprises. *Prerequisite:* Economics 1–2. *Second semester. Three credits.* Education Building. Sutherland.

56. INSURANCE. *Prerequisite:* Economics 1–2, business 41. *Second semester. Two credits.* Education Building. Plumley.

58. INTERNATIONAL TRADE. Theory of international trade. Tariffs and tariff history. *Prerequisite:* Economics 1–2 and Economics 7. *Second semester. Two credits.* Education Building. Plumley.

61. STATISTICAL METHODS. Elementary statistical methods as used in business and in the social sciences. *First semester. Two lectures and one laboratory period per week. Three credits.* Education Building. Plumley.

62. TRANSPORTATION. The growth and development of transportation in the United States with emphasis on bases of rate structures and regulation. *Prerequisite:* Economics 1–2, business 41. *Second semester. Two credits.* Education Building. Inwood.

64. LABOR ECONOMICS. *Prerequisite:* Economics 1–2. *Second semester. Three credits.* Education Building. Plumley.

66. INTRODUCTION TO ECONOMICS AND BUSINESS ADMINISTRATION (College of Engineering). *Prerequisite:* Junior Standing. *Either semester. Three credits.* Education Building. Plumley.

68. ECONOMICS OF MARKETING. *Prerequisite:* Economics 1–2. *Second semester. Three credits.* Education Building. Inwood.

73. BUSINESS CYCLES. *Prerequisite:* Economics 1–2. *First semester. Three credits.* Education Building. Plumley.

91. ADVANCED ECONOMIC THEORY. *Prerequisite:* Economics 1–2. *First semester. Three credits.* Education Building. Sutherland.

92. HISTORY OF ECONOMIC THOUGHT. *Prerequisite:* Economics 1–2. *Second semester. Three credits.* Education Building. Sutherland.

Business

41. FUNDAMENTALS OF BUSINESS ORGANIZATION. An introductory survey of problems and methods of business administration. *Prerequisite:* Sophomore standing. *First semester. Three credits.* Education Building. Inwood.

43–44. ELEMENTARY ACCOUNTING. Accounting theory and practice. Problems and practice sets. *Prerequisite:* Sophomore standing. *Two lectures and one laboratory period per week. Both semesters. Three credits each semester.* Education Building. Chadwick.

47. BUSINESS LAW. A comprehensive study of the forms and procedure with respect to law of contracts, negotiable instruments and general commercial practice. *First semester. Three credits.* Education Building. Plumley.

55–56. ADVANCED ACCOUNTING. Advanced theory of accounts and its application. Selected problems and readings. *Prerequisite:* Business 43–44. *Both semesters. Three credits each semester.* Education Building. Chadwick.

65. ADMINISTRATION OF FINANCE. Principles and problems of financing business enterprises. *Prerequisite:* Business 41. *First semester. Three credits.* Education Building. Inwood.

66. INDUSTRIAL MANAGEMENT. Internal organization and control of different forms of business enterprise. *Prerequisite:* Business 41. *Second semester. Three credits.* Education Building. Inwood.

74. ADVANCED BUSINESS LAW. An advanced course in business law for those who are specializing in a preparation for business. *Prerequisite:* Business 47. *Second semester. Three credits.* Education Building. (Not given in 1940–1941.)

85. COST ACCOUNTING. A comprehensive study of all elements of manufacturing cost accounting. *Prerequisite:* Business 43–44. *First semester. Three credits.* Education Building. Chadwick.

86. FEDERAL TAX ACCOUNTING. Study of the history of the Federal income tax; Federal revenue Acts and their interpretation. Actual preparation of individual, partnership and corporation income tax

returns, important Treasury Department decisions on income tax problems. *Prerequisite:* Business 43–44. *Second semester. Two credits.* Education Building. Chadwick.

92. AUDITING. The principles and practice of auditing. Practice problems. *Prerequisite:* Business 43–44. *Second semester. Three credits.* Education Building. Chadwick.

Sociology

1. PRINCIPLES OF SOCIOLOGY. The fundamentals of social processes and evolution. *Prerequisite:* Sophomore standing. *First semester. Three credits.* Education Building. Webster.

2. SOCIAL PROBLEMS. The major problems of modern social life and their remedies. *Prerequisite:* Sophomore standing. *Second semester. Three credits.* Education Building. Webster.

50. RURAL SOCIOLOGY. Rural life and problems with special reference to Nevada conditions. *Second semester. Two credits.* Education Building. Webster.

57. CULTURAL ANTHROPOLOGY. Primitive cultures as a basis for modern social organization. *First semester. Two credits.* Education Building. Webster.

71. SOCIAL ORGANIZATION. The structure, forms, functions and development of major social groups and institutions. *First semester. Three credits.* Education Building. Webster.

79. RACE PROBLEMS. The social significance of race and racial minorities. *First semester. Two credits.* Education Building. Webster.

80. THE FAMILY. Forms and functions of the family as a social institution. Emphasis on present trends. *Second semester. Two credits.* Webster.

81. POVERTY AND DEPENDENCY. Causes of economic inefficiency. Methods used in relief. *Prerequisite:* Economics 1–2. *First semester. Two credits.* Education Building. Webster. (Alternates with Sociology 83.)

83. POPULATION. The social and economic significance of numbers and quality of population. Migration. *First semester. Two credits.* Education Building. Webster. (Alternates with Sociology 81.)

84. SOCIAL SECURITY. Theory and development of modern provisions for economic security. Emphasis upon old age and unemployment in the United States. *Prerequisite:* Economics 1–2. *Second semester. Two credits.* Education Building. Webster. (Alternates with Sociology 86.)

86. METHODS IN SOCIAL WORK. Principles and methods in applied sociology. *Prerequisite:* Sociology 1 and 2. *Second semester. Two credits.* Education Building. Webster. (Alternates with Sociology 84.)

90. ADVANCED SOCIAL THEORY. Emphasis upon modern schools of social thought. *Prerequisite:* Sociology 1. *Second semester. Three credits.* Education Building. Webster.

EDUCATION

PROFESSOR TRANER, HEAD OF DEPARTMENT
PROFESSOR EMERITUS JOHN W. HALL
ASSOCIATE PROFESSOR RUEBSAM
ASSOCIATE PROFESSOR BROWN
ASSISTANT PROFESSOR PUFFINBARGER
MR. HIGGINS
MISS NESBITT
MISS FREDRIC
COOPERATING TEACHERS

Requirements for a minor in education: Psychology 6 (3 credits), education 24 (2 credits), education 60 (2 credits), education 71 (3 credits), education 75 (2 credits), education 76 (2 credits), education 82 (2 credits), and 2 credits of special methods courses (education 64, 65, 66, 88).

Requirements for a major in education: 27 credits in education, approved by the Dean, of which at least 12 must be in courses numbered 50 or above.

Kindergarten-Primary Education

17. KINDERGARTEN - PRIMARY EDUCATION. This course deals with kindergarten-primary education as a unified experience, emphasizing the history, theory and curriculum of the kindergarten and primary grades. *First semester. Two credits.* Ruebsam.

18. THE KINDERGARTEN-PRIMARY CURRICULUM. This course includes emphasis upon the various phases of the kindergarten-primary course of study (art, music, games, dances, rhythms, nature study, etc.). *Second semester. Two credits.* Ruebsam.

19. LITERATURE IN THE KINDERGARTEN-PRIMARY GRADES. Children's stories as a background to literature will be considered in the course, with practical guidance in selection and teaching. The relation of literature to the activities program will be shown through built-up reading lessons, dramatizations, and simple puppetry. The artistic presentation of poetry as a joyous experience will be included. *First semester. Two credits.* Ruebsam. (Alternates with Education 41.) (Not given in 1940–1941.)

25A. OBSERVATION OF TEACHING. Observation and discussion of specific classroom work in the kindergarten-primary grades as a preparation for practice teaching. *First semester. One credit.* Ruebsam.

28–29. SUPERVISED TEACHING IN KINDERGARTEN-PRIMARY GRADES. Opportunity for teaching open to normal school students and to four-year students desiring to qualify for the elementary teaching certificate. Students enrolled must have had or be taking education 34. Students teach two subjects, one hour daily. *Either semester. Five credits.* Ruebsam. Fee $1.

34. THE TEACHING OF READING AND ENGLISH. Principles underlying the selection and presentation of subject matter for the primary grades. This includes beginning reading, activities, seat work, and tests in reading. Picture studies, stories, dramatization, sentence structure, compositions, and poetry comprise the work in language. *Second semester. Three credits.* Ruebsam.

41. CONSTRUCTIVE ACTIVITIES FOR KINDERGARTEN-PRIMARY GRADES.

This course is devoted to a consideration of the materials by means of which the child organizes and expresses his ideas and establishes desirable attitudes and habits. *First semester. Two credits.* (Alternates with Education 19.) Ruebsam. Fee $1.

53. EARLY GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD. A study of the factors affecting the physical, motor, intellectual, social, and emotional development of the child from birth through the primary grades of school. *First semester. Two credits.* Ruebsam.

54. AUXILIARY SUBJECTS IN THE KINDERGARTEN-PRIMARY CURRICULUM. An intensive study of the contribution of such subjects as arts and crafts, music, games and rhythms, to the education of the kindergarten and primary child. If taken for graduate credit an individual problem pertaining to the philosophy of kindergarten-primary education will be assigned. *Second semester. Two credits.* Ruebsam.

55. CONTENT MATERIAL IN KINDERGARTEN-PRIMARY GRADES. This course is an advanced study of recent theory and practice covering objectives, methods, and desirable experiences to be afforded children in the kindergarten-primary grades in the fields of arithmetic and social sciences. *Second semester. Two credits.* Ruebsam. (Not given in 1940–1941.)

General Elementary

1. TEACHING IN THE ELEMENTARY SCHOOL. An introduction to teaching as a profession, what it requires of the teacher, what it has to offer, and what problems of classroom teaching and management it presents. *First semester. Two credits.* Traner.

3–4. MODERN TRENDS IN ART EDUCATION. Techniques of handling art media—finger paint, clay, easel paint, chalk, water color, etc. Planned especially for elementary school teachers who wish to use new methods in art teaching. *Both semesters. Two credits each semester.* Joslin. Fee $1.50 each semester.

21. TEACHING OF MUSIC. The aims and principles of music teaching in the kindergarten, elementary and upper grades. Group technique, song leading, interpretation, rhythmic activities. Care of the voice through various periods of development. Remedial exercises for improving pitch defects and tone quality. Music materials, rote songs, unison and descant songs, part songs, records, radio, and methods of approach for the listening period. *First semester. Two credits.* Post.

24. STATE SCHOOL ORGANIZATION AND SCHOOL LAW. The principles of good State school organization and how Nevada conforms to those principles as revealed by a careful study of the school code of the State. This course is designed to meet *all* certification requirements for school law. *Either semester. Two credits.* Brown.

25B. OBSERVATION OF TEACHING. Observation and discussion of specific classroom work in the intermediate grades, as a preparation for practice teaching. *First semester. One credit.* Puffinbarger.

30. TEACHING OF THE SOCIAL STUDIES. A study of means by which child participation in the learning of the social studies may be attained. Emphasis will be placed upon such topics as directed study, the problem-discussion method, the unit and project method, and source

material. The teaching of the course is based upon the study of fourteen problems. *Second semester. Two credits.* Brown.

31. THE TEACHING OF ARITHMETIC. Particular emphasis will be given to diagnostic and remedial treatment of pupil difficulties. Considerable time will be devoted to studies pertaining to content, pupil readiness to learn arithmetic and the principal objectives of the study. *First semester. Two credits.* Puffinbarger.

35. THE TEACHING OF ENGLISH. A study of the principles, materials, and methods involved in the teaching of the language subjects in the intermediate grades, with especial attention to remedial procedures in reading. *Second semester. Two credits.* Puffinbarger.

37. THE TEACHING OF GEOGRAPHY. A consideration of modern trends in the study of geography in the elementary school, the principles governing the successful teaching of the subject, the use of problems and projects, the selection and organization of subject matter with especial reference to the state adopted texts, and the contribution of standardized tests for measuring achievement. *First semester. Two credits.* Puffinbarger.

43–44. SUPERVISED TEACHING IN THE INTERMEDIATE GRADES. Opportunity for teaching, open to normal school students and to four-year students desiring to qualify for the elementary teaching certificate. Students enrolled must have had or be taking methods courses. Students teach two subjects, one hour daily. *Either semester. Five credits.* Puffinbarger. Fee $1.

46. THE MANAGEMENT AND ORGANIZATION OF RURAL SCHOOLS. A study of the classroom problems of the rural school; organization, course of study, daily program, use of projects, classification, equipment, and discipline. *Second semester. Two credits.* Puffinbarger.

57. HISTORY OF ELEMENTARY EDUCATION. This course will consider the evolution of elementary school practice and theory from the time of the early Greeks and Romans to the present. Its principal objectives will be (1) to give the teacher in service functional knowledge of educational trends, (2) to enlarge the perspective of the teacher, and (3) to aid the teacher to evaluate her status in everyday life. *First semester. Two credits.* Brown. (Not given in 1940–1941.)

68. EDUCATION 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. *First semester. Two credits.* Brown.

Secondary Education

56A. GROUP LEADERSHIP FOR WOMEN. A study of the development, purposes, and organization of Girl Scout, Girl Reserve and the Camp Fire groups. Whenever possible, national leaders from each group will contribute to the leadership training. Program planning, activities, crafts, etc., adaptable to the three programs are included. Each student will assist as a group leader. *Second semester. Two credits. One lecture, one laboratory.* Fredric.

56B. SCOUTCRAFT FOR MEN. This course will deal with the theory and practice of scoutcraft as presented by Boy Scouts of America. The course includes not only a study of the nature of the boy and a review of aims and methods of education and their application to the program of scouting, but gives a complete picture of types of leisure-time programs being offered boys in America today. *Second semester. One credit.*

58. HISTORY OF SECONDARY EDUCATION. This course will involve a study of educational trends from the time of the early Greeks and Romans to the present. The principal objective of the work will be to throw light on present day secondary school problems by showing the evolution of secondary school curricula, methods of instruction, and objectives. *Second semester. Two credits.* Brown. (Not given in 1940–1941.)

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. Open to juniors only. *Either semester. Two credits.* Traner.

64. ADMINISTRATION AND ORGANIZATION OF HIGH SCHOOL ATHLETICS. A course covering high school competition in general, methods of organizing athletic associations and administration of same. *Second semester. Three periods per week. Two credits.* Martie.

65. HIGH SCHOOL MUSIC. Conducting. Instrumental technique. Practical consideration of instrumentation, transposing instruments, and teaching material of all grades. Choral technique. Voice ranges of boys and girls, the changing voice, remedial exercises. Materials for part singing, girls' and boys' glee clubs, and mixed chorus. High school music curricula. Technical and appreciatory objectives. Active participation in orchestra, glee club or band required and applicant must be a junior or senior with a minor in music or its equivalent. *Second semester. Two credits.* Post.

66. SUBJECT MATTER AND METHODS. A study of the most suitable subject matter for the different high school courses and of the methods of teaching specific subjects. General class discussion and special study and reports and observation by individuals in their major and minor subjects.

Section A, foreign languages. *First semester. One credit.* Traner.

Section B, English. *First semester.*

Section C, mathematics. *First semester. Two credits.* Wood.

Section D, science. *First semester. One credit.* Brown. (Not given in 1940–1941.)

Section E, social subjects. *Second semester. Two credits.* Brown.

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.* Brown.

73–74. SUPERVISED TEACHING IN SEVENTH AND EIGHTH GRADES. This course provides opportunity for teaching specific subjects in the seventh and eighth grades of the junior high school. Credits obtained in this course may be applied toward elementary and junior high school teaching certificates. Students enrolled will teach two different classes on Tuesday and on Thursday. *Prerequisite:* Method courses in the subjects to be taught. *Either semester. Four credits.* Brown. Fee $1.

75–76. SUPERVISED TEACHING IN THE HIGH SCHOOL. Teaching in grades nine to twelve in major or minor subject of the student. Required of all candidates for the high school teachers diploma. Students enrolled must reserve ample time either in the forenoon or afternoon to make assignments possible. *Prerequisite:* Method courses in subject to be taught. Students teach one class on Tuesday and Thursday. *Either semester. Two credits.* Traner and Brown for academic subjects, Nesbitt for home economics, Higgins for agriculture. Fee $1.

82. NONINSTRUCTIONAL RESPONSIBILITIES OF THE HIGH SCHOOL TEACHER. A study of those responsibilities and requirements which the high school teacher must meet outside of class instruction. The course includes a consideration of the teacher's relations to the profession, to the school authorities and to the State and community. For seniors only. *Second semester. Two credits.* Traner.

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 for the vocational agricultural certificate. *Second semester. Two credits.* Higgins.

87. METHODS IN TEACHING VOCATIONAL AGRICULTURE. This course involves principles and techniques in course construction for all-day, part-time and evening classes in vocational agriculture; preparation of teaching plans and job analysis; methods of conducting supervised farm training, including selection of the long-time program, aims and objectives, budgeting, preparation of job plans, keeping farm records and accounts, enterprise analysis and teachers responsibility in supervision. Open to seniors who are preparing to meet the requirements for a high school vocational teaching certificate. *First semester. Three credits.* Higgins.

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 for the vocational home economics certificate. *First semester. Two credits.* Nesbitt.

89. METHODS IN TEACHING VOCATIONAL HOMEMAKING. Analysis of

objectives, content and experiences for a comprehensive program of education for home living in secondary schools to include the following: Provision for food for the family; selection, care and construction of clothing; care and guidance of children; selection, furnishing and care of house; selection, and use of home equipment; maintenance of health; home care of the sick; consumer-buying; management of all materials and human resources available to the home; maintenance of satisfactory family relationships; application of the arts and sciences to the home. *First semester. Three credits.* Nesbitt.

95. Supervision and Instruction in Junior High School Grades. This course will consider the development, present status, and influence of the junior high school on educational perspectives and educational practices in the junior high school and in the corresponding grades of the traditional elementary school. The structural, social, civic, and economic-vocational foundations of the junior high school will be studied briefly. Attention will be given to the psychological foundation of the junior high school and its implications for supervision, for the instructional program, and for the guidance and socialization of pupils in upper elementary and junior high school grades. A major part of the course time will be given to the study of the instructional program of junior high school grades. *Second semester. Two credits.* Brown.

121. School Supervision. Studies in elementary school problems. A course for teachers who wish to study the technique of the daily class meeting and problems of classroom procedure. Considerable time will be devoted to the program of the activity school. This course will be especially valuable for prospective supervisors and principals. A seminar. *Either semester. Two credits.* Hall.

Educational Psychology

Education 6. See Psychology 6.

67. Psychology of the Elementary School Subjects. This course sets forth and interprets the scientific experiments and investigations that have been made relating to learning and teaching of the elementary branches. Emphasis is placed on the psychological problems of immediate concern to the teacher in the classroom. *Second semester. Two credits.* Puffinbarger.

69. The Education of Retarded Children. Describes the characteristics and capacities of slow-learning children, their place in the school and community, and the procedures basic to planning and carrying out an adequate program of learning experience that satisfies the needs and capacities of such children at each stage of their development. *First semester. Two credits.* Puffinbarger. (Not given in 1940–1941.)

70. The Education of Superior Children. Designed to acquaint public school teachers with the problems and methods involved in the adjustment and training of superior children, and with educational provisions for the mentally alert, but emotionally unstable, gifted child. *Second semester. Two credits.* Puffinbarger. (Not given in 1940–1941.)

72. ADVANCED EDUCATIONAL PSYCHOLOGY. The nature and needs of the child, emphasizing mental and emotional development, nature of learning, conditions affecting learning, problems of transfer, problems of adjustment. *First semester. Two credits.* Puffinbarger.

ELECTRICAL ENGINEERING

College of Engineering

PROFESSOR S. G. PALMER, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR SANDORF

21. INTRODUCTORY ELECTRICAL ENGINEERING. An introduction to the study of electrical engineering which will include lectures, laboratory demonstrations, and class discussions concerning the applications of electricity in modern living. An elective course offered for engineering and nonengineering students. *First semester. One credit.* Electrical Building. Palmer.

24. ELEMENTS OF ELECTRICAL ENGINEERING. A beginning course in electrical engineering particularly intended for nonengineering students. A study of the laws and properties of electric and magnetic circuits, electrical meters and measurements, direct and alternating current machinery. The course will include lectures, recitations, problems and laboratory demonstrations. *Second semester. Two credits.* Electrical Building. Palmer.

47. RURAL ELECTRIFICATION. A course intended particularly for students in the College of Agriculture, combining a study of the elementary principles of electrical circuits and machines with the application of these principles in the use of power and light on the farm. The course includes lectures, discussions, and laboratory demonstrations. *First 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. *Prerequisites:* Physics 4, mathematics 25 and 26. *First semester. Three credits.* Palmer.

52. ALTERNATING CURRENT MACHINERY. A study of alternating current motors, generators, transformers, converters, transmission lines, and auxiliary apparatus. The time is largely taken up with mathematical problems involved in the design and operation of such equipment. *Prerequisite:* E. E. 51. *Second semester. Three credits.* Palmer.

53. ALTERNATING CURRENT MACHINERY. ADVANCED COURSE. A continuation of the preceding course, taking up more advanced problems in the theory and characteristics of electrical circuits and machinery. *Prerequisite:* E. E. 52. *First semester. Three credits.* Sandorf.

54. ELECTRICAL DESIGN. A continuation of electrical engineering 53, including a study of the fundamental principles underlying the design of electrical machinery. *Prerequisite:* Electrical engineering 51, 52, 53. *Second semester. Three credits.* Sandorf.

56. ALTERNATING CURRENT CIRCUITS. A study of the fundamental

laws and properties of alternating current circuits and metering equipment. Solution of problems involving vectors and complex quantities. *Prerequisite:* E. E. 51. *Second semester. Two credits.* Sandorf.

57. ELECTRICITY AND MAGNETISM. A course for junior electrical engineering students, concerning those principles which pertain primarily to electrical machinery and circuits. The course is intended to accompany E. E. 51, with the same prerequisites as for that course. *First semester. Two credits.* 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. Students who have not completed the physics requirements may register in this course upon recommendation of the physics department. 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.* Sandorf. Fee $2.50 per semester.

63–64. ELECTRICAL ENGINEERING LABORATORY. A continuation of the preceding laboratory courses. Tests are made on transformers, induction and cynchronous motors, alternating current generators, converters, switchboard equipment and other apparatus commonly found in power generation, distribution and use. *Prerequisites:* E. E. 51–52, 61–62. *Both semesters. Four credits each semester.* Palmer. Fee $2.50 per semester.

65. ELECTRICAL ILLUMINATION. A study of the principles of electric lighting and illumination and the practical application of these principles in modern lighting. An elective course for both engineering and nonengineering students. *First semester. Two credits.* Palmer.

66. ELECTRIC POWER EQUIPMENT. A study of generating equipment, switchboards and switching equipment, transformers, relays, and other protective devices as applied to modern generating and substations. Elective for juniors and seniors. *Second semester. Two credits.* Palmer.

67. COMMUNICATION ENGINEERING. A study of fundamental principles in the field of communication including the mathematical theory and application of telephone transmitters and receivers, coupled circuits, transmission lines, and vacuum tube circuits. *Prerequisites:* Electrical engineering 52, mathematics 25 and 26, physics 3 and 4. *First semester. Three credits. Two lecture periods and one laboratory.* Sandorf. Fee $2.50.

68. COMMUNICATION ENGINEERING. A continuation of electrical engineering 67, including a study of rectifying systems, filters, radio and carrier systems of modulation and detection, antennas, and wave propagation. *Second semester. Three credits.* Sandorf. Fee $2.50.

75. ELECTRICITY IN MINING. A study of the theory and application of electrical machinery commonly used in mining and associated fields. *Prerequisites:* Mathematics 11, 13, 14 and physics 3 and 4 or physics 1a and 2a. *Two lecture periods and one laboratory. Three credits. Second semester.* Palmer.

76–77. ELECTRICAL ENGINEERING LABORATORY. The course is intended to offer an opportunity to supplement the required laboratory courses of experiments with further detailed study of laboratory problems in electrical testing. Projects may be assigned in any branch of electrical engineering. Students may register in the course who have completed in a satisfactory manner such other electrical engineering courses as may have a direct bearing on the work to be undertaken. *One or two credits each semester.* Palmer or Sandorf. A laboratory fee of $2.50 per credit may be required, depending upon the work undertaken.

78–79. ELECTRICAL LABORATORY APPARATUS. In this course the student undertakes the design and construction of one or more pieces of permanent laboratory equipment. Satisfactory evidence must be presented of ability to undertake the work agreed upon. *One or two credits each semester.* Palmer or Sandorf.

80. THESIS. Original design or investigation covering a project to be selected with the approval of the instructor. An elective course for seniors whose records indicate ability to successfully complete such a project. *Second semester. One to three credits.* Palmer and Sandorf.

83–84. SEMINAR. Limited to students who have attained junior standing. Presentation of abstracts and discussion of technical articles of interest appearing in current electrical engineering journals. *One credit each semester.* Electrical Building. Palmer and Sandorf.

85–86. COMMUNICATIONS LABORATORY. The course consists of assembling and testing circuits and apparatus used in electrical communications. Prerequisites required will depend upon the student's ability and practical experience. *One to two credits each semester.* Sandorf. Fee $2.50 per credit.

ENGLISH LANGUAGE AND LITERATURE

PROFESSOR HILL, ACTING HEAD OF DEPARTMENT
PROFESSOR HIGGINBOTHAM
ASSOCIATE PROFESSOR RIEGELHUTH
ASSOCIATE PROFESSOR HARWOOD
ASSISTANT PROFESSOR GRIFFIN
ASSISTANT PROFESSOR MILLER
MR. HOLMES, INSTRUCTOR
MR. BUTTERWORTH, INSTRUCTOR

Requirements for a minor in English: English 1–2 (6 credits), English 44–45 (6 credits), and 6 additional credits in the department in courses numbered 50 or above.

Requirements for a major in English: English 1–2 (6 credits), English 44–45 (6 credits), and 15 additional credits in the department, at least 12 of which shall be in courses numbered 50 or above.

Literature and Composition

1–2. COMPOSITION AND RHETORIC. The study of English as a means of self-expression, with special attention to the writing of exposition, description, and narration. *Both semesters. Three credits each semester.* The Departmental Staff.

NOTE—Students who receive a grade of A in English 1 may substitute for English 2 one of the courses in the department numbered to 50 of a credit

value of not less than two units. In no case may a course be used to meet both first-year and second-year requirements.

Any student who receives a failure in a course which he has substituted for English 2 will be required to register for English 2 the following semester.

A student who is habitually delinquent in the use of English in connection with any course in the University curriculum may be remanded to the Department of English to take without credit such further work in composition as the head of the department thinks advisable.

3–4. ADVANCED COMPOSITION. Extensive practice in writing, planned to meet the individual needs of the student who wishes to develop his power of expression in English. *Both semesters. Three credits each semester.* 102 Hall of English. Harwood.

41–42. APPRECIATION OF LITERATURE. A study of the more important types of contemporary English and American literature. *Both semesters. Two credits each semester.* Riegelhuth and Hill.

NOTE—Arts and science students not majoring or minoring in English may, upon the approval of the head of the department, substitute for English 41–42 one of the other courses in the department numbered to 50 of a credit value of not less than two units.

44–45. INTRODUCTION TO POETRY. A course designed to acquaint prospective majors and minors in English with the principles of versification, and to suggest methods for the reading and interpretation of poetry which should lead to its appreciation and enjoyment. *Both semesters. Three credits each semester.* Riegelhuth and Harwood.

NOTE—English 44–45 is the prerequisite of all courses in literature numbered 50 or above.

59–60. CREATIVE WRITING. A special course in advanced composition for students with considerable training or talent who are interested in writing as an artistic medium for self-expression. Special attention will be given to the capabilities of the individual student. *Prerequisite:* Demonstrated proficiency in the fundamentals of writing and the consent of the instructor. *Both semesters. Two credits each semester.* 102 Hall of English. Harwood.

68–69. THE ENGLISH NOVEL. A study of the development of the novel in England in the nineteenth and twentieth centuries. *Both semesters. Three credits each semester.* 101 Hall of English. Hill. (Not offered in 1940–1941.)

70–71. AMERICAN LITERATURE. The progress of America, as reflected in prose and poetry, from the end of the Colonial period to the present time. *Both semesters. Three credits each semester.* 101 Hall of English. Hill.

72–73. MODERN DRAMA. Representative English and American dramatists, since 1890. *Both semesters. Three credits each semester.* 101 Hall of English.

75–76. SHAKESPEARE. The reading of Shakespeare's principal plays and a close interpretation of two of his most characteristic dramas. *Both semesters. Three credits each semester.* 101 Hall of English. Hill.

77–77A. THE BIBLE AS LITERATURE. The study of representative literary types found in the Old Testament. *Prerequisite:* English 1–2 and 41–42 or 44–45. *Both semesters. Three credits each semester.* 101 Hall of English. Hill. (Not offered in 1940–1941.)

78. MILTON. Minor poems, dramas, and Paradise Lost. *Second semester. Three credits.* 101 Hall of English. Hill. (Not offered in 1940–1941.)

79. THE POETRY OF THE ROMANTIC PERIOD. A study of the movement with emphasis on Wordsworth and Coleridge. *First semester. Three credits.* 103 Hall of English. Riegelhuth. (Not offered in 1940–1941.)

79A. PROSE OF THE ROMANTIC PERIOD. Representative prose of the period, chiefly essays, critical and informal. *Second semester. Three credits.* 103 Hall of English. Riegelhuth. (Not offered in 1940–1941.)

80. VICTORIAN POETS. A study of the major poets against the background of the age. *First semester. Three credits.* 103 Hall of English. Riegelhuth.

80A. PROSE OF THE VICTORIAN AGE. Representative prose of the age, exclusive of the drama and the novel. *Second semester. Three credits.* 103 Hall of English. Riegelhuth.

85–86. ENGLISH DRAMA. A comprehensive survey of English drama from its beginnings to the end of the nineteenth century. *Both semesters. Three credits each semester.* 102 Hall of English. Harwood. (Not offered in 1940–1941.)

87–88. EIGHTEENTH CENTURY PROSE. Representative prose of the 18th century with emphasis on the work of Defoe, Swift, Steele, Addison, Johnson, Boswell, and the novelists. *Both semesters. Two credits each semester.* 102 Hall of English. Harwood. (Not offered in 1940–1941.)

94. CHAUCER. "The Canterbury Tales," with stress on the literary aspects of the work, rather than on the purely philological. *First semester. Three credits.* 102 Hall of English. Harwood.

95. ENGLISH LITERATURE. The development of English literature from its beginnings to the present, with emphasis on the greater writers and the social background of their times. This course is designed primarily for seniors and prospective teachers majoring in literature. *Second semester. Three credits.* 102 Hall of English. Harwood.

97–98, 99–100. INDEPENDENT STUDY. Open only to juniors and seniors majoring in English who have attained an average grade of B in all their work. Hours to be arranged with individual students. *One credit a semester.* Departmental Staff.

101–102. SEMINAR. Open only to graduate students. *Both semesters.* Hours to be arranged with individual students. *One to three credits each semester.* Hill and Staff.

200. THESIS COURSE. Open only to candidates for a master's degree. *Six credits.* Hill and Staff.

Journalism

Requirements for a minor in journalism: English 1–2 (6 credits), journalism 21–22 (6 credits), journalism 51–52 (4 credits), and 2 additional credits in journalism courses numbered 50 or above.

Requirements for a major in journalism: English 1–2 (6 credits), journalism 21–22 (6 credits), journalism 51–52 (4 credits), journalism 53 (3 credits), journalism 81–82 (2 credits), and 6 additional credits in journalism in courses numbered 50 or above.

Courses in the social sciences and in literature should supplement those in journalism.

The four-year professional Course in Journalism is explained on pages 124–126.

1–2. INTERPRETING THE DAY'S NEWS. Study of the news of the day and the function of the newspaper in American life. *Both semesters. Two credits each semester.* 101 Hall of English. Higginbotham.

21–22. NEWS GATHERING AND WRITING. What makes news, how news is obtained, and how news is written are studied and the principles applied in reporting news for the U. of N. Sagebrush, the Reno newspapers, and the United Press. Discussions and laboratory. *Prerequisite:* Sophomore standing and the consent of the instructor. *Both semesters. Three credits each semester.* 105 Hall of English. Higginbotham.

51–52. NEWS EDITING. Work in copy reading, rewriting, headline writing, news evaluation, the mechanics of publishing, and make-up accompanied by study of the principles which govern these and similar duties of the newspaper copy editor and of the law of the press. *Prerequisite:* Journalism 21–22 and the consent of the instructor. *Both semesters. Two credits each semester.* 105 Hall of English. Higginbotham. (Not offered in 1940–1941.)

53. THE EVOLUTION OF THE NEWSPAPER AS A SOCIAL INSTITUTION. The development of the newspaper in America, from colonial times to the present, especially in relation to political, economic, and social movements, is studied, as are the men and the newspapers which created the traditions of modern journalism. Open to juniors and seniors. *First semester. Three credits.* 105 Hall of English. Higginbotham. (Not offered in 1940–1941.)

54. ADVANCED REPORTING. Study of the background and materials of the news of public affairs, together with the actual reporting of such news from representative sources in Reno and Carson City. *Prerequisite:* Journalism 21–22. *Second semester. Three credits.* 105 Hall of English. Higginbotham. (Not offered in 1940–1941.)

56. ADVERTISING AND ADVERTISEMENT COPY WRITING. Study of the principles of advertising and their practical application in the writing of copy for the newspaper and the magazine. *Prerequisite:* Journalism 21–22, or the consent of the instructor. *Second semester. Three credits.* 105 Hall of English. Higginbotham.

65. COMMUNITY NEWSPAPER MANAGEMENT. Study of the problems of journalism peculiar to the country weekly and small city daily, especially as found in Nevada. Editorial, circulation, and advertising management will be stressed. *Prerequisite:* Journalism 21–22. *First semester. Three credits.* 105 Hall of English. Higginbotham.

67. EDITORIAL WRITING. The study of the interpretation of contemporary events through the newspaper and magazine editorial, coupled with extensive practice in writing. *Prerequisite:* Journalism 21–22, or consent of instructor. *First semester. Two credits.* 105 Hall of English. Higginbotham.

68. THE FEATURE ARTICLE. The study, writing, and marketing of

the special feature article for magazines and newspapers. *Prerequisite:* Journalism 21–22, or the consent of the instructor. *Second semester. Two credits.* 105 Hall of English. Higginbotham.

79. SOCIAL PROBLEMS IN JOURNALISM. Sociological aspects of journalism, including public opinion and the news, propaganda, social responsibility, newspaper leadership, and similar subjects. *Prerequisite:* Journalism 21–22, or the consent of the instructor. *Second semester. Two or three credits.* 105 Hall of English. Higginbotham.

81–82. NEWSPAPER INTERNESHIP. Reporting and copy reading as members of the staffs of the Nevada State Journal, the Reno Evening Gazette, and the Reno Bureau of the United Press Association. *Prerequisite:* Open only to seniors in the course in journalism and senior majors in journalism. *Both semesters. One or two credits each semester.* 105 Hall of English. Higginbotham and cooperators in journalism.

93–94, 95–96. INDEPENDENT STUDY. Open only to juniors and seniors in the course in journalism or majoring in journalism who have attained an average grade of B in all their work. Hours to be arranged with individual students. *One credit each semester.* Higginbotham.

Speech

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.* Griffin and Miller.

11E. PUBLIC SPEAKING FOR NORMAL SCHOOL STUDENTS. Second *semester. Three credits.* Education auditorium. 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.* This course may be repeated for credit as 16A, 16B, etc. 107 Hall of English. 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. Two credits each semester.* 106 Hall of English. Miller.

23–24. THE DRAMA OF TODAY. An interpretation of the trend and social significance of modern plays. Primarily for freshmen and sophomores not majors or minors in English. *Both semesters. Two credits each semester.* Miller. (Not offered in 1940–1941.)

61–62. ADVANCED SPEECH COMPOSITION. Study of effective speech composition, based upon application of rhetorical and psychological principles. First semester preparation of extended oration on current social or political problems. Second semester study and preparation

of speeches for special occasions: Eulogy, introduction, after-dinner, commemoration, etc. Open to limited number of students with consent of instructor. *Two credits each semester.* 107 Hall of English. Griffin.

63–64. HISTORY OF ORATORY. Examination of backgrounds, methods, and ideals of modern oratory. Particular attention to the outstanding figures of each period, with study of historical settings and significance of each orator. British oratory is studied first semester and American oratory the second. *Prerequisite:* English 11–12 or 16–17. *Both semesters. Two credits each semester.* 107 Hall of English. Griffin. (Not offered in 1940–1941.)

81–82. PLAY PRODUCTION. The reading, study and production of representative Shakespearean and modern plays, with lectures, readings, and reports. Practice work is offered in all the aspects of play production: management, lighting, scenery, make-up, directing, acting, etc. The course aims to aid the prospective high school teacher. *Prerequisite:* Junior standing. *Both semesters. Three credits each semester.* This course may be repeated for credit as 81A, 81B, etc. Education Auditorium and 106 Hall of English. Miller.

83. PARLIAMENTARY LAW AND PRACTICE. Study and practice of the parliamentary rules and procedure governing deliberative assemblies. Organization of model parliamentary groups, with rotating chairmanship and routine transaction of typical business of such groups. Practice in drawing up model constitutions. *Second semester. Two credits.* 107 Hall of English. Griffin.

84. MODERN DEBATE PRACTICE AND PROBLEMS. Study and discussion of the various types of modern debates, with particular attention to the problems of directors and coaches. Bibliographies and collateral readings in textbooks and speech journals. Conduct of debates and methods of judging. *First semester. Two credits.* 107 Hall of English. Griffin. (Not offered in 1940–1941.)

FOREIGN LANGUAGES

PROFESSOR CHAPPELLE, HEAD OF DEPARTMENT
PROFESSOR MURGOTTEN
ASSOCIATE PROFESSOR GOTTARDI
ASSISTANT PROFESSOR KLINE
MR. BRENNINGER, INSTRUCTOR
MRS. OSGOOD, ASSISTANT

Requirements for a minor in French, German, Italian, Latin, and Spanish: With no admission units, courses 1–2 (10 credits), 3–4 (6 credits)*, and 2 additional credits in courses numbered 50 or above; with 2 admission units, courses 3–4 (6 credits), and 6 additional credits in courses numbered 50 or above; with 4 admission units. 6 credits in courses numbered 50 or above.

Requirements for a major in French, German, Italian, Latin, and Spanish: With no admission units, courses 1–2 (10 credits), 3–4 (6 credits)*, and 10 additional credits in courses numbered 50 or above; with 2 admission units, courses 3–4 (6 credits), and 14 additional credits in courses numbered 50 or above; with 4 admission credits, 16 credits in courses numbered 50 or above.

Students intending later to teach foreign 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.

*German 9–10 may be offered in lieu of German 3–4.

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. Some courses numbered above 50 are given only in alternate years. Consult the printed schedule of classes for the definite offerings any given semester.

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).

For all foreign languages courses numbered "4" the prerequisite is 3 years of high school work or courses 1, 2 and 3 in the same language.

The following courses are recommended but not required for majors and minors in any one of the foreign languages: History 5–6.

Foreign Languages

200. FOREIGN LANGUAGE THESIS COURSE. Open only to candidates for the masters degree. *Six credits.* Chappelle.

French

The following courses are recommended, but not required, for majors or minors in French: History 79–80.

1. FIRST YEAR FRENCH. Drill in the essentials of grammar. Elementary composition and conversation. *First semester. Five credits.* Stewart Hall. Gottardi and Murgotten.

2. FIRST YEAR FRENCH (Continued). Grammar, composition and conversation. Translation of simple prose texts. *Prerequisite:* French 1 or one year of high school French. *Second semester. Five credits.* Stewart Hall. Gottardi and Murgotten.

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.* Stewart Hall. Chappelle and Murgotten.

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 Murgotten.

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.* Murgotten.

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.* Murgotten.

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.* Chappelle.

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:* French 3–4. *Both semesters. Two credits each semester.* Chappelle.

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.* Chappelle.

69–70. FRENCH CLASSIC DRAMA. The development of the drama in France with special study of the works of Corneille, Racine, and Molière. *Prerequisite:* French 3–4. *Both semesters. Two credits each semester.* Murgotten.

71. NINETEENTH CENTURY FRENCH DRAMA. A study of the drama of the nineteenth century with special reference to the romantic school and the works of Victor Hugo. *Prerequisite:* French 3–4. *First semester. Two credits.* Murgotten.

72. CONTEMPORARY FRENCH DRAMA. A study of French plays of the twentieth century. *Prerequisite:* French 3–4. *Second semester. Two credits.* 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.*

81–82. THE EIGHTEENTH CENTURY IN FRENCH LITERATURE. A study of the works of Montesquieu, Voltaire, Rousseau, etc. *Prerequisite:* French 3–4. *Both semesters. Two credits each semester.* Chappelle.

89–90. FRENCH PHONETICS. A study of pronunciation on the basis of practical phonetics. This course is especially arranged for prospective teachers of French. *Prerequisite:* French 3–4. *Both semesters. Two credits each semester.* Gottardi.

German

1. FIRST YEAR GERMAN. A systematic study of grammar, elementary composition and conversation. *First semester. Five credits.* 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. Five credits.* Murgotten.

3–4. 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. *Both semesters. Three credits each semester.* Chappelle and Murgotten.

3A–4A. The same as German 3–4, except that this class meets only once a week. Intended primarily for teachers in active service in the public schools and for students from other departments who need this course to help fulfill their language requirements. *Both semesters. One credit each semester.* Chappelle.

9–10. INTERMEDIATE PRESCIENTIFIC GERMAN. Grammar review and reading of magazine articles and other texts dealing with the fields of science in which the class is most interested. *Prerequisite:* German 1–2 or two years of high school German. *Both semesters. Three credits each semester.* Chappelle.

51–52. THE GERMAN NOVEL. Rapid reading of masterpieces of German fiction: Scheffel, Baumbach, Sudermann, Thomas Mann, etc. *Prerequisite:* German 3–4. *Both semesters. Two credits each semester.* Murgotten.

57–58. GENERAL SURVEY OF GERMAN LITERATURE. The history of German literature with detailed study of special periods. Assigned readings and reports on the works read. *Prerequisite:* German 3–4. *Both semesters. Two credits each semester.* Chappelle.

59–60. SCIENTIFIC GERMAN. Readings from German scientific works, with special emphasis on chemistry and physics. This course is particularly recommended to premedical students and to those who intend to specialize in any one of the scientific fields. *Prerequisite:* German 3–4 or 9–10. *Both semesters. Two credits each semester.* Chappelle.

69–70. GERMAN CLASSICS. Reading and technical study of representative works of Lessing, Schiller, and Goethe. *Prerequisite:* German 3–4. *Both semesters. Two credits each semester.* Chappelle.

71–72. THE MODERN GERMAN DRAMA. A study of the German drama from about 1850 to the present time. Special references to Hauptmann, Schnitzler, Wedekind, etc. *Prerequisite:* German 3–4 or the equivalent. *Both semesters. Two credits each semester.* Brenninger.

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. *Prerequisite:* German 3–4 or 9–10. *Both semesters. One credit each semester.* Chappelle.

Italian

1. FIRST-YEAR ITALIAN. Elementary grammar, composition, and conversation. Reading of modern Italian prose. *First semester. Five credits.* Stewart Hall. Gottardi.

2. FIRST-YEAR ITALIAN (Continued). Grammar, composition, and conversation. Translation of modern Italian prose and poetry. *Prerequisite:* Italian 1 or one year of high school Italian. *Second semester. Five credits.* Gottardi.

3–4. INTERMEDIATE ITALIAN. Grammar review. Reading of prose and poetry. Exercises in conversation and composition. *Prerequisite:* Italian 1–2, or two years of high-school Italian. *Both semesters. Three credits each semester.* Gottardi.

51–52. THE ITALIAN NOVEL. Rapid reading of masterpieces of modern Italian fiction: Manzoni, Fogazzaro, Verga, etc. *Prerequisite:* Italian 3–4. *Both semesters. Two credits each semester.* Gottardi.

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 3–4. *Both semesters. Two credits each semester.*

55–56. INTERMEDIATE COMPOSITION. *Prerequisite:* Italian 3–4. *Both semesters. One credit each semester.*

Latin

1. FIRST-YEAR LATIN. Drill in the essentials of Latin grammar.

Word study and composition. Roman life and customs. *First semester. Five credits.* Murgotten.

2. First-Year Latin (Continued). Translation of easy Latin prose. Composition. Roman antiquities. *Prerequisite:* Latin 1 or one year of high school Latin. *Second semester. Five credits.* Murgotten.

3. Vergil. First six books of the Æneid. Study of classic myths. *Prerequisite:* Latin 1–2 or two years of high school Latin. *First semester. Three credits.* Murgotten.

4. Cicero. Orations. Study of Roman law and government. *Prerequisite:* Latin 3 or three years of high school Latin. *Second semester. Three credits.* Murgotten.

51–52. Advanced Latin. Selected readings of Latin prose. History of Latin literature. Composition. *Prerequisite:* Latin 4 or four years of high school Latin. *Both semesters. Two credits each semester.*

53–54. Latin Lyric Poetry. Horace and Catullus. *Both semesters. Two credits each semester.* This course alternates with 51–52.

Spanish

The following courses are recommended, but not required, for majors or minors in Spanish: History 59–60.

1. First-Year Spanish. Drill in the essentials of grammar. Elementary composition and conversation. *First semester. Five credits.* Stewart Hall. 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. *Second semester. Five credits.* 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.* Gottardi and 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.* Gottardi and Kline.

51–52. The Modern Spanish Novel. Rapid reading of masterpieces of Spanish fiction: Galdós; Valdés; Ibáñez; etc. *Prerequisite:* Spanish 3–4. *Both semesters. Two credits each semester.*

53. Commercial and Journalistic Spanish. Readings dealing primarily with Spanish-American social and economic conditions. *Prerequisite:* Spanish 3–4. *First semester. Two credits.* Kline.

55–56. 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. *Both semesters. One credit each semester.* Kline.

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:* Spanish 3–4. *Both semesters. Two credits each semester.*

67–68. EARLY SPANISH NOVEL. Reading of Spanish prose of the sixteenth, seventeenth and eighteenth centuries. A study of novelistic movements. Montalvo, Montemayor, Cervantes, Quevedo. Collateral reading. *Prerequisite:* Four credits of junior-senior work. *Both semesters. Two credits each semester.*

69–70. MODERN SPANISH DRAMA. A study of Spanish dramatic literature from the golden age to the twentieth century. *Prerequisite:* Spanish 3–4. *Both semesters. Two credits each semester.*

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.

81–82. SPANISH CLASSIC DRAMA. Literature of the sixteenth and seventeenth centuries—Lope de Vega; Tirso de Molina, etc. *Prerequisite:* Four credits junior-senior work. *Both semesters. Two credits each semester.*

GENERAL ENGINEERING

1. ENGINEERING ORIENTATION. See page 220 for description of this course.

2. 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. .....

5. ELEMENTARY MECHANICAL DRAWING. Training in the use of drawing instruments, lettering, geometrical construction, dimensioning, pictorial projection, working drawings of machine parts from copy and from models, tracing and blue printing. Required of all freshmen. *First semester. Laboratory. Two credits.* Electrical Building. Amens.

6. DESCRIPTIVE GEOMETRY. Standard problems on the point, line, plane, curve 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 15. *Second semester. Laboratory and lecture. Two credits.* Electrical Building. Amens and Davidson.

GEOLOGY

PROFESSOR GIANELLA, HEAD OF DEPARTMENT
PROFESSOR CARPENTER
ASSISTANT PROFESSOR WHEELER

Requirements for a minor in geology: Geology 8, 9, 11 and 12 (10 credits), and 8 additional credits in the department, at least 6 of which must be in courses numbered 50 or above.

Requirements for a major in geology: Geology 8, 9, 11, 12 and 14 (12 credits), and 15 additional credits in the department, at least 12 of which must be in courses numbered 50 or above.

8. GENERAL GEOLOGY. A study of the forces on or within the earth, dealing chiefly with the dynamic and structural aspects of the subject.

The interpretation of topographic maps. *Prerequisite:* At least sophomore standing. *Either semester. Three credits.* Mackay School of Mines. Gianella and Wheeler.

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 or 10. *Either semester. Three credits.* Mackay School of Mines. Wheeler.

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. Gianella and Wheeler.

11. 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 7 and 8, or the equivalent. *First semester. Two credits.* Mackay School of Mines. Gianella. Fee $2.

12. BLOWPIPE ANALYSIS. The determination of minerals by blowpipe analysis. *Prerequisite:* Chemistry 7 and 8, or the equivalent, and geology 11. *Second semester. Two credits.* Mackay School of Mines. Wheeler. Fee $3.

14. DESCRIPTIVE MINERALOGY. Lectures and recitations on the classification, salient properties, occurrence, genesis, and uses of the more important minerals, illustrated by typical specimens. *Prerequisite:* Geology 11. *Second semester. Two credits.* Mackay School of Mines. Gianella.

51. PETROLOGY. Laboratory study of rock-forming minerals and rocks in the hand specimen. Lectures on the characters, origin, and classification of rocks. *Prerequisite:* Physics 1A–2A or 3–4, geology 8 or 10, 9, 11 and 12. *First semester. Two credits.* Mackay School of Mines. Wheeler. Fee $2.

52. PETROGRAPHY. Lectures on the genesis of rocks, and the study of rock-forming minerals and rocks under the microscope. *Prerequisite:* Geology 11 and 12 and 51. *Second semester. Three credits.* Mackay School of Mines. Gianella. Fee $2.

53. STRATIGRAPHIC PALEONTOLOGY. A laboratory study of the hard parts of the major invertebrate groups, the faunal assemblages of the geologic past, and the application of paleontologic methods to stratigraphic geology. *Prerequisite:* Geology 8 or 10, and 9 (zoology 2 recommended). *First semester. Two credits.* Mackay School of Mines. Wheeler.

55. ADVANCED MINERALOGY. Advanced work in either blowpipe analysis, crystallography, or the determination of minerals under the microscope. *Prerequisite:* Geology 11, 12 and 14. *Either semester. One or two credits.* Mackay School of Mines. Gianella and Wheeler. Fee $2.

60. ECONOMIC GEOLOGY OF THE NONMETALS. The first part of the course deals with the geology of ground water and petroleum, followed by a study of the occurrence, distribution, origin, and economic value of other nonmetals of western United States. *Prerequisite:* Geology 8 or 10, 9, 11, 12, and 14. *Second semester. Three credits.* Mackay School of Mines. Wheeler.

61. ECONOMIC GEOLOGY OF THE METALS. The geology of ore deposits, treating of their distribution, origin, mode of occurrence, and alteration; with special reference to the more important mining districts of North America. *Prerequisite:* Geology 11, 12, 14 and 51 (geology 52 recommended). *First semester. Three credits.* Mackay School of Mines. Gianella.

70. FIELD GEOLOGY. Instruction in field methods and the investigation of the principal geologic features of several areas in the Reno region. Transportation and other expenses are covered by the S. Frank Hunt Foundation. *Prerequisite:* Geology 11, 12, 14 and 51. *Second semester. One credit.* Mackay School of Mines. Gianella.

71. SUMMER FIELD GEOLOGY AND PROSPECTING. Eight weeks of study in critical Nevada areas where both surface and subsurface geology may be investigated and mapped. Reports, well-kept field notes and finished maps will be required. All living and traveling expenses for instructors and students will be paid from the S. Frank Hunt Foundation funds. *Prerequisite:* Geology 51 and 60 or 61 (and preferably geology 52 and 82). *Four credits.* Gianella, Wheeler and Carpenter.

NOTE—Geology 71 may be substituted as a no-credit course for civil engineering 58 (summer surveying) a no-credit course.

79. GEOLOGIC INVESTIGATION. Original investigation of a geologic problem. *Prerequisite:* Geology 51, 52 and 60 or equivalent training. *First semester. One or two credits to be arranged.* Mackay School of Mines. Gianella and Wheeler.

80. GEOLOGIC INVESTIGATION. A continuation of geology 79. *Second semester. Credits to be arranged.* Mackay School of Mines. Gianella and Wheeler.

82. STRUCTURAL GEOLOGY. A brief course treating of the deformation of the earth's crust. *Prerequisite:* Geology 14 and 51. *Second semester. Two credits.* Mackay School of Mines. Gianella.

179–180. ADVANCED GEOLOGIC INVESTIGATION. Credits and fee to be arranged according to work undertaken. Mackay School of Mines. Gianella and Wheeler.

199–200. THESIS. Six to ten credits total. Fee to be arranged according to work undertaken. Gianella and Wheeler.

HISTORY AND POLITICAL SCIENCE

PROFESSOR HICKS, ACTING HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR SMITH
ASSISTANT PROFESSOR MAZOUR
MR.....

Requirements for a minor in history: History 1–2 (6 credits), history 5–6 (6 credits), and 6 additional credits in the department in courses numbered 50 or above.

Requirements for a major in history: History 1–2 (6 credits), history 5–6 (6 credits), and 15 additional credits in the department, at least 12 of which must be in courses numbered 50 or above.

Requirements for a minor in political science: History 1–2 (6 credits), political science 1–2 (4 credits), and 8 additional credits in the department in courses numbered 50 or above.

Requirements for a major in political science: History 1–2 (6 credits), history 5 (3 credits), political science 1–2 (4 credits), and 14 additional credits at least 12 of which must be from political science courses numbered 50 or above, or history 73–74 (2 or 4 credits), 87–88, 89–90, 95–96 (each 4 credits), or in both, but not more than 6 of these 14 may be chosen in history.

For majors 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. Requirements for the department's recommendation for the teaching of history in high schools: A major, 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. 5–6 is prerequisite to 77–78, 83–84 and 97–98. Political science 1–2 is prerequisite to all other courses in political science except 79–80. History 79–80 (4 credits), or history 91–92 (4 credits), is recommended for political science majors and minors.

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. *Either semester. Three credits each semester.* Regular freshman history course. 102 Stewart Hall. Hicks, Mazour, and Smith.

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.* 204 Morrill Hall. Mazour and Smith.

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.

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. (Not given in 1940–1941.)

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 students in elementary education. *Second semester. Two credits.* (Alternates with 62.) 101 Stewart Hall. (Not given in 1940–1941.)

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. (Not given in 1940–1941.)

57–58, 57A and 58A. HISTORY OF WESTERN AMERICA. The study of the development of the Pacific Coast of North America to the end of the nineteenth century. The northwestward expansion of New Spain; California under Spain, Mexico, and the United States; the southern expansion of Russian settlement; the overland expansion of the British and Americans; the diplomatic controversy over Oregon; the retirement of the Hudson Bay Company; the formation of American States and the provinces of British Columbia. *Two or three credits each semester.* 102 Stewart Hall. (Not given in 1940–1941.)

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. 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.

63–64. ENGLAND AND THE BRITISH EMPIRE. A study of the political and social development of England and a consideration of the interrelationships of the various units in the British Empire. (Given in alternate years.) *Two credits each semester.* Hicks. (Not given in 1940–1941.)

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. Credits to be arranged.* 101 Stewart Hall.

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.

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 or two credits per semester.* 105 Stewart Hall. (Not given in 1940–1941.)

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. (Given on sufficient demand.)

77–78. RECENT EUROPEAN HISTORY. A study of Europe since 1815, with special emphasis upon the political and economic forces brought about by the French and Industrial Revolutions. Colonial expansion, economic imperialism and militarism resulting in the World War and post-war European problems. *Both semesters. Two credits each semester.* 101 Stewart Hall. Mazour.

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.* (Alternates with 55–56.) 101 Stewart Hall.

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.

83–84. HISTORY OF RUSSIA. The foundation of the Russian State and society. Special emphasis will be placed on territorial expansion; political, economic, and social development; the intellectual movement; 19th century problems that led to the Revolutions of 1905 and 1917, with its international implications. *Both semesters. Two credits each semester.* 101 Stewart Hall. Mazour. (Not given in 1940–1941.)

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.

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. Two credits each semester.* 105 Stewart Hall. (Not given in 1940–1941.)

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. Two credits each semester.* 105 Stewart Hall.

91. THE TWENTIETH CENTURY DIPLOMATIC HISTORY: THE RIVALRY OF THE NATIONS. An intensive prewar study. Not given for less than five students. Open to history majors 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.

92. THE TWENTIETH CENTURY DIPLOMATIC HISTORY: 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.*

93–94. HISTORY OF THE UNITED STATES SINCE 1850. A survey course in the history of the United States from 1850 to the present, with special emphasis on the immediate background of the Civil War and the problems of Reconstruction; the emergence of large-scale business and efforts at regulation by the National Government; the disappearance of the frontier; American overseas expansion; the United States in the World War; the crisis of 1929 and its aftermath. Recommended for students of journalism. *Both semesters. Two credits each semester.* 102 Stewart Hall. (Not given in 1940–1941.)

95–96. INSTITUTIONAL HISTORY OF THE UNITED STATES, 1607–1815. A study of the history of the United States from the founding of the first permanent English colony in America to the close of the second war for independence, with especial attention to the economic, governmental, and religious institutions of the English colonies in America; the conflict between the colonies and the mother country; the economic and social phases of the American Revolution; the formation of the new government, with emphasis on the economic and social background of the movement for the adoption of the Constitution; the development of political parties; foreign relations, and the War of 1812. Recommended for pre-legal students. *Two credits each semester.* 102 Stewart Hall. (Not given in 1940–1941.)

97–98. MODERN GERMANY. This course is devoted to the social, political, economic and intellectual development of the German people, beginning with 1800. Particular attention is given during the second semester to Germany as a factor in world affairs beginning with 1870 and to the present time. *Both semesters. Two credits each semester.* 101 Stewart Hall. Mazour.

99–100. HISTORY THESIS WORK. *Both semesters. Credits to be arranged.* 101 Stewart Hall. Hicks and Staff.

199–200. GRADUATE THESIS. *Both semesters. Credits to be arranged.* Hicks and other members of the Staff.

Political Science

1–2. COMPARATIVE GOVERNMENT. A comparative study of Great Britain, France, Germany, Italy, and the USRR. Recent political principles of Totalitarianism and Democracy will be investigated and a comparative analysis of economic and political institutions of the two political schools of thought will be made. *Both semesters. Two credits each semester.* 104 and 105 Stewart Hall. Mazour.

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. Two credits.* 105 Stewart Hall. (Not given in 1940–1941.)

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. Two credits.* 105 Stewart Hall.

64. INTERNATIONAL LAW. An elementary study of the principal topics, accompanied by examination of leading cases. *Second semester. Two credits.* 105 Stewart Hall.

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.* (Not given in 1940–1941.)

73–74. ROMAN LAW. An introduction of the Institutes of Justinian and the Roman System of Jurisprudence. Fundamental to the study and understanding of modern law. *Both semesters. One credit each semester.* 105 Stewart Hall. (Not given in 1940–1941.)

79–80. THE CONSTITUTIONS OF THE UNITED STATES AND NEVADA. *Both semesters. One credit each semester.* Mazour.

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 on the United States. *Both semesters. Two credits each semester.* 101 Stewart Hall. (Given on sufficient demand.)

87–88. ENGLISH CONSTITUTIONAL LAW. An introduction to such legal classics as Blackstone and Dicey, together with leading sample cases on the law and constitution of England. Fundamental to American Constitutional Law and History. *Both semesters. One credit* each semester. Given in alternate years. (Not given in 1940–1941.)

89–90. AMERICAN CONSTITUTIONAL LAW. Deals with the basic supreme court decisions in the development of the United States of today. *Both semesters. One credit each semester.*

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.

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.

HOME ECONOMICS

College of Agriculture

PROFESSOR LEWIS, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR POPE
ASSISTANT PROFESSOR MARSH

3. INTRODUCTORY COURSE. The course is planned to help freshmen solve their present student problems, assist them in the selection of courses for succeeding years, and to acquaint students with the scope of home economics and the opportunities offered in this field. *First semester. Lecture, two periods. Two credits.* 110 Agriculture Building. Lewis and Pope.

15–18. CLOTHING. A course dealing with the adaptation and modifications of commercial patterns. Study and working out of individual clothing budgets; selection and construction of underwear and dresses suitable for the University girl. *Both semesters. Lecture, one hour. Laboratory, two periods. Three credits each semester.* 204 Agriculture Building. Pope. Fee $2.

16. TEXTILES. A study of the chief textile fibers and analysis of fabrics. The aim of the work with fibers is to form a basis for an understanding of fabrics. It includes the study of methods of production of raw materials and of manufacturing processes as related to quality of fabrics. The study of fabrics is based upon the analysis of different materials to find the relation between quality and the fiber, weave, adulteration, finish and cost. *Second semester. Lecture, two hours; laboratory, one period. Three credits.* 108 Agriculture Building. Pope. Fee $2.

31–32. FOOD PREPARATION. A study of foods, as to their source, cost, the scientific methods and techniques used in preparation, and the art of serving them, as well as their composition and use in the body. *Laboratory, two periods; lecture, one hour. Three credits each semester.* 203 Agriculture Building. Marsh. Fee $5.

42. FOOD ECONOMICS. Application of the principles of economics in marketing from the consumer-buyer and institutional-buying standpoints, which includes methods of selection, as to quantities, qualities, grades, brands, and price. *Second semester. Lecture, one hour. Laboratory, one period. Two credits.* Agriculture Building. Marsh. Fee $1.

45. RELATED ART. A study of color and design with applications made through the mediums of block-printing, tie-dyeing, batik, knitting, crocheting, and problems woven on the looms. The construction of these problems into finished articles, such as mounted block prints, and loom problems into purses, pillow tops, scarves, and rugs. *First semester. Laboratory, two periods. Two credits.* 108 Agriculture Building. Pope. Fee $2.50.

50. FOODS AND NUTRITION. This course is planned for any student who desires to be informed on the problem of human nutrition, and is of equal interest to men and women. It includes a brief study of the composition and cost of foods and the essentials of an adequate diet. *Second semester. Lecture, two periods. Two credits.* 204 Agriculture Building. Lewis.

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 nearby counties. The purpose of this course is to assist the 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.*

54. CARE OF HEALTH AND DISEASE. A study of positive health and care of the sick, which aims to give a knowledge of the general care of the sick in the home, an understanding of health laws and diseases that affect the community and the individual, and enlarge the students vocabulary. *First semester. Lecture, two hours. Two credits.* 108 Agriculture Building. Marsh.

55. MEAL PLANNING. The course is a comprehensive study of the planning, preparation, and serving of meals, as to costs of food, time, and energy, as well as field trips. The project is the concentration on some special food problem for demonstration. The lectures include a detailed study of the selection and care of china, linen, and silver. *Prerequisite:* Home economics 31–32, and home problems. *Lecture, one hour. Laboratory, three periods. Four credits. First semester.* 203 Agriculture Building. Marsh. Fee $5.

56. FOOD MANAGEMENT FOR ORGANIZED GROUPS. The course is a study of budgeting, buying, planning, and preparation of meals for groups of fifty or more. It is planned to meet the needs of house managers and group leaders. *Two lecture periods with time spent in buying, budgeting and supervising quantity food preparation. Hours to be arranged. Two credits.* Marsh.

57. FUNDAMENTALS OF FOOD FOR MEN. A course especially designed for engineer and forestry students. It covers food selection, as to costs, preparation, service and bodily needs. *One lecture; two laboratory periods. Three credits.* Marsh. 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 15–18, and home problems. *Lecture, one period. Laboratory, two periods. Three credits. Second semester.* 204 Agriculture Building. Pope. Fee $2.

67. CLOTHING. Planning and selection of children's garments emphasizing speed, labor-saving methods and relative costs in their construction. May register with the consent of the instructor. *First semester. Laboratory, two periods. Two credits.* 204 Agriculture Building. Pope. Fee $2.

68. COSTUMES. This course includes a study of color, effects of color on different types of individuals and the effect of light on colors. It deals with design and becoming and unbecoming lines as illustrated in costumes. Laboratory work takes up the making of costumes. *Second semester. Laboratory, two periods. Two credits.* 204 Agriculture Building. Pope. Fee $2.

76. CHILD DEVELOPMENT. A study of the whole child as a personality, the physical, mental, emotional and spiritual development of the preschool child in its home and nursery school environment. The course endeavors to apply the principles of psychology, physiology, nutrition and chemistry learned in other courses. Students are required to observe nursery schools one hour each week. *Prerequisite:* Psychology 5. *Both semesters. Lecture, two hours. Two credits.* 108 Agriculture Building. Marsh.

81. NUTRITION. A study of the fundamental principles of human nutrition and their application to the feeding of individuals and groups under varying physiological and economic conditions. *Prerequisite:* Home economics 31–32, 55, home problems, chemistry 26, zoology 57–58. *Second semester. Three credits.* 204 Agriculture 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; home problems, chemistry 26; zoology 57–58. *Parallel:* Home economics 81–83. *Second semester. Laboratory, three periods. Three credits.* 203 Agriculture Building. Lewis. Fee $5.

85. SPECIAL PROBLEMS IN FOODS. A study which deals with assembling and organizing scientific research materials and minor experimental problems in foods. A course intended for senior and graduate women in home economics. *Prerequisite:* Home Economics 31, 32, and 55. *Laboratory, two periods, and conferences. Two or more credits, according to the work done. Both semesters.* 203 Agriculture Building. Marsh. Fee $5.

86. HOUSEHOLD ADMINISTRATION. This course is divided into two units. The first is a survey of the evolution of woman's work and her changing relation to home and society, with special emphasis on an analysis of the problems of the modern family. The second unit is a study of the management problems of the homemaker in regard to income, time and labor. Open to juniors and seniors only. *First semester. Lecture, two periods. Two credits.* 204 Agriculture Building. Lewis.

87. HOUSE DECORATION. Planning, decorating, and furnishing of homes, considering art, convenience, sanitation, and economy. *Prerequisite:* Art 5, home economics 16, 45. *First semester. Lecture, one period; laboratory, two periods. Three credits.* 108 Agriculture Building. Lewis. Fee $1.50.

88. HOUSEHOLD EQUIPMENT. The study of household equipment from the standpoint of selection, methods of operation and care is stressed. Home projects are worked out and discussed in relation to

equipment. *Prerequisite:* Physics 19 and chemistry 5. *Second semester. Lecture, one period; laboratory, one period. Two credits.* 103 Agriculture Building. Pope. Fee $1.

92. DIET THERAPY. A study of the value of diet in the treatment of disease. (For students who expect to qualify as professional dietitians.) *Prerequisite:* Home economics 81–83. *First semester. Lecture, one period. Laboratory, one period. Two credits.* Agriculture Building. Lewis Fee $2.50.

94. EXPERIMENTAL COOKERY. A study of experimental procedure, methods and investigation in cookery which offers opportunity to acquire techniques and skills in research and to apply principles of chemistry used in cookery investigation. *Prerequisite:* Home economics 55 and general organic and physiological chemistry. *One lecture and one laboratory period. Two or more credits according to work done.* Agriculture Building. Given alternate years. Lewis. Fee $5.

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. *Given on request. Lecture, one period; laboratory, one period. Two to four credits.* 108 Agriculture Building. Pope. Fee $2.

96. QUANTITY COOKERY. A course in quantity cookery that includes care and use of institutional equipment, principles of menu planning and food preparation for groups of fifty or more. Laboratories available for the course are the University Dining Hall, County Hospital, Commercial Pastry Shop and a field trip to San Francisco and bay region institutions. *Prerequisite:* Home economics 42 and 55. *Lecture, one period. Laboratory, two periods. Three credits.* Marsh. Fee $2.

98. ORGANIZATION AND MANAGEMENT. A comprehensive study of the house and food units of the various types of institutions, as to organization and management, which includes cost of food control, records, equipment, furnishings and arrangements. *Prerequisite:* Home economics 55. *Lecture, three hours. Three credits.* 108 Agriculture Building. Marsh.

100. SEMINAR. Newer developments in preschool child studies, which will include recent research in child development, and nursery school. Problems relating to definite phases will be selected by each member of the class. Open to seniors and college graduates. *First semester. Three credits.* Marsh.

101. HOMEMAKING FOR ADULTS. Intended for those interested in developing classes for adults. Problems of selecting content, field work in promoting, organizing, observing and teaching adult classes. *Prerequisite:* Open to students of junior standing or better.

102. SEMINAR. DEVELOPMENTS IN CONSUMER EDUCATION. Readings and survey of the field of consumer education. Problem topics to be selected by the individual. Open to undergraduates, anyone interested in this recent study. *First semester. Three credits.* Marsh.

Ed. 88. TEACHER-TRAINING COURSES IN HOME ECONOMICS. *See Education.*

MATHEMATICS AND MECHANICS

PROFESSOR WOOD, HEAD OF DEPARTMENT
MR. VANCE
MR. PALM
MR. .....
MISS JENSEN

Requirements for a minor in mathematics: Mathematics 11 (3 credits), 13 (2 credits), 14 (3 credits), 23–24 (6 credits), or their equivalent, and 4 additional credits in the department in courses numbered 50 or above.

Requirements for a major in mathematics: Mathematics 11 (3 credits), 13 (2 credits), 14 (3 credits), 23–24 (6 credits), or their equivalent, and 12 additional credits in the department in courses numbered 50 or above.

Mathematics 15 (5 credits) and 16 (5 credits) may be substituted for 11, 13, and 14 in the major and minor requirements.

A. ALGEBRA. A thorough review of algebra for students of the College of Engineering who fail to pass the qualifying examination in Mathematics 15. This class meets three times per week for one semester, carries no university credit but may be used to remove entrance deficiencies. *First semester.* Mackay Science Hall. Palm.

5. ALGEBRA. A second course in algebra for students who have had one year of algebra in the high school. *Each semester. Two credits.* Mackay Science Hall. Jensen.

7. SOLID GEOMETRY. The geometry of the plane, the cone, the prism, the pyramid, and the sphere, with practical applications. *Second semester. Two credits.* Mackay Science Hall. Jensen.

11. COLLEGE ALGEBRA. The usual topics of college algebra, with special emphasis upon the topics that will be most helpful in the higher courses in mathematics. *Prerequisite:* Mathematics 5 or 1½ years of high school algebra. *Each semester. Three credits.* Mackay Science Hall.

13. PLANE TRIGONOMETRY. A study of the trigonometric functions, indentities, and the solution of triangles. Not required of students who have had high school trigonometry. *Each semester. Two credits.* Mackay Science Hall.

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 be studied. *Prerequisites:* Mathematics 11, 13. *Second semester. Three credits.* Mackay Science Hall. Wood.

15–16. ELEMENTARY MATHEMATICAL ANALYSIS. A unified treatment of the elements of college algebra, trigonometry, and analytic geometry, with special emphasis upon the applications. This course is required of all engineering students and is recommended for all others who intend to specialize in mathematics or who desire mathematical preparation for scientific work. This course will begin with a two-weeks intensive review of algebra, including quadratics, exponents, and radicals. At the end of this period an examination will be given. Students who fail to pass this examination or those who fail to carry mathematics 15 will be transferred to mathematics A. *Both semesters. Five credits each semester.* Mackay Science Hall. The Departmental Staff.

18. MATHEMATICAL THEORY OF INVESTMENT. A mathematical study

of interest, annuities, sinking funds, depreciation, amortization and other topics relating to business problems, including an introduction to the mathematics of life insurance. *Prerequisite:* Mathematics 11. *Second semester. Three credits.* Mackay Science Hall. Alternates with mathematics 20.

20. MATHEMATICAL STATISTICS. A mathematical study of frequency distributions, averages, dispersion, probable error, correlation, graphical methods and other related topics, with application to problems in the social and natural sciences. *Prerequisite:* Mathematics 11. *Second semester. Three credits.* Mackay Science Hall. Alternates with mathematics 18. (Not given in 1940–1941.)

22. MATHEMATICS FOR STUDENTS OF AGRICULTURE AND BIOLOGICAL SCIENCES. A study of the essentials of algebra, trigonometry, elementary mechanics, statistics, graphical methods, logarithmic paper, and other topics with applications. This course is designed to meet the needs of students in the College of Agriculture, premedical students, preforestry students, and other students in the biological sciences. Students planning to continue their mathematical work should take Mathematics 14 upon completion of this course. *Second semester. Four credits.* Mackay Science Hall. Palm.

23–24. DIFFERENTIAL AND INTEGRAL CALCULUS. The elements of the calculus with applications. Designed for students in the College of Arts and Science. *Prerequisite:* Mathematics 11, 13, 14, or Mathematics 15, 16. *Both semesters. Three credits each semester.* Mackay Science Hall.

25–26. CALCULUS. A unified course in differential and integral calculus, with special emphasis upon the applications. Required of all engineering students. *Prerequisite:* Mathematics 15, 16. *Both semesters. Three credits each semester.* Mackay Science Hall. The Departmental Staff.

50. 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. Methods of finding approximate values of the roots of equations. *First semester. Three credits.* Mackay Science Hall. (Not given in 1940–1941.)

51. HISTORY OF MATHEMATICS. Lectures and assigned readings on the history of the mathematical science. Recommended for students preparing to teach mathematics in high school. *First semester. Two credits.* Mackay Science Hall. Cannot be used for graduate credit. Palm.

55–56. ANALYTIC MECHANICS FOR ENGINEERS. Work in the resolution of forces, moments of inertia, laws of motion, friction, dynamics of machinery, work and energy, and impulse. Special emphasis is given to practical problems. *Prerequisite:* Mathematics 25, 26; Physics 3. *First semester, three credits. Second semester, two credits.* Mackay Science Hall. Vance.

59–60. COLLEGE GEOMETRY. A study of advanced geometrical topics such as The Nine Point Circle, Ceva's Theorem, etc., using the methods of proof of elementary geometry. Recommended for students preparing to teach mathematics in high school. *Both semesters. Two credits*

each semester. Mackay Science Hall. Alternates with Mathematics 73–74. Wood. (Not given in 1940–1941.)

66. TEACHING OF MATHEMATICS. See Education 66.

70. SOLID ANALYTICAL GEOMETRY. A study of the plane, ellipsoid, paraboloid, hyperboloid, and the general equation of the second degree in three dimensional space. *Second semester. Two credits.* Mackay Science Hall. (Not given in 1940–1941.)

73–74. PROJECTIVE GEOMETRY. A synthetic development of the more fundamental projective properties of conic sections, including also an elementary treatment of involutions, anharmonic ratios, and the principle of duality. *Both semesters. Two credits each semester.* Mackay Science Hall. Alternates with Mathematics 59–60. Palm.

85–86. DIFFERENTIAL EQUATIONS. A study of ordinary and partial differential equations of the first and second orders with special attention to geometrical and physical applications. *Both semesters. Two credits each semester.* Mackay Science Hall. Vance.

87. ADVANCED CALCULUS. A more rigorous study of the differential and integral calculus, with extensive applications to geometrical and physical problems. *Second semester. Three credits.* Mackay Science Hall. Vance.

105. THEORY OF FUNCTIONS OF THE COMPLEX VARIABLE. The fundamental operations applied to the complex number, the series, differentiation and integration, etc. *First semester, three credits.* Mackay Science Hall. Given in alternate years. Wood.

115. VECTOR ANALYSIS. A study of the Vector notation applied to problems of physics. *First semester. Three credits.* Mackay Science Hall. Given in alternate years. Vance. (Not given in 1940–1941.)

135. HARMONIC ANALYSIS. A study of the properties of Fourier Series, Legendre and Bessel Functions, and their use in the solution of partial differential equations of mathematical physics. *First semester. Three credits.* Mackay Science Hall. Vance. Given in alternate years.

150. SEMINAR. Library work and reports on various topics of mathematical interest. *Both semesters. Two or three credits each semester.* Mackay Science Hall. Vance.

199–200. THESIS COURSE FOR GRADUATE STUDENTS. *Six credits.* Mackay Science Hall. Wood.

MECHANIC ARTS

College of Engineering

PROFESSOR SIBLEY, HEAD OF DEPARTMENT
SUPERINTENDENT RYAN

3. MACHINE SHOP. A basic course in machine work following a definite plan throughout the semester, includes instruction in bench work, lathe, shaper, drill and milling machine Junior year. *Both semesters. Two credits.* Mechanical Building. Ryan. Fee $5 per credit.

5. MACHINE SHOP. An advanced course in gear cutting, face plate work, elementary die making and construction and use of special tools,

jigs, and fixtures. *Prerequisite:* M. A. 3 or equivalent. *Either semester. One or two credits.* Mechanical Building. Ryan. $5 per credit.

6. PATTERN AND FOUNDRY PRACTICE. Study of the products and methods of the foundry. Practical instruction is given in pattern making and molding. *Second semester. One credit.* Mechanical Building. Ryan. Fee $5.

7. MACHINE SHOP. An advanced course in general machine work for students wishing to develop projects in connection with thesis or special work. *Prerequisite:* Mechanic arts 3. Also for students desiring to fill in a program in which case the work will consist of problems arising in the repair and maintenance of laboratory and shop equipment. *One or two credits, either semester.* Mechanical Building. Ryan. Fee $5 per credit.

11. MACHINE SHOP. An elementary shop course in machine work includes instruction in bench work and in the use of drill, lathe, and milling machines. *Both semesters. One credits.* Mechanical Building. Ryan. Fee $5.

50. SHOP METHODS. The study of engineering materials and the methods and tools used in forming them. Laboratory work consists of practical heat treating, testing of machine and cutting tools under various conditions and power requirements. *Prerequisite:* M. A. 3 or equivalent. *Either semester. One lecture, two laboratory periods. Three credits.* Mechanical Building. Ryan. Fee $5.

MECHANICAL ENGINEERING

College of Engineering

PROFESSOR SIBLEY, HEAD OF DEPARTMENT
ASSISTANT PROFESSOR AMENS
MR. DAVIDSON

19–20. ELEMENTS OF MECHANICAL ENGINEERING. A course designed to acquaint the student with the various types of equipment and machinery usually encountered in mechanical engineering practice. *No prerequisite.* Required of all mechanical engineering students. *Both semesters. One-half credit each semester.* Davidson.

21. TECHNICAL REPORT WRITING. A study of the approved methods of preparing technical reports. The report is analyzed from both the engineering and grammatical standpoints and several written reports on technical subjects are required during the semester. *Prerequisite:* English 1 and 2. *First semester. One credit.* Davidson.

30. INTRODUCTORY AERODYNAMICS. A course designed to introduce the elements of aerodynamics and provide an introduction to M. E. 78. Theory of flight, aircraft engines, aircraft instruments, history of aeronautics and the radio terminology in common use are covered. *Prerequisite:* Mathematics 15 and 16. *Second semester. Two credits.* Davidson.

41–42. ADVANCED MACHINE DRAWING. An exacting drill in projections, intersections, accurate and neat instrumental drawing, including layout, and methods of reproducing drawings. *Prerequisite:* G. E. 5 and 6. *Either semester. Three credits per semester.* Amens.

51. KINEMATICS. The kinematics of machinery, showing the laws which govern the velocity and acceleration of moving parts, the correct forms of gear teeth and the manner of designing trains of mechanism. *Prerequisite:* Physics 3 and 4, mathematics 25 and 26. *First semester. Three credits.* Sibley.

52. ADVANCED KINEMATICS. Balancing inertia forces in moving parts of reciprocating engines. Design of governors, flywheels and valve mechanism. Practical problems in machine design may be substituted for the above with the approval of the instructor. *Prerequisite:* M. E. 51. *Second semester. Three credits.* Sibley.

54. HEAT ENGINES. Steam and internal combustion engines, boilers and power plant auxiliaries, fuels and combustion. This course is arranged to acquaint the student with the design, construction, and operation of the mechanical equipment that he will be called upon to use in the laboratory. *Prerequisite:* Physics 3 and 4. *First semester. Three credits.* Davidson.

55–56. THERMODYNAMICS. A study of the thermodynamics of perfect gases, vapors, and mixed gases and vapors, their application to gas engines, air compressors, refrigerating machinery, steam engines and turbines. *Prerequisite:* Physics 3 and 4, Math. 25 and 26. *Second semester. Three credits.* Sibley.

57–58. 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, bearings, cylinders, springs, bolts, keys, etc. *Prerequisite:* C. E. 74. *First and second semester. Three credits each semester.* Amens.

64. MECHANICAL LABORATORY. (Mechanical Engineers.) Calibration of laboratory equipment. Testing of fuels and lubricants. Study of power absorbing instruments and of steam calorimeters. *Prerequisites:* M. E. 54, physics 3 and 4, or must be taken currently. *First semester. Junior year. Two periods of four hours each. Three credits.* Davidson. Fee $5.

64A. MECHANICAL LABORATORY. (Nonmechanicals.) Calibration of laboratory instruments. Testing of fuels and lubricants. Operation and testing of steam and liquid fuel engines. *First semester. Junior year. Prerequisites:* M. E. 54, Physics 3 and 4, or must be taken currently. *Two laboratory periods. Two credits.* Davidson. Fee $5.

65. MECHANICAL POWER LABORATORY. (Mechanical Engineers.) Operation and testing of steam engines and turbines and related equipment. Testing fugal and reciprocating pumps and auxiliaries, blowers, fans, etc. *Prerequisite:* M. E. 55 and 64. Two four-hour periods. *Second semester. Junior year. Three credits.* Davidson. Fee $5.

65A. MECHANICAL LABORATORY. (Nonmechanicals.) Testing of steam driven equipment, internal combustion engines, fuel testing (particularly liquid and gaseous). Air flow, fans, blowers, and auxiliaries. *Prerequisite:* M. E. 64A. *Two four-hour periods. Second semester. Two credits.* Davidson. Fee $5.

66. ADVANCED MECHANICAL LABORATORY. Advanced laboratory problems including the design of test setups as required by circumstances. For seniors and graduates. *Prerequisite:* M. E. 56 and 65.

First or second semester. Three to six credits, as arranged. Davidson. Fee $5.

70. HEATING, VENTILATING, AND AIR CONDITIONING. *Prerequisite:* M. E. 54 and 55. Elective for juniors or seniors. *Either semester. Two credits.* Sibley.

74. INDUSTRIAL PLANT DESIGN. A problem and design course for the study of industrial plant layout and organization for production. Elective for juniors and seniors. *Either semester. One lecture, two laboratory periods. Three credits.* Sibley.

75. POWER-PLANT ENGINEERING. A study of the principles involved in the design, construction, and operation of water, steam- and gas-power plants for mills, factories, and electric generating stations. A layout of a plant to meet specified conditions is made in the drawing room. Elective for juniors and seniors. *Either semester. One lecture. Two laboratory periods. Three credits.* Sibley.

77A–77B. INTERNAL COMBUSTION ENGINES. *Prerequisite:* M. E. 54 and 55. Elective for juniors and seniors. *First and second semesters. Two credits each semester.* Amens.

78. AERODYNAMICS. A more advanced course than M. E. 30. The theory of flight, air flow, and principles of design of aircraft structures are covered. The requirements of the aircraft power plant are studied, and data covering modern engines presented. *Prerequisite:* Mathematics 15, 16, 55, and 56, M. E. 30 and 54. *First or second semester. Three credits.* Davidson.

80. THESIS. An original design or an investigation intended to give the student a knowledge of research methods in engineering. This course is elective for seniors and graduates at the discretion of the instructors in the department. *Second semester. Three credits.* Staff. Laboratory fee of $5 may be required.

METALLURGY

College of Engineering

PROFESSOR PALMER, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR SMYTH

4. ENGINEERING METALLURGY. Lectures and recitations for engineering students on the properties and uses of industrial metals and alloys, metallurgical processes and apparatus, and an introductory course on the metallurgy of iron and steel. *Prerequisite:* Chemistry 6 and physics 1A or 3. *Second semester. Two credits.* Mackay School of Mines. 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:* Geology 12, chemistry 9 and 10. *First semester. Lectures, one hour; laboratory, three periods. Four 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 and supplies used.

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:* Metallurgy 4. *Second semester. Lecture, one hour; laboratory, two periods. Three credits.* Mackay School of Mines. Palmer. Fee $2.50.

58. FERROUS METALLURGY. Lectures and recitations on the principles and practice of producing iron and steel, the properties and uses of the ferrous metals, the iron-carbon diagram, mechanical and heat treatment of steel, and alloy steels. *Prerequisite:* Metallurgy 4. *Second semester. Two credits.* Mackay School of Mines. Smyth.

61. PYRO-METALLURGY NONFERROUS METALS. Lectures and recitations on the smelting or fire methods of extracting the common metals from their ores and refining processes for these metals by fire methods. The principal metals covered will be copper, lead, zinc, mercury and nickel. *Prerequisite:* Geology 11 and Metallurgy 4 and 51. *First semester. Three credits.* Mackay School of Mines. Palmer.

62. 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, molybdenum, platinum, tin, and tungsten. *Prerequisite:* Junior standing. *Second semester. One credit.* Mackay School of Mines. Palmer.

66. ORE DRESSING. Lectures and recitations in ore dressing. Laws of crushing, sizing, and concentration of ores, including flotation. *Prerequisite:* Metallurgy 4. *Second semester. Lectures, two hours. Two credits.* Mackay School of Mines. Palmer.

68. ORE DRESSING LABORATORY. A laboratory course to accompany metallurgy 66. This course covers general practice in the use of the various machines used in ore dressing. *Prerequisite:* Chemistry 9 and 10, metallurgy 51. *Second semester. Laboratory, two periods. Two credits.* Mackay School of Mines. Palmer and Smyth. Fee $5.

71. HYDRO-METALLURGY. Lectures, recitations, and laboratory, exercises on the various hydro-metallurgical methods used in the recovery and refining of the metals gold, silver, copper, lead and zinc. *Prerequisites:* Metallurgy 51 and 66; chemistry 10. *First semester. Lectures, two hours; laboratory, one period. Three credits.* Mackay School of Mines. Palmer. Fee $5.

72. ELECTROMETALLURGY. Lectures and recitations on electric smelting and the electrolytic processes involved in the metallurgy of the common and precious metals. *Prerequisite:* Metallurgy 61 and 71. *Second semester. Two credits.* Mackay School of Mines. Palmer.

76. 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.

79–80. PROJECT. Two laboratory periods weekly devoted to individual problems in metallurgy. Stress is placed upon amplifying the subject matter of previous metallurgy courses, and in the methods of searching for, summarizing, and presenting the data gathered and worked out. *Prerequisite:* Metallurgy courses to the senior year and taken with Metallurgy 61 and 71. *Both semesters. Two credits.* Mackay School of Mines. Palmer. Fee to be arranged according to work undertaken, and only required with laboratory which uses apparatus, chemicals, etc. When projects involve laboratory work, students shall pay a charge to be based on the number of assays made or the type of work undertaken. The amount to be paid will be determined near the end of the project course and is to be paid as soon as the amount of the charge can be determined.

MILITARY SCIENCE AND TACTICS

PROFESSOR CLARK, COLONEL, INFANTRY, U. S. ARMY
ASSISTANT PROFESSOR BASSETT, DEML (ROTC), MAJOR INFANTRY, U. S. ARMY, COMMANDANT
INSTRUCTOR M'CORMICK, DEML (ROTC), SERGEANT, U. S. ARMY

Requirements for a minor in military science: Military 1–2 (2 credits), 3–4 (2 credits), and 12 additional credits in the department, at least 6 of which must be in courses numbered 50 or above.

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 orientation; the National Defense Act and the R. O. T. C.; obligations of American citizenship; evolution of the military policy of the United States; current international situation; military discipline, courtesies and customs of the service; military sanitation and first-aid; military organization; map reading; leadership (drill and command); the rifle and rifle marksmanship. 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 military history; leadership (drill and command); automatic rifle; characteristics of infantry weapons; musketry; scouting and patrolling; functions of platoon scouts; combat principles of the rifle squad and section in attack, defense, and security. Required of all second-year men students. *Three hours per week. Both semesters. One credit each semester.*

MILITARY 51–52. Advanced course. First year (elective)—Practical and theoretical. Aerial photograph reading; leadership (principles, instructional methods, drill and command); machine guns; howitzer company weapons; automatic pistol; rifle marksmanship (review); combat principles (general); combat principles of the rifle platoon, machine gun platoon, and howitzer company squad, in attack, defense, and security; field fortification. *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 training 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 receive pay at the rate of $21 per month from the United States Government.

MILITARY 53–54. Advanced course. Second year (elective)—Practical and theoretical. Military history and policy of the United States; military law; company administration and supply; Officers Reserve Corps regulations; leadership (principles, instructional methods, drill and command); tanks; mechanization; combat principles (general); combat principles of the rifle company, machine gun company, and howitzer company platoon, in attack, defense, and security; anti-aircraft defense; defense against chemical warfare; combat intelligence; infantry signal communications. *Five hours per week. Both semesters. First semester, two credits; second semester, three credits.*

MILITARY BAND. Students enrolled in the military department and assigned to the band will receive credit for required military training at the rate of one credit for each semester. Such students are required to attend at least two periods of band practice and one of drill per week, and will attend with the band when required for parades, reviews, and other military ceremonies.

MINING

College of Engineering

PROFESSOR CARPENTER, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR SMYTH
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.*

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 3 and 4; Chemistry 5 and 6. *Junior year. First semester. Three credits.* Carpenter and Smyth.

52. MINE PLANT. Lectures on the principles and practice of underground and surface haulage, hoisting, air compression, mine drainage, ventilation and illumination. Stress is placed upon the underlying principles of physics and mechanics. *Prerequisite:* Physics 3 and 4; 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.* Carpenter.

72. MINE ADMINISTRATION. Lectures and recitation on the business,

sociology, and laws of mining, including mine examination, organization of staff, problems concerning power, labor and supplies, 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.* Smyth.

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.

79–80. 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. A charge based on equipment and material used.

MUSIC

PROFESSOR POST, HEAD OF DEPARTMENT

Requirements for a minor in music: 1–2 (2 credits), 5 or 65 (2 credits), 10 (2 credits), 11–12 (2 credits), 50–51 (6 credits), 54–55 (2 credits), 57 (2 credits).

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, and a listening experience with selected music literature contained in the library of phonograph records. *Both semesters. One credit each semester.* 204 Education Building. Post.

5. TEACHING OF MUSIC. (Same as Education 21.) The aims and principles of music teaching in the kindergarten, elementary, and upper grades. Group technique, song leading, interpretation, rhythmic activities. Care of the voice through various periods of development. Remedial exercises for improving pitch defects and tone quality. Music materials, rote songs, unison and descant songs, part songs, records, radio, and methods of approach for the listening period. *First semester. Two credits.* Education Building. Post.

10. APPRECIATION OF MUSIC (open to all University students. Non-enrolled listeners invited but visitor cards must be obtained. No previous training necessary). Content of music as found in representative literature from the Greek period to the present time, giving a brief chronological view of the evolution of music. Training in observation of the elements of music and in musical form. Criticism, current concerts, recitals in the lecture hours and the phonograph

provide material for study. The library contains about one thousand records, two hundred fifty scores and many reference books. *First semester. Two credits.* 204 Education Building. Post.

11–12. CAMPUS CHORAL CLUB. Open to all students, men and women, interested in choral singing, who have at least average qualifications of voice and are approved by the director. Representative selections from the best vocal literature such as the oratorio "Messiah" by Handel, the "Requiem" by Brahms; concert versions of parts of the operas such as "Carmen" by Bizet, "Tannhauser" by Wagner; other selections and part songs. One or more public concerts are given each year in joint performance with the Community Choral Society. *Two semesters. One credit each semester.* 204 Education Building and Barracks. Post.

15–16. 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. The orchestra assists the Choral Society in the performance of Handel's "Messiah" and other large works for chorus and orchestra. In addition, attractive instrumental works are prepared and played in one or more public concerts each year. *Two semesters. One-half credit each semester.* Barracks. Post.

17–18. BAND. (See under military for a description of the requirements and credits for men assigned to the band as a substitute for military.) University students, both men and women are eligible for membership in the University band. The schedule calls for appearances at civic and university parades, athletic contests, rallies, and an annual spring concert. One out-of-town trip with the football team is usually made each year. *Two semesters. One credit each semester.* 204 Education Building. 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.

52–53. ADVANCED HARMONY. Study of secondary sevenths, ninth chords, altered chords, modulation, suspension and passing tones, analysis, original work. Continued ear training. Open to all students who have had music 50–51, or the equivalent. *Two semesters. Three credits each.* 204 Education Building. Post.

54–55. CAMPUS CHORAL CLUB. For description, see music 11 and 12. *Prerequisite:* Music 11–12. *Two semesters. One credit each semester.* 204 Education Building and Barracks. 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. Illustrations from representative works in the record library. A logical continuation of Music 10. *Second semester. Two credits.* 204 Education Building. Post.

59–60. UNIVERSITY AND COMMUNITY LITTLE SYMPHONY ORCHESTRA.

For description see music 15–16. *Prerequisite:* Music 15–16. *Two semesters. One-half credit each.* Barracks. Post.

63–64. BAND. For general description, see music 17–18. *Prerequisite:* Music 17–18. Post.

65. HIGH SCHOOL MUSIC. (Same as Education 65.) Conducting. Instrumental technique. Practical consideration of instrumentation, transposing instruments, and teaching material of all grades. Choral technique. Voice ranges of boys and girls, the changing voice, remedial exercises. Materials for part singing, girls' and boys' glee clubs, and mixed chorus. High school music curricula. Technical and appreciatory objectives. Active participation in orchestra, glee club, or band required and applicant must be a junior or senior with a minor in music or its equivalent. *Second semester. Two credits.* Education Building. Post.

ORIENTATION

1. 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 that the lectures shall 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.

PHILOSOPHY

PROFESSOR THOMPSON, HEAD OF DEPARTMENT

Requirements for a minor in philosophy: Psychology 5 (3 credits), philosophy 7 or 8 (3 credits), and 21 (3 credits), and 6 credits in the department in courses numbered 50 or above.

Requirements for a major in philosophy: Psychology 5 (3 credits), philosophy 7 or 8 (3 credits), and 21 (3 credits), and 12 credits in the department in courses numbered 50 or above.

The following courses are recommended, but not required, for majors and minors in philosophy: Psychology 51 and 62, economics 1 and 2, sociology 81, and political science 1 and 2.

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. *Open to freshmen. Either semester. Two credits.* 202 Morrill Hall. Thompson.

7. DEDUCTIVE LOGIC. Terms, definition, division, syllogism and fallacies. Text, lectures and exercises. *Open to freshmen. First semester. Three credits.* 202 Morrill Hall. Thompson.

8. INDUCTIVE LOGIC. The assumptions of induction methods of scientific investigation, fallacies, the tests of truth. Text, lectures and exercises. *Open to freshmen. Second semester. Three credits.* 202 Morrill Hall. 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.* 202 Morrill Hall. 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.* 202 Morrill Hall. 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.* 202 Morrill Hall. Thompson. (Not given in 1940–1941.)

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.* 202 Morrill Hall. Thompson. (Not given in 1940–1941.)

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. 202 Morrill Hall. 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 and psychology 5. *First semester. Two to three credits according to work done.* 202 Morrill Hall. 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.* 202 Morrill Hall. 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.* 202 Morrill Hall. 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.* 202 Morrill Hall. Thompson.

PHYSICAL EDUCATION

Men

PROFESSOR MARTIE, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR SCRANTON
ASSISTANT PROFESSOR COLEMAN

Requirements for a minor in physical education: Courses 1–2 (1 credit), 3–4 (1 credit), or equivalent, 9–10 (2 credits), and 10 credits in the department in courses numbered 50 or above.

Requirements for a major in physical education: Courses 1–2 (1 credit), 3–4 (1 credit), 9–10 (2 credits), 53 (2 credits), 58 (2 credits), 60 (2 credits), 63 (2 credits), 64 (2 credits), and 8 additional credits in the department in courses numbered 50 or above. Zoology 57 and 58, and a year of chemistry is strongly recommended. Participation in at least one major sport is required of both majors and minors.

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 rhythm. *Freshman year.* (Required.) *First semester. Two hours per week. One-half credit.* Scranton.

2. DEVELOPMENTAL EXERCISES. Continuation of course 1 with addition of calisthenics and light apparatus. *Second semester. One-half credit.* Coleman.

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.* Coleman.

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.* Scranton.

By obtaining consent of the head 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, basketball, track, tennis, cross country, wrestling and tumbling.

5–8. SPECIAL CORRECTIVE EXERCISES. This course is designed for all freshman 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.* Martie.

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.* Scranton.

10. CONTINUATION OF COURSE 9. *Second semester. Three hours per week. One hour credit.* Scranton.

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. Coleman.

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 work 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.* Martie.

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. Coleman.

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.* Coleman.

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.* Coleman.

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.* Coleman.

58. See Education 64. Martie.

59. CORRECTIVE GYMNASTICS. The work will consist of lectures covering the biological, sociological, and physiological aspect of the causes of functional and structural defects. Practical work will include the use of apparatus and the adaption of various forms of exercises to the needs of the individual.

(a) Improving functional organic capacity.
(b) Correction of physical defects.
(c) Measurements of motor ability.

Three periods per week. Two credits. First semester. Martie.

60. INTRODUCTION TO PHYSICAL EDUCATION AND HEALTH. This course will consider the aims and objectives of physical education and health; the principles underlying the curriculum, standards for selection of activities and criteria for judging the work. Application will be made to the capacities and needs of different age groups. *Three periods per week. Two credits. Second semester.* Coleman.

61. PHYSICAL DIAGNOSIS AND HEALTH EXAMINATION. The purpose of this course is to enable the teacher to perform a physical examination and detect gross defects in structural and organic development

and function. Infectious diseases are studied and common diseases of the vital organs briefly covered. Laboratory includes practice in diagnosis. *Three periods per week. Two credits. First semester.* Martie.

62. PSYCHOLOGY OF COACHING. Emphasizes the application of practical psychology in all forms of athletic activities. Of special interest to prospective leaders and coaches. Illustrations of applied psychology are collected and analyzed as to values in the relations to specific forms of athletics. *Three periods per week. Two credits. Second semester.* Martie.

63. PHYSIOLOGY OF EXERCISE. This course acquaints students with physiological changes in human organisms due to physical exercise. It furnishes a physiological basis for planning a program of physical education for schools and training programs for the athletic teams. Laboratory experiments deal with simple observations of respiration, circulatory, nervous and metabolic adjustments to physical exercise. *Three periods per week. Two credits. First semester.* Martie.

64. CHARACTER EDUCATION THROUGH PHYSICAL EDUCATION. An application of the principles of leadership to the particular problems in the program of character education in general, but with special references to the character training situations that arise in physical education activities. *Three periods per week. Two credits. Second semester.* Martie.

65. RECREATION LEADERSHIP. A study of community recreation with special emphasis upon its relation to physical education. Designed to aid in preparation for community service. *Three periods per week. Two credits. First semester.* Martie.

PHYSICAL EDUCATION

Women

PROFESSOR SAMETH, HEAD OF DEPARTMENT
MISS RUSSELL
MISS STEWART

All P. E. Minors—1, 2, 3, 4, 9 or 10, 23, 31, 55, 56, 57.
Dance Minors—11, 53.
Sports Minors—59 and 60 or 61.
Recommendations—(Sports) Chemistry, Home Economics 33, Education 56.
(Dance) Art Survey, Classics, Dramatics, History of Various Civilizations, Music Appreciation.

1, 2, 3, 4. COURSES REQUIRED FOR GRADUATION. Numbered in order in which they are taken. One and two have each one unit of credit (3 periods); three and four each have one-half unit of credit (2 periods); at the medical examination students will be rated A, B, C, D, according to physical condition. Those rating C and D will take lighter work than those rating A and B. They will register for 5, 6, 7, 8.

A—DANCING (including clogging, interpretation, etc.).

B—GYMNASTICS (including marching, general posture training, etc.).

C—ORGANIZED GAMES (relays and simple games leading up to field ball, soccer, indoor baseball, etc.).

D—Stunts and Tumbling.

E—Sports (archery, fencing,* golf, riding,* tennis, winter sports).

F—Swimming. (Fee $5 per semester.)

5–6. Individual or Adapted Group Gymnastics. Planned to meet specific needs such as correction for feet, abdomen, spine, etc. Recommended for all first and second semester students who, upon examination, show a need for it. *Four short periods a week. One credit each semester.* Gymnasium.

7–8. Continuation of P. E. 5–6. *Three short periods a week. One-half credit each semester.*

9. Games for the Pre-School Child and for the First Three Grades. Recommended for those who like to work with young children. Required of all P. E. minors who do not take P. E. 10. *One credit.*

10. Folk Dancing for Elementary Grades and High School. The object of this course is to give those who intend to teach, folk dances suitable for use in the four upper grades. It stresses dance terminology, the fundamental steps of many countries, calls, etc., also includes short and not very difficult dances. Required for P. E. Minors who do not take P. E. 9. *Prerequisite:* Physical education 1–2 or the equivalent. *Two periods. One credit.* Gymnasium.

11. Continuation of P. E. 10. With special attention to material suitable for the grades above the sixth and for high school. Fundamentals of clog and tap will be included if the class wish it. This class will meet twice a week for one month. The remainder of the semester will be devoted to one period of practice teaching and one of class discussion. Required for P. E. Minors (Dance). *One semester. One credit.*

23. Health and Physical Education Program:

A—Six weeks. Health as related to the teacher, the child, and the school. Remedial and preventable conditions.

B—Six weeks. Health in the home. (Not required of students who are taking Home Economics 54.)

C—Six weeks. First Aid. A Red Cross certificate may be had if the grade is 2.5 or better.

This course may be elected for 1, 2, or 3 units. Required for P. E. Minors. *Three credits.*

25–26. Activities. Swimming (Sr. L. S.), dancing, golf, tennis, etc., open to those who have completed requirements for graduation and who wish to improve their skills in any activity offered. *Each semester, one-half credit.*

27–28. Continuation of 25–26. *Each semester, one-half credit.*

31–32. Contemporary Dance. Open to all who have had the equivalent of Physical Education 1–2. *Three periods. Each semester. One credit.* Gymnasium.

53. History and Development of the Dance. This course will deal with a historical development of the dance, a study of dance

*Only when additional instruction is available. Equipment and additional fees will be required.

forms, their relationship to one another and to the contemporary dance. It will include social dancing as well as the dance as an art form. Material suitable for use in elementary and high school will be studied. *Prerequisite:* P. E. 31 or its equivalent. Required for P. E. Minors. (Dance). *First semester. One lecture; laboratory, two periods. Three credits.* Alternate years—not offered in 1940–1941.

54. Continuation of 53 and stressing composition for the individual and for directing group composition. May accompany 53. *Laboratory, two periods. One credit.* Alternate years.

55. Applied Anatomy and Physiology of the Neuromuscular System. The chief object of this course is to familiarize the student with the mechanism and function of the neuromuscular system. The student will be prepared to study intelligently cases of round shoulders, spinal curvature, flat feet, and the effects of fatigue. *Prerequisite:* Physical education 1 and 2; Zoology 57–58. *First semester. Laboratory, one period. One credit.* Gymnasium. Alternate years.

56. Reconstructive Physical Education. Application of P. E. 55 to the needs of the child, his growth, development, and physical activity. Required for P. E. Minors. *Laboratory, two periods. Two credits.* Alternate years.

57. History, Administration and Adaptation of Physical Education and Recreational Activities—in elementary, junior high and senior high school P. E. programs, also as applied to after-school programs, play days, clubs, etc., also a study of extra-curricular activities such as camping, outings, and community recreation. There will be opportunity to direct after-school activities, either in athletic associations or on playgrounds. *First semester. Three lectures. Three credits.*

59. Theory and Practice of Directing Team Games in Elementary and Junior High School. This course includes a study of the essentials of the technique and game forms leading to baseball, basketball, hockey, soccer, volley ball, etc. Opportunity will be given for actual practice in teaching. *Prerequisite:* At least two years participation in college athletics. *Two lectures and one practice period per week. Either semester. Two credits.* Gymnasium.

60. Theory and Practice of Directing Team Sports in Senior High School. This course will stress rules, testing, and officiating, and give opportunity for actual practice in officiating and making tests. (Required of sports minors who do not take P. E. 61.) *Either semester. Two lectures and one practice period per week. Two credits.*

61. Methods of Teaching. Archery, badminton, swimming, tennis, etc. (Required of sports minors who do not take P. E. 60.) *Two lectures. Two credits.*

101–102. Problems in Health and Physical Education. Open only to seniors or graduate students. Where work is done in the field of health education the student must also have had the equivalent of a minor in hygiene or zoology. *Two to five credits.*

RECREATION. All women who are registered for physical education courses, or who have completed the freshman-sophomore requirement in physical education, may receive instruction and participate in all activities sponsored by the Women's Athletic Association. (See page 69.) 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

PROFESSOR LIEFSON, ACTING HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR BLAIR
ASSISTANT PROFESSOR BATDORF

Requirements for a minor in physics: Physics 53–54 (10 credits), 55–56 (6 credits), and 2 additional units in the department.

Requirements for a major in physics: Physics 53–54 (10 credits), 55–56 (6 credits), and 6 additional units in 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 correspondence course in physics 1b-2b. *Prerequisite:* Plane geometry. A knowledge of trigonometry is desirable. *Both semesters. Three credits each semester.* Mackay Science Hall. Blair.

1B–2B. GENERAL PHYSICS LABORATORY. A laboratory course to make the student an intelligent observer of natural phenomena. To accompany physics 1a-2a. Experimental work, largely quantitative 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.* Mackay Science Hall. Blair. 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 demonstrations at the lecture table and by problems. *Prerequisite:* Plane, solid, and analytic geometry and trigonometry. *Both semesters. Five credits each semester.* Mackay Science Hall. Liefson and Batdorf.

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:* Plane, solid, and analytic geometry and trigonometry. *Both semesters. Credits to be arranged, with a maximum of six credits for the course.* Mackay Science Hall. Liefson and Batdorf. Fee $1 per credit hour.

7. DESCRIPTIVE ASTRONOMY. A brief course in astronomy designed to acquaint the student with the most important facts relating to the heavenly bodies. The objects of the course are to make the student

an intelligent observer of the more common astronomical phenomena. Descriptive rather than mathematical in character. *Either semester. Three credits. Two scheduled periods and one evening hour per week to be arranged.* Mackay Science Hall. Blair.

9–10. INTRODUCTORY PHYSICS. A nonmathematical course dealing with the fundamental principles of physics. Practical applications will be emphasized, and lectures will be illustrated by numerous experiments and lantern slides. *No prerequisite. Two credits each semester.* Mackay Science Hall. Liefson.

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.* Mackay Science Hall. Blair. Fee $3.

51–52. 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. *Either semester. One credit. One three-hour computing period per week.* Mackay Science Hall. 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:* Plane, solid, and analytic geometry and trigonometry. *Both semesters. Five credits each semester.* Mackay Science Hall. Liefson and Batdorf.

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:* Plane, solid, and analytic geometry and trigonometry. *Both semesters. Credits to be arranged, with a maximum of six credits for the course.* Mackay Science Hall. Liefson and Batdorf. Fee $1 per credit hour.

57–58. ELECTRICAL MEASUREMENTS. Precise measurements of current electromotive force and power, with both alternating and direct current. Calibration of instruments, determination of resistence, capacity, mutual inductance, and self-inductance. Hysteresis. Photometry. Illumination. *Prerequisite:* General physics, differential and integral calculus. *Both semesters. Two credits each semester.* Mackay Science Hall. Liefson. 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

general physics will be fully treated. *Prerequisite:* General physics, differential and integral calculus. *Both semesters. Two credits each semester.* Mackay Science Hall. Batdorf.

61–62. LIGHT AND PHYSICAL OPTICS. Lectures: Experimental illustration of selected topics in light, including discussion of the corpuscular and wave theories of light, the restricted theory of relativity, lenses, mirrors and prisms, prism spectra, Doppler's principle and its applications, diffraction, interference, the theory of the grating, double refraction and polarization. *Prerequisite:* General physics, differential and integral calculus. *Both semesters. Two credits each semester.* Mackay Science Hall. Blair.

63. PHYSICAL OPTICS. Laboratory exercises in connection with course 61–62. *First semester. Two credits.* Mackay Science Hall. Blair and Liefson. Fee $3.

65–66. HISTORY OF PHYSICS. Lectures and recitations. Preparation of reports and discussion of assigned topics by members of the class. *Prerequisite:* General physics. *Both semesters. Two credits each semester.* Mackay Science Hall.

68. ELECTRIC LIGHTING. The application of physical principles to the various problems of electric lighting, photometry, and miscellaneous applications of electricity. *Prerequisite:* General physics, differential and integral calculus. *Second semester. Two credits.* Mackay Science Hall.

71–72. INTRODUCTION TO MODERN PHYSICS. Lectures and experimental illustrations. Discussion of important topics in the fields of radiation and the structure of atoms and molecules. Introduction to quantum mechanics. *Prerequisite:* General physics. *Two credits each semester.* Mackay Science Hall. Liefson.

73–74. ELECTRICITY AND MAGNETISM. Introduction to the mathematical theory of electricity and magnetism. Solution of problems by exact reasoning from fundamental principles. *Prerequisite:* General physics, differential and integral calculus. *Either semester. Two credits per semester.* Mackay Science Hall. Batdorf.

75–76. GLASSBLOWING. A laboratory course of instruction in methods of making simple glass apparatus. *Either semester. One credit.* Mackay Science Hall. Liefson. Fee $6.

77–78. THERMIONIC VACUUM TUBES. A laboratory course of selected problems involving the determination of constants of vacuum tubes and vacuum tube circuits. One hour each week will be devoted to discussion and reports. *Prerequisite:* Physics 3–4–5–6 (or the equivalent), differential and integral calculus. *Either semester. Two credits per semester.* Mackay Science Hall. Liefson. Fee $3.

101–102. THEORETICAL 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, differential and integral calculus and differential equations. *Both semesters. Two credits each semester.* Mackay Science Hall. Batdorf.

103–104. THESIS WORK, and all special laboratory work not in the courses announced above. *Both semesters. Credits to be arranged.* Mackay Science Hall. Staff.

PSYCHOLOGY

PROFESSOR YOUNG, HEAD OF DEPARTMENT
ASSOCIATE PROFESSOR IRWIN

Requirements for a minor in psychology: Psychology 5 (3 credits), 10 (2 credits), 51 (3 credits), 62 (3 credits), and 7 additional credits in the department.

Requirements for a major in psychology: Philosophy 1 (2 credits), zoology 55 (2 credits), sociology 71 (3 credits), psychology 5 (3 credits), 51 (3 credits), 60 (2 credits), 62 (3 credits), 63 (2 credits), and 6 additional credits in the department, at least 2 of which must be in courses numbered 50 or above.

2. HUMAN NATURE. A freshman course in personal and social efficiency, emphasizing the most practical principles of elementary social psychology. Topics included are psychological factors in effective study, the hereditary and environmental sources of individual capacities, attitudes, and other traits, the measurement of personality traits and aptitudes, techniques in influencing people, etc. *No prerequisite. Both semesters. Two credits.*

5. GENERAL PSYCHOLOGY. An introductory course dealing with forms and laws of human behavior and consciousness. Lectures, prescribed readings, term paper. Not open to freshmen. *Prerequisite to all other courses in the department except psychology 2. Either semester. Three credits.* Education Building.

6. ELEMENTARY EDUCATIONAL PSYCHOLOGY. A consideration of the applications of psychology to educational problems. Required of normal students and four-year students seeking the high school teacher's diploma. *Prerequisite:* Psychology 5. *Second semester. Three 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. *Prerequisite:* Psychology 5. *Second semester. Two credits.* Education Building.

14. APPLIED PSYCHOLOGY. A general course in the applications of psychology: Psychology of vocational guidance, personal efficiency, scientific management, social work, propaganda and public opinion, law, medicine, athletics, business, art. *Prerequisite:* Psychology 5. *Second semester, alternate years, starting 1934–1935. Two credits.*

40. MENTAL HYGIENE. A consideration of the principles of psychology in their relationship to mental health and efficiency. *Prerequisite:* Psychology 5. *Second semester. Three credits.*

51. SOCIAL PSYCHOLOGY. A study of the applications of psychology to the social relations of the individual and the group life of society: Interaction of individual and social factors in the formation of personality, leadership, propaganda, audiences, communities, nations, crowds, amusements, personality problems, etc. *Prerequisite:* Psychology 5. *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. *First semester. Three credits.* Education Building.

57. PSYCHOLOGY OF ADVERTISING. An intensive study of the psychological principles basic to effective advertising. Emphasis will be placed on techniques of experimental investigation useful to advertisers in solving problems on the job for which psychology does not provide answers. *Prerequisite:* Psychology 5. *First semester, alternate years, starting 1940–1941. Two credits.*

59. MENTAL, PERSONALITY, AND VOCATIONAL APTITUDE TESTS. Lectures, practice, readings. Description, demonstration, and training in the construction, use, and interpretation of standard tests. Special attention will be given to test uses for school purposes, industrial and personnel practice, clinical diagnosis, vocational guidance, social service work, etc. *First semester. Two credits. Alternate years.*

60. COMPARATIVE PSYCHOLOGY. The genetic history of consciousness in animals, savages and civilized human beings. *Prerequisite:* Psychology 5. *Second semester. Two credits.*

61. BUSINESS PSYCHOLOGY. Discussions, readings, and practical assignments on the mental laws basic to effective buying, selling, advertising, and management of men. Salesmanship will be emphasized. *Prerequisite:* Psychology 5. *First semester, alternate years, starting 1941–1942. Two credits.*

62. EXPERIMENTAL PSYCHOLOGY. A laboratory course in the application of scientific methods to the study of mental processes. Lectures, assigned readings, and laboratory. *Prerequisite:* Psychology 5. *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.

64. INDUSTRIAL PSYCHOLOGY. Application of the principles of psychology to the problems of personnel management, vocational selection, training the worker, fatigue, monotony, accident prevention, morale, leadership, strikes, and emotional and social adjustment of the worker. *Prerequisite:* Psychology 5. *Second semester, alternate years, starting 1935–1936. Two credits.*

65. CRIMINAL AND LEGAL PSYCHOLOGY. The individual and social factors of crime and legal relationships, with special emphasis on juvenile delinquency. Problems of the lawyer, educator, and social worker are considered. A study is made of criminal personality and the nature, development, prevention, detection, and treatment of crime and the criminal. Field trips will be taken. *Prerequisite:* Psychology 5. *First semester, alternate years, starting 1933–1934. Two credits.*

70. MARRIAGE, HOMEMAKING, AND DIVORCE. A presentation of the psychological principles involved in these three types of social adjustment. Open to juniors, seniors and graduates who have had general psychology. *Second semester. Two credits.*

102. RESEARCH IN PSYCHOLOGY. The thesis subject may be chosen from any field of psychology in which the student has had at least one advanced course. For graduate students and seniors. *Either semester. Two credits.*

AFFILIATED ORGANIZATIONS

1. AGRICULTURAL EXPERIMENT STATION.
2. AGRICULTURAL EXTENSION DEPARTMENT.
3. THE STATE ANALYTICAL LABORATORY.
4. THE STATE BUREAU OF MINES.
5. LABORATORY FOR PURE FOOD AND DRUGS AND WEIGHTS AND MEASURES.
6. THE STATE VETERINARY CONTROL SERVICE.
7. THE UNITED STATES BUREAU OF MINES EXPERIMENT STATION.

THE NEVADA AGRICULTURAL EXPERIMENT STATION

Staff

LEON W. HARTMAN, Ph.D.....President of University
SAMUEL B. DOTEN, M.A., Director.....Entomology
GOLAMAE JOHNSON.....Librarian and Secretary to Director
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 in Range Management
MARTHA R. BRUCE.....Statistician in Range Management
MARK A. SHIPLEY, B.S.....Assistant in Range Management
AGNES L. SCHMITH.....Clerk in Range Management
EDWARD RECORDS, V.M.D.....Veterinary Science
LYMAN R. VAWTER, D.V.M., M.S.....Associate in Veterinary Science
ALBERTA MACHEN.....Clerk in Veterinary Science
M. R. MILLER, M.S.....Chemistry
WM. T. RAWLES, B.S.....Fellow in Chemistry
ROBERT STEWART, Ph.D.....Soils Research
V. E. SPENCER, M.S.....Associate in Soils Research
FORREST M. WILLHITE, M.S.....Assistant in Soils Research
MARJORIE HOWES.....Clerk in Soils Research
GEORGE HARDMAN, M.S.....Irrigation
HOWARD G. MASON.....Assistant in Irrigation
F. B. HEADLEY.....Farm Development
MABEL CONNOR, B.A.....Statistician in Farm Development
J. E. CHURCH, Ph.D.....Meteorology
CARL ELGES, JR., M.S.....Assistant in Meteorology

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 receives $60,000 annually. In addition, for the fiscal year 1939–1940 it received $2,460.64 from the Federal Bankhead-Jones Fund. The total of these Federal appropriations for the current fiscal year will be $92,460.64. None of these funds can be applied to teaching or to the work of agricultural

extension, because the object of all these funds is the investigation by scientific methods of problems in the agricultural industry.

The Nevada Experiment Station has chosen problems for study in five fields:

I. The problems of the most effective use of a limited water supply in crop production.

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 1939–1940 the active project list of the Station is as follows:

RANGE MANAGEMENT—

Project 22—Adams Fund. *Poisonous Range Plants.* 1916–Continuous. Project Leader, C. E. Fleming, assisted by M. R. Miller, Dr. L. R. Vawter and Andrew Young.

Project 24—Hatch Fund. *Methods of Producing More and Better Lambs in Nevada Range Flocks.* 1919–Continuous. Project Leader, C. E. Fleming.

Project 26—Hatch Fund. *Feeding and Finishing Range Ewes and Lambs.* 1920–Continuous. Project Leader, C. E. Fleming.

Project 31—Purnell Fund. *Studies of the Economics of Cattle Production under Nevada Ranch and Range Conditions.* 1927–Continuous. Project Leader, C. A. Brennen, assisted by C. E. Fleming and Grant H. Smith.

Range Conservation Carrying Capacity Survey and Economic Study of Range Use and Factors Affecting Ranch and Range Stability. 1937– In cooperation with Bureau of Agricultural Economics, U. S. Forest Service, Soil Conservation Service, Resettlement Administration, Division of Grazing, Farm Credit Administration, Agricultural Adjustment Administration, Nevada Extension Service, and Utah, Idaho and Wyoming Experiment Stations.

Project 45—Purnell Fund. *Development of a Rotation Paddock System of Grazing on Irrigated Meadows by Range Flocks of Sheep.* Reno, 1920–Continuous; Elko, 1934–Continuous. Project Leader, C. E. Fleming, assisted by C. A. Brennen.

Project 52—Bankhead-Jones Fund. *Annual Brome Grasses as Invaders of Sheep and Cattle Ranges in Nevada.* 1936–Continuous. Project Leader, C. E. Fleming, assisted by Departments of Veterinary Science, Chemistry and Soils.

Range Plant Inventory and Range Forage Improvement Studies. In cooperation with U. S. Forest Service. 1937–. Project Leader, C. E. Fleming, assisted by C. A. Brennen and Grant H. Smith.

Project 55—Station Sales Fund. *Weed Control by Plant Competition.* 1937–. In cooperation with the Nevada Agricultural Extension Service and the Federal Bureau of Plant Industry. Project Leader, C. E. Fleming, assisted by C. A. Brennen.

METEOROLOGY—

Project 15—Adams Fund. *Timber and Snow Studies and Snow Surveying.* 1932–Continuous. Project Leader, Dr. J. E. Church, assisted by Carl Elges.

Project 44—Purnell Fund. *Forecasting the Run-off of the Humboldt River, Nevada.* 1933–. Project Leader, Dr. J. E. Church, assisted by Carl Elges.

VETERINARY SCIENCE—

Project 16—Adams Fund. *Hemorrhagic Diseases in Cattle.* 1914–Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.

Project 36—Adams Fund. *Lymphangitis in Cattle.* 1928–Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.

Project 39—Purnell Fund. *A Study of Types of Malnutrition, Diminished Reproductive Activity, and Lowered Resistance to Disease in Cattle Which Appear To Be Due to Deficiencies in the Content of Certain Forms of Mineral Matter in Soil, Water and Forage.* 1929–Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter, M. R. Miller and V. E. Spencer.

Project 40—Purnell Fund. *Encephalomyelitis in Equines.* 1930–Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.

ENTOMOLOGY—

Project 5—Hatch Fund. *Insects Injurious to Alfalfa.* 1916–Continuous. Project Leader, S. B. Doten.

Project 46—Hatch Fund. *The Relation of Methods of Herding Sheep on the Open Range to the Prevalence of Grub in Head* (Oestrus ovis). 1934–. Project Leader, S. B. Doten, assisted by C. E. Fleming, Dr. L. R. Vawter, in cooperation with the Nevada State Sheep Commission.

IRRIGATION—

Project 49—Purnell Fund. *An Inventory of the Agricultural Land Resources of the Basins of the Truckee, Carson, and Humboldt Rivers and Minor Streams.* 1934 – Continuous. Project Leader, George Hardman.

Project 50—Purnell Fund. *An Inventory and History of the Water Resources of the Truckee, Carson, and Humboldt Rivers and Minor River Basins.* 1934 – Continuous. Project Leader, George Hardman.

FARM DEVELOPMENT—

Project 30—Purnell Fund. *Land Utilization and Farm Development Studies.* 1925–Continuous. Project Leader, F. B. Headley.

Project 32—Purnell Fund. *A Test of the Economic Efficiency of Alfalfa Hay as a Sole Ration for Dairy Cattle, and Its Relation to Sterility.* 1925–Continuous. Project Leader, F. B. Headley.

Project 41—Hatch Fund. *Hog Feeding Experiments.* 1930 – Continuous. Project Leader, F. B. Headley.

Project 42—Purnell Fund. *Turkey Feeding Experiments.* 1933–Continuous. Project Leader, F. B. Headley.

Project 53—Purnell Fund. *Bovine Mastitis; Natural Resistance in Dairy Animals.* 1938–. Project Leader, Dr. Edward Records, Dr. L. R. Vawter, M. R. Miller, and F. B. Headley.

SOIL FERTILITY—

Project 48—Purnell Fund. *A Study of Various Organic and Inorganic Phosphates, with Special Reference to Their Ability to Penetrate Soils and to Their Positional and Chemical Availability to Plants.* 1934–Continuous. Project Leader, V. E. Spencer, assisted by Robert Stewart.

In cooperation with the U. S. D. A. Experimental Farm at Beltsville, Maryland, New Jersey Experiment Station at Brunswick, New Jersey, Ohio Experiment Station at Wooster, Ohio, Illinois Experiment Station at Des Plaines, Illinois, Florida Experiment Station at Quincy, Florida, Yuma Station, Bureau of Plant Industry at Bard, California, and University of Illinois at Urbana, Illinois.

NEVADA AGRICULTURAL EXTENSION 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

LEON W. HARTMAN, Ph.D., President of the University.
CECIL W. CREEL,[1] Agr.D., Director of Agricultural Extension.
THOMAS E. BUCKMAN, M.S.,Acting Director of the Extension Service.
MRS. MARY S. BUOL, B.S., Assistant Director for Home Economics.
MRS. MARIE WATKINS, Chief Clerk.
L. E. CLINE, M.S., Extension Agricultural Economist.
VERNER E. SCOTT, M.S., Extension Agricultural Economist.
OTTO R. SCHULZ, B.S., Soil Conservationist.
A. L. HIGGINBOTHAM, M.A., Extension Editor, University of Nevada.
ARCHIE ALBRIGHT, B.S., Assistant County Extension Agent, Washoe County.
H. E. BOERLIN, B.S., County Extension Agent, Washoe County.
ROYAL D. CROOK, M.S., District Extension Agent, Churchill and North Lyon Counties.
FLORENCE S. DAVIS,[2] B.S., County Extension Agent, Clark County.
LOUIE A. GARDELLA, B.S., County Extension Agent, Lincoln County.
HELLEN GILLETTE, B.A., Agent-at-Large, University of Nevada, Reno.
LENA HAUKE, B.S., County Extension Agent, Churchill County.
M. GERTRUDE HAYES, B.S., County Extension Agent, Washoe County.
PAUL L. MALONEY, B.S., District Extension Agent, Humboldt and North Lander Counties.
MARK W. MENKE, B.S., County Extension Agent, Elko County.
E. B. RECANZONE, B.S., County Extension Agent, Lyon County.
ANTOINE PRIMEAUX, B.S.,Assistant County Extension Agent, White Pine County.
A. J. REED, B.S., County Extension County, Pershing County.
E. C. REED,[3] M.S., County Extension Agent, Washoe County.
W. H. STODIECK, B.S., District Extension Agent, Douglas and Ormsby Counties.
C. R. TOWNSEND, District Extension Agent, Southern Eureka, Southern Lander, Nye, and White Pine Counties.
HELEN S. TREMEWAN, B.S., County Extension Agent, Elko, County.
J. W. WILSON, B.S., County Extension Agent, Elko County.
J. H. WITTWER, B.S., County Extension Agent, Clark County.

Cooperative extension work in agriculture and home economics is conducted in Nevada under the provisions of the following Acts of Congress: The Smith-Lever Act, approved May 8, 1914; the Capper-Ketcham Act, approved May 22, 1928; the Bankhead-Jones Act, approved June 29, 1935.

The Agricultural Extension Division as established under the Memorandum of Understanding with the U. S. Department of Agriculture dated September 8, 1914, is 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

[1]On leave, 1940.
[2]Cooperative appointment with Farm Security Administration.
[3]On leave of absence, Executive Assistant, Agricultural Conservation Program, University of Nevada, Reno, Nevada.

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." Instructions and demonstrations are given to rural people in both adult and junior organized groups through the County Farm Bureau Community Centers, and Boys and Girls 4-H Clubs.

County Farm Bureau Community Centers serve as a forum where farm men and farm women banded together find a solution for many of their problems by cooperating with Agricultural Extension Service.

Extension work is outlined in written projects and budgets entered into by the cooperating parties. Major projects are range livestock, dairying, poultry, crops, home improvement, human nutrition, and rural organization.

The organization for extension work in Nevada comprises an administrative and specialist staff, resident at the University, and eighteen 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 County Farm Bureaus.

THE STATE ANALYTICAL LABORATORY

Staff

LEON W. HARTMAN, Ph.D., President of the University.
WALTER S. PALMER, E.M., Director.
WILLIAM I. SMYTH, E.M., Chemist.
VINCENT P. GIANELLA, Ph.D., Geologist.
HARRY E. WHEELER, Ph.D., Geologist.

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 work of the laboratory is done by the director and chemist, with the geologist and mineralogist assisting with the unusual rocks and minerals.

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.

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 BUREAU OF MINES

Staff

LEON W. HARTMAN, Ph.D., President of the University.
JAY A. CARPENTER, E.M., Director.
WALTER S. PALMER, E.M., Metallurgist.
VINCENT P. GIANELLA, Ph.D., Geologist.
WILLIAM I. SMYTH, E.M., Analyst.
HARRY E. WHEELER, Ph.D., Stratigrapher.
B. F. COUCH, Secretary.

The Bureau of Mines of the State of Nevada was established by the Legislature of 1929. The Act lodges the supervision of the Bureau with the Board of Regents of the University of Nevada. 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 nometallic 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 1939 Legislature appropriated $17,500 for the biennium.

LABORATORY FOR PURE FOOD AND DRUGS AND WEIGHTS AND MEASURES

(Sierra and Fifth Streets)

Staff

LEON W. HARTMAN, Ph.D., President of the University.
SANFORD C. DINSMORE, B.S., Commissioner.
WAYNE B. ADAMS, B.S., Deputy Commissioner and Chemist.
EDWARD L. RANDALL, M.S., Chemist.
VICTOR COKEFAIR, Inspector.
J. M. MCLEOD, B.A., Inspector.
A. J. RAFAEL, Inspector.

The 1939 session of the State Legislature enacted a new food and drug law, which also embraces cosmetics, to replace the old law which has been on the statute books for thirty-three years. The present law is modeled closely after the Federal Act and provides that all rules, regulations, definitions and decisions proclaimed by the Secretary of the United States Department 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 has 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 1931 session of the State Legislature passed what is known as the Petroleum Products Inspection Act and the enforcement of this statute was delegated to the State Department of Weights and Measures.

THE STATE VETERINARY CONTROL SERVICE

Staff

LEON W. HARTMAN, Ph.D., President of the University.
EDWARD RECORDS, V.M.D., Director.
LOUISE COMBS, B.S., Technician.
ALBERTA MACHEN, Stenographer.

The State Veterinary Control Service was organized during 1915, under the provisions of an Act of the Legislature approved March 11, 1915. The primary object of this department is to provide facilities for the routine diagnosis of communicable diseases of domesticated animals in the laboratory and the field. Minor research into the nature, cause, and means of control of such diseases is also carried on. Special sera and vaccines, which cannot be procured in the open market, are also prepared and supplied when needed. From time to time bulletins, circulars, and press releases dealing with the communicable diseases of domesticated animals and the most modern means of controlling the same are prepared and distributed. 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 conducted by the State Department of Agriculture, the State Board of Sheep Commissioners, and the U. S. Bureau of Animal Industry.

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.

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF MINES, RARE AND PRECIOUS METALS EXPERIMENT STATION

Staff

EDMUND S. LEAVER, Met.E., Supervising Engineer and Metallurgist.
JESSE A. WOOLF, M.S., Associate Metallurgist.
ANDREW C. RICE, Ph.D., Associate Analyst.
CLYDE E. ARRINGTON, B.A., Assistant Analyst.
ALFRED P. TOWNE, Laboratory Mechanic.
ARTHUR E. FOX, B.S., Junior Chemist.
CHARLES V. ROLLINS, B.S., Junior Chemist.
RAYMOND S. LAMBERT, Laboratory Assistant.
HARRY S. MILBURN, Assistant Assayer.
HARRY F. MCCRAY, Chief Clerk.
GENEVIEVE Y. ODLE, Typist.

MINING DIVISION

WILLIAM O. VANDERBURG, E.M., Mining Engineer.

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. The building was completed in July 1921, and at once fully equipped as the Rare and Precious Metals Experiment Station.

The scope of work embraces investigation of gold, silver, platinum and rare metals for the entire United States, and other problems having especial importance for the mining and metallurgical industries of Nevada.

Studies of mining costs and practices in many districts of Nevada have been made and published.

THE SUMMER SESSION OF THE UNIVERSITY OF NEVADA

JUNE 17 THROUGH JULY 26, 1940

The program of the 1940 Summer Session of the University of Nevada offers a wide choice of cultural and professional courses leading to the fulfillment of requirements for the Bachelor's and Master's degrees and to the attainment and renewal of kindergarten-primary, elementary and secondary teaching credentials. The schedule of courses and activities has been planned to meet the needs of the teacher in service and to afford opportunity for all types of college students to use the summer profitably in furthering their academic and professional training. Unusual opportunity is given to increase teaching skill, to improve teaching personality, to obtain help with individual classroom problems, to acquire new cultural and recreational interests and to become better informed concerning current and social problems.

THE PLACE

The University of Nevada campus is ideally environed for combined summer study and recreation. Reno, Nevada, is strategically and delightfully located on the banks of the Truckee River and surrounded by the majestic Sierra Nevada Mountains. Serving as industrial, financial, and distributive center for a vast area, the city possesses business and cultural advantages seldom paralleled by any community of its size. It is characterized by many fine homes, lovely drives, restful parks, good playgrounds, libraries, and churches, and possesses excellent living conditions.

The summer climate of Reno is generally delightful and agreeable for study; the nights are always cool and the days moderately warm.

Reno is the hub of a far-reaching recreational area. Within a radius of 50 miles such outstanding scenic places as the rugged and picturesque Sierra Nevada Mountains, the Truckee Canyon, historic Virginia City with its renowned Comstock Lode, the Geiger Grade Skyline Drive, Mount Rose Drive, magnificent Lake Tahoe, the State Capitol at Carson City, and Pyramid Lake are accessible over smooth hard-surfaced highways. Numerous week-end pleasure trips can be planned to afford recreational opportunities.

ADMISSION AND CREDITS

Admission to the Summer Session is open to anyone with ability to do scholastic work on the University level. However, credit toward any University diploma will be granted only after the student has met all requirements for admission to the University. Students enrolling with less than two years of college work may take courses numbered fifty or above only upon the consent of the instructor of the course.

The number of credits allowed for each course as designated in the Bulletin is determined on the basis that fifteen University recitation periods of 50 minutes each, together with approximately two hours of

outside preparation for each such period, earn one credit. Classes which meet daily for the six weeks carry, therefore, two credits. Six credits is as heavy a load as the student can expect to carry and represents the maximum amount of credit obtainable during the session.

CREDIT FOR CERTIFICATES AND DEGREES

All of the courses listed carry University credit and may be applied to meet the requirements for the diploma from the Normal School or for degrees from the University. All courses, likewise, are accepted by the Nevada State Board of Education to meet the requirements for *renewals* of certificates and for life diplomas. All courses in Education are likewise accepted by the Board as meeting the requirements for any teachers' certificate except that the certificate may demand certain specific courses as, for example, courses in secondary education which cannot be met by offering courses in elementary education.

REQUIREMENTS FOR THE BACHELOR'S DEGREE

The total number of units required for the Bachelor's degree from the College of Arts and Science of the University of Nevada is 126, of which not less than forty must be upper division work. Such upper division courses in the regular University catalog and in the Summer Session Bulletin are numbered 50 or above. Courses must be so selected from a group of departments as to include at least one major and one minor. The specific requirements for majors and minors vary with departments, but in general a major does not exceed 27 units, of which 12 must be upper division. The maximum units for a minor are 18, of which six must be upper division. Information concerning specific departmental requirements may be learned upon arrival at the University or by writing the Director of the Summer Session.

TEACHERS FROM OTHER STATES

Teachers from other States who may desire teaching certificates in Nevada should first make application to the Certification Clerk, State Department of Education, at Carson City, Nevada, in order to learn the requirements they must meet. They will then be able to determine what courses in the Summer Session they should elect.

There are two types of elementary certificates granted in Nevada, one to graduates of standard two-year Normal Schools and one to graduates of standard four-year colleges holding the Bachelor's degree and having completed 18 hours of work in Education, of which four must be methods of teaching elementary subjects and four must be directed teaching in the elementary grades. The high school certificate is issued to graduates of an accredited college who have had 18 units of work in education, the majority of which must be in the field of secondary education, with at least four hours of practice teaching.

LIVING ACCOMMODATIONS

Adequate accommodations in private homes and boarding houses may be secured in the vicinity of the University at reasonable rates. Students may obtain information from the Secretary of the Department of Education concerning available places at the opening of the session.

THE APPOINTMENT SERVICE OF THE UNIVERSITY OF NEVADA

Since 1923 the Department of Education has maintained an appointment service to assist its graduates in securing teaching positions for which they may be qualified. As the policy of the appointment director has always been to consider the interests of the children in the schools paramount to the interests of prospective teachers desiring positions, recommendations have been confined exclusively to students of the department whose work, ability, and character are quite thoroughly known. The appointment service, therefore, has not been available in the past to non-Nevada graduates.

A slight change in this policy inaugurated last year will permit teachers in this State who have attended two recent Summer Sessions to enroll with the Appointment Service. For such teachers the service will consist primarily of registering them as candidates for positions and of keeping on file copies of recommendations and other credentials that may be submitted to interested employing authorities. The Appointment Service will not undertake to "recommend" such teachers but may be able to help them secure positions.

The fee charged for enrollment is $2.50, which covers only partiallly the necessary postage, stationery, printing, and stenographic service. For this fee five sets of credentials are prepared, to be sent to school authorities; for each additional set of five prepared, an additional fee of $1.50 is charged. No commission on salary or any other fee is charged.

REGISTRATION PROCEDURE

Monday, June 17 will be devoted to registration and enrollment in the desired courses. Students should first report to Mrs. Jeanette C. Rhodes, Registrar of the University, in the Administration Building, to receive the registration card. They should then consult the instructors whose courses they wish to select to receive approval for enrolling in the course and to learn assignments for the first day's work. With the program determined they should then return the registration card to the Registrar and to the Comptroller.

STATEMENT OF EXPENSES

Registration fee*		$25.00
Textbooks (estimated)	$5.00 to	10.00
Board and Room (for six weeks)	Approximately	60.00

ADMINISTRATIVE OFFICERS OF THE SUMMER SCHOOL

LEON W. HARTMAN, Ph.D., President of the University.
HAROLD N. BROWN, Ed.D., Associate Professor of Education and Director of the Summer Session.
MRS. JEANETTE C. RHODES, B.A., Registrar.
THEA C. THOMPSON, Ph.B., Librarian.
CHARLES H. GORMAN, M.S., Comptroller.

THE SUMMER SESSION FACULTY

HAROLD N. BROWN, Ed.D., Associate Professor of Education.

B.S., Kansas State Teachers College, 1923; M.A., Stanford University, 1927; Ed.D., University of California, 1935. Commenced teaching as a

*No additional out-of-State fee.

rural teacher in Clay County, Kansas. Taught in city graded system at Clifton. Superintendent of Tampa city schools for three years. Coached athletics in high school. Supervisor of junior high school studies and director of boys' activities such as Boy Scouts, 4-H Club work, and athletics at the Arizona State Teachers College, Tempe. Author of "A Liberal Education, What Is It?", "The Dynamic in Teaching," and "History of Education in Nevada, 1861–1934." Instructor, Summer Sessions, Kansas State Teachers College, 1928, 1937, 1939.

MARIE L. BURGESS, Primary Teacher, Rockridge School, Oakland.

Since 1930, primary teacher in the Rockridge school, doing teacher-training work for the University of California. Graduate of Mills Seminary and of the Munson School for Private Secretaries; student of Education and English at the University of California; holder of the California Life Diploma; collaborated with the committee that prepared the section on English in "Handbook for Teachers of Intermediate Grades," recently published by State of California; author of article, "Music in the Primary Grades." Teacher, Demonstration Primary School, University of Nevada, Summer Sessions 1930, 1931, 1937, 1939.

HAZEL M. DURHAM, B.A., Teacher of Art, B. D. Billinghurst Junior High School, Reno.

A graduate of the four-year course of the State accredited California College of Arts and Crafts at Oakland, receiving the degree of Bachelor of Art Education upon which the California State Department of Education grants a Special Secondary Art Credential; teacher of arts and crafts, Ely public schools, 1936–1937; B. D. Billinghurst Junior High School, 1938–; University of Nevada Summer Sessions, 1937, 1938, 1939.

MIRIAM GATLEY, M.A., Head of Department of English, San Francisco Junior College.

A.B., University of Denver, 1922; B.S., Colorado Agriculture College, 1922; M.A., University of Denver, 1926; attended Stanford University, University of Chicago; requirements of the Ph.D. at the University of California nearly completed. Traveled extensively in Europe in 1929; spent the year 1931–1932 at Oxford University, England, on an American student fellowship; has taught one year in a junior high school; one year in the Phoenix, Arizona, Business College; five years in high schools at Tempe, Arizona, and Bakersfield, California; five years in junior colleges at Johnstown, Colorado, and San Francisco, California; two summer sessions at the University of California; activities in colleges included presidencies of W. A. A., Y. W. C. A., social sorority, as well as serving as editor of a weekly college paper. San Francisco Junior College, 1935–.

J. R. GOTTARDI, M.A., Associate Professor of Modern Languages.

B.A., University of Nevada, 1921; M.A., *ibid.*, 1926; graduate work in Modern Languages at University of California, University of California at Los Angeles, University of Southern California, University of Pennsylvania; obtained "Certificado de Approvecho" for summer school work at the Universidad Nacional de Mejico. Teacher Lovelock high school, 1921–1922; Instructor of Modern Languages, University of Nevada, 1922–1924; Professor of Modern Languages, San Rafael Military Academy, 1924–1926; Assistant Professor of Modern Languages, University of Nevada, 1926–1930; Associate Professor of Modern Languages, *ibid.*, 1930–.

O. S. HUBBARD, Ed.D., Coordinator, Secondary Curricula, Santa Clara County, California.

B.L., University of California, 1913; M.A., Stanford University, 1917; Ed.D., University of California, 1938. Teacher and Vice Principal, Lincoln School, Alameda, California; Assistant Superintendent of Schools,

Fresno County, California; Assistant Superintendent of Schools, Piedmont, California; Assistant Director of Research, Oakland Public Schools, Oakland, California; District Superintendent of Schools, and Principal of Lindsay High School, Lindsay, California; District Superintendent of Schools, Madera, California; Assistant Superintendent of Schools, Fresno, California; Superintendent of Schools, Fresno, California, 1928–1937; Coordinator of Secondary Curricula, Santa Clara County, California, 1938–.

ERNEST L. INWOOD, Ph.D., Associate Professor and Head of the Department of Economics, Business and Sociology.

B.A., University of Nevada, 1927; Ph.D., University of California, 1935; Teaching Fellow, University of California, 1927–1930; Instructor in Economics, University of Nevada, 1930–1931; Instructor in Economics, The College of the City of New York, 1934–1938; Associate Professor of Economics, Business and Sociology, University of Nevada, 1938–; Head of the Department, 1939–.

RALPH A. IRWIN, Ph.D., Associate Professor of Psychology.

B.S., Kansas State Agriculture College, 1928; M.S., *ibid.*, 1929; Ph.D., Ohio State University, 1938. Graduate Research Assistant in Educational Tests and Measurements at Kansas State College in 1929; on leave of absence from the University of Nevada in 1934 to serve as Teaching Assistant in Psychology at Ohio State University; business, industrial, social service consultant in tests and measurements since 1929; in charge of mental testing program and student personnel records at the University of Nevada; specialized in the fields of counseling, guidance, personality and delinquency of children and adolescents; University of Nevada, 1929–; Washington State College Summer Session, 1939.

ANATOLE G. MAZOUR, Ph.D., Assistant Professor of History and Political Science.

A.B., University of Nebraska, 1929; M.A., Yale University, 1931; Ph.D., University of California, 1933. Attended the Russian gymnasium: also the University of Vienna for one year. Member of American Historical Society, Sigma Upsilon, Phi Beta Kappa. World War Veteran; served in the Civil War in Russia. Traveled throughout Europe and America. Author of "The First Russian Revolution, 1825," and "An Outline of Modern Russian Historiography"; articles contributed to various English and French magazines. Teaching experience: University of California, Stanford University, Miami University, University of Oregon Summer Session, 1939. University of Nevada, 1938–.

JOHN P. PUFFINBARGER, Ed.M., Assistant Professor of Education.

B.S., in Education, Kansas State Teachers College at Pittsburg, 1926; Ed.M., Oklahoma University, 1933; all course requirements completed for Ph.D. at Kansas University. Teaching experience in one-room rural schools, principal of elementary, junior, and senior high schools, and superintendent of city schools; Associate Professor at State Teachers College and Principal of Training School at Durant, Oklahoma, 1933–1935; Assistant Instructor, Department of Education at Kansas University, 1935–1937; Assistant Professor of Education, University of Nevada, 1927–. Served as sergeant of infantry in World War and as army interpreter and buyer after Armistice, visiting all leading European countries. Member Kansas Academy of Science, Kansas State Mental Hygiene Society, and Phi Delta Kappa. University of Nevada Summer Session Faculty, 1938, 1939.

PAUL THURSTON, M.A., Superintendent of Schools, Educational District No. 1, Clark County.

Graduate of Dixie College, 1923; B.S., University of Utah, 1931; M.A., University of Chicago, 1935. Washington County, Utah, scholarship

student to the University of Utah; University of Chicago Fellowship in Education. Member of Phi Kappa Phi and Phi Delta Kappa. President of Nevada Department of Secondary School Principals of the National Educational Association. Superintendent of Schools, 1935–.

JEANNE ELIZABETH WIER, B.A., LL.D., Emeritus 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. Member Phi Beta Kappa, Phi Kappa Phi, Pi Gamma Nu. Public school teaching experience in primary grades and high school. Came to University of Nevada 1899. In charge of Department of History and Political Science since that time. Organizer and executive officer of Nevada State Historical Society, beginning 1904. Collector of the Society's large library and museum. Compiler and editor of all its publications and author of many articles in those volumes. Contributor to Encyclopedia Britannica, Dictionary of American Biography, and many other familiar works. Now writing Nevada articles for the James Truslow Adams Dictionary of American History. University of Nevada Summer Session, 1938, 1939.

GRETCHEN WULFING, A.M., Director of Elementary Education, Redlands, California.

A.B., Stanford University, 1927; A.M., *ibid.*, 1938. Received Lower Division Honors, Phi Beta Kappa and A.B. with Great Distinction. Holds California Life Elementary, California Elementary Supervisor's, California General Secondary, and California Administrative Certificates; also a Wisconsin Life Elementary Certificate. Interested while in high school and college in folk dancing, basketball, debating, and swimming. Approximately fifteen years of experience in which is included four years as a rural school supervisor in San Benito and Placer Counties; three years as City Elementary School Supervisor in San Jose, California, 1935–1938; Director of Elementary Education, Redlands, 1938–.

COURSES OF INSTRUCTION*

ART

Sm. 7. THE MODERN ARTS AND CRAFTS. An elementary introduction for teachers. Instruction will be given in craftwork, including leather work, elementary bookbinding, decorative papers, metal and cork craft, or other crafts of especial interest to the class and meeting the needs and abilities of elementary school children. The necessary fee for materials will depend on the projects undertaken. Students who may wish to elect this course a second time may do so by undertaking new and advanced projects; such students will sign for the course under the number Sm. 7a. *Two credits.* 7:45 daily. Durham.

Sm. 8. THE TEACHING OF ART. A practical outline of public school art including the graphic arts and craftwork in all grades, with suitable projects and suggested work in the teaching of art in correlation with other studies. Fundamental art instruction and suggestions for those unfamiliar with modern art instruction trends. *Two credits.* 9:35 daily. Durham.

BUSINESS

Sm. 51. ELEMENTS OF ACCOUNTING.* A practical discussion of accounting systems for the purpose of instructing the student in the maintenance of such systems and in the understanding of accounting records and statements. *Two credits.* 11:25 daily. Inwood.

*Courses marked with a star (*) may be taken for graduate credit by conferring with the instructor at time of registration.

ECONOMICS

Sm. 57. PRINCIPLES OF ECONOMICS.* A study of the outstanding national and international economic problems, together with the principles basic to their solution. *Two credits.* 9:35 daily. Inwood.

EDUCATION

Sm. 19. LITERATURE IN THE PRIMARY GRADES. This course will include the history of children's literature, practical guidance in the selection of suitable and entertaining books for children, the relation of literature to the activity program through built-up reading lessons and dramatizations, including shadow plays and puppets. Literature as an approach to creative writing, story telling, the enjoyment of poetry and its use in choral speaking will be emphasized. *Two credits.* 8:40 daily. Burgess.

Sm. 51. MODERN TRENDS IN THE TEACHING OF ARITHMETIC.* Particular emphasis will be placed upon diagnostic and remedial treatment of pupil difficulties. Special attention will be given to the psychology of relationships and to experiences which lead to the learning of arithmetic through making such relationships really meaningful. In connection with this work, clinical service will be administered for school children having difficulties with arithmetic. *Two credits.* 8:40 daily. Puffinbarger.

Sm. 54 AUXILIARY SUBJECTS IN THE KINDERGARTEN-PRIMARY CURRICULUM.* This course deals in a practical way with the contributions of art, music and rhythms to the program of the kindergarten-primary grades; their importance in the development of the young child; and how they may enter into the activity program and assist in the integration of other subjects. Annual units of work will be prepared by those taking this course. *Two credits.* 7:45 daily. Burgess.

Sm. 57. HISTORY OF ELEMENTARY EDUCATION.* This course will consider the evolution of elementary school practice and theory from the time of the Greeks and Romans to the present. Its principal objectives will be (1) to give the teacher functional knowledge of educational tendencies and trends, (2) to enlarge the perspection of the teacher, and (3) to aid the teacher to evaluate her status in life. *Two credits.* 8:40 daily. Brown.

Sm. 59. THE SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. A survey of the social studies in an integrative program, modern content of the social studies in the elementary school, techniques in teaching the social studies, desirable materials to enrich the program. Lecture and discussion, with outside reading along the lines of the student's own interest. *Two credits.* 7:45 daily. Wulfing.

Sm. 63. STATE SCHOOL ORGANIZATION AND SCHOOL LAW. The principles of good State school organization and how Nevada conforms to those principles as revealed by a careful study of the school code of the State. This course meets all certification requirements for school law and is required in the Normal School course and in the University course for the high school teachers' certificate. *Two credits.* 7:45 daily. Thurston.

Sm. 66B. THE TEACHING OF HIGH SCHOOL ENGLISH.* The theory

and practice of the teaching of English in high school. Attention will be centered on the major problems which teachers face in developing pupil appreciation of literature and in training students to read understandingly and to write and speak effectively. Specific study will be made of extensive and intensive reading, current usage, requirements in composition, courses of study, new textbooks, objective tests and measurements, and new methods and techniques that are being used by teachers of English. *Two credits.* 10:30 daily. Gatley.

Sm. 67. PSYCHOLOGY OF THE ELEMENTARY SCHOOL SUBJECTS.* The principal function of this course is to improve teaching procedures by studying recent contributions gained through scientific experiments and investigations. Much time will be devoted to the technique of subject matter presentation, to classroom organization, to individual differences, to motivation—all with the specific purpose of making more efficient the learning process. The course should prove worth while to the elementary school principal or supervisor. *Two credits.* 10:30 daily. Puffinbarger.

Sm. 70. THE EDUCATION OF EXCEPTIONAL CHILDREN.* Designed to acquaint elementary and high school teachers with the problems and methods involved in the adjustment and training of nontypical children in the schools. The course will give attention to the selection, psychological characteristics, and educational provisions for the mentally retarded, the gifted, and emotionally unstable, and the delinquent. *Two credits.* 11:25 daily. Puffinbarger.

Sm. 77. ACTIVITY EDUCATION IN NEVADA.* While this course considers the program, problems, curriculum, and methods of the activity school, a considerable part of the session will be devoted to the application of progressive educational methods and materials to school conditions of Nevada. Some thought will be given to standardized testing as a phase of the progressive education movement. A summary course involving the various aspects of progressive education. *Two credits.* 11:25 daily. Brown.

Sm. 78. READING IN THE ELEMENTARY SCHOOL. A general course including the place of reading in the program of the modern school, building readiness for reading, methods and materials desirable in teaching children to read, the prevention and correction of reading difficulties, and the development of good taste in recreational reading. Lecture and discussion, with outside reading along the lines of the student's own interest. *Two credits.* 9:35 daily. Wulfing.

Sm. 78A. SPECIAL PROBLEMS IN READING (a Laboratory Course).* Selection of a problem in reading of genuine interest to the student, and subsequent reading and organizing of material suitable for use in a school situation. Problems suitable for investigation might include a program for improvement in slow readers, the planning of a program to build reading readiness, the development of study skills in intermediate and upper grades, or a program for appreciation in reading. Group discussion and planning of general techniques, with individual guidance in the pursuit of each student's problem. *Two credits.* 10:30 daily. Wulfing.

Sm. 91. PROBLEMS OF THE BEGINNING PRINCIPAL.* A study of the

problems confronting the principal in his relations with pupils, teachers, school boards, and community; problems of housing, school schedule, supervision of instruction, extra-curricular activities, discipline, records and reports, budgeting, etc. For school principals, teachers looking forward to a principalship, and rural teachers who may wish to increase their value to school boards through knowledge of administrative principles. *Two credits.* 10:30 daily. Thurston.

Sm. 93. PERSONALITY DEVELOPMENT OF CHILDREN.* Genetic and cross-sectional studies of the personal and social factors necessary for the development in school children of a wholesome and adjusted personality, and a consideration of the causes and remedial procedures for typical maladjustments and behavior problems of school children. Factors for study will include the development of physique, intelligence, special abilities, interests, emotional maturity, social tendencies vocabulary, initiativeness, curiosity, imagination and creative abilities, the aesthetic senses, the moral habits. The course is designed especially for teachers, administrators, and parents who realize the paramount importance of developing a healthy personality in children. *Two credits.* 11:25 daily. Irwin.

Sm. 96. ADMINISTRATION AND SUPERVISION OF EXTRA-CURRICULAR ACTIVITIES.* This course will consider the origin, development, objectives, and basic principles of extra-curricular activities. An analysis and evaluation will be made of typical extra-curricular activities such as the home room, the student council, the school assembly, clubs, athletics, social events, and school publications. The supervision and financial administration of the extra-curricular program will be analyzed and evaluated. Students will be asked to make contributions to the course growing out of their own experiences in the field. *Two credits.* 11:25 daily. Hubbard.

Sm. 97. CHARACTER EDUCATION; ITS PRINCIPLES, METHODS, AND MATERIALS.* Typical topics will be the psychological and social nature of character and ideals, stages of natural and controlled character growth, general vs. specific traits, juvenile delinquency and behavior problems, direct vs. indirect methods, opportunities and methods of character teaching in history, biology, art, and other subjects, repressive and expressive techniques, and the objective measurement of character and personality traits. Some attention will be given also to measuring the effects on character of such influences as radio, newspapers, movies, gossip, Boy Scouts, the church, and other individual and group pressures. *Two credits.* 8:40 daily. Irwin.

Sm. 98. HEALTH AND SAFETY EDUCATION.* Organization, content and methods of health and safety education. Analysis of hazards in the home, recreation, public buildings and street and highway activities. Emphasis will be placed upon prevention of accidents, the development of attitudes necessary to health and safety in school and community life. Use of audio-visual aids will be shown. *Two credits.* 8:40 daily. Thurston.

Sm. 112. SUPERVISION AND INSTRUCTION IN JUNIOR HIGH SCHOOL GRADES.* This course will consider the development, present status, and influence of the junior high school on educational perspectives and educational practices in the junior high school and in the corresponding grades of the traditional elementary school. The structural, social,

civic, and economic-vocational foundations of the junior high school will be studied briefly. Attention will be given to the psychological foundation of the junior high school and its implications for supervision, for the instructional program, and for the guidance and socialization of pupils in upper elementary and junior high school grades. A major part of the course time will be given to the study of the instructional program of junior high school grades. *Two credits.* 8:40 daily. Hubbard.

Sm. 120. SEMINAR IN EDUCATIONAL ADMINISTRATION.* A course designed for administrators in the field. The work will be handled on the problem basis, and students are encouraged to bring problems arising in their own work. The course will include a consideration of problems relating to the superintendency, the school board, the budget, the school plant, the school library, school personnel, public relations, supervision and guidance, and other phases of school administration. *Two credits.* 9:35 daily. Hubbard.

ENGLISH

Sm. 74B. CONTEMPORARY BRITISH LITERATURE.* Discussion of the problems in contemporary British literature through a study of the men, their writings, and the age in which they are living. Designed to guide students to a clearer understanding of the current social problems in relation to contemporary English life and thought and to a more discriminating appreciation and evaluation of the human character and experience found in significant writing. *Two credits.* 8:40 daily. Gatley.

Sm. 83B. REPRESENTATIVE AMERICAN WRITERS.* Outstanding American writers studied for enjoyment and appreciation as well as for knowledge of literary achievement, position in the literary life of America, and social background. Special reference will be made to the national and regional characteristics and to the literary aims and ideals of the authors. *Two credits.* 11:25 daily. Gatley.

HISTORY AND POLITICAL SCIENCE

Sm. 66. NEVADA HISTORY.* A study of the forces and conditions which brought Nevada into existence as a Territory and, later, as a State of the Union and her response to the successive problems which have confronted her to the present time. Help will be given in the organization of public school material on Nevada History. *Two credits.* 9:35 daily. Wier.

Sm. 66A. RESEARCH IN NEVADA HISTORY.* Open to students who have had 66 or its equivalent. *Credit and hours to be arranged.* Wier.

Sm. 70. EUROPE FROM THE FIRST TO THE SECOND WORLD WAR, 1914–1939.* This course undertakes the study of the most significant era of recent history, the war and post-war problems leading to the second world war. Intricate social and economic problems, national minority questions, colonial rivalry, the conflict of political ideologies, are all subjects to be analyzed intensively in this course. *Two credits.* 8:40 daily. Mazour.

Sm. 79–80. THE CONSTITUTIONS OF THE UNITED STATES AND NEVADA. A study of the Federal Government, the historical background, the

executive, legislative, and judicial branches of the National Government, followed by a study of the State Government of Nevada. *Two credits.* 11:25 daily. Mazour.

Sm. 98. GERMANY IN WORLD AFFAIRS.* An advanced study devoted to the social, political, economic, and intellectual development of the German people beginning with 1870. Particular attention is given to Germany as a factor in world affairs and her share of responsibility for the turbulent events since 1914. *Two credits.* 10:30 daily. Mazour.

MODERN LANGUAGES

French

Sm. 66. FRENCH.* Readings from recent and contemporary prose writers. Diction, composition, and conversation. Counts towards a major or a minor. May be offered for graduate credit by completing the necessary additional assignments. *Prerequisite:* Fifteen hours of college credit or four years of high school French. *Two credits.* 9:35 daily. Gottardi.

Italian

Sm. 64. ITALIAN.* Readings from Manzoni, Deledda, Fogazzaro, and other modern Italian writers. Conversation and composition. Counts towards a major or a minor. May be offered for graduate credit by completing the necessary additional assignments. *Prerequisite:* Fifteen hours of college credit or four years of high school Italian. *Two credits.* 10:30 daily. Gottardi.

Spanish

Sm. 68 SPANISH.* Readings from Galdôs, Ibañez, Caballero, and Valdés. Composition. Class is conducted in Spanish. Course especially intended for teachers in active service. Counts towards a major or a minor. May be offered for graduate credit by completing the necessary additional assignments. *Prerequisite:* Fifteen hours of college credit or four years of high school Spanish or Sm. 30 (described in 1939 Summer Session Bulletin). *Two credits.* 7:45 daily. Gottardi.

MODERN LANGUAGE SEMINAR

Sm. 104. MODERN LANGUAGE SEMINAR.* Work may be done in French, Italian, or Spanish. Advanced undergraduates or graduate credit. *Prerequisite:* Four hours in courses numbered above 50 in the language forming the basis for the work. *Two credits.* Hours to be arranged. Gottardi.

MUSIC

Sm. 16. MUSIC IN THE PRIMARY GRADES. This course will emphasize the ways and means through which music may function as a happy and worth while experience for the young child. The course will include the selection and presentation of songs, folk dances and singing games; note reading; listening to music for expression in creative effort; the use of rhythm instruments and making of simple ones; the use of the song bell in the classroom and in group playing. Upon request from an appreciable number of the class, instruction will be given in the use of the song bell. *Two credits.* 10:30 daily. Burgess.

PSYCHOLOGY

Sm. 40. MENTAL HYGIENE. A study of mental health and mental efficiency, psychological principles, and practical applications in preventing, detecting, and correcting emotional, intellectual and social behavior difficulties of normal children and adults. The course is oriented with the needs of teachers, parents, social workers and other adults in mind. Topics covered will include human motivation, emotional control, personal efficiency in work and study, developing self-confidence, avoiding fatigue, relaxing, relations between physical and mental phenomena, psycho-religious healing, typical human defense mechanisms in the face of frustrations, social and occupational therapy, family tensions, drugs and mental efficiency, and in general the development of a well balanced and socially acceptable personality. *Two credits.* 9:35 daily. Irwin.

Sm. 102. RESEARCH IN PSYCHOLOGY.* Special problems in some field of psychology in which the student is interested and has had at least one advanced course. A written term report based largely on self-directed experimental or library research is expected. Conferences are held when needed, usually one or two times a week. *Two credits.* Time to be arranged. Irwin.

SCHEDULE OF CLASSES

SUMMER SESSION, 1940

7:45—

Education Sm. 54	Burgess
Education Sm. 59	Wulfing
Education Sm. 63	Thurston
Art Sm. 7	Durham
Spanish Sm. 68	Gottardi

8:40—

Education Sm. 19	Burgess
Education Sm. 51	Puffinbarger
Education Sm. 57	Brown
Education Sm. 97	Irwin
Education Sm. 98	Thurston
Education Sm. 112	Hubbard
English Sm. 74B	Gatley
History Sm. 70	Mazour

9:35—

Education Sm. 78	Wulfing
Education Sm. 120	Hubbard
Art Sm. 8	Durham
Economics Sm. 57	Inwood
French Sm. 66	Gottardi
History Sm. 66	Wier
Psychology Sm. 40	Irwin

10:30—

Education Sm. 16	Burgess
Education Sm. 66B	Gatley
Education Sm. 67	Puffinbarger
Education Sm. 78A	Wulfing
Education Sm. 91	Thurston
History Sm. 98	Mazour
Italian Sm. 64	Gottardi

11:25—

Education Sm. 70	Puffinbarger
Education Sm. 77	Brown
Education Sm. 93	Irwin
Education Sm. 96	Hubbard
Business Sm. 51	Inwood
English Sm. 83B	Gatley
Political Science Sm. 79–80	Mazour

NOTE—Nevada History Seminar Sm. 66A, Modern Language Seminar, Sm. 104, Research in Psychology, Sm. 102 are to be arranged with instructors.

RECIPIENTS OF SCHOLARSHIPS AND HONORS 1939–1940

The five REGENTS' SCHOLARSHIPS of $50 each for excellence in scholarship, awarded to

Cyril Ham — Richard Edwards
Pauline Tobener — Georgia Ereno
Mary Jane McSorley

The ELLA SPRENGLE STUBBS SCHOLARSHIP of $100, awarded to
Walter Schmidt

The UNIVERSITY ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP of $25, awarded to
Dorothy Mae Snider

The ROSE SIGLER MATHEWS SCHOLARSHIPS of $75 each, awarded to
Mary Boland — Ned R. Dickson

The MARYE WILLIAMS BUTLER SCHOLARSHIP of $50, awarded to
Betty Nelson

The AZRO E. CHENEY SCHOLARSHIP of $300, awarded to
Frank W. McCulloch

The MRS. CARL OTTO HERZ ELECTRICAL ENGINEERING SCHOLARSHIP of $50, awarded to
Albert Caton, Jr.

The CHARLES ELMER CLOUGH SCHOLARSHIPS of $80 each, awarded to
David Hartman — William Potter

The GRAND ARMY OF THE REPUBLIC SCHOLARSHIP of $50, awarded to
Merlynn Thompson

The CARRIE BROOKS LAYMAN MEMORIAL SCHOLARSHIP of $200, awarded to
June Julian

The PREMEDICAL SCHOLARSHIP of $100, awarded to
Kenneth Eather

The WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM of $75, awarded to
Basil Benedict

The VERN F. HENRY MEMORIAL MASONIC SCHOLARSHIP of $50, awarded to
Lowell E. Hillygus

The RAYMOND SPENCER SCHOLARSHIP of $250, awarded to
Curtis Thomas

The RENO LODGE OF ELKS CHET SCRANTON ATHLETIC SCHOLARSHIP of $100, awarded to
John Sala

The NEVADA STATE PRESS ASSOCIATION SCHOLARSHIP of $50, awarded to
James Gibbs

The MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS of $500 each, awarded to
Gene McDaniel — Helen Byrd Inman
John Barber — Padriac Partridge
Frances Arenaz

The RENO CHAPTER OF THE WOMAN'S CHRISTIAN TEMPERANCE UNION SCHOLARSHIPS of $50 each, awarded to

Viva Leonard — Mary Arentz
Beulah Leonard — Malcolm Musson (First semester)
William Ogle — Charles Wesley Schlager (Second semester)

The four NOBLE H. GETCHELL SCHOLARSHIPS of $300 each, awarded to

Lewis Kattenhorn — Leroy A. Streshley
Margaret A. Mullin — Herbert M. Chiara

The RITA HOPE WINER MEMORIAL SCHOLARSHIP of $50, awarded to

Sybil Furchner

The four GRAND LODGE OF THE INDEPENDENT ORDER OF ODD FELLOWS SCHOLARSHIPS of $150 each, awarded to

Ralph Isaac — Audrey Pedersen
Harold Biegler — Mathew Laking

The CARSON CITY ROTARY CLUB SCHOLARSHIP of $135, awarded to

Robert Biggs (First semester)
William H. Shewan (Second semester)

The RENO ROTARY CLUB SCHOLARSHIP of $100, awarded to

Don Burrus

The NEVADA SAGEBRUSH CHAPTER DAUGHTERS OF THE AMERICAN REVOLUTION SCHOLARSHIP of $25 per semester, awarded to

Barbara Anne Rook (Spring semester)

The GINSBURG JEWELRY COMPANY'S prize of a fine watch at end of first semester, awarded to

Kenneth Eather

The HENRY ALBERT SENIOR PUBLIC SERVICE PRIZE of $25, awarded to

Francis Breen

The ARMANKO SENIOR LIBRARY PRIZE of $100 worth of books, awarded to

Clayton Carpenter

GOLD MEDAL

Awarded annually to that member of the graduating class who has maintained the highest average grade in scholarship throughout the four-year college course. Duplicate award to

Elizabeth D'Allesandro — George W. Sears, Jr.

FRENCH MEDAL

Awarded by the French Minister of Foreign Affairs, through the Consul General at San Francisco, for distinguished work in courses in French, to

Felicia A. Moos

Commissioned as Second Lieutenants, Infantry, Officers' Reserve Corps, United States Army:

John W. Barrett — Benjamin T. Cardinal
John M. Etchemendy — Harry E. Gallaway
Charles W. Johnstone — Clinton W. McKinley
Harry E. Mornston — Kenneth E. Waymire

Certificates of Eligibility for Appointment as Second Lieutenants, Infantry, Officers' Reserve Corps, United States Army, upon attainment of majority:

Fred L. McIntyre — B. Allen Rives — Walter Wilcox

Designated as Honor Graduate under provisions of Army Regulation 605-7:
Charles William Johnstone

Awarded Governor's Medal for proficiency in military training, observance of the rules, military courtesy, and intelligent attention to duty:
Cadet First Sergeant Lee E. Barrett

Awarded Reserve Officers' Association Medal for attendance, discipline, and proficiency:
Cadet First Sergeant Lee E. Barrett

Awarded Fourragere of the University colors for the Basic Course student having the highest standing in attendance and discipline:
Cadet Private First Class Edwin S. Dodson

Awarded Fourragere of the University colors for the First Year Advanced Course student having the highest standing in attendance and discipline:
Cadet First Lieutenant Roy L. Shipp, Jr.

Awarded Fourragere of the University colors for perfect attendance during the entire Basic Course:
Cadet Sergeant Ralston O. Hawkins

Awarded Gold Medals presented by the California Society Sons of the American Revolution for attaining the highest mark in their respective classes:
Second Year Advanced Class—Cadet Captain John W. Barrett.
First Year Advanced Class—Cadet First Lieutenant Olinto M. Barsanti.
Second Year Basic Class—Cadet Sergeant John M. Bazzini.
First Year Basic Class—Cadet Private First Class Edwin S. Dodson.

Seniors elected to the National Honor Fraternity, PHI KAPPA PHI, election being based on scholarship:

Wayne S. Ames	William J. Hatton
Francis Richmond Breen	Herbert Newton Jacobs
Clayton A. Carpenter	Edward King
Elizabeth D'Alessandro	Joseph Nord Littlefield
Nancy Julia Hall	Conrad Martin
Martin Kieran Hannifan	George W. Sears, Jr.

William Martin Smythe

HONOR ROLL OF THE SENIOR CLASS, whose average for the *four* years is 1.5 or higher:

Herbert N. Jacobs	George W. Sears, Jr.
Wayne S. Ames	Elizabeth D'Alessandro
Edward King	William J. Hatton

Students whose names appeared on the Honor Scholarship Roll both semesters of the University year 1938–1939:

SENIORS

Edward King	Nancy J. Hall
William J. Hatton	Martin K. Hannifan

JUNIORS

Gene McDaniel	Elizabeth Burleigh
John Barber	Pauline Tobener
David Hartman	Julian Mapes
William Ogle	Ned Dickson
Helen Byrd	Evelyn Bulmer

SOPHOMORES

Charles Bacon
William Potter
Georgia Ereno
Richard Edwards
Don H. Townsend
Gratia Ferguson
Mary Boylan

FRESHMAN

Orin J. Mead
Mary Jane McSorley
Dorothy Mae Snider
Frances Arenaz
Kenneth Eather
Wilfrid Wylie
Mary J. Higgins
Beulah Leonard
Melvin M. Tilley
Kenneth Mann

GRADUATES

Diplomas and Degrees were awarded on Commencement Day, May 15, 1939, as follows:

ADVANCED DEGREES

Master of Arts

Chester Walter Cheel
Harold James Curran
Dwight Frederick Dilts
Bruce Kneeland Moore

Master of Science

James Hawthorne Ashbaugh
Clyde Ellsworth Arrington
Harold J. Heinen
Warren Louis Perilstein

Engineer of Mines

Norman John Ericson

Bachelor of Arts

Elaine Elizabeth Adams
Julio Arobio
John W. Barrett
Robert Norrison Beatty†
Frances Virginia Beckley†
Tom Beko
Rose Boggio
Francis Richmond Breen
Helen Hays Brown
Henry G. Bryant*
Billie Burke Cann
Charlotte C. Caton*
Doris Ellen Chesnutt*
Harriet Jean Chism
Elizabeth D'Alessandro*
William Carlton Davis
Ruth Evelyn Doan
Gladys Uzzell Edlind
Mary Evasovic*
Harold A. Fletcher (1912)
David Goldwater
Ethel Charlotte Graunke*
Chester Arthur Green
William Russell Grubbs
Nancy Julia Hall
Newell F. Hancock
Mary Elizabeth Handley
Berna M. Hansen
Kathleen Hansen
Jack Beaumont Hanson
Verle Lucille Harris*
William J. Hatton
Virginia Heany
Teofisto A. Hermosa†
Kirk Bernerd Herrick*
Ellen Holcomb
Samuel Holliday
Margaret Adele Hussman
Betty Inda*
Herbert Newton Jacobs
Anita Irene Jauregui
Elna Jepson
Virginia Miller Johnson
Charles William Johnstone
Malcolm P. Jones
Elizabeth Virginia Kohlhoss*†
Leo Bob McCuddin
Robert Malcolm Metten†
Felicia A. Moos*
Margaret A. Neaton
Oliver Sanford Ness†
A. Loring Primeaux
Donald Adolph Purdy
Virginia Lee Raitt
Marilyn Rhoades
Jean Elizabeth Rice
John Erbin Robb*
Georgene Mildred Roberts
Fitzgerald Norcross Salter†
Mary Boczkiewicz Sanger
Barbara L. Schmidt†
Gwendolen Shearer
George F. Sheats*
Helen K. Shovlin
Claude DeLorme Silverwood*
Lila E. Stoddard
John F. Urrutia*
Robert Norton Van Wagoner
Marie Louise Varnon
Robert Ray Waldren
Kenneth E. Waymire

†December 22, 1938.
Margaret Jensen (Nevada, 1938) earned a high school teacher's diploma December 22, 1938.
*Each candidate whose name is starred receives the high school teacher's diploma in addition to the diploma for the bachelor's degree.

BACHELOR OF SCIENCE

Wayne S. Ames
Arthur Miles Andersen
Eunice Beckley*
John Milton Boylan
Kenneth D. Dimock*
Forrest Kelly Eccles
Herbert L. Eikelberger
Chester Martin Estes
William L. Goodin
Shek Ying Lam†
Ernest E. Larkin†
Arthur H. Leigh
Paul Leonard†
Dean Fishburn Nelson
William B. Newbold
Floyd Smalley†
Sam Walker Stark
John Leland Starratt
Lola Yvonne Stoddard*
Robert Thomas Vaughn*

BACHELOR OF SCIENCE IN CHEMISTRY

George Earl Dukes†
Frank Hickey
George W. Sears, Jr.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Peter Guisti
Edward King
Joseph Nord Littlefield
Walter H. Lobenstein, Jr.
Richard Paul Sauer†

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Clayton A. Carpenter
Frank Samuel Goodner
Gotfred O. Hoffmann
Elmer Lynch Isaac
Loren Glenn Maxwell
Lewis G. Porteous
Norman Arthur Smith

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

James A. Atkinson
Edward Zareh

BACHELOR OF SCIENCE IN MINING ENGINEERING

John Tyler Gardiner
Martin Kieran Hannifan
Evilio Hernandez C.
Harvey O. Kolhoss†
Victor E. Kral†
Modesto Louis Leonardi
H. Gordon Macdonald
Conrad Martin
William Lionel Osborne
Ernest Raymond Rodriguez
William Martin Smythe

BACHELOR OF SCIENCE IN AGRICULTURE

Archie R. Albright†
Anthony R. Belmonte*
William Bruce Button†
Robert C. Campbell
Theodore Demosthenes
Melvin George Dodson
Leland Edward Fallon
Fred C. Gallaway
Harry E. Gallaway
John O. Gustafson†
George F. Hardman
Chester L. Jacobsen*
James G. Jensen
Henry Hudson Lee, Jr.†
Jed S. Oxborrow*
Carroll E. Williamson†
Charles R. York*

BACHELOR OF SCIENCE IN HOME ECONOMICS

Mary Margaret Cline
Mary Loretta Collins*
Georgia Elizabeth Cooper
Lois Afton Downs*
Teletha Louise Kirn*
Elizabeth Kornmayer
Clarethel Masterson*
Mary Gwendolyn Meginness
Margaret Melba Pearson*
Gertrude M. Polander*
Mildred Anne Woodward*

TEACHER'S DIPLOMA OF GRAMMAR GRADE

Helen Biegler
Ivy Gubler
Eva L. Hughes
Josephine Tyrrel Mason
Mrs. Ethel B. McGuire
Laverne Jacobsen Park
Lina Katherin Pinjuv
Agnes Mary Schroder
Helen Inez Strosnider
Grace Dorothy Tobener

†December 22, 1938.
*Each candidate whose name is starred receives the high school teacher's diploma in addition to the diploma for the bachelor's degree.

ROSTER OF STUDENTS

YEAR 1939–1940

GRADUATE

Adeline Law Adams.....Reno
Wayne Sidney Ames.....Reno
Ina Angus.....Reno
Clyde Arrington.....Reno
Marcelle Barkley.....Reno
Aurora Belmonte.....Reno
Betty Blum.....Reno
John Boylan.....Reno
Clarence L. Byrd.....Reno
E'Lois Campbell.....Reno
Nelle Carman.....Sparks
Lawrence Carter.....Reno
Emmeline Christensen.....Fernley
Lloydine Clayton.....Reno
Margaret Cline.....Reno
Sylvia M. Cohen.....Chicago
Marshall Creel.....Reno
Gladys Crosby.....Reno
Margaret Crosby.....Carson City
Mary Williams Custer.....Reno
William H. Davidson.....Reno
William C. Davis.....Reno
Helen Dunn.....Reno
Kelly F. Eccles.....Reno
Clara P. Ferguson.....Reno
Dorothy Fisher.....Sparks
Frances N. Formaster.....Reno
George F. Gadda.....Reno
Frank M. Godwin.....Fernley
Mrs. Ella K. Gottschalck.....Reno
Helen Gould.....Reno
Mary M. Griffin.....Sparks
Jean L. Harris.....Weeks
Anita S. Hayden.....Reno
Frank D. Hickey.....Reno
Felton Hickman.....Reno
Edith J. Holmes.....Reno
William O. Holmes.....Reno
Bernard J. Hooper.....Reno
Geraldine Hosmer.....Reno
Proctor Hug.....Sparks
Marguerite Hughes.....Reno
Margaret Jensen.....Reno
Robert B. Jeppson.....Carson City
Millicent E. Johnson.....Reno
Roger Joseph.....Seattle
Chauncey L. King.....Minden
Lawton B. Kline.....Reno
Paul Laiolo.....Reno
Shek Ying Lam.....Reno
Jean Keith Lee.....Reno
Philip A. Lee.....Reno
Ainsley Mabson.....Reno
Evelyn Mantle.....Sparks
James Milton Mapes.....Reno
Mary Mathews.....Reno
Frederick A. Maynard.....Reno
Betty McCulloch.....Fernley
Gladys M. McDonnell.....Reno
Norman McKenzie.....Verdi
Mary Gwen Meginness.....Reno
Bruce K. Moore.....Reno
Theodore C. Moore.....Reno
Mary N. Morman.....Reno
Louise Mornston.....Sparks
Rodney Morrin.....Reno
Oliver Ness.....Reno
Norman E. Nichols.....Reno
Murrell Nutting.....Reno
Verna Paterson.....Reno
Emma A. Petersen.....Reno
Thomas Prunty.....Sparks
Embree Raiford.....Sparks
William T. Rawles.....Reno
Vivian Redford.....Sparks
Ellinor Robinson.....Reno
Randall Ross.....Reno
Coba Salsbury.....Reno
Neil Scott.....Reno
Chester Scranton.....Reno
Albert Seeliger.....Sparks
Marianne Severne.....Sparks
George F. Sheats.....Reno
Louise K. Springer.....Reno
Helene Stark.....Reno
Audrey H. Stewart.....San Francisco
Lucille Stone.....Sparks
Dora Stuntebeck.....Verdi
Elsie Sult.....Reno
Emily Tholl.....Sparks
Winifred Thomas.....Reno
Ellen C. Thompson.....Reno

Marion M. Trabert	Reno
Margaret S. Vance	Reno
J. Ralph Warren	Reno
Margaret G. Watson	Reno
Kenneth Waymire	Sparks
Sessions Wheeler	Reno
Leona M. Williams	Reno
Frances Wood	Reno
John Yapuncich, Jr.	Biwabik, Minn.
Marie P. York	Reno
Sam Zackheim	Dayton

SENIORS

Ovidio Abreu	Arts and Science	Venezuela
June Adams	Arts and Science	Reno
Ione Anderson	Arts and Science	Reno
Rene Ashley	Arts and Science	Reno
Ross Ashley	Arts and Science	Reno
Dorothy Atcheson	Arts and Science	Gardnerville
Arthur Atkins	Mines	San Francisco, Calif.
Charles Bacon	Mines	New York, N. Y.
John Barber	Arts and Science	Reno
Charles Barnes	Arts and Science	Reno
Olinto Barsanti	Arts and Science	Tonopah
George Beattie	Arts and Science	San Francisco, Calif.
Frank Beloso	Arts and Science	Reno
Basil Benedict	Arts and Science	Levan, Utah
June Bradbury	Home Economics	Sparks
Harry Bradley	Agriculture	Fallon
Betty Brannin	Arts and Science	Sparks
Guy Brown	Electrical Engineering	Reno
Evelyn Bulmer	Arts and Science	Reno
Ferren Bunker	Agriculture	Bunkerville
Elisabeth Burleigh	Arts and Science	Ely
Theda Burrus	Arts and Science	Reno
Chester Burt	Arts and Science	Goldfield
Robert Cameron	Arts and Science	Reno
Cleora Campbell	Arts and Science	Reno
Isaac Caraco	Mechanical Engineering	Los Angeles
Leonard Carpenter	Arts and Science	Las Vegas
Albert Caton	Electrical Engineering	Reno
Frederick Clayton	Civil Engineering	Reno
Henry Clayton	Arts and Science	Alhambra, Calif.
Jack Cliff	Agriculture	Carson City
Margery Cliff	Arts and Science	Carson City
Duane Collins	Agriculture	Reno
Helen Collins	Arts and Science	Reno
Thomas Coltman	Mines	Clearlake Highlands, Calif.
Robert Comer	Arts and Science	Reno
Thelma Crosby	Arts and Science	Reno
Marjorie Davin	Arts and Science	Lovelock
Dudley Davis	Mines	Reno
Harry Dawson	Electrical Engineering	Victoria, B. C.
Galen DeLongchamps	Agriculture	Reno
Ned Dickson	Arts and Science	Hawthorne
James Driscoll	Arts and Science	Reno
Thelma Eager	Arts and Science	Sparks
Juanita Elcano	Arts and Science	Reno

Walter Elkins	Mechanical Engineering	Reno
John Etchemendy	Arts and Science	Gardnerville
Sumner Evans	Mines	Atherton, Calif.
Frank Fitz	Mines	Reno
Wilma Foote	Home Economics	Sparks
Charles Fox	Mines	Flushing, N. Y.
Arthur Frazier	Mines	Reno
Dagmar Frederiksen	Arts and Science	Reno
Gertrude Freeman	Home Economics	Reno
Geo. Friedhoff	Agriculture	Yerington
Shirley Fuetsch	Arts and Science	Reno
Robert Fulton	Mines	Reno
Ezra Funk	Agriculture	Preston
Sybil Furchner	Arts and Science	Reno
Ray Garamendi	Arts and Science	Ely
John Green	Mechanical Engineering	Los Angeles
Artemus Ham	Arts and Science	Las Vegas
Cyril Ham	Electrical Engineering	Las Vegas
Gloria Hammond	Arts and Science	Golconda
Robert Handley	Arts and Science	Eureka
Reveau Hansen	Home Economics	Lovelock
Clara Hanson	Arts and Science	Sparks
Byron Hardie	Mines	Las Vegas
Ethel Hardy	Arts and Science	Fernley
James J. Hart, Jr.	Arts and Science	Reno
David Hartman	Electrical Engineering	Reno
Clarence Heckethorn	Arts and Science	Las Vegas
Lowell Hillygus	Agriculture	Yerington
Janet Holcomb	Arts and Science	Reno
Martha Ann Holcomb	Arts and Science	Reno
Robert Hudspeth	Agriculture	Verdi
Frank Inman	Arts and Science	Reno
Helen Byrd Inman	Home Economics	Reno
Eugene Jahn	Electrical Engineering	Reno
Peter Jensen	Arts and Science	Reno
Margaret Johnson	Arts and Science	Sparks
Max Johnson	Arts and Science	Reno
Wilma M. Jones	Arts and Science	Colusa, Calif.
Ernest Jorgensen	Mines	Las Vegas
Robert Joy	Arts and Science	Reno
James King	Arts and Science	Reno
Donald Kinkel	Arts and Science	Sparks
Herman Konnerth	Mechanical Engineering	Los Angeles
Dorothy Kunsch	Arts and Science	Reno
David Langberg	Arts and Science	Reno
Beatrice Lansdon	Arts and Science	Reno
Louise Leonard	Arts and Science	Reno
Leslie Lincoln	Mines	Pittsburg, Calif.
Grace Little	Arts and Science	Fernley
William Locke	Arts and Science	Reno
Duane Lucas	Arts and Science	Reno
Howard Mason	Agriculture	Reno
Pio Mastroianni	Civil Engineering	Reno

Maris Maule	Arts and Science	Minden
Henry Mayer	Arts and Science	Reno
Gene McDaniel	Electrical Engineering	Reno
Jack McKenzie	Agriculture	Verdi
Clinton McKinley	Civil Engineering	Reno
Howard McMullen	Arts and Science	Reno
Patricia Meaker	Arts and Science	Reno
Richard Miller	Arts and Science	Canton, Ohio
Harry Mornston	Arts and Science	Sparks
Cressy Murray	Mines	Los Angeles, Calif.
John Naughton	Arts and Science	Sparks
Betty Nelson	Arts and Science	Reno
Mark Nesbitt	Mines	Reno
William Ogle	Arts and Science	Las Vegas
Axel Theodore Olson	Agriculture	Parshall, N. D.
Hermann Owens	Electrical Engineering	Truckee, Calif.
Brice Pace	Mines	Pelham Manor, N. Y.
Robert Paille	Arts and Science	Reno
Robert Parker	Arts and Science	Reno
William Parsons	Arts and Science	Ely
William Pasutti	Arts and Science	Sparks
Maude Patterson	Arts and Science	Dyer
William Peccole	Arts and Science	Las Vegas
James Peckham	Arts and Science	Reno
Margie Pefley	Arts and Science	Reno
Athy Peratis	Mechanical Engineering	Los Angeles
Mrs. Bessie Perazzo	Arts and Science	Reno
James Perkins	Mines	Tonopah
Eugene Peterson	Agriculture	Reno
Harry Plath	Mines	Reno
Walter Powers	Arts and Science	Sparks
Mary Prunty	Arts and Science	Sparks
Clifton Prusia	Arts and Science	Westwood, Calif.
Clifford Quilici	Arts and Science	Dayton
John Radovich	Arts and Science	Lead, S. D.
Jess Ralphs	Arts and Science	Lovelock
Mary Read	Arts and Science	Las Vegas
Russell Rivers	Arts and Science	Reno
Allen Rives	Arts and Science	Reno
Lorraine Robinson	Arts and Science	Reno
Nevio Rosa	Arts and Science	Tonopah
Andrew Rosaschi	Arts and Science	Yerington
Frank Rosaschi	Arts and Science	Yerington
Nellie Roseberry	Arts and Science	Tuscarora
Marion Rowan	Arts and Science	Reno
John Sala	Arts and Science	Ely
Edith Salvi	Arts and Science	McGill
Lewis Sanborn	Mines	Arcadia, Calif.
Walter Schmidt	Agriculture	Reno
Frank Schumacher	Arts and Science	Reno
Ralph Shearer	Electrical Engineering	Reno
Maurice Sheppard	Arts and Science	Reno
Betty Marie Shidler	Arts and Science	Reno

Roy Shipp	Electrical Engineering	Boulder City
Eleanor Smith	Arts and Science	Chicago, Ill.
Merle Snider	Arts and Science	Winnemucca
Virginia Snow	Arts and Science	Reno
Blake Speers	Arts and Science	Sparks
John Starbird	Mines	King City, Calif.
Fred Steen	Arts and Science	Tonopah
Cleone Stewart	Arts and Science	Ogden, Utah
Mary Stott	Home Economics	Eureka
James Sullivan	Arts and Science	Reno
Richard Taylor	Arts and Science	Reno
Curtis Thomas	Electrical Engineering	Pioche
Gordon Thompson	Arts and Science	Reno
Melvin Tilley	Mech. Engineering	Susanville, Calif.
Pauline Tobener	Arts and Science	Reno
Ong-Hee Tye	Civil Engineering	San Francisco
Virginia Vuich	Arts and Science	Tonopah
John Watrous	Arts and Science	Oakland, Calif.
Henry Wells	Agriculture	Winnemucca
Fraser West	Agriculture	Reno
Thomas West	Arts and Science	Reno
Luana Whipple	Home Economics	Logandale
Charles Whitham	Arts and Science	Alhambra, Calif.
Dorothy Whitney	Arts and Science	Reno
Loyal Willis	Agriculture	Yerington
Edith Winbourn	Arts and Science	Reno
Genevieve Wines	Arts and Science	Reno
Edward Wise	Mines	Sparks
Mary Wood	Arts and Science	Reno
Robert Young	Arts and Science	Sacramento, Calif.
Anthony Yriberry	Arts and Science	Ruth

Juniors

Guy Allen	Arts and Science	Wellington
Grace Amonette	Arts and Science	Elko
Grant Anderson	Electrical Engineering	Fernley
Wilbourne Andrews	Arts and Science	Minden
Eileen Angus	Arts and Science	Reno
Phyllis Anker	Arts and Science	Lovelock
Mary Anxo	Arts and Science	Eureka
Mary Arentz	Home Economics	Simpson
Virginia Aylor	Arts and Science	Burley, Idaho
Alma Bails	Arts and Science	Sparks
Betty Baird	Home Economics	Boulder City
Harold Baird	Arts and Science	Bucklin, Kansas
Earlmond Baker	Arts and Science	Reno
David Barber	Arts and Science	San Francisco
Evelyn Barry	Arts and Science	North Fork
George Basta	Arts and Science	Ruth
Cameron Batjer	Arts and Science	Smith
Marcell Bawden	Arts and Science	Reno
Sarah Bawden	Arts and Science	Reno
John Bazzini	Agriculture	Wadsworth
Jack Beach	Arts and Science	Fallon

Florence Koocher Beatty	Arts and Science	Reno
Edward Beaupeurt	Arts and Science	Reno
William Bennet	Mines	Willoughby, Ohio
Mary Ellen Bennetts	Arts and Science	Boca, Calif.
Caroline Best	Home Economics	Fallon
James Bett	Civil Engineering	Elko
Darrell Birch	Arts and Science	Sparks
Maureen Bony	Arts and Science	Reno
Marie Borsini	Home Economics	Yerington
Mary Boylan	Arts and Science	Reno
Jeanne Brannin	Arts and Science	Sparks
Joseph Brooks	Mines	Pasadena, Calif.
Geo. B. Brown	Mines	Alameda, Calif.
Laura Brown	Arts and Science	Reno
Maurine Brown	Home Economics	Reno
Florence Butler	Arts and Science	Tonopah
Russell Byington	Mines	Reno
Helen Cameron	Home Economics	Carson City
Ben Cardinal	Arts and Science	Reno
Perry Carlson	Arts and Science	Winnemucca
Phillip Carroll	Civil Engineering	Sparks
Richard Carroll	Arts and Science	Reno
William Casey	Arts and Science	Sparks
Lorenzo Casia	Mines	Reno
Melanio Casia	Mines	Reno
Eva Ceccarelli	Arts and Science	Sparks
Gerald Chamberlain	Mech. Engineering	Berkeley, Calif.
Mitchell Cobeaga	Arts and Science	Lovelock
Ruth Coleman	Arts and Science	Reno
Lee Conaway	Mines	Caliente
Bernard Connolly	Agriculture	Reno
John Cooper	Civil Engineering	Reno
Bette Cowgill	Arts and Science	Reno
Emma Crabtree	Civil Engineering	Reno
Virginia Crofut	Home Economics	Reno
Charles Crow	Mines	Long Beach, Calif.
Katherine Dalzell	Arts and Science	Reno
Andres Darang	Agriculture	Reno
George Dawson	Mines	Victoria, B. C.
Kathryn Devlin	Arts and Science	Whitney
Burley Dooley	Agriculture	Ceres, Calif.
Dallas Downs	Civil Engineering	Los Angeles, Calif.
Donald Downs	Arts and Science	Fallon
Doris June Drake	Home Economics	Reno
Merian Ducker	Arts and Science	Carson City
Delmont Dunann	Arts and Science	Reno
Eleanor DuPratt	Arts and Science	Reno
James DuPratt	Arts and Science	Yerington
John DuPratt	Arts and Science	Reno
Paul Eaton	Arts and Science	Compton, Calif.
James Edmunds	Arts and Science	Winnemucca
Kenneth Edson	Arts and Science	Reno

Richard Edwards	Arts and Science	Reno
Roger Edwards	Arts and Science	Reno
Myrtle Elges	Arts and Science	Sparks
Georgia Ereno	Arts and Science	Reno
Douglas Erskine	Arts and Science	Roseville, Calif.
George Escobar	Arts and Science	Austin
Sergio Estavillo	Civil Engineering	Sacramento, Calif.
Nick Evasovic	Agriculture	Ruth
Isobel Fairhurst	Arts and Science	Reno
Ira Farris	Arts and Science	Chicago, Ill.
Walter Flagg	Agriculture	Susanville, Calif.
Lola Frazer	Arts and Science	Reno
Ray Frazer	Arts and Science	Reno
Chesley Freemonth	Agriculture	Reno
Delbert Fryberger	Arts and Science	Lovelock
Jim Gibbs	Arts and Science	Fallon
John Giomi	Agriculture	Yerington
Richard Glendinning	Mech. Engineering	Oakland, Calif.
Delphina Goicoechea	Home Economics	Elko
Eleanor Goldsworthy	Arts and Science	Reno
Nonie Goldwater	Arts and Science	Reno
Winston Goodner	Arts and Science	Plainwell, Mich.
Marion Grady	Arts and Science	Reno
Marjorie Gregory	Arts and Science	Elko
Robert Grenig	Civil Engineering	McGill
Joseph Gross	Electrical Engr.	Sacramento, Calif.
Marjory Gusewelle	Arts and Science	Las Vegas
Fred Haley	Mines	Sacramento, Calif.
Gerard Hanford	Mech. Engineering	Los Angeles, Calif.
Claire Hansen	Arts and Science	McGill
George Hansen	Agriculture	Reno
Betty Hardy	Arts and Science	Sparks
Ray Harris	Arts and Science	Rio Vista, Calif.
Ruth Harris	Arts and Science	Eureka
Ralston Hawkins	Arts and Science	Winnemucca
Margaret Hermansen	Arts and Science	Ely
Carl Hill	Mines	Reno
Helen Hill	Arts and Science	Reno
Norman Hoover	Civil Engineering	Reno
Phyllis Horton	Arts and Science	Reno
Harold Jacobsen	Agriculture	Eureka
Richard Jameson	Arts and Science	Reno
Inabelle Jarvis	Arts and Science	Fallon
Dyer Jensen	Arts and Science	Reno
Elsa Jensen	Home Economics	Preston
Roy Jensen	Agriculture	Reno
Annie Johnson	Arts and Science	Ely
Betty Johnson	Home Economics	Lovelock
Mrs. Elsie Johnson	Arts and Science	Reno
Harold Johnson	Civil Engineering	Ely
Harvey Johnson	Mines	Beowawe
James Johnson	Arts and Science	Fallon

Wilma A. Jones	Arts and Science	Sparks
Georgiana Kane	Arts and Science	Sparks
Kern Karrasch	Arts and Science	Reno
George Katz	Civil Engineering	San Francisco
Arthur Kaufman	Civil Engineering	Los Angeles
Glen Keiser	Arts and Science	Los Angeles
Frank Keith	Mines	Reno
Peter Kelley	Arts and Science	Eureka
Harold Kerns	Mines	Orange, Calif.
Mildred Kibble	Arts and Science	Reno
Joseph Kievit	Arts and Science	Reno
John Kinneberg	Mines	Battle Mountain
Otis Kittle	Mines	Reno
Jean Knouse	Arts and Science	Reno
George Koocher*		Reno
Mary Kornmayer	Arts and Science	Reno
Yen Chi Kwan	Arts and Science	Reno
Matthew Laking	Mechanical Engineering	Sparks
Clifford Lassen	Arts and Science	Sparks
William Latimer	Arts and Science	Camino, Calif.
Lee Lawhead	Elect. Engineering	Glendale, Calif.
Leslie Leggett	Arts and Science	Reno
John Lemich	Arts and Science	Ely
Elliot Lima	Agriculture	Fallon
Marvin Linson	Agriculture	Stanley, N. D.
Nellie Little	Arts and Science	Fernley
Robert Locke	Arts and Science	Reno
Helen Lohse	Arts and Science	Fallon
Catherine Lowney	Arts and Science	Hawthorne
Mary Lukens	Arts and Science	Sparks
Aileen Mahoney	Arts and Science	Dunphy
Mary Mahoney	Arts and Science	Dunphy
Mary Maloney	Home Economics	Tonopah
William Marks	Arts and Science	Virginia City
Charles Matson	Agriculture	Reno
Gerald McCormack	Mechanical Engineering	Reno
Frank McCulloch	Arts and Science	Fernley
Joseph McDonald	Arts and Science	Reno
William McGee	Arts and Science	Reno
Allan McGill	Arts and Science	Reno
Fred McIntyre	Arts and Science	Reno
Thomas Menzies	Mines	Boulder City
Jack Meyers	Mines	Roseville, Calif.
Robert Middlekauff	Mines	Denver, Colo.
June Rose Miles	Home Economics	Reno
William Miller	Arts and Science	Reno
William Mitchell	Mech. Engr.	Bingham Canyon, Utah
Joe Moore	Arts and Science	Reno
Henry Morehead	Mech. Engineering	San Gabriel, Calif.
Gilbert (Sam) Morehouse	Mechanical Engineering	Fallon
Harry Morgan	Civil Engineering	Los Angeles, Calif.

*Died October 26, 1939.

John Morning	Mines	Long Beach, Calif.
Ross Mortensen	Electrical Engineering	Verdi
John Namle	Arts and Science	Sacramento, Calif.
Margaret Nash	Arts and Science	Reno
William Newman	Mines	Reno
Eli Nickovich	Arts and Science	Yerington
Daniel O'Keefe	Mines	Reno
William Orr	Mechanical Engineering	Pioche
Paul Ostroumov	Arts and Science	Harbin, Manchuria
Gaylord Palmer	Mech. Engineering	San Francisco
Nick Pappas	Agriculture	Sparks
Padraic Partridge	Mines	Oakland, Calif.
Audrey Pedersen	Arts and Science	Reno
Roy Penny	Arts and Science	Reno
Louis Peraldo	Arts and Science	Paradise Valley
Edna Pflum	Home Economics	Fallon
Jack Pieri	Arts and Science	Reno
John Polish	Agriculture	Yerington
William Potter	Electrical Engineering	Elko
Ruth Pray	Home Economics	Fernley
Carlyle Pribbernow	Arts and Science	Tonopah
Gladys Putney	Arts and Science	Sparks
Frank Quilici	Agriculture	Verdi
Margaret Records	Arts and Science	Reno
Jack Rhoades	Arts and Science	Boulder City
Theodore Rischard	Mines	Balboa Island, Calif.
Sally Robinson	Arts and Science	Lovelock
Richard Roche	Agriculture	Reno
James Rookus	Mines	Long Beach, Calif.
Eugene Rowland	Mechanical Engineering	Reno
Malcolm Boyce Royalty	Electrical Engineering	Reno
John Russell	Mines	Ely
Mary Sala	Arts and Science	Ely
Raymond Sandkule	Civil Engineering	Danville, Calif.
Grant Sawyer	Arts and Science	Fallon
Dorothy Schooley	Home Economics	Reno
Roy Seeman	Mines	Laguna Beach, Calif.
Cesar Siard	Arts and Science	Winnemucca
Kenneth Skidmore	Mines	Sacramento, Calif.
Aileen Smith	Arts and Science	Reno
Robert Smith	Arts and Science	Winnemucca
William Smith	Arts and Science	Talahassee, Fla.
John Spann	Arts and Science	Reno
Mark Stewart	Agriculture	Reno
Richard Stoddard	Arts and Science	Reno
Leland Strauch	Arts and Science	Sacramento, Calif.
Lawson Sullivan	Arts and Science	Reno
James Taylor	Mines	Sacramento, Calif.
Robert Taylor	Arts and Science	Ruth
Merlyn Thompson	Arts and Science	Reno
Don Townsend	Electrical Engineering	Fallon
James Trail	Agriculture	Reno

James Tranter	Arts and Science	Reno
Elwyn Trigero	Agriculture	Reno
Leland Tucker	Civil Engineering	Elko
Florence Turpin	Arts and Science	Reno
George Tweedy	Mines	Las Vegas
Mary Urrutia	Home Economics	Reno
Lilly Venton	Arts and Science	Sparks
Vincent Vercoe	Agriculture	Reno
Clyde Vinson	Arts and Science	Bonanza, Oregon
Alice Wade	Home Economics	Fallon
William Wald	Arts and Science	Reno
Mark Wallace	Arts and Science	Carlin
Raymond Walts	Agriculture	Reno
Romietta Ward	Arts and Science	Reno
Helen Westall	Arts and Science	Virginia City
Dean White	Mines	San Francisco, Calif.
Laird Wilcox	Arts and Science	Reno
Ruth Wilcox	Arts and Science	Reno
Walter Wilcox	Arts and Science	Reno
Edna Williams	Arts and Science	Sparks
Richard Williams	Arts and Science	Las Vegas
Glenda Wilson	Arts and Science	Reno
Jack Wittwer	Agriculture	Las Vegas
James Wolf	Mech. Engineering	Sacramento, Calif.
Alfred Woodgate	Civil Engineering	Carson City
Mary Woodward	Arts and Science	Reno
Charles Yetter	Mines	Reno
Hilary Young	Agriculture	San Francisco, Calif.

SOPHOMORES

Harry Ackerman	Civil Engineering	Reno
Lester Adams	Agriculture	Bunkerville
Alice B. Addenbrooke	Home Economics	Reno
Florence Alexander	Arts and Science	Reno
Ann Allen	Arts and Science	Mailuku, Hawaii
Andrea Anderson	Arts and Science	San Francisco, Calif.
Roy Anderson	Arts and Science	Fullerton, Calif.
Stella Antunovich	Arts and Science	Virginia City
Frances Arenaz	Arts and Science	Reno
Bryn Armstrong	Arts and Science	Las Vegas
Jannett Ashby	Arts and Science	Valdez, Alaska
Harold Babcock	Arts and Science	Reno
Rosmino Barengo	Arts and Science	Reno
Julia Barkley	Arts and Science	Reno
James Barrett	Arts and Science	Reno
Eleanor Bart	Home Economics	Reno
William Barton	Arts and Science	Tucson, Ariz.
Fred Bachelder	Agriculture	Yerington
Walter Bedel	Civil Engineering	Visalia, Calif.
Allan Beers	Electrical Engineering	Reno
Leonard Bell	Arts and Science	Reno
Robert Bennyhoff	Arts and Science	Portola, Calif.

Harold Biegler	Mines	Elko
Harry Bony	Arts and Science	Reno
Robert Bowen	Mech. Engineering	Inverness, Calif.
Dorothy Bowers	Arts and Science	Reno
James Breen	Mechanical Engineering	Reno
Mildred Brendel	Arts and Science	Berkeley, Calif.
Edith Brooks	Arts and Science	Reno
Carl Bruhns	Civil Engineering	Santa Cruz, Calif.
Eileen Buck	Arts and Science	Boulder City
Emogene Byars	Arts and Science	Reno
Larry Callahan	Mines	Ely
Mary Margaret Cantlon	Arts and Science	Sparks
Ircel Carter	Electrical Engineering	Beowawe
Felix Castagnola	Arts and Science	San Francisco, Calif.
Lynn Casto	Arts and Science	Salina, Utah
Abbott Charles	Mines	Reno
Hubert Chessher	Mines	Reno
George Clark	Mines	Carlin
William Cochran	Arts and Science	Reno
Lois Coffin	Arts and Science	Reno
Mary Comish	Arts and Science	Elko
Vicente Comiso	Arts and Science	Reno
Emery Conaway	Agriculture	Caliente
Ellenlou Connolly	Arts and Science	Reno
Wilbur Cook	Civil Engineering	Reno
Thomas Cooke	Arts and Science	Reno
Herbert Covington	Arts and Science	Sparks
William Cristani	Mechanical Engineering	Fallon
Walter Culver	Arts and Science	Montello
Venitia Dahlstrom	Arts and Science	Fallon
Carlos Danao	Electrical Engr.	Red Bluff, Calif.
George Dangberg	Mechanical Engineering	Gardnerville
Kirk Day	Agriculture	Sparks
Lewis Denton	Arts and Science	Caliente
Jane Ellen Devine	Arts and Science	Sparks
Emily Diessner	Arts and Science	Reno
Margaret DiGrazia	Arts and Science	Wells
Marlea Dodge	Arts and Science	Fallon
Edwin Dodson	Arts and Science	Carson City
Donald Dondero	Arts and Science	Carson City
Roy Dondero	Mines	Reno
Marie Dooner	Arts and Science	Reno
Mary Madalynn Down	Arts and Science	Las Vegas
Murray Drewette	Electrical Engineering	Reno
Hazel Eather	Arts and Science	Eureka
Kenneth Eather	Arts and Science	Eureka
Norma Eather	Arts and Science	Eureka
Leland Eckley	Civil Engineering	Mina
John Elkin	Arts and Science	Virginia City
Dorothy Elkins	Arts and Science	Reno
Alfred Elpern	Mines	Reno
Chester Evans	Electrical Engineering	Reno

Warren Ferguson	Arts and Science	Eureka
Peter Finn	Agriculture	Reno
Franklin Fisher	Arts and Science	Minden
Charla Fletcher	Arts and Science	Reno
Bette Fodrin	Arts and Science	Carson City
Harvey Foulkes	Mechanical Engineering	Reno
Bill Francis	Arts and Science	Las Vegas
Samuel Francovich	Arts and Science	Reno
Cleo Frehner	Agriculture	Mesquite
George Frey	Agriculture	Fallon
Frank Fuller	Arts and Science	Reno
Barbara Fulstone	Arts and Science	Topaz, Calif.
Hugh Fulton	Mines	Oakland, Calif.
John Fulton	Mines	Reno
James Gaines	Mines	Alhambra, Calif.
Hugh Gallagher	Arts and Science	Virginia City
Ann Gamble	Home Economics	Hazen
Kermit Gardner	Electrical Engineering	Reno
Catherine Gianella	Arts and Science	Reno
Jay Gibson	Arts and Science	Alturas, Calif.
Edgar Gill	Arts and Science	Reno
Joe Giomi	Agriculture	Yerington
John A. Goetz	Electrical Engineering	Oakland, Calif.
Jack Good	Mines	Reno
Jane Goodyear	Arts and Science	Decatur, Ill.
Bessie Gregory	Arts and Science	Reno
Helen Griffing	Arts and Science	Reno
Clark Guild	Arts and Science	Carson City
David Hall	Arts and Science	Ruth
Jonelle Hamlet	Arts and Science	Reno
Dorothy Hansen	Arts and Science	Reno
Esther Hansen	Home Economics	Yerington
Jessie Hansen	Arts and Science	Reno
Ruth Hansen	Home Economics	Yerington
Vera Hardy	Arts and Science	Reno
Virgil Hart	Arts and Science	Reno
Robert Hawley	Arts and Science	Reno
Lois Hecker	Home Economics	Reno
Fred Heinen	Electrical Engineering	Reno
Jean Henderson	Arts and Science	Reno
Roger Hickman	Mines	Quinn River
Sue Hicks	Arts and Science	Oakland, Calif.
Mary Higgins	Arts and Science	Reno
Mary Hill	Arts and Science	Susanville, Calif.
Herbert Holt	Mech. Engineering	Los Angeles, Calif.
Shirley Huber	Arts and Science	Reno
Helen Hudspeth	Arts and Science	Verdi
Betty Hull	Arts and Science	Linwood, Calif.
Marie Hursh	Arts and Science	Reno
Robert Hutchinson	Electrical Engineering	Reno
Ralph Isaac*	Mechanical Engr.	Austin

*Died January 16, 1940.

Nellie Isola	Arts and Science	Sparks
Dorothy Janes	Arts and Science	Reno
Chester Jenkins	Electrical Engr.	Eagle Rock, Calif.
Luther Johnson	Mechanical Engr.	Minneapolis, Minn.
Wesley Johnson	Civil Engineering	Montello
Charles Jones	Civil Engineering	Sparks
Helen Jones	Arts and Science	Reno
Olga Jones	Home Economics	Reno
Henry Jorgensen	Arts and Science	Las Vegas
June Julian	Arts and Science	Reno
Lewis Kattenhorn	Electrical Engr.	Battle Mountain
Eleanor Kearns	Arts and Science	Reno
Mickey Kelly	Arts and Science	Las Vegas
Richard King	Arts and Science	Reno
Arthur Kinneberg	Mines	Battle Mountain
Harold Kling	Arts and Science	Carlin
John Knemeyer	Electrical Engineering	Alturas, Calif.
Theodore Knopf	Electrical Engineering	Campbell, Calif.
Alice Kohlhoss	Home Economics	Fallon
Joseph Kosakowski	Arts and Science	Housatonic, Mass.
Rita Laing	Arts and Science	Reno
Frances Larraguetta	Arts and Science	Winnemucca
Bill Lattin	Arts and Science	Fallon
Riley Lee	Agriculture	Los Angeles, Calif.
Nellie Lees	Arts and Science	Ursine
Buelah Leonard	Arts and Science	Reno
Viva Leonard	Home Economics	Reno
Helen Lilly	Arts and Science	Berkeley, Calif.
Maryanne Lockridge	Arts and Science	Sparks
Felix Lopez	Mines	Reno
Kenneth Mann	Arts and Science	Mina
Charles Mapes	Arts and Science	Reno
Frank Margrave	Mines	Reno
Elizabeth Martin	Arts and Science	Paradise Valley
Dorothy Mason	Arts and Science	Reno
Elizabeth Mason	Arts and Science	Reno
John Mayse	Arts and Science	Elko
Bernard McConville	Mines	South Pasadena, Calif.
Phyllis McCulloch	Arts and Science	Fernley
Robert McDonough	Arts and Science	Reno
Norma McDowell	Arts and Science	Reno
Clarence McEwen	Arts and Science	Reno
Betty McGee	Arts and Science	Sparks
Barbara McKenzie	Arts and Science	Reno
Albert McKey	Mines	Chicago, Ill.
Donald McMeekin	Arts and Science	Reno
James McNabney	Arts and Science	Reno
Mertice McQuerry	Arts and Science	Reno
Mary Jane McSorley	Arts, Science	Mokelumne Hill, Calif.
Aubin Meizel	Agriculture	Reno
David Melarkey	Arts and Science	Reno
Chetty Milbery	Arts and Science	Reno

Clarence Miller	Arts and Science	Fallon
Mike Miskulin	Mines	Kimberly
Robert Moore	Civil Engineering	Elko
William Moran	Arts and Science	Reno
LeRoy Mow	Electrical Engr.	San Francisco, Calif.
Ralph Moyer	Mines	Carson City
Edwin Mulcahy	Arts and Science	Sparks
Margaret Mullin	Arts and Science	Austin
Mary Margaret Murphy	Arts and Science	Reno
Malcolm Musson	Mines	Tahoma Park, Md.
Francis Nagle	Arts and Science	Roseville, Calif.
James Neary	Arts and Science	Waukegan, Ill.
David Nelson	Mines	Hammonton. Calif.
Elmer Nelson	Arts and Science	Sparks
Orville Nelson	Agriculture	Stanley, N. D.
June O'Neill	Arts and Science	Reno
Leslie Oppio	Agriculture	Sparks
Samuel Osgood	Arts and Science	Reno
Teddyanna Pease	Arts and Science	Sparks
George Peckham	Agriculture	Reno
Jarrell Perkins	Arts and Science	Graford, Texas
Virginia Pflum	Arts and Science	Fallon
John Phethean	Arts and Science	Nr. Leicester, Eng.
John Phillips	Arts and Science	Ely
Ridgley Pierson	Arts and Science	Reno
Robert Pillifant	Arts and Science	Waukegan, Ill.
Geno Pisani	Arts and Science	Sparks
Perry Pollock	Mechanical Engineering	Sparks
Moises Ponce	Mines	Philippines
Fred Proteous	Mines	Hazen
Dorothy Post	Arts and Science	Reno
Eleanor Potts	Arts and Science	Reno
George Potts	Agriculture	Potts
William Powell	Arts and Science	Fernley
Virginia Pozzi	Arts and Science	Carson City
Ralph Preece	Agriculture	Reno
Robert Prescott	Civil Engineering	Reno
Priscilla Prunty	Arts and Science	Charleston
Donald Questa	Agriculture	Reno
Lois Rabe	Arts and Science	Gardnerville
Elliott Reyer	Mines	Denver, Colo.
Verna Reynolds	Arts and Science	Reno
Burt Rice	Agriculture	Reno
Doris Jean Rice	Arts and Science	Sparks
Thomas Rice	Agriculture	Reno
Mada Ricker	Arts and Science	Berkeley, Calif.
Mildred Riggle	Home Economics	Sparks
Jeanette Rives	Arts and Science	Reno
Marguerite Rives	Arts and Science	Reno
Robert Robens	Arts and Science	Reno
Robert Robinett	Arts and Science	San Francisco, Calif.
Aurora Robison	Home Economics	Reno

Barbara Rook	Arts and Science	Reno
Peter Rosaschi	Arts and Science	Yerington
Betty Marie Ross	Arts and Science	Reno
Charles Rowan	Arts and Science	Reno
Frank Roylance	Arts and Science	Hawthorne
Annette Sargent	Arts and Science	Hawthorne
Alyce Savage	Arts and Science	Reno
James Savage	Arts and Science	Reno
Dolores Saval	Arts and Science	Sulphur
Richard Sawyer	Arts and Science	Reno
Eileen Sayre	Home Economics	Smith
Gene Scarselli	Arts and Science	Sparks
Wesley Schlager	Arts and Science	Las Vegas
Marion Schultz	Arts and Science	Sparks
Paul Seaborn	Electrical Engineering	Reno
John Severne	Mines	Sparks
Vincent Shea	Arts and Science	Waukegan, Ill.
William Shewan	Civil Engineering	Carson City
Emma May Shum	Arts and Science	Oakland, Calif.
June Sinai	Arts and Science	Reno
Herbert Smith	Arts and Science	Reno
Lloyd Smith	Mines	Nevada City, Calif.
Dorothy Snider	Arts and Science	Reno
Dante Solari	Arts and Science	Reno
Virginia Spencer	Arts and Science	Reno
Dorothy Stakel	Home Economics	Winnemucca
Delbert Stewart	Agriculture	Reno
Leslie Stewart	Agriculture	Paradise Valley
Frederick Stiverson	Electrical Engineering	Fallon
Russell Strom	Arts and Science	Reno
Maurice Sullivan	Arts and Science	Reno
Ralph Sullivan	Arts and Science	Reno
Harold Swingle	Mines	Silver City
Jeanette Taylor	Arts and Science	Reno
Mary Jain Taylor	Arts and Science	Reno
Russell Taylor	Arts and Science	Las Vegas
Barbara Terwilliger	Arts and Science	Reno
Rae Thomas	Arts and Science	Reno
Frank Titus	Arts and Science	Truckee, Calif.
Robert Towle	Mech. Engr.	San Francisco, Calif.
Marion Towner	Arts and Science	Reno
Alice Martha Traner	Arts and Science	Reno
Craig Tranter	Arts and Science	Reno
Marvin Trigero	Arts and Science	Reno
Thomas Tucker	Agriculture	Sparks
Margaret Turrillas	Arts and Science	Reno
Helen Urrutia	Arts and Science	Reno
Elmer Vacchina	Arts and Science	Reno
Bernard Van Wagenen	Arts and Science	Reno
Beryl Vaughan	Arts and Science	Reno
Mario Vial	Civil Engineering	Susanville, Calif.
Myron Waldman	Arts and Science	Las Vegas

Myneer Walker	Mines	Reno
George Westergard	Agriculture	Lovelock
Ralph Westergard	Arts and Science	Lovelock
Leland Whipple	Agriculture	Logandale
Kathryn Wilkes	Arts and Science	Pioche
Marie Williams	Arts and Science	Tonopah
Frances Willis	Arts and Science	Yerington
Hugh Wilton	Mines	Las Vegas
Janette Winn	Arts and Science	Reno
Frank Woodward	Arts and Science	Reno
James Worden	Arts and Science	Tahoe City, Calif.
Lorene Wright	Arts and Science	Hiko
Wilfrid Wylie	Arts and Science	Reno
Merle Young	Arts and Science	Lovelock
William Zerweck	Electrical Engineering	Stockton, Calif.

FRESHMAN

Max Abbott	Arts and Science	Bunkerville
Violet Ambrose*		Reno
Harry Anderson	Arts and Science	Reno
Leonard Anker	Agriculture	Lovelock
Rose Arenaz	Arts and Science	Reno
Frank Arlang	Arts and Science	Ely
Richard Armstrong	Arts and Science	Hawthorne
John Aymar	Arts and Science	Reno
Donald Bagley	Agriculture	Sparks
Eileen Bailey	Arts and Science	Reno
John Balzar	Arts and Science	Reno
Verl Barnum	Agriculture	Logandale
Burton Barrett	Mines	Las Vegas
Fred Barrett	Arts and Science	Yerington
Angelo Barsanti	Arts and Science	Tonopah
Clarence Bath	Agriculture	Reno
Paul Bauer	Mechanical Engineering	Pioche
Janice Bawden	Arts and Science	Reno
Jack Bay	Mines	Eureka
William Bay	Agriculture	Reno
Lisle Beaman	Arts and Science	Yerington
Robert K. Beaman	Agriculture	Smith
Ramona Beetschen	Arts and Science	Reno
Robert Biggs	Arts and Science	Carson City
William Bingham	Arts and Science	Las Vegas
Berkeley Black	Arts and Science	Reno
Geraldine Black	Arts and Science	Ely
Betty Boardman	Arts and Science	Reno
Virginia Boitano	Arts and Science	Cortez
Catharine Bolander	Arts and Science	Reno
Beverly Boles	Arts and Science	Reno
Frank Booth	Agriculture	Yerington
Warren Botkin	Arts and Science	Reno
Robert Bowen	Mech. Engineering	Inverness, Calif.

*Died December 1939.

Patsy Bowler	Arts and Science	Tonopah
Evelyn Boyer	Arts and Science	Reno
Rolland Bradford	Mechanical Engineering	Reno
Marian Bradley	Arts and Science	Reno
Sue Brannin	Arts and Science	Sparks
Robert Brinsmead	Arts and Science	Reno
Charles Brock	Civil Engineering	Berkeley, Calif.
Roberta Brockman	Arts and Science	Reno
Betty Brown	Arts and Science	Sparks
Irene Bruce	Arts and Science	Reno
Clovis Bull	Arts and Science	Reno
Samuel Bull	Arts and Science	Reno
Marva Bunker	Arts and Science	Bunkerville
Robert Burns	Arts and Science	New Berlin, Ill.
Don Burrus	Mechanical Engineering	Reno
Clair Ellen Butler	Arts and Science	Reno
George Campbell	Civil Engineering	Santa Monica, Calif.
John Cantlon	Agriculture	Sparks
Jean Caple	Arts and Science	Reno
Thomas Carey	Mines	Berkeley, Calif.
Mary Carroll	Arts and Science	Reno
Dorothy Casey	Arts and Science	Sparks
Ruthe Cash	Arts and Science	Reno
Jean Cave	Arts and Science	Sparks
Virginia Ceresola	Arts and Science	Wadsworth
Alturo Cerfoglio	Agriculture	Reno
Claude Chadwell	Arts and Science	Lewisburg, Tenn.
Ernest Chickese	Arts and Science	Reno
Herbert Chiara	Arts and Science	Battle Mountain
Marigene Christianson	Arts and Science	Reno
Alta Claus	Arts and Science	Reno
Frank Claus	Mines	Reno
Mary Elizabeth Cochran	Arts and Science	Reno
Raymond Cochran	Arts and Science	Reno
Dorothy Cole	Arts and Science	Reno
Ben Collins	Mines	San Fernando, Calif.
Robert Compston	Electrical Engineering	Wellington
Margaret Connolly	Arts and Science	Reno
Donald Cooney	Agriculture	Reno
Ella Corbett	Arts and Science	Winnemucca
George Couch	Electrical Engineering	Fallon
William Covington	Arts and Science	Sparks
Elsie Crabtree	Civil Engineering	Reno
Thomas Craven	Arts and Carson	Carson City
Barbara Crosby	Arts and Science	Wadsworth
Charles Culverwell	Arts and Science	Caliente
Willie Curran	Agriculture	Reno
William Curtis	Arts and Science	Reno
Owen Cusick	Arts and Science	Reno
Leota Davie	Arts and Science	Litchfield, Calif.
Franklin Davis	Arts and Science	Reno
Gloria Day	Arts and Science	Wellington

James Devlin	Mechanical Engineering	Whitney
Barbara Dickerson	Arts and Science	Reno
Martin Dodge	Agriculture	Fallon
Robert Dodson	Mines	Fernley
Annette Donati	Arts and Science	Reno
Jack Donner	Mechanical Engineering	Reno
Helen Donohue	Home Economics	Reno
Kenneth Down	Arts and Science	Las Vegas
Jack Downing	Electrical Engineering	Reno
Sam Drakulich	Arts and Science	Kimberly
Herbert Draper	Mines	Reno
Sylvia DuChane	Home Economics	Reno
Aaron Dunn	Agriculture	Yerington
Ira DuPratt	Arts and Science	Yerington
William Dwyer	Arts and Science	Reno
Lyman Earl	Electrical Engineering	Las Vegas
Peter Echeverria	Arts and Science	Ely
Helen Edwards	Arts and Science	Reno
Woodrow Ellertson	Arts and Science	Reno
Florence Erickson	Arts and Science	Reno
William Etchemendy	Arts and Science	Gardnerville
Doris Evans	Arts and Science	Reno
Emil Evasovic	Mines	Ruth
Lester Ferguson	Agriculture	Reno
Mary Ferguson	Arts and Science	Reno
Anthony Fialdini	Mechanical Engineering	Cobre
John Fleming	Arts and Science	Reno
James Forsyth	Arts and Science	Reno
Eugene Francovich	Mechanical Engineering	Reno
William Friel	Arts and Science	Tonopah
Thomas Friend	Mines	Searchlight
Dennis Frisbie	Arts and Science	Reno
Wendell Fritz	Electrical Engineering	Reno
Arthur Fyfe	Mechanical Engineering	Silver Peak
John Gabrielli	Arts and Science	Reno
Edythe Gallaway	Home Economics	Reno
Allen Gallaway	Electrical Engineering	Reno
Robert Games	Arts and Science	Reno
Joe Gandolfo	Agriculture	Sparks
Cliff Gelmstedt	Agriculture	Sparks
Glen Geraghty	Mines	Ely
June Gerry	Arts and Science	Reno
Lester Gliessman	Agriculture	Reno
Wayne Goodin	Arts and Science	Reno
Patricia Goodman	Arts and Science	Ely
Ray Gough	Mines	Fallon
Robert Gould	Mines	Las Vegas
Virginia Green	Arts and Science	Ely
Ferne Gregory	Arts and Science	Elko
Mary Louise Griswold	Arts and Science	Reno
Coreen Grove	Arts and Science	Maynard, Minn.
Edward Grundel	Mines	Aurora

Thomas Guild	Civil Engineering	Yerington
Howard Guinn	Agriculture	Sparks
Lauris Gulling	Arts and Science	Reno
William Gustin	Electrical Engineering	Las Vegas
Mary Hackett	Arts and Science	Pioche
Norinne Hamlin	Home Economics	Reno
Lorena Hammock	Arts and Science	Hawthorne
Wade Hampton	Arts and Science	Los Angeles, Calif.
Martha Hancock	Arts and Science	Reno
Lee Hansen	Agriculture	Yerington
Dorothy Hardie	Arts and Science	Smith
Geraldine Hardman	Arts and Science	Reno
Harley Harmon	Arts and Science	Reno
William Harrigan	Mines	Reno
Warren Harrison	Arts and Science	Reno
Warren Hart	Arts and Science	Reno
Frances Hawkins	Arts and Science	Winnemucca
Eleanor Hecker	Arts and Science	Reno
Richard Hecker	Agriculture	Reno
John Heintz	Arts and Science	Mill Valley, Calif.
Betty Jean Henderson	Arts and Science	Reno
William Henley	Arts and Science	Virginia City
Charles Henrikson	Arts and Science	Tahoe City, Calif.
Oliver Henrikson	Mech. Engineering	Tahoe City, Calif.
Stanley Hill	Mechanical Engineering	Reno
Harriet Hills	Arts and Science	Oroville, Calif.
Heath Hovey	Elect. Engineering	El Centro, Calif.
Richard Hoy	Arts and Science	Trona, Calif.
Robert Hoyer	Mines	Lincoln, Calif.
Louis Hutchinson	Arts and Science	Reno
Phillip Hutchinson	Arts and Science	Reno
Austin Imus	Mines	Fallon
Dale Jackson	Arts and Science	Reno
Vida Jacobsen	Arts and Science	Eureka
Carl Jesch	Electrical Engineering	Fallon
Frances Jesch	Arts and Science	Fallon
Bradley Johns	Arts and Science	Dover, Ohio
Robert Johns	Arts and Science	Sparks
Gerald Johnson	Civil Engineering	Ely
Helen Johnson	Arts and Science	Reno
Henry Johnson	Arts and Science	Reno
Ivaloo Johnson	Arts and Science	Reno
Henry Jones	Mines	Reno
Marjorie Jones	Home Economics	Overton
Bernice Jordan	Arts and Science	Baker
Anne Kavanaugh	Arts and Science	Reno
John Kearney	Mines	Sparks
Lyman Keele	Arts and Science	Sparks
Vincent Keele	Arts and Science	Sparks
Harold Keen	Arts and Science	Reno
Vern Keller	Arts and Science	Smith
Richard Kellison	Arts and Science	Sparks

Thomas Kent	Arts and Science	Fallon
Ralph Kergan	Mines	Oakland, Calif.
Shirley Kidd	Arts and Science	Reno
Richard Kidman	Mechanical Engineering	Reno
Margaret King	Arts and Science	Wells
William King	Arts and Science	Reno
William Kirkendall	Agriculture	Compton, Calif.
Ann Kirkwood	Arts and Science	Reno
Arthur Korngiebel	Arts and Science	Santa Barbara, Calif.
Frances Kramer	Arts and Science	Sparks
Jesse Kramer	Arts and Science	Fernley
Ray Kroll	Arts and Science	Reno
Vernon Laca	Arts and Science	Lovelock
Joseph Lancaster	Mechanical Engineering	Reno
Adler Larsen	Arts and Science	Reno
William Larsen	Arts and Science	Verdi
Howard LaVoy	Arts and Science	Sparks
Helen Laxague	Arts and Science	Ely
Donna Leavitt	Arts and Science	Bunkerville
Wendell Leavitt	Agriculture	Mesquite
Mervin Leigh	Agriculture	Reno
George Lone	Arts and Science	Reno
Paul Lessenger	Arts and Science	Sparks
Keith Mahan	Arts and Science	Reno
Charlotte Mason	Arts and Science	Reno
Mary M. Mason	Arts and Science	Reno
Eugene Mastroianni	Electrical Engineering	Reno
Virginia Mathews	Arts and Science	Panaca
Laura Matson	Arts and Science	Reno
Velia Mazza	Arts and Science	Reno
John McDonald	Agriculture	Fallon
Robert McElwee	Electrical Engineering	Sparks
Eugene McFarland	Arts and Science	Sparks
Geraldine McFarland	Arts and Science	Virginia City
Mary Etta McKenna	Arts and Science	Reno
Mary McKenzie	Home Economics	Reno
Porter McKernon	Home Economics	Reno
Jean McLaughlin	Home Economics	Reno
Jack McNutt	Arts and Science	Parchment, Mich.
Forrest McQueen	Arts and Science	Reno
Charles McQuerry	Electrical Engineering	Reno
Eugene Michal	Mines	Round Mountain
Alfred Mills	Arts and Science	Fallon
Jessie Milne	Arts and Science	Reno
Mildred Missimer	Arts and Science	Reno
Elwood Moffett	Electrical Engineering	Reno
Ashley Molk	Mechanical Engineering	Reno
Edwin Monsanto	Electrical Engineering	Reno
Lynn Montgomery	Arts and Science	Orange, Calif.
Thomas Montgomery	Mechanical Engineering	Reno
George Moore	Arts and Science	Elko
William Moore	Arts and Science	Pasadena, Calif.

Alice Morgan	Arts and Science	Reno
Harriett Morrison	Arts and Science	Reno
Molly Morse	Arts and Science	Las Vegas
Lucille Mortensen	Arts and Science	Reno
Rudolph Nagel	Arts and Science	Sparks
Betty Nash	Arts and Science	Las Vegas
Fritzi Jane Neddenriep	Arts and Science	Minden
Roy Nishiguchi	Arts and Science	Gerlach
Catherine Norris	Home Economics	Reno
Irma Oetting	Arts and Science	Reno
Johanna Ogle	Arts and Science	Las Vegas
Robert O'Kelly	Mines	Susanville
Della Olaechea	Arts and Science	Ely
Marvin Orgill	Agriculture	Caliente
Evelyn Osgood	Arts and Science	Reno
Angelyn O'Shaughnessy	Arts and Science	Sparks
Harry Paille	Arts and Science	Reno
Arthur Palmer, Jr.	Agriculture	Bloomfield, N. J.
Donald Parkinson	Arts and Science	Elko
William Paterson	Arts and Science	Reno
John Patti	Arts and Science	Reno
Robert Patterson	Mines	Altadena, Calif.
Guilda Patton	Arts and Science	Reno
Franklin Peck	Mechanical Engineering	Reno
Betty Lee Perry	Arts and Science	East Ely
George Perry	Arts and Science	Fernley
Betty Jane Petersen	Arts and Science	Reno
Hal Peterson	Arts and Science	Ely
Jack Pierce	Civil Engineering	Reno
Ernest Piersall	Arts and Science	Reno
Charles Plumridge	Mines	Reno
Lois Poulsen	Arts and Science	Reno
Robert Preece	Mechanical Engineering	Reno
Patricia Prescott	Arts and Science	Reno
Leo Puccinelli	Arts and Science	Elko
Deane Quilici	Arts and Science	Dayton
Martin Quist	Arts and Science	San Francisco, Calif.
Robert Rae	Mechanical Engineering	Sparks
Duane Ramsey	Civil Engineering	Reno
Glen A. Ranson	Arts and Science	Reno
Margaret Reading	Arts and Science	Reno
Gaylord Reagor	Arts and Science	Reno
Albert Rebbe	Arts and Science	Reno
Mario Recanzone	Arts and Science	Paradise Valley
JoAnn Record	Arts and Science	Reno
Dorothy Reiselt	Arts and Science	Reno
Robert Revert	Arts and Science	Beatty
Claude Reynolds	Mines	Susanville, Calif.
George Ricker	Arts and Science	Reno
Marshall Robb	Arts and Science	Tonopah
Gene Robens	Arts and Science	Reno
Robert Roecker	Arts and Science	Duluth, Minn.

Lloyd A. Rogers	Arts and Science	Reno
Yvonne Rosasco	Arts and Science	Reno
Thomas Ross	Arts and Science	Miamisburg, Ohio
Marguerite Rule	Home Economics	Reno
Eleanor Ryan	Arts and Science	Sparks
Warren Salmon	Arts and Science	Reno
Geraldine Sayre	Arts and Science	Wellington
William Scatena	Arts and Science	Yerington
Dorothy Schmidt	Arts and Science	Reno
Edwin Schultz	Arts and Science	Sparks
Elizabeth Schwartz	Arts and Science	Goodsprings
Nedye Schwartz	Arts and Science	Reno
Velma Scott	Arts and Science	Reno
Margaret Sears	Arts and Science	Reno
James Sehon	Arts and Science	Salem, Ore.
Ruth Shipaugh	Arts and Science	Reno
George Shontz	Mines	Imlay
Frank Simoni	Arts and Science	Reno
John A. Simpson	Mines	Reno
Robert Singleton	Arts and Science	Sparks
Edwin Carter Sittler	Arts and Science	Reno
Clyde Smart	Arts and Science	Fallon
Bernard Smith	Arts and Science	Reno
Boyd Smith	Arts and Science	Ely
Drew Smith	Arts and Science	Reno
Hugo Smith	Agriculture	Lovelock
Patricia Smith	Arts and Science	Reno
Rachel Smith	Arts and Science	Reno
Velma Smith	Arts and Science	Fernley
Hubert Smithwick	Arts and Science	Compton, Calif.
Clifford Smitten	Arts and Science	Reno
Vera Sorensen	Arts and Science	Reno
Harry Stavert	Electrical Engineering	Sparks
Elizabeth Steele	Arts and Science	Reno
William Steenis	Arts and Science	Reno
Donald Stephenson	Mines	Reno
Dick Stewart	Mechanical Engineering	Reno
Franklin Stewart	Arts and Science	Fallon
Jeanne Stewart	Arts and Science	Fallon
Robert Stewart	Agriculture	Minden
Billie Jean Stinson	Arts and Science	Carson City
Ruth Stock	Arts and Science	Fernley
Jack B. Streeter	Arts and Science	Sparks
Leroy Streshley	Agriculture	Austin
Gyneth Strom	Arts and Science	Reno
AuDeene Stromer	Arts and Science	Reno
Vane Strother	Arts and Science	Lynwood, Calif.
Don Struck	Arts and Science	Orange, Calif.
John Stuifbergen	Arts and Science	Shelbyville, Mich.
Nick Sulentich	Arts and Science	Kimberly
Paul Sullivan	Arts and Science	Reno
Tony Sutich	Agriculture	Ruth

Leroy Talcott	Agriculture	Unionville
Jack Theis	Arts and Science	Reno
Beatrice Thompson	Arts and Science	Reno
Lillian Thompson	Arts and Science	Reno
Grace Thomson	Arts and Science	Reno
Henry Toccalini	Agriculture	Nevada City, Calif.
Hale Tognoni	Mines	Eureka
Douglas Trail	Arts and Science	Reno
Damon Tranter	Arts and Science	Reno
Clayson Trigero	Electrical Engineering	Reno
Winifred Trude	Arts and Science	Reno
Emilie Turano	Arts and Science	Reno
Rita Turano	Arts and Science	Reno
Clara Turrillas	Arts and Science	Reno
John Uhalde	Mechanical Engineering	Ely
Thomas Underhill	Arts and Science	Las Vegas
Wallace Upson	Agriculture	Reno
Irving VanDalsem	Mines	Los Angelels, Calif.
William Van Tassel	Mechanical Engineering	Reno
Otis Edward Vaughn	Arts and Science	Reno
William Vogt	Arts and Science	Reno
George Voss	Mech. Engr.	Santa Barbara, Calif.
Jack Walsh	Electrical Engineering	Reno
Ray Warren	Arts and Science	Las Vegas
Zelma May Waymire	Arts and Science	Sparks
Joseph Weihe	Arts and Science	Reno
Willard Weller	Arts and Science	Reno
Jean Werner	Arts and Science	Wellington
Lee Elizabeth West	Arts and Science	Reno
Virginia Whelan	Arts and Science	Wadsworth
Ellen Wholey	Arts and Science	Reno
William Weir	Civil Engineering	Silver City
Charleen Wieland	Arts and Science	Boulder City
Floyd Wikstrom	Arts and Science	Reno
Hilma Wikstrom	Arts and Science	Reno
Eugene Williams	Electrical Engineering	Reno
Harriet Williams	Arts and Science	Elko
Alice Winter	Arts and Science	Reno
Alphonse Wisniewski	Arts and Science	Panaca
William Woo	Electrical Engineering	Reno
Sally Lou Woodgate	Arts and Science	Carson City
Calvert Woods	Electrical Engr.	Sacramento, Calif.
Robert Woodward	Mines	Sulphur
Dean Woodworth	Arts and Science	Tonopah
Jeanne Wright	Arts and Science	Sparks
David Yee	Civil Engineering	Reno
Clarence Young	Arts and Science	Lovelock

SPECIAL STUDENTS

William Ashton	Mines	Reno
Tom Boland	Electrical Engineering	Reno
Charles Chun	Electrical Engineering	Reno

Clifton Coulter	Mines	Virginia City
Dita B. Duke	Arts and Science	Reno
John Edwards	Arts and Science	Reno
Truda Fowler	Arts and Science	Reno
Arthur Hackwood	Mines	Virginia City
Lurayne Hamlyn	Home Economics	Reno
Jack Hargrove	Arts and Science	Reno
Robert Hartor	Arts and Science	Reno
Jacqueline Harwood	Arts and Science	Reno
Irma Hervey	Arts and Science	Reno
Russell Jones	Arts and Science	Reno
Cecil Kearns	Arts and Science	Reno
May Kummer	Arts and Science	Reno
Edith Lee	Home Economics	Reno
Andrew Marsinko	Arts and Science	Mingo Junction, Ohio
Woodburn McCahon	Mines	Winnemucca
Hedric McDowell	Arts and Science	Reno
Marion Motley	Arts and Science	Canton, Ohio
ReJoyce Munker	Arts and Science	Reno
Howard Norton	Mechanical Engineering	Reno
Celestine Owens	Home Economics	Reno
Wilma Pettite	Arts and Science	Reno
Kenneth Philcox	Agriculture	Reno
Zella Piersall	Arts and Science	Reno
Geno Quilici	Arts and Science	Sparks
George R. Smith, Jr.	Arts and Science	Reno
Harvey Smith	Arts and Science	Pasadena, Calif.
Catherine Smyth	Arts and Science	Reno
Alfred Sorensen	Arts and Science	Sparks
Olin Souders	Arts and Science	Turney, Mo.
Ivy Taber	Arts and Science	Reno
Patricia Tobin	Arts and Science	Reno

SUMMER SCHOOL, 1939

Buela Jane Adams.....Las Vegas
Alice B. Addenbrooke.....Reno
Frances Arville Ahlers.....Eureka
Verna Allen.....Long Beach, Calif.
Marvel Pearl Alps.....Reno
Wayne S. Ames.....Tacoma, Wash.
Ida Anderson.....Las Vegas
Walter Anderson.....Carson City
Bryan Bean.....Stockton, Utah
Marian Bee.....Ft. Collins, Colo.
Helen Benedict.....Levan, Utah
Marge L. Bengoa.....McDermitt
Mary Ellen Bennetts.....Boca, Calif.
Lucille Berg.....Round Mountain
Max Berger.....Chicago, Ill.
Mildred M. Black.....Bruneau, Ida.
Mildred Bray.....Carson City
Gladys Blair.....Reno
Grace Broom.....Santa Monica, Calif.
Reva Bunker.....Bunkerville
Frances M. Burdick.....Wilder, Ida.
Thomas A. Butcher.....Reno
E'Lois Campbell.....Reno
Mary Louise Carmody.....Reno
Eunice Caton.....Reno
Evalyn M. Clayton.....Eureka
Mrs. Frances Clock.....Reno
Helen Ann Collins.....Reno
Roger Corbett.....Winnemucca
Catherine Corgan.....Milwaukee, Wis.
Mary Crane.....Goldfield
Thelma Crosby.....Reno
Dollyruth Crowell.....Austin
Vera Delmue.....Pioche
Katherine Dondero.....Hawthorne
Pauline Donlin.....Boulder City
Eleanor DuPratt.....Reno
John DuPratt.....Reno
Frances Dyer.....Grover, Colo.
Ina Erickson.....Goodhue, Minn.
Josephine Erickson.....Roberts, Mont.
Isobel Fairhurst.....Reno
Bernice Ferris.....Sandpoint, Ida.
Anna J. Finley.....Reno
Helen M. French.....Reno
Ida Frost.....Reno
Shirley Fuetsch.....Reno
Eloise Geary.....Helena, Mont.
Emile Gezelin.....Reno
Thelma Gillies.....Sparks
Roy Gomm.....Reno
Frances Graf.....Reno
Maurine Graf.....Reno
Maud Graham.....Reno
Chester Green.....Reno
Alice Parman Grieves.....Reno
Helen Smith Gritton.....Reno
Jessie Gulling.....Reno
Artemus Ham.....Reno
Doris Hancock.....Greeley, Colo.
Virginia O. Hansen..Long Beach, Calif.
Mary Lou Harreld.....Carbondale, Ill.
Zina Harrison.....Ely
Alice Hatch.....Tonopah
Laurence Hatch.....Tonopah
Leah Hicks.....Reno
Chester Howard.....Carlin
Proctor Hug.....Sparks
Viola Huych.....Sparks
Christine Iverson.....East Ely
Dorothy Janes.....Reno
Merle Jones.....Overton
Edward Kane.....Reno
Lois Kelley.....Eureka
Mary Kling.....McGill
Thelma Kottke.....Battle Mountain
William Kottke.....Battle Mountain
Lorene Kramer.....Reno
Mary Dorothy Kunsch.....Reno
Esther Laiola.....Reno
Grace Little.....Fernley
Elizabeth H. Lundberg...Oakland, Cal.
Freeland Wayne Lytle.....Pioche
John Manning.....Reno
Mary I. Marchino..San Francisco, Cal.
Mary E. Martin.....Las Vegas
Margaret McGovern.....Sparks
Gene McIntyre.....Reno
Howard McMullen.....Reno
Patricia Meaker.....Reno
John McNamara.....Reno
Chetty Milbery.....Reno
Gordon Miles.....Modesto, Calif.
Harry L. Miller.....Reno

Marvin Moler.....Reno
Andrew Morby.....Sparks
Bernice Morrow.....Kemmerer, Wyo.
Elvira Muller.....Reno
Adah Myers.....Plainview, Minn.
Murrell Nutting.....Long Beach, Calif.
Lee Olsen.....Salt Lake City, Utah
June O'Neill.....Reno
Marie Glenn Osborne.....Reno
Maude Patterson.....Dyer
Margie Pefley.....Reno
Bessie Perazzo.....Reno
Josephine Peretz.....Reno
Jessie Peters.....Reno
Harriet Petersen.....Reno
Roy Petrie.....Reno
Romie Pine.....Hawthorne
Thelma Pollock.....Reno
Alta Porter.....Forest Grove, Ore.
Mary Prunty.....Sparks
Thomas Prunty.....Sparks
Marion Ruth Quirk.....Gerlach
Embree Raiford.....Reno
Jess Ralphs.....Lovelock
Irene Rebaleati.....Eureka
Doris Reed.....Seal Beach, Calif.
Carl Oden Romwall....Petaluma, Calif.
Nellie Roseberry.....Tuscarora
Randall Ross.....Reno
Clarence Royeds..Medicine Lake, Mont.
Leila Saunders.....Reno
Alma Schiappacasse.....Reno
Chester Scranton.....Reno
Selma Sielaff.....Reno
Kathryn Smith.....Denio, Ore.
Mabel Smith.....Steamboat
John Spann.....Reno
Fredricka Starling.....Reno
Morgan Streeter.....Reno
Dora Stuntebeck.....St. Anthony, Ida.
Myron Swezey.....Hayward, Calif.
Dorothy Taber.....Carson City
Rebecca Taitel.....Los Angeles, Calif.
Grace Tobener.....Reno
Jessie Todd.....Fallon
Elisabeth Vassar.....Tybo
Robert Vaughn.....Reno
Wendell W. Vine.....Winnemucca
Ruby Wakeling.....Lund
Anne Waldbridge.....Topeka, Kas.
Harold Wilkes.....Pioche
Elizabeth K. Willis.....Yerington
Covey Wills.....Reno
Isabel Wilson.....Cumberland, Md.
Martha Jane Winter.....Reno
Caroline Yetter.....Fallon
Dorris Zaehringer....Washington, D. C.

ENROLLMENT SUMMARY
YEAR 1939–1940

GRADUATE STUDENTS		
Total all schools		103
COLLEGE OF ARTS AND SCIENCE		
Seniors	118	
Juniors	146	
Sophomores	193	
Freshmen	270	
Specials	24	
		751
COLLEGE OF ENGINEERING		
Mackay School of Mines—		
Seniors	20	
Juniors	32	
Sophomores	29	
Freshmen	30	
Specials	4	
		115
School of Civil Engineering—		
Seniors	5	
Juniors	15	
Sophomores	11	
Freshmen	9	
		40
School of Electrical Engineering—		
Seniors	11	
Juniors	7	
Sophomores	17	
Freshmen	20	
Specials	2	
		57
School of Mechanical Engineering—		
Seniors	6	
Juniors	12	
Sophomores	10	
Freshmen	22	
Specials	1	
		51
COLLEGE OF AGRICULTURE		
School of Agriculture—		
Seniors	17	
Juniors	25	
Sophomores	23	
Freshmen	33	
Specials	1	
		99
School of Home Economics—		
Seniors	7	
Juniors	18	
Sophomores	13	
Freshmen	10	
Specials	3	
		51
Total University		1267
Enrollment of Men	787	
Enrollment of Women	480	
Total Summer School, 1939		151
		1418
Less names counted twice		33
Grand total enrollment		1385

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[1]Figures at end of lines refer to pages.

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