

UNIVERSITY OF NEVADA BULLETIN

VOL. XXXII

MAY 12, 1938

No. 4

THE  
UNIVERSITY OF NEVADA  
ANNOUNCEMENTS



1938-1939

With Record for 1937-1938

BRING THIS BULLETIN WITH YOU WHEN YOU COME TO REGISTER

PUBLISHED QUARTERLY BY THE UNIVERSITY OF NEVADA  
RENO, NEVADA

Entered in the Post Office at Reno, Nevada, as second-class matter under Act of Congress, July 16, 1894. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized April 21, 1919.



CARSON CITY, NEVADA  
STATE PRINTING OFFICE - JOE FARNSWORTH, SUPERINTENDENT  
1938

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OFFICE OF THE  
BOARD OF REGENTS, UNIVERSITY OF NEVADA  
RENO, NEVADA, APRIL 15, 1938

*To His Excellency, RICHARD KIRMAN, SR., 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 1937-1938, 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:

CAROLYN M. BECKWITH, *Secretary.*

SILAS E. ROSS,  
*Chairman.*

1938 - CALENDAR - 1938

JAN.	FEB.	MARCH	APRIL
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1939 - CALENDAR - 1939

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UNIVERSITY CALENDAR

1938 FIRST SEMESTER

- August 27-28.....Saturday-Sunday.....Dormitories open to students
- August 29-30.....Monday-Tuesday.....Examinations for admission
- August 29-30.....Monday-Tuesday.....Reexamination to remove conditions
- August 29- Monday-Friday,  
September 2.. 3:15 daily.....Freshman week program
- August 29-30.....Monday-Tuesday.....Matriculation and registration
- August 31.....Wednesday.....Regular class work begins
- September 5.....Monday.....Labor Day
- September 20.....Tuesday.....Registration closes
- October 19.....Wednesday.....Mid-semester reports are due
- October 21-22.....Friday-Saturday.....HOME COMING
- November 11.....Friday.....Armistice Day
- Nov. 24-27.....Thursday-Sunday, inc.....Thanksgiving recess
- Dec. 16-22, inc.....Semester examinations
- December 22.....Thursday, 4 p. m.....First semester closes
- December 27.....Tuesday, 9 a. m.....Final grades must be on file with Registrar

1939 SECOND SEMESTER

- January 9-10.....Monday-Tuesday.....Matriculation and registration
- January 11.....Wednesday.....Regular class work begins
- January 31.....Tuesday.....Registration closes
- March 8.....Wednesday.....Mid-semester reports are due
- March 18.....Saturday.....Engineers' Day
- March 25.....Saturday.....Mackay Day
- April 6-9.....Thursday-Sunday, inc.....Easter recess
- May 6.....Saturday.....Senior examinations end
- May 8.....Monday.....Senior standings must be on file with Registrar
- May 8-13.....Monday-Saturday, inc.....Semester examinations
- May 12.....Friday.....Meeting of Honorary Board of Visitors
- May 13.....Saturday, 12 m.....Second semester closes
- May 13.....Saturday evening.....Phi Kappa Phi address
- May 14.....Sunday.....Baccalaureate Sunday
- May 15.....Monday.....COMMENCEMENT DAY
- May 17.....Wednesday, 12 m.....Final grades must be on file with Registrar
- August 28.....First Semester of University year 1939-1940 opens

## OFFICERS OF THE UNIVERSITY

## THE BOARD OF REGENTS

HON. GEORGE S. BROWN (1947)	Reno
HON. SILAS E. ROSS (1945)	Reno
HON. FRANK WILLIAMS (1943)	Goodsprings
HON. A. C. OLMSTED (1941)	Wells
HON. GEORGE WINGFIELD (1939)	Reno

## OFFICERS OF THE BOARD

HON. SILAS E. ROSS, Chairman	Reno
MR. GEORGE H. TAYLOR, Secretary Emeritus	Reno
MISS CAROLYN M. BECKWITH, Secretary	Reno

## COMMITTEES OF THE BOARD

<i>Executive Committee</i> —SILAS E. ROSS, GEORGE WINGFIELD, GEORGE S. BROWN.
<i>Property Committee</i> —SILAS E. ROSS.
<i>Instruction Committee</i> —A. C. OLMSTED.
<i>Library Committee</i> —FRANK WILLIAMS.
<i>Student-Welfare Committee</i> —GEORGE S. BROWN.

## HONORARY BOARD OF VISITORS

BEN W. COLEMAN, <i>Chief Justice Supreme Court</i>	Chairman
MR. J. N. TEDFORD	Fallon, Churchill County
MRS. PERCY NASH	Las Vegas, Clark County
MRS. MINNIE JENSEN	Gardnerville, Douglas County
MRS. A. C. OLMSTED	Wells, Elko County
MRS. ROSE MCNAIR	Goldfield, Esmeralda County
MR. E. C. JOHNSON	Beowawe, Eureka County
MR. EMIOL SNIDER	Winnemucca, Humboldt County
MR. ELMER J. ISAAC	Austin, Lander County
MR. R. R. ORR	Pioche, Lincoln County
MR. L. B. OLDS	Silver City, Lyon County
MR. T. O. MCKINNON	Hawthorne, Mineral County
MRS. C. E. GALVIN	Tonopah, Nye County
MR. R. C. BOCKIEWICZ	Stewart, Ormsby County
MR. CLARENCE YOUNG	Lovelock, Pershing County
MR. DAVID W. ELKIN	Virginia City, Storey County
MR. J. M. BLAKELEY	Reno, Washoe County
MR. CHRISTIAN HERMANSEN	Preston, White Pine County

## ADMINISTRATIVE OFFICERS

WALTER E. CLARK, Ph.D., LL.D., President.
MAXWELL ADAMS, Ph.D., Vice President.
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., Dean of Men.
JOSEPH D. LAYMAN, B.L., Emeritus Librarian.
THEA C. THOMPSON, Ph.B., Librarian.
HORACE P. BOARDMAN, C.E., Director of the Engineering Experiment Station.
WALTER S. PALMER, E.M., Curator of the Mackay Museum.
EDMUND S. LEAVER, Met.E., Superintendent, United States Bureau of Mines Experiment Station.
JOSEPH B. LYNCH, Superintendent of Buildings and Grounds.
CLAIR HARPER, M.D., University Hospital Association Physician.
MRS. ETHEL SHURTLEFF, Matron University Hospital.
BETTY SHAFFER, B.S., Matron of Manzanita Hall.
PAUL A. HARWOOD, M.A., Master of Lincoln Hall.

*Colleges and Schools—*

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

*Public Service Division—*

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

\*On leave 1937-1938, Professor Jay A. Carpenter, Acting-Director.

*General Library Staff—*

- RUTH G. NASH, B.A., Assistant Librarian.  
 CLARE LOUISE JOHNSON, B.A., Cataloguer.  
 PRECIOUS NASH JOHNSON, B.S., Loan Desk Assistant.

*Central Clerical Staff—*

- CAROLYN M. BECKWITH, Secretary to the President.  
 MRS. FRED A. METCALF, Clerk, Comptroller's Office.  
 ALICE TERRY, Clerk, Comptroller's Office.  
 LOIS LAMERTON, Departmental Stenographer.  
 MAE C. BRADSHAW, B.A., Registrar's Assistant.

OFFICERS OF INSTRUCTION<sup>1</sup>*University Faculty<sup>2</sup>*

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

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

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

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-; Vice President of the University, 1922-.

JAMES EDWARD CHURCH, JR.,<sup>3</sup> Ph.D., Professor and Head of the Department of Classics.

A.B., University of Michigan, 1892; Ph.D., University of Munich, 1901; Instructor in Latin and German, University of Nevada, 1892-1894; Assistant Professor of the Latin Language and Literature, *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-.

JEANNE ELIZABETH WIER, B.A., LL.D., Professor and Head of the Department 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 Science, *ibid.*, 1906-1917; Professor of History, *ibid.*, 1917-1921; Professor of History and Political Science, *ibid.*, 1921-.

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-.

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

<sup>2</sup>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.

<sup>3</sup>The order beginning here is seniority in rank.



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

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

LEON WILSON HARTMAN, Ph.D., Professor and Head of the Department of Physics.

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

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., 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; 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 Head of the Department of English.

A.B., University of Chicago, 1899; Assistant in English, University of Chicago, 1905-1907; 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; Officer d'Academie, 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, B.S., Professor of Agricultural Extension and Director of the Nevada Agricultural Extension Department.

B.S., University of Nevada, 1911; Agent, Bureau of Entomology, U.S.D.A., 1911-1912, detailed at Salt Lake City, Utah, and Agricultural Experiment Station, Purdue University, 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.*, 1920; Instructor in High School, Lancaster, Wisconsin, 1908-1909; Superintendent of Schools, Lancaster, Wisconsin, 1909-1914; Instructor in Education, University of Nevada, 1915-1918; Assistant Professor of Education, *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-; Director State Bureau of Mines, 1929-.

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

A.B., Westminster College, 1907; A.M., Millikin University, 1909; Ph.D., University of Illinois, 1914; Instructor in Botany and Horticulture, University of Nevada, 1914-1916; Assistant Professor of Botany and Horticulture, *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, 1923-1924; Associate Professor of Modern Languages, *ibid.*, 1924-1926; Professor of Modern Languages, *ibid.*, 1926-.

JAY ARNOLD CARPENTER, E.M., 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.

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 and Athletics 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-.

\*On leave, 1937-1938.

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 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-.

FREDERICK WOOD, Ph.D., 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; George Wesleyan College, 1925-1928; Hamline University (Minnesota), 1928-1932; Professor of Mathematics, University of Nevada, 1932-.

WILLIAM L. REED, Colonel, Infantry, United States Army, Professor of Military Science and Tactics.

Second Lieutenant, U. S. A., 1899; First Lieutenant, 1901; Graduate Infantry and Cavalry School, 1904; Major, U. S. A., 1917; Colonel of Infantry (National Army), 1918; Graduate Staff School, Langres, France, 1918; Lieut. Colonel, U. S. A., 1920; Colonel, 1923; Graduate Command and General Staff School, 1924; General Staff Corps Eligible List; Professor of Military Science and Tactics, University of Nevada, 1935-1938.

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

B.S., North Dakota State Agricultural College, 1922; Teaching Fellow in Physics, University of California, 1922-1925; Ph.D., University of California, 1925; Instructor in Physics, University of Nevada, 1925-1926; Assistant Professor of Physics, *ibid.*, 1926-1929; Associate Professor of Physics, *ibid.*, 1929-1935; Professor of Physics, *ibid.*, 1935-.

\*On leave first semester University year, 1937-1938.

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-.

#### Associate Professors<sup>1</sup>

KATHERINE LEWERS, Associate Professor of Freehand Drawing and Head of the Department 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-.

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-.

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; Assistant in History and Political Science, University of Nevada, 1913-1915; Instructor in History and Political Science, *ibid.*, 1915-1916; Assistant Professor of History, *ibid.*, 1917-1924; Associate Professor of History and Political Science, *ibid.*, 1924-.

<sup>1</sup>Order of seniority in rank.



- GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and Astronomy.  
A.B., Tabor College, 1902; A.M., Washburn College, 1904; Assistant in Physics and Astronomy, Washburn College, 1904-1905; 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 and Acting Head of the Department 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-.
- 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-.

- S. ALLEN LOUGH, Ph.D., Associate Professor of Chemistry.  
A.B., University of Denver, 1924; M.S., University of Michigan, 1927; Ph.D., *ibid.*, 1933; Teacher of Organic Chemistry, University of Denver Dental College, 1923-1924; Research Assistant in Physiological Chemistry, Medical School, University of Michigan, 1924-1925 and 1927; Instructor in Chemistry, University of Nevada, 1928-1929; Assistant Professor of Chemistry, *ibid.*, 1929-1933; Associate Professor of Chemistry, *ibid.*, 1933-.
- 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 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 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; Assistant in Psychology, Nebraska Normal College, 1907-1908; Instructor in Education, *ibid.*, 1908-1909; Assistant in Economics, Business and Sociology, University of Nevada, 1928-1929; Instructor in Economics, Business and Sociology, *ibid.*, 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; Assistant Professor of Education, University of Nevada, 1930-1935; Associate Professor of Education, *ibid.*, 1935-.



CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education and Athletics 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., 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-.

RALPH A. IRWIN, M.S., Associate Professor of Psychology.  
B.S., Kansas State Agricultural College, 1928; M.S., *ibid.*, 1929; Instructor in Psychology, University of Nevada, 1929-1931; Assistant Professor of Psychology, *ibid.*, 1931-1937; Associate Professor of Psychology, *ibid.*, 1937-.

ERNEST L. INWOOD, Ph.D., Associate Professor of Economics, Business and Sociology.  
B.A., Nevada, 1927; Ph.D., California, 1935; Teaching Fellow, California, 1927-1930; 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-.

ELDON WITTEW, Ph.D., Associate Professor 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-.

#### Assistant Professors<sup>1</sup>

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 WITTEW, B.A., Assistant Professor of Agricultural Extension.  
B.A., Utah Agricultural College, 1917; County Agricultural Agent, Uintah County (Utah), 1917-1921; County Agricultural Agent, Clark County, 1921-1923; District Extension Agent, Clark and Lincoln Counties, 1924-1936; 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-.

<sup>1</sup>Order of seniority in rank.

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-.

MAE BERNASCONI-SIMAS, M.S., Assistant Professor of Physical Education for Women.

B.A., University of Nevada, 1928; M.S., *ibid.*, 1932; Instructor in Physical Education for Women, University of Nevada, 1928-1932; Acting Head of Department, *ibid.*, 1929-1930; Assistant Professor of Physical Education, *ibid.*, 1932-.

HENRY WYATT ISBELL, Captain, U. S. A., Assistant Professor of Military Science and Tactics; Commandant of Cadets.

First Lieutenant, Av. Sec. Sig. O. R. C., 1917; First Lieutenant of Infantry, 1920; Captain of Infantry, 1928; Graduate of Infantry School, Basic Course, 1921; Adjutant of American Electoral Mission in Nicaragua, 1928; Secretary, Bolivia-Paraguay Conciliation Commission, 1929; Assistant Professor of Military Science and Tactics, University of Nevada, 1934-1938.

LORETTA ROSE MILLER, M.S., Assistant Professor of Biology.

B.S., University of Nevada, 1929; M.S., *ibid.*, 1933; Instructor in Biology, University of Nevada, 1929-1935; Assistant Professor of Biology, *ibid.*, 1935-1938.

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-.

\*On leave, 1936-1938.

## 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; Teaching Assistant, University of Oregon, 1928-1930; Field Assistant, United States Geological Survey, 1930; Research Fellow in Geology, Stanford University, 1930-1933; Recorder, United States Geological Survey, 1935; Instructor in Geology, University of Nevada, 1935-1936; Assistant Professor of Geology, *ibid.*, 1936-.

## DOUGLAS DASHIELL, M.A., Assistant Professor of Physical Education and Athletics for Men.

B.A., Southwestern University, 1928; M.A., University of Southern California, 1933; Director of Athletics and Coach, La Feria High School, 1928-1929; Director of Athletics and Varsity Coach, Temple Junior College, 1929-1931; Vice Principal, Director of Athletics and Coach, Las Vegas High School, 1931-1936; Assistant Professor of Physical Education and Athletics for Men, University of Nevada, 1936-.

## JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education and Athletics 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; Assistant in Modern Languages, University of Nevada, 1928-1931; Instructor in Modern Languages, *ibid.*, 1931-1937; Assistant Professor of Modern Languages, *ibid.*, 1937-.

## WILLIAM C. MILLER, 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; Fellow in English, University of Nevada, 1932-1934; Instructor in English, *ibid.*, 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-.

## CHARLES LOCKWOOD STEWART, Ph.D., Assistant Professor of History and Political Science.

A.B., 1927; M.A., 1929; Ph.D., 1936, University of California; Teaching Assistant in American History, University of California, 1929-1931, 1932-1934; Assistant Professor of History and Political Science, University of Nevada, 1937-1938.

## JOHN PARK PUFFINBERGER, 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-.

## 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-.

## INGO MADDAUS, JR., M.A., Assistant Professor of Mathematics.

B.A., 1931; M.A., 1932, Columbia University; Instructor in Mathematics and Physics, Patterson Junior College, 1936-1937; Instructor in Mathematics, University of Nevada, 1937-1938; Assistant Professor of Mathematics, *ibid.*, 1938-.

## 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 Farmer 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. Regt. Co. G. S. I., 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.

*Instructors<sup>1</sup>*

## BERTRAND FRANKLIN COUCH, Instructor in Mine Accounting.

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

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

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

<sup>1</sup>Order of seniority in rank.

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; Assistant in Poultry, University of Nevada, 1932; Instructor in Poultry Husbandry, *ibid.*, 1933-.

GEORGE ERNEST BROOKS, B.S., Instructor in Dairying.  
B.S., Nevada, 1927; Assistant in Dairying, University of Nevada, 1932; Instructor in Dairying, *ibid.*, 1933-.

GORDON L. ROBERTSON, M.S., Instructor in Economics, Business and Sociology.

B.A., Nevada, 1932; M.S., *ibid.*, 1934; Fellow in Economics, Business and Sociology, University of Nevada, 1932-1933; Instructor in Economics, Business and Sociology, 1933-.

FRED J. COLLINS, M.A., Instructor in Economics.

B.A., Nevada, 1932; M.A., Clark University, 1934; Teaching Fellow in Economics, University of Nevada, 1932-1933; Instructor in Economics, *ibid.*, 1935-.

WILLIAM DWIGHT BILLINGS, Ph.D., Instructor in Botany.

A.B., Butler University, 1933; M.A., Duke University, 1935; Ph.D., *ibid.*, 1936; Graduate Assistant in Botany, Duke University, 1935-1936; Teaching Fellow, *ibid.*, 1935-1936; Temporary Instructor in Botany, University of Tennessee, 1936-1937; Instructor in Botany, Duke University Summer Sessions, 1937 and 1938; Instructor in Botany, University of Nevada, 1938-.

#### Lecturers, Fellows, and Assistants

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

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

RUTH MILLER FERRIS, B.A., Assistant in French.

B.A., Nevada, 1916; Fellow in English, University of Nevada, 1932-1934; Assistant in French, *ibid.*, 1934-1937.

EVA B. ADAMS, M.A., Assistant in English.

B.A., Nevada, 1928; M.A., Columbia, 1936; Fellow in English, University of Nevada, 1936-1937; Assistant in English, 1937-.

HAROLD J. HEINEN, A.B., Fellow in Chemistry.

A.B., Hope College, 1937; Assistant in Chemistry, *ibid.*, 1935-1937; Fellow in Chemistry, University of Nevada, 1935-1937.

W. R. WHIDDEN, Lecturer in Education.

KATHERINE SCHUELL, A.B., Fellow in Physical Education for Women.

A.B., Fresno State Teachers College, 1936; Fellow in Physical Education for Women, University of Nevada, 1937-1938; Assistant in Physical Education for Women, *ibid.*, 1938-.

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

B.S., Nevada, 1938; Assistant in Mathematics, University of Nevada, 1938-.

#### UNIVERSITY STANDING COMMITTEES

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

*Admission, Entrance Examinations, and Advanced Standing*—

G. W. SEARS, C. R. HICKS, S. G. PALMER.

*American-Scandinavian Scholarship Nominating Committee*—

R. STEWART, P. FRANDSEN, L. W. HARTMAN.

*Assemblies and Lectures*—

H. N. BROWN, C. C. SMITH, I. J. SANDORF.

*Athletics*—

P. A. HARWOOD, F. WOOD, F. W. WILSON.

*Campus Calendar*—

MISS MACK, R. C. THOMPSON, T. H. POST, H. N. BROWN, R. S. GRIFFIN, W. C. MILLER.

*Campus Employment*—

MISS MACK, P. A. HARWOOD, J. B. LYNCH.

*Graduate*—

M. ADAMS, R. STEWART, J. R. YOUNG.

*Health*—

P. FRANDSEN, J. E. MARTIE, MISS SAMETH.

*Library*—

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

*National Youth Administration Employment*—

MISS MACK, R. C. THOMPSON, P. A. HARWOOD, J. B. LYNCH.

*Registration and Scholarship*—

M. ADAMS, R. STEWART, F. H. SIBLEY, F. W. TRANER, J. A. FULTON, MRS. RHODES.

*Rhodes Scholarship Nominating Committee*—

S. A. LOUGH, R. C. THOMPSON, S. W. LEIFSON.

*Schedules*—

H. P. BOARDMAN, P. A. LEHENBAUER, H. C. AMENS.

*Scholarships and Prizes*—

J. A. CARPENTER, MISS LEWIS, S. A. LOUGH.

*Student Affairs*—

R. C. THOMPSON, MISS MACK, P. A. HARWOOD.

*Vocational Guidance*—

J. R. YOUNG, A. L. HIGGINBOTHAM, J. A. CARPENTER.

*Chief Marshal of Formal Assemblies*—

COLONEL W. L. REED, 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 was established, in connection with the colleges founded upon the Congressional Act of 1862, agricultural experiment stations, "to aid in the acquiring and diffusion among the people of the United States of useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." The Hatch Act of 1887 appropriated \$15,000 annually for this support.
- 1889—The first graduates from the State Normal School.
- 1889—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 refurbish 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.
- 1933-1937—Beginning with the summer of 1933 and continuing through 1937 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 and several laboratories rewired and otherwise 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 Foundation 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 Mr. Hunt made a large additional gift to the Hunt Foundation.

1936—The University 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.

## 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.
  - (e) Engineering Experiment Station.
- C. College of Agriculture.
  - (a) School of Agriculture.
  - (b) School of Home Economics.
- D. Affiliated Organizations.
  - (a) Agricultural Experiment Station.
  - (b) Agricultural Extension Department.
  - (c) State Analytical Laboratory.
  - (d) State Bureau of Mines.
  - (e) State Hygienic Laboratory.
  - (f) Pure Food and Drugs Control and Weights and Measures.
  - (g) State Veterinary Control Service.
  - (h) United States Bureau of Mines Experiment Station.
- E. Summer Session.

## COLLEGES, SCHOOLS, AND 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 if they prefer.)

Work in the following subjects is offered in the College of Arts and Science: Art, biology, business, chemistry, classics, economics, education, English, journalism, geology, history, mathematics, mineralogy, modern languages and literatures, music, philosophy, physical education, physics, political science, psychology and sociology.

### 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 principles 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 20 to July 29, 1938.

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.

### ENGINEERING EXPERIMENT STATION

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

### THE COLLEGE OF AGRICULTURE

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



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

#### AGRICULTURAL EXPERIMENT STATION

The Agricultural Experiment Station receives its Federal support from the Hatch Fund (1887), from the Adams Fund (1906), 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 five public service departments under the direction of the President and Board of Regents of the University:

##### STATE ANALYTICAL LABORATORY

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

##### STATE HYGIENIC LABORATORY

The State Hygienic Laboratory was organized in 1909 to

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

##### FOOD AND DRUGS CONTROL AND WEIGHTS AND MEASURES

The Act of the Legislature in 1909 which established the Food and Drugs Control and Weights and Measures 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.<sup>1</sup> 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

<sup>1</sup>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.

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 efficiency and educational effectiveness of the department. For general administrative work the head of the department is in that college in which his major work appears.

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

## ADVANTAGES AND EQUIPMENT

Reno, the seat of the University, is a substantially built and steadily growing city, numbering in 1938 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 Pacific States. The Reno Young Men's and Young Women's Christian Associations have well-equipped quarters which are centers of athletic and social activities. University students are welcomed by all of the churches of Reno.

### BUILDINGS AND GROUNDS

The University campus has an area of 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 the University lake. The first floor includes the administration offices, two classrooms, a large lecture room, a home economics laboratory, and the botany laboratories. The second floor is devoted to the School of Home Economics and the Department of Biology, and includes the sewing laboratory, the cooking laboratory, the model kitchen and dining room, and the biological laboratories. The basement includes laboratories for dairying, farm crops, soil physics, biology, and soils research. (1918\*)

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

**BARRACKS**—The Barracks Building is a two story frame building located directly north of Lincoln Hall. It is used by the Military Department and by the Buildings and Grounds Department. This building was erected in September 1918, 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

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



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 of 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 mechanical and electrical laboratories. These laboratories are equipped with modern machinery for giving instruction in the several courses, such standard tests as are usually required being represented. The second floor contains the computing rooms, drafting rooms, radio laboratory and the classrooms of the several departments. (1912)

**EXPERIMENT STATION 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 certain staff members of the University's Agricultural Experiment Station. (1913)

**GREENHOUSE**—A working greenhouse is on the east side of the campus. It is used by the Departments of Botany and Horticulture, and also for the study of plant industry. (1909). 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 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 first floor is occupied by the Department of Farm Development and the Station Library. The second floor is occupied by the offices of the Station Director and by the Departments of Entomology and Range Management. The herbarium occupies the third floor. (1891; moved to Virginia Street, basement added, 1926)

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

**HOSPITAL**—The University Hospital is situated between the Gymnasium and Lincoln Hall. This is a one story building and contains six rooms and a basement. There are 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 Hospital Association of the University has daily office hours in this building. (1902)

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

**LINCOLN HALL**—Lincoln Hall, the men's dormitory, is a three story brick building, with present accommodations for seventy-eight 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 112x118 feet and

is two stories throughout with basement, except for a light well over the library in the center of the building. In the basement are storerooms, the seismograph laboratory, geology department workroom, mining laboratory, lavatory, shower and locker rooms for the students, and the ore dressing laboratory.

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 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 of two story brick construction 80 x 80 feet. It

contains a machine shop, forge shop, pattern shop, mechanical laboratory and drafting room, strength of materials laboratory and the laboratories of the Civil Engineering Department. (1897)

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

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

**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)

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

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

**THE UNIVERSITY FARM**—Four miles south of Reno the State purchased, in 1917, a 213-acre farm primarily for use as a stock farm. (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 60,880 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. The list includes subscriptions to about two hundred of the leading cultural, scientific, and technical magazines and journals.

During the University year, excepting legal holidays, the Library is open from 7:30 a. m. to 9:30 p. m., Mondays to Thursdays, inclusive; 7:30 a. m. to 6 p. m., Fridays; 7:30

a. m. to 12:30 p. m., Saturdays, 1:30 p. m. to 5:30 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. 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 3,000 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 at all times during the 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.

#### 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 Library of 63,944 volumes and of the State Library at Carson City which has over 125,312 volumes, including over 48,502 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 and a greenhouse make possible a limited amount of work in plant physiology.

*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 petrographical microscopes and the necessary accessories. It has also a set of mineral thin sections cut in definite direction, and a collection of rock sections with many representatives of each of the chief types, together with many sections illustrating special types. A separate grinding room is provided with apparatus for making thin sections of rocks and minerals. Blowpipe and other chemical work is also provided for. A lantern with a growing collection of slides furnishes additional illustrative material for lecture work. 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 a phonograph.

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 set includes, also, one of the finest phonographs obtainable, an automatic Capehart.

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 tool grinder 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, 2½ 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 in the Electrical Building is equipped with twelve power generators or auxiliary units on which may 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 50-hp. Diesel engine belted to an alternator provided with grid rheostats for loading.

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 Ball engine.

A 7-kw. Curtis turbo-generator.

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

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

A 6-hp. vertical gas engine.

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

A Buick automobile engine.

A Chevrolet automobile engine.

A 100-hp. Sprague dynamometer for testing high speed internal combustion engines.

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.

Two oil testing machines with motors.

One vacuum pump with motor.

One electric oven with controlling equipment.

One inclined friction plane.

One oil still.

Two Hays-Orsat gas analyzers.

One Peterson-Palmquist gas analyzer.

One set of aviation meters and gages.

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

The mechanic arts laboratories, the machine shop, forge 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 forge shop contains six power forges with all necessary equipment.

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 manufacture 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 nine 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 the 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 shall be paid out of 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. Fine grinding plant in enclosed circuit to prepare ores for cyanidation, concentration, flotation, or any other tests. A very representative collection of various types of ores for testing purposes is maintained.

*Metallographic*—The metallographic laboratory is equipped with the following:

One Sauveir & Boylston polishing machine; one Warner & Swasey polishing machine, and a Leitz grinding machine; two large Leitz metallurgical microscopes with photomicrographic cameras; one Heele-Berlin spectroscope; a Bausch & Lomb quartz spectrograph; a Leitz ultrapaque 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 stopper; one butterfly stopper; one Obertop drill tester; one Tool-O-Meter; one Clark air-meter; 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, hydro-metallurgy, 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 electro-thermo 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*—In this laboratory students who are interested in agriculture have an opportunity to pursue work according to the methods adopted by the Association of American Agricultural Chemists.

*Farm Crops*—This laboratory includes a large display of samples of seeds and matured plants of the different varieties of cereal and forage crops. The equipment includes a large electric germinator for testing all kinds of farm seeds for germination; testers and cleaners; dockage machines; and other equipment used by the Federal Government for

the commercial grading of grain and hay. Students will make germination and purity tests of commercial samples of farm seeds sent to the laboratory from the various farming districts of the State.

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

*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 15,000 mounted sheets, nearly all of western

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

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

#### PATHOLOGICAL MUSEUM

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

#### CHEMICAL SPECIMENS

A number of substances representing the field of the chemical industries have been collected and placed in cases in 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 of 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 1937-1938:

Phi Kappa Phi Day Address, "Scholarship in an Economic World," by Dr. William Meyer, Professor of Astro-Physics, University of California.

## COMMENCEMENT, 1937

May 8—Phi Kappa Phi Address, "World Peace," by Honorable Key Pittman, Chairman of the Foreign Relations Committee of the United States Senate.

May 9—Baccalaureate Sermon, "Man's Greatest Maxims," by Dr. James H. N. Williams of Pacific Grove, former Superintendent of the Methodist Episcopal Mission in Nevada.

May 10—Commencement Address, "The Stamp of a University," by Dr. Elton D. Trueblood, Pastor of the Memorial Church of Stanford University.

## ASSEMBLY ADDRESSES, 1937

September 17—"The Constitution," by Chauncey W. Smith, State Superintendent of Public Instruction.

October 20—"Ancient China and Modern Japan," by Newton H. Bell, Lecturer of Extension Division Faculty of the University of California.

October 25—"The Challenge to Democracy," by Dr. Everett R. Clinchy, Director National Conference of Jews and Christians, New York City; Rabbi Morris S. Lazaron of the Hebrew Corporation of Baltimore, Maryland; Dr. Ashby Jones, Baptist Clergyman and Columnist, Atlanta, Georgia; and Reverend John T. Smith, St. Thomas Aquinas Church of Reno, Nevada.

December 9—"New Twists on the Old Crooks," by C. Ray Hansen, Criminologist, North Canton, Ohio.

November 17—"Celebration of Seventy-fifth Anniversary of the Founding of the Land Grant College System and the Fiftieth Anniversary of the Establishment of Agricultural Experiment Stations." Radio addresses by Alfred Atkinson, President of Montana State College and of the Land Grant Association, and by President Franklin D. Roosevelt.

January 13—"Mussolini's Purposes for Italy," by Dr. Ethan Colton, National and International Y. M. C. A. and Missionary Lecturer of New Jersey.

February 22—"George Washington and the Philosophy of Democracy," Reverend John T. Smith, St. Thomas Aquinas Church of Reno, Nevada.

February 25—Phi Kappa Phi Day Address, "What Is Scholarship?" by Dr. James Bursch, Director of Research, Sacramento City School Department.

March 15—"Star Wagon," a critical analysis of Maxwell Anderson's production, by Arthur F. Blanks, Professor of Public Speaking, University of California.

April 4-8—Five lectures by Sir Herbert B. Ames, Visiting Lecturer of the Carnegie Endowment for International Peace:

April 4—"The Spirit of Present-Day Germany or A Week at the National Socialist Party Rally in Nuremberg."

April 5—"How Hitler Came to Power, and How Will He Use It,"

April 6—"Czechoslovakia—A Democracy in Danger."

April 7—"The Boiling Cauldron of Central Europe."

April 8—"British Policy at Geneva."

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 Science 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 1937-1938

President.....	Alan Bible,'30
Vice President.....	Blythe Bulmer,'33
Secretary-Treasurer.....	Louise Blum Lewers,'95
Assistant Secretary.....	Armena Scruggs,'33

#### EXECUTIVE COMMITTEE

Marshall Guisti,'30
Chester Scranton,'24
Francis Smith,'32
Margaret Martin Bankofer,'34
William Melarkey,'21
George Ogilvie,'15
Catharine Somers Huntley,'20
George Duborg,'24
Kerwin Foley,'35
Frances Armbruster,'32
Kathryn McCormack,'33

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 HOSPITAL ASSOCIATION

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

The association is supported entirely by the fees received from its membership. These are used to pay the salaries of the College Physician and of the Hospital Matron, to purchase necessary furnishings, equipment, hospital supplies and to pay for laboratory examinations, X-rays, prescriptions and medicines, and for the repair and upkeep of the building. Any surplus above that required to provide for emergencies will be used to extend the services of the association to its members.

The direct management of the association is the responsibility of the University Committee on Health. The College Physician will hold regular daily consultation periods at the University hospital while the University is in session. The Matron, who is also an experienced nurse, is in charge of the hospital, keeps the records, and has authority to make such regulations regarding visiting hours and the conduct of the hospital as may seem best in the interests of health and efficiency.

#### MEDICAL AND HOSPITAL FEES

1. *Health Service Fee.* A fee of \$1 per semester will be charged all students at the time of registration. This fee covers emergent medical attention to any student injured or taken ill while on the campus, though it does not cover continued free consultations or continued hospitalization. It covers also the cost of the medical examination required of

all students taking physical education or engaging in athletics. It entitles the student to such follow-up medical advice as may be desirable.

2. *Hospital Association Membership Fee.* This is an additional fee of \$3 per semester which is required of all students who do not live with their parents or guardians in Reno or Sparks, unless they present at the time of registration a written request from their parents or guardians that they shall not pay such fee. While primarily intended to safeguard the health of students away from home, the association will receive into its membership any student living in Reno or Sparks who wishes to take advantage of its privileges by paying the membership fee. The fee must, however, be paid at the time of registration. It entitles the member to unlimited free consultations with the College Physician or hospital nurse at the regular scheduled hour but does not give him the right to call upon them at any time he chooses, except in cases justified as emergencies. The chief object of these consultations is the detection of illness before it becomes serious. For the cost of a single medical call the member may receive a whole semester of medical advice. The privilege should not be abused by expecting unreasonable service at unreasonable times. Persons, not members, going to the hospital for advice or treatment will be charged a reasonable fee except in emergent cases duly covered by the *Health Service Fee*.

3. *Hospital Bed Rates.* When it is necessary for a member to be hospitalized he will be charged a rate of \$2 per day, which pays for meals, laundry, physician's visits, general nursing and other routine hospital expenses, but does not include night nursing or the other special services that may be required in serious illness.

#### UNIVERSITY HOSPITAL ASSOCIATION RULES

1. The University hospital is for the use only of those students who have paid the membership semester fee of \$3 and whose names are on the membership list, except in emergent cases duly covered by the *Health Service Fee*.

2. Members are entitled to free consultations with the College Physician and nurse at the hospital only during the regular consultation periods.

3. Members who prefer to see the College Physician at his

downtown office may have the privilege of doing so by paying the special rate for association members of \$1 per visit.

4. Any calls for medical or nursing service outside the hospital 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 individual making the request.

5. Students entering the University with some chronic ailment should not expect indefinitely to receive free treatment for it, nor does the association guarantee free treatment for injuries or ailments contracted off the campus.

6. Members will be given free X-ray and other laboratory tests, free medicines and prescriptions *only* when such have been authorized by the College Physician and the Chairman of the University Committee on Health.

7. When an operation is advised the patient must make his own arrangements for its performance and for the payment of medical, nursing and special hospital fees.

8. The University hospital has a small operating room, suitable for certain types of operation, for the use of which a special charge of \$5 is made.

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

10. Contagious cases cannot ordinarily be cared for in the University hospital. Such patients must go to the city or county isolation hospital or be cared for in private homes.

#### 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 2.5 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. Upper-class 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 Departments 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 Chi*—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 inter-collegiate 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.

#### 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 undergraduates 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 the 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.

*Fraternalities 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), Delta Sigma Lambda (1922), Beta Kappa (1925), Lambda Chi Alpha (1929). National sororities—Delta Delta Delta (1913), Phi Beta Phi (1915), Gamma Phi Beta (1921), Kappa Alpha Theta (1922), Beta Sigma Omicron (1931), Alpha Delta Theta (1932).

*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 chairman 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 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

### MEN

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

#### REQUIRED PHYSICAL EDUCATION

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

#### PHYSICAL EXAMINATIONS

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

#### UNIFORM AND FEE

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

##### *Tentative Cost of Uniform:*

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

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

#### ATHLETICS

Excellent facilities are provided on the Mackay Athletic

Field for all branches of athletics. American football, baseball, track, basket ball, and tennis are the sports of special prominence at present. The main policy of the University is to foster the spirit of honor and manliness, to prevent the development of commercialism or professionalism in athletics, and to see to it that athletic sports do not encroach upon the claims of scholarship.

This university is a member of the Far Western Conference, as are the following institutions: The Branch of the College of Agriculture of the University of California at Davis, Chico State College, College of the Pacific, and Fresno State College.

#### ELIGIBILITY RULES

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 under the rules of the Far Western Conference, as well as the following University rules:

1. All students intending to participate in athletics must pass a physical examination satisfactory to the Head of the Department of Physical Education and Athletics for Men.
2. Students excused from required courses in physical education shall not be eligible for participation in any freshman or varsity sport without the written consent of the Head of the Department of Physical Education and Athletics.
3. No student on conduct 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 for the first time at the University, students are required to take an examination to determine their *physical* fitness for enrollment in the Reserve Officers' Training Corps. 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 schools of the college will be required to complete the prescribed two-year (basic) course of military training unless excused therefrom by proper authority.

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

(a) Those over 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.

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

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.

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 a strict 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 immediately take steps to familiarize himself with the Regulations for the Department of Military Science and Tactics.

#### HONORS AND AWARDS FOR MILITARY EXCELLENCE

*Honor Graduate*—Under existing Army regulations the University may designate as "honor graduate" one member of the second year advanced course. The term "honor graduate" is understood to apply to a graduate of the institution and the R. O. T. C. whose attainments in scholarship have been so marked as to receive the approbation of the head of the institution, and whose proficiency in military training and intelligent attention to duty have merited the approbation of the Professor of Military Science and Tactics. He must be a citizen of the United States, of exemplary habits, and of good moral character. The designation as honor graduate does not give the individual any claim or right to an appointment in the Regular Army. However, for the past two years the University has been permitted to nominate its honor graduate for a commission in the United States Marine Corps.

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.

*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 students who have received honorable mention in each of the several colleges, or in their full four-year course. Honorable mention is won by attaining a standing of 90 percent or better on the average in the full work of any one year or of the four years. At the end of each semester the Faculty Scholarship Committee issues a scholarship honor 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.

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

### 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 foundation was initiated in April 1925. The committee chosen by the founder to select the lecturer under this foundation consists of the President of the University, the Deans of the Colleges of Arts and Science, of Agriculture, 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

\*Suspended for the years 1931-1938 at the desire of the executor of the estate of the donor.

#### 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.

#### RENO WOMAN'S CHRISTIAN TEMPERANCE UNION PRIZES

Beginning in the spring of 1927 the Reno Chapter of the Woman's Christian Temperance Union has annually offered a \$25 prize for the best essay, written by a student of the University, entered in competition and dealing with the subject set each year by the National Woman's Christian Temperance Union Committee on Essay Contests. The English department of the University has charge of this contest and selects the winner whose name is announced at commencement. Beginning with 1932, the Reno Chapter has annually offered an additional \$25 prize for the best essay, under conditions as given above, to competitors who are students in elementary education. The School of Education has charge of this contest and selects the winner.

#### 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 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.

Complete instrument, travel, and camp equipment has been purchased, and the summer field geology and prospecting course was given in 1936 and 1937.

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 summer vacations, set up camp and actually and actively study and map geological formations and structures of economic importance or prospect for minerals of economic importance. The entire summer vacation will be devoted to such purposeful student endeavor. His gifts will also provide opportunity for shorter trips of visitation to mines or mills actually in operation, or weekend 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 PRIZE

The Armanko Office Supply Company, beginning with commencement in May 1936, will present an annual prize of one hundred dollars worth of books at list price to be purchased by them for the student judged to possess the best private library owned by a member of the senior class of the University of Nevada. The winning student may select the books to be awarded.



The winner shall be chosen each year, within the month before commencement, by a special committee from the faculty of the University of Nevada appointed by the President of the University. Either residents of Nevada or graduates of Nevada high schools shall be given preference. In selecting the winner, 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 the student's delight in good books and 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.

#### WASHOE COUNTY BAR ASSOCIATION PRIZE

Beginning with the University year 1936-1937 the Washoe County Bar Association offers two annual cash prizes of \$50 and \$25, respectively, to the two undergraduate students of the University of Nevada who submit the first and second best theses upon some subject connected with the Constitution of the United States. Theses must be submitted under the following conditions:

1. The special subject for each year, chosen by a committee of the Bar Association, will be announced in the University catalog of the preceding spring. The subject for the year 1936-1937 is, "Is It Necessary That the Constitution of the United States Be Amended to Take Care of Changing Economic Conditions, and, If So, What Amendment or Amendments Should Be Suggested?"

2. Theses must have from 1,500 to 3,000 words and must be submitted to the President of the University before March 1 in typewritten form without any name or other indication of the writer, but accompanied by a sealed envelope containing the writer's name and address.

3. Theses, identified only by numbers entered in the order of receipt at the President's office will be judged by a committee of the Bar Association. Cash prizes will be paid to the winners at commencement time through the Bar Association Committee.

#### 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 bequests 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.

#### SCHOLARSHIPS AND FELLOWSHIPS

For 1938-1939 the following scholarships are available:

##### 1. REGENTS' SCHOLARSHIPS

###### A. (Established 1911)

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

## B. (Established 1922-1923)

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

- (a) Officers and enlisted men 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. THE ELLA S. STUBBS MEMORIAL SCHOLARSHIP

(Established 1919)

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

## 3. 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.

## 4. THE LEWIS D. FOLSOM SCHOLARSHIP

(Established 1920)

An annual scholarship of \$100, given by Mrs. Mary E. Folsom of Reno, in memory of her husband, Lewis D. Folsom. This scholarship is to be awarded alternately to a man and then to a woman student of the junior class, who is deemed by the Scholarships Committee to be the worthiest

member of that class of individual ability and need and who is not receiving another scholarship. The Scholarships Committee shall choose an alternate for this scholarship, judging on the same conditions. This scholarship award is payable on September 15 following the commencement announcement and shall then be paid to the winner only if enrolled for regular senior work at the University. Otherwise, it shall be paid to the chosen alternate, provided that the alternate is duly enrolled for senior work in this University.

## 5. THE ROSE SIGLER MATHEWS SCHOLARSHIP FUND

(Established 1920)

This scholarship fund was established by Mr. Isaac R. Mathews of Reno, Nevada, in memory of his wife, Rose Sigler Mathews. The trust fund, given by Mr. Mathews for scholarship purposes, amounts to \$6,900, 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.

## 6. WASHOE COUNTY BRANCH OF THE NATIONAL ASSOCIATION OF UNIVERSITY WOMEN SCHOLARSHIP

(Established 1921)

The Washoe County branch of the National Association of University Women offers the Theodora Stubbs Fulton Memorial scholarship having annual value of \$200. This was discontinued for the year 1930-1931, but was renewed for the year 1931-1932 at an annual value of \$100. This scholarship is to be awarded to an upper-class woman student of the University of Nevada, who has taken all her work at the University of Nevada, provided that—

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

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

These same committees shall choose an alternate satisfying similar conditions.

The winner of this scholarship shall be announced at commencement.

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

7. THE MARYE WILLIAMS BUTLER SCHOLARSHIP FUND  
(Established 1921)

In the University year 1921-1922, Mrs. Sophie E. Williams of Nye County, Nevada, established a scholarship fund of \$1,000, to be known as the Marye Williams Butler Scholarship Fund, in memory of her daughter, Marye Williams, graduate of the Normal School of the University of Nevada, Class of 1899.

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

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

8. THE AZRO E. CHENEY SCHOLARSHIP FUND  
(Established 1922)

The Honorable Azro E. Cheney bequeathed to the University of Nevada \$5,000 in trust, to be controlled and

\*The payment of the second installment for the year 1932-1933 and subsequent installments have been suspended owing to closing of Reno banks.

invested by the Board of Regents. The income from this trust fund is to be awarded, by the University Scholarships Committee, at each annual commencement of the University to that member of the freshman or sophomore class who is a bona fide resident of Nevada and 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.

9A. THE GENERAL O. M. MITCHELL WOMAN'S RELIEF  
CORPS SCHOLARSHIP\*

(Established 1922)

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

9B. 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.

\*Suspended for the years 1934-1938 at the request of the donors.



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 Craig Moore, who qualified as a descendant of a Civil War Veteran.

#### 10. THE MRS. CARL OTTO HERZ SCHOLARSHIP

(Established 1926)

This scholarship was 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 scholarship carries an annual value of \$50 and is to be awarded at the end of each University year, beginning with May 1926. The scholarship is to be awarded by the University Scholarships Committee to one of three electrical engineering students nominated to the committee by the head professor of electrical engineering. The nominees must each be electrical engineering students who are self-supporting in whole or in part, are of good character and of good scholarship, and who have earned senior standing in the University of Nevada. The scholarship sum will be payable to the winner on September 15 following the award, provided the winner is then enrolled in the University of Nevada for his senior year in electrical engineering. Otherwise the sum is to be paid to a chosen alternate satisfying the same conditions.

#### 11. 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 each 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.

#### 12. THE JAMES WARD GERMAN SCHOLARSHIPS IN FORENSICS

(Established 1937)

Mr. James Ward German of Reno established in the spring of 1937 two scholarships in forensics to be awarded annually at commencement under the following conditions:

1. One hundred dollars to that man of the sophomore class who in the opinion of the faculty member in charge of forensics has made the greatest progress in debate, extempore speaking or oratory. Such student shall have completed at least sixty hours of regular work in the College of Arts and Science.

2. One hundred dollars to that man of the junior class who in the opinion of the faculty member in charge of forensics has made the greatest progress in debate, extempore speaking or oratory. Such student shall have completed at least ninety hours of work in the College of Arts and Science.

3. An alternate for each of these scholarships shall be named at the time of commencement, provided the alternate meets the requirements for the scholarship.

4. If in any one year there is no member of the sophomore class whose record entitles him to this award, the scholarship sum shall be held until the next year when the faculty member in charge of forensics may then recommend two sophomores, both to receive \$100. The same provision shall hold should there be no eligible member of the junior class, in which event two members of the junior class may be nominated for the following year, both to receive \$100.



5. These scholarships are subject to payment as follows: One-half on September 15 and one-half on January 25 of the University year following the commencement award, provided the winners are duly enrolled in the University of Nevada on these dates, otherwise to alternates similarly recommended.

#### 13. 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 \$30 each to a worthy, self-dependent sophomore or upper-class man or woman student who, while in college, is an abstainer from debt, intoxicants and tobacco. The recipient of this scholarship is to be chosen each spring by the University Committee on Scholarships and prizes. If 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 \$30 payments of each semester shall be made on the winner's registration day, and shall be followed by similar payments on the 5th of each September, October, November, December, February, March, April and May, provided the winner is duly enrolled as a student at the University of Nevada. (Rent to replace cash for the years 1934-1938.)

#### 14. 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 of the sophomore year to that man or woman student, chosen by the University Scholarships Committee and the Head of the Department of Biology, as the worthiest among the students who have completed the freshman year's course of this University of Nevada as premedical or pre-nursing students.

This scholarship shall be payable to the winner if duly enrolled in the sophomore year in this University of Nevada otherwise to an alternate satisfying the conditions and duly enrolled.

#### 15. 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.

#### 16. 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 Scholarship Committee 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.

#### 17. 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 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.

#### 18. THE RENO LODGE OF ELKS ATHLETIC SCHOLARSHIP

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

#### 19. 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 the average grade in his university work 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 of the scholarship.

(g) Must be at least in part self-supporting and in need of financial assistance in order to continue his or her studies.

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 start 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.

#### 20. 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.

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. MACDONALD, 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.

## 21. 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.

## 22. 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 funds. It is probable these funds will be made available for the University year 1938-1939, although no official assurance has yet been received.

BENEFICIARY AID  
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. The fund is available first to girls, high school graduates, or girls who have completed one year of normal or university work, the latter to have the preference. Boys are eligible under like conditions, but only when the funds are ample and no applications from girls are on file. Students desiring to take advantage of this offer will apply to Mrs. E. E. Wardin, State Chairman of the Committee on Student Loan Fund, 130 West Liberty Street, Reno, Nevada.

*The David Russell Loan Fund*—By will, David Russell of Loyalty, California, bequeathed, in 1908, the annual income of his residual estate (the estate amounting to a

little above \$19,000) 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 118 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 two 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 lived in Nevada continuously for at least six full months just prior to the opening date of the semester in which the student matriculates in the University of Nevada.

The Board of Regents of the University has given instructions to the President concerning these 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 of his matriculation in this University of Nevada. 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 with the exceptions only of members of the University staff and Nevada school teachers in active service.

#### UNIFORMS

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

\*These fees suspended for the University year 1938-1939 by the Board of Regents.

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 Betty Shaffer live in Manzanita Hall and have supervision over it. Miss Echo Loder is in charge of Artemisia Hall. Miss Shaffer 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:

	1st Sem.	2d Sem.
Room with roommate.....	\$34.00	\$36.00
Single room.....	42.50	45.00
Suite with roommate.....	42.50	45.00
Double room used by one person.....	51.00	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.

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 Saturday, August 27,

\*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.

1938, to receive student residents for the University year 1938-1939.

*Lincoln Hall*—Lincoln Hall, the men's dormitory, has present accommodations for 78 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 special application blanks, which will be sent upon request made either to the Master of Lincoln Hall or to the Registrar of the University. Such applications will then be considered by the Master in the order of their receipt.

To be honored, all applications must: (1) *Be on file with the Master of Lincoln Hall at least one week 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
Double room used by one person.....	60

NOTE—As only eight 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 enrollment day of the semester, of desire to cancel the reservation. 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 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.

\*See footnote p. 112.

(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 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 Saturday, August 27, 1938, to receive students for the 1938-1939 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 one week before the opening of any given semester. Nevadans making application later than such time will be accommodated if places are still open, but cannot be received otherwise.*

#### LABORATORY FEES

LABORATORY FEES—Departments giving laboratory courses must charge fees to cover special expenses incident to such courses. These fees are calculated to cover 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. (These teachers are exempt from any University payments except laboratory fees, if they take laboratory courses for credit.)

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. (These students are exempt from all University fees and charges except laboratory fees if laboratory courses are taken for credit. It is understood that any such new student of the University must pay the matriculation fee if at any later semester he enrolls for more than five 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 \$10 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.

#### HEALTH SERVICE AND HOSPITAL FEES\*

Hospital Association membership, \$3.

Hospital bed rates, \$2 per day (see page 72).

Health service fee, \$1.

#### TABLE OF TUITION CHARGES, FEES AND DEPOSITS PER SEMESTER

	<i>Fees</i>
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
Associated Students Fee.....	10.00
Bacteriology 51, 52, 53.....	5.00
Botany 1, 2.....	3.00
Botany 3, 55, 64.....	4.00
Botany 22, 56.....	1.00
Botany 23, 54.....	2.00
Change of registration per course (see page 132).....	1.00
Chemistry 9, 10.....	12.00
Chemistry 1, 2, 7, 8, 51, 52, 53, 64, 67, 71, 72, 74, 99, 100.....	8.00

\*See page 71 for explanation.

	<i>Fees</i>
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
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
Diploma (Degree or certificate).....	5.00
Drawing Outfits.....	20 to 30.00
Education 28-29, 38, 43-44, 48, 73-74, 75-76.....	1.00
Education 41.....	2.00
Electrical Engineering 61, 62, 63, 64.....	2.50
Electrical Engineering 67, 68, 70, 76, 77, 80, 85, 86.....	2.50 per credit
Health Service.....	1.00
Geology 11, 51, 52, 55.....	2.00
Geology 12.....	3.00
Graduate fee for thesis binding.....	1.00
History Syllabus.....	25¢ to 1.00
Home Economics 31, 32, 55, 83, 85, 94.....	5.00
Home Economics 33.....	3.00
Home Economics 9, 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
Matriculation (new students only).....	5.00
Mechanic Arts 2, 3, 5, 6, 7, 11.....	5.00 per credit
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).....	1.00
Nature Study 1, 2.....	1.00
Physical Education (laundry and locker).....	1.00
Physics 1b, 2b, 19, 20, 57, 58, 63, 77, 78.....	3.00
Physics 5, 6, 55, 56.....	1.00 per credit
Physics 75, 76.....	5.00
Poultry 2, 8.....	2.00
Removal of Conditions.....	1.50

<sup>1</sup>If a student supplies his own transportation in a satisfactory manner, this fee will not be required.

<sup>2</sup>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.

<sup>3</sup>See footnote 4, page 118.

<sup>4</sup>According to work being done.

TABLE OF TUITION CHARGES, ETC.—Continued

	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
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 must be prepared to pay all of above charges due from them to the University at the time of completing their enrollments. These payments due cannot be deferred.*

## 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<sup>1</sup>

	Low	Moderate	Liberal
<sup>2</sup> Tuition.....	None	None	None
Board, 8½ months.....	\$212.50	\$225.00	\$300.00
Room.....	80.00	90.00	125.00
<sup>3</sup> Laundry.....	25.00	35.00	50.00
<sup>4</sup> Books, stationery, etc.....	30.00	35.00	45.00
Fees (laboratory, athletic, medical, etc.)	35.00	40.00	50.00
Fees (registration and incidental).....	15.00	15.00	15.00
<sup>5</sup> Totals.....	\$397.50	\$440.00	\$585.00

<sup>1</sup>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.*

<sup>2</sup>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.

<sup>3</sup>Students from outside the State of Nevada must add a tuition of \$75 each semester.

<sup>4</sup>This item may be greatly reduced by residents of Manzanita Hall who choose to take advantage of the house-laundry facilities.

<sup>5</sup>All engineering students will require complete drawing outfits. These

## 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.

cost from \$20 to \$30. Students having this equipment should bring it with them.

<sup>2</sup>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. They do include the \$15 registration and incidental fees, suspended for the year 1938-1939.

## ADMISSION AND DEGREES

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

Applicants for entrance who cannot qualify for regular freshman standing may be admitted as limited freshmen<sup>1</sup> or as specials.<sup>2</sup>

### SCHOLARSHIP REQUIREMENTS FOR NON-NEVADANS

Applicants for admission to first year standing in the University of Nevada from States of the Union other than Nevada must present at least 10 of their 15 acceptable high school units from subjects 1-20, inclusive (p. 122). Of these 10, at least 6 must carry grades above 3.<sup>3</sup>

### SCHOLARSHIP REQUIREMENTS FOR NEVADA APPLICANTS

Applicants for admission to first year standing in the University who come from Nevada high schools or from Nevada families must present at least 6 of their 15 acceptable high school units from subjects 1-20, inclusive (p. 122). Of these 6, at least 4 must carry grades above 3.

### REQUIREMENTS FOR ADMISSION TO THE SEVERAL COLLEGES AND SCHOOLS

#### ADMISSION OF CANDIDATES FOR DEGREES

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

<sup>1</sup>Students presenting 13 or more but less than 15 acceptable units may be admitted as "Limited Freshmen."

<sup>2</sup>See p. 125.

<sup>3</sup>Grades equivalent to this University's "above 3" in the usual A, B, C, etc., system are grades of B or better, and in the percentage grading system are grades of 80 percent or better.

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

#### TO THE COLLEGE OF ARTS AND SCIENCE

For unconditional<sup>1</sup> admission, 15 units.

- I. *Required*: English, 3 units.  
Mathematics, 2 units.
- II. Ten of the fifteen required units must be from subjects 1 to 20, inclusive.
- III. Not more than 5 units may be taken from subjects 21 to 32, and not more than the highest number indicated in any one of these subjects.

#### TO THE COLLEGE OF ENGINEERING

##### ALL SCHOOLS

- I. The *required* units for entrance<sup>2</sup> to the College of Engineering, effective from the beginning of the University year 1938-1939, shall be:

English.....	3 units
History.....	1 unit
Plane geometry.....	1 unit
Algebra.....	1½ units
Solid geometry or trigonometry..	½ unit
Chemistry or physics.....	1 unit

- II. *Elective*..... 7 units
- Total..... 15 units

<sup>1</sup>Students presenting 13 or more but less than 15 acceptable units may be admitted as "Limited Freshmen."

<sup>2</sup>It is recommended that the entering students 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 footnote on page 165 for meaning of the term "restricted" freshman, and see also mathematics 15 and mathematics A.

<sup>3</sup>The electives may be chosen from recognized high school subjects, but in no case may more than 5 units be elected in subjects 21 to 32, inclusive, and not more in any one of these subjects than the highest number which is indicated. It is advised that the electives include 2 units of foreign language, preferably modern language. In certain meritorious cases some entrance credit, not exceeding 1 unit, may be granted for practical experience.

TO THE COLLEGE OF AGRICULTURE AND THE SCHOOL OF  
HOME ECONOMICS

I. <i>Required:</i> English.....	3 units
Social Science.....	1 or 2 units
Mathematics.....	2 units
Natural Science.....	1 or 2 units
II. <i>Elective</i> .....	7 units
Total.....	15 units

SUBJECTS ACCREDITED FOR ADMISSION

Subject	Units <sup>1</sup>
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
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.....	1/2 to 1
12. Commercial Geography.....	1/2 to 1

<sup>1</sup>A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work. Two hours of laboratory work are regarded as the equivalent of one hour of prepared work.

Subject	Units
13. Algebra (a).....	1
Plane Geometry (b).....	1
Advanced Algebra (c).....	1/2
Solid Geometry (d).....	1/2
Trigonometry.....	1/2
14. General Science.....	1
15. Physics.....	1
16. Chemistry.....	1
17. Physical Geography.....	1/2 or 1
18. Botany.....	1/2 or 1
19. Zoology.....	1/2 or 1
20. Physiology.....	1
21. Drawing.....	1/2 to 2
22. Music.....	1/2 to 2
23. Agriculture.....	1/2 to 4
24. Home Economics.....	1/2 to 4
25. Manual Training.....	1/2 to 3
26. Shopwork.....	1 to 3
27. Bookkeeping.....	1/2 to 3
28. Stenography.....	1/2 to 3
29. Typewriting.....	1 to 2
30. Trades and Industries.....	1/2 to 4
31. Vocational Work.....	1
32. Commercial Arithmetic or Applied Mathematics.....	1/2 to 1

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

METHODS OF ADMISSION

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

By examination;

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

By transfer from any university or college of recognized standing.

ADMISSION BY EXAMINATION

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



schools. 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, but such credit is provisional until the first year's work is completed.

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

Students transferring from other colleges must present

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

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. In the colleges of engineering and agriculture, such students must have at least 63 credits with a grade above 3; in the college of arts and science, such students must have one-half of the work done at the University of Nevada with a grade above 3.

#### ADMISSION OF PERSONS WHO ARE NOT CANDIDATES FOR DEGREES

##### UNCLASSIFIED STUDENTS

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

Unclassified students are subject to all rules relating to registration and scholarship. By satisfying the requirements in any curriculum for which they have full admission, they may become candidates for degrees.

##### SPECIAL STUDENTS

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

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

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

1. College credit may be 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.

3. A special student who has successfully carried the regular prescribed work of his college during four semesters and who has made a grade of 2.5 or better in 50% of his work and has no unremoved conditions or failures will be allowed to matriculate as a regular sophomore student. If he has made a grade of 2.5 or better in 90% of his work and has no unremoved conditions or failures, he will be allowed to matriculate as a regular junior student.

For any person who can present satisfactory reasons for such action, the rule relating to the minimum age limit may be waived by vote of the University faculty.

Special students are subject to all the rules relating to registration and scholarship. By satisfying the requirements

for admission to any college they may gain regular standing and become candidates for degrees.

#### PUBLIC SCHOOL TEACHERS

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

#### VISITORS

With the consent of the President and the instructors concerned, regular visitors may be enrolled as such during the first three weeks of the term, provided they are above 21 years of age or present credentials of graduation from a standard high school. They shall be governed by the regular University rules and are due, 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. Any eligible visitor who has been a bona fide resident of Nevada for six months or more is exempt from the payment of any fees. These Nevada residents may visit in not to exceed two University courses.

#### ADMISSION TO ADVANCED STANDING

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. Such advanced standing, however, is subject to the conditions stated under admission by transfer, p. 124.

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.

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

A student who desires to take an examination for advanced credit must present to the instructor by whom the examination is to be given a statement from the Registrar certifying that he is eligible to enter the examination. The amount of credit granted on the basis of special examination will not exceed the regular work of one semester in the college in which the student is registered. 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. A fee of \$3 for each such special examination must be paid to the University Comptroller in advance of the examination.

#### UNIVERSITY RULES GOVERNING REGISTRATION

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

#### I. METHOD OF REGISTERING

1. On registration day the student will secure a registration blank from the Registrar's representatives. This card will be filled out by the student in accordance with the directions thereon. All men students registering at the University for the first time will present themselves to the headquarters of the Military Department for enrollment or determination of their status with respect to military training requirements.

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

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

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

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

6. The signature of the instructor must be obtained for courses in which there are sections.

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

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



9. The registration card shall finally be deposited with the Registrar.

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

## II. CLASSIFICATION OF STUDENTS

1. Four classes of students, seeking college credit, are recognized—regular, unclassified, special and, for engineers only, restricted.

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

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

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

5. A "restricted" freshman (in engineering) is defined as one who presents 15 acceptable units but who is deficient in no more than 2 of the required units.

6. A sophomore is a regular student who has completed within 3 of the number of hours required in his course.

7. A junior is a regular student who has completed within 3 of the number of hours required in his course of which 20 hours must be of grade 2.5 or better.

8. A senior is a regular student who has completed within 3 of the number of hours required in his course of which 45 hours must be of grade 2.5 or better.

## III. CONDITIONS AND FAILURES

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

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

3. Any student who receives a grade of 4 shall be conditioned. A condition may be removed by satisfying the requirements of the department. A student who desires to remove a term condition must present to the instructor by

whom the examination is to be given, or under whom the deficient work is to be completed, a statement from the Registrar certifying that he is eligible and that the fee of \$1.50 has been paid. The individual instructor may set the date on which the condition may be removed.

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

5. A condition may be removed only during the next semester of residence after the condition was incurred. If a condition is not removed by the end of the first semester of residence thereafter, the Registrar shall record a grade of 5. 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. An application for the removal of a condition will not be accepted until a fee of \$1.50 has been paid.

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

7. A student may be placed on probation or suspended from the University at any time his scholarship or conduct warrants such action. Unless a student is passing in two-thirds of his work, he is liable to be placed on probation or to be suspended from the University. Each individual case will be considered by the Committee on Registration and Scholarship.

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

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

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

11. Instructors will report on delinquent students at mid-semester. The time for dropping subjects without failure



is at the end of six weeks. A student whose work is of passing grade may drop a subject, without failure, at any time with the consent of his Dean.

#### IV. LATE REGISTRATION

1. 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. There shall be no exception to this rule.

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

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

4. Each student shall complete his registration by 4 o'clock p. m. of the third day after the day upon which 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.

5. After the registration coupon has been filed with the Registrar, a student may add a subject or change a subject in which he is registered in accordance with the regular rules, when he has secured the approval of his Dean and the instructor concerned, upon the payment of a fee of \$1 for each course which he adds. The fee will be omitted when the change is caused by faculty action or at the request of the Registration Committee.

#### V. HOURS OF REGISTRATION

1. Including required military science and physical education, regular students in the College of Engineering shall register for eighteen hours. Regular students of the College of Arts and Science shall register for fifteen and one-half hours during their freshman and sophomore years and for sixteen hours during their junior and senior years. Regular students in the College of Agriculture, including the School of Home Economics, shall register for fifteen hours in addition to the required military and physical education.

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

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

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

Two exceptions may be allowed to this rule:

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

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

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

6. A student on probation shall not be allowed to register for more than 80% of the regular number of hours of his prescribed course.

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

8. 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

<sup>1</sup>Previous semester, when used to determine the maximum number of hours, shall be construed to mean the last semester in which a student was registered.

Students entering from another school with advanced standing who wish to take extra hours must furnish records to the Registration Committee showing that the work previously done was of grade corresponding to that required of our own students who are eligible for extra hours.

college to which he transfers,<sup>1</sup> effective at the time the transfer is made, the details of the transfer to be handled by the Registration Committee.

#### VI. WITHDRAWALS

1. A student who wishes to withdraw from any course shall first secure from the Registrar a withdrawal slip. He shall take this to the instructor in the course in question for his signature. He will then report to the Dean of his college, who may grant a withdrawal from the class. The withdrawal slip must be filed by the student with the Registrar, who shall notify the instructors concerned. The date of withdrawal shall be the date on which the slip is filed with the Registrar.

2. After the end of the sixth week of the semester a student desiring to withdraw from a course must present to the Dean a written statement from the instructor stating that his work done to date is of passing grade, otherwise the record will be "withdrawal with failure."

3. In 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.

#### VII. TRANSFER OF STUDENTS TO ONE COLLEGE FROM ANOTHER

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.

#### VIII. HONORABLE DISMISSAL

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.

<sup>1</sup>See page 145 for Arts and Science requirements.

#### THE GRADING SYSTEM

1. The following grading system became effective in May 1921:

1	equals 95% to 100%	} (passing)
1.5	equals 90% to 94%	
2	equals 85% to 89%	
2.5	equals 80% to 84%	
3	equals 75% to 79%	
3.5	equals 70% to 74%	} (condition)
4	equals 60% to 69%	
5	equals below 60%	(failure)
(i)	when preceded by a passing grade, indicates work of good quality, but incomplete.	

2. A passing grade followed by the letter (i) denotes work of a higher quality than that represented by the grade, but incomplete in some particular. A student receiving such an "incomplete" grade must complete the unfinished work during the next semester in residence in order to receive a higher grade in the course. If this is not done the Registrar shall erase the (i) and the grade as given shall become the final grade in the course.

3. In determining honors, the average of the figures representing the grades per credit shall be taken.

4. Except when a clerical error has been made, the passing grade of a student may not be changed after the class records have been filed with the Registrar, unless the subject has been repeated in a regular college class.

#### REQUIREMENTS FOR GRADUATION

A candidate for a bachelor's degree must pass in all the subjects both prescribed and elective in his chosen course, and he must conform to all directions given in connection with that course in regard to electives.

In order to graduate, a student shall have at least 63 of his credit hours above a grade of 3.

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. (Political Science 79-80.)

In the College of Arts and Science 126 credits are required for graduation.

In the College of Agriculture 128 credits are required for graduation.

In the School of Home Economics 128 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.

#### 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 certificate, if received in addition to a 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 140.

#### 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 \$10 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*—An average grade of at least 2.0 must be obtained in all course work offered for the master's degree. Graduate credit will not be given when the grade falls below 2.5.

*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 FACULTY OF THE COLLEGE OF ARTS  
AND SCIENCE IN CANDIDACY FOR THE DEGREE  
OF MASTER OF ARTS  
(Department of History)

By

JOHN EDWARDS SMITH  
RENO, NEVADA  
1938

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 type-written 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 Theses, 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

- WALTER E. CLARK, Ph.D., LL.D., President of the University.  
 MAXWELL ADAMS, Ph.D., Vice President of the University; Dean of the College of Arts and Science; Professor of Chemistry.  
 JAMES EDWARD CHURCH, JR., Ph.D., Professor of the Classics.  
 JEANNE ELIZABETH WIER, A.B., LL.D., Professor of History and Political Science.  
 PETER FRANSDEN, A.M., LL.D., Professor of Biology.  
 LEON WILSON HARTMAN, Ph.D., Professor Physics.  
 REUBEN CYRIL THOMPSON, A.M., Professor of Philosophy.  
 ALBERT ELLSWORTH HILL, A.B., Professor of English.  
 JAMES REED YOUNG, Ph.D., Professor of Psychology.  
 JOHN WILLIAM HALL, A.M., Emeritus Professor of Education.  
 SARAH LOUISE LEWIS, M.A., Professor of Home Economics.  
 BENJAMIN F. CHAPPELLE, Ph.D., Professor of Modern Languages.  
 GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.  
 FRED W. TRAINER, Ph.D., Professor of Education.  
 PHILIP A. LEHENBAUER, Ph.D., Professor of Biology.  
 FRANCIS CLARK MURGOTTEN, Ph.D., Professor of Modern Languages.  
 THEODORE H. POST, M.A., Professor and Director of Music.  
 JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education and Athletics 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.  
 FREDRICK WOOD, Ph.D., Professor of Mathematics.  
 SIGMUND W. LEIFSON, Ph.D., Professor of Physics.  
 VINCENT P. GIANELLA, Ph.D., Professor of Geology.  
 .....U. S. A., Professor of Military Science and Tactics.  
 KATHERINE LEWERS, Associate Professor of Freehand Drawing and Art.  
 KATHARINE RIEGELHUTH, A.M., Associate Professor of English.  
 MARGARET ELIZABETH MACK, A.M., Associate Professor of Biology.  
 SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.  
 GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics 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 Modern Languages.  
 PAUL A. HARWOOD, M.A., Associate Professor of English.  
 S. ALLAN LOUGH, Ph.D., Associate Professor of Chemistry.  
 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 and Athletics for Men.
- HAROLD N. BROWN, Ph.D., Associate Professor of Education.
- RALPH A. IRVIN, M.S., Associate Professor of Psychology.
- ERNEST L. INWOOD, Ph.D., Associate Professor of Economics, Business and Sociology.
- MAE SIMAS, M.A., Assistant Professor of Physical Education for Women.
- RICHARD O. BASSETT, JR., Major of Infantry, U. S. A., Assistant Professor of Military Science and Tactics; Commandant of Cadets.
- ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business and Sociology.
- ROBERT STUART GRIFFIN, B.S., Assistant Professor of English.
- HARRY E. WHEELER, Ph.D., Assistant Professor of Geology.
- DOUGLAS DASHIELL, M.A., Assistant Professor of Physical Education and Athletics for Men.
- JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education and Athletics for Men.
- LAWTON B. KLINE, M.A., Assistant Professor of Modern Languages.
- WILLIAM C. MILLER, M.A., Assistant Professor of English.
- EMILY ROSS, M.A., Assistant Professor of Mathematics.
- JOHN PARK PUFFINBARGER, Ed.M., Assistant Professor of Education.
- ALICE B. MARSH, M.S., Assistant Professor of Home Economics.
- INGO MADDAUS, JR., Assistant Professor of Mathematics.
- CHARLES L. STEWART, Ph.D., Assistant Professor of History.
- GRANT H. HUSTIS, Sergeant, U. S. A., Instructor in Military Science and Tactics.
- GORDON L. ROBERTSON, M.S., Instructor in Economics, Business and Sociology.
- FRED J. COLLINS, M.A., Instructor in Economics.
- W. DWIGHT BILLINGS, Ph.D., Instructor in Botany.
- EDWARD W. LOWRANCE, Ph.D., Instructor in Biology.
- CLYDE D. SOUTER, LL.B., Lecturer in Law.
- RUTH MILLER FERRIS, B.A., Assistant in French.
- KATHERINE SCHNELL, A.B., Assistant in Physical Education for Women.
- EVA ADAMS, M.A., Assistant in English.
- MARGARET JENSEN, B.S., Assistant in Mathematics.
- MARY TORNEY RYAN, B.A., 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 120-128.

## REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ARTS AND SCIENCE

In order to be recommended for the degree of Bachelor of Arts<sup>1</sup> 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 work designed primarily for juniors and seniors. 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. 82, 84), and political science, 79-80<sup>2</sup> as required by the State law (p. 135).
- II. A minimum of six units in English 1-2<sup>3</sup> shall be required of all students.
- III. A minimum of sixteen units<sup>4</sup> in each of the three groups named below shall be required of freshmen and sophomores:

GROUP 1. Latin, German, French, Spanish, and Italian. Four entrance units in not more than two languages will meet this requirement.

A single year in a language other than Latin will not be counted toward meeting the requirement unless one semester of that language be taken in college.

With three entrance units the requirement is 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.

<sup>1</sup>Students who have majored in mathematics or science may, on petition to the faculty, be granted the degree of Bachelor of Science.

<sup>2</sup>Credit in history 1-2 fulfills this requirement.

<sup>3</sup>Subject to provisions stated under course of study, p. 225.

<sup>4</sup>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.

GROUP 3. Mathematics, physics, chemistry, botany, zoology, and geology.

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. 147.

The specific group requirements under II, 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.....	$\frac{1}{2}$ to 1 $\frac{1}{2}$	Military and P. E.....	$\frac{1}{2}$ to 1 $\frac{1}{2}$
English 1.....	3	English 2.....	3
Foreign language.....		Foreign language.....	
Social science.....	} ...12 or 11	Social science.....	} .....12 or 11
Natural science or mathematics.....		Natural science or mathematics.....	
Elective.....		Elective.....	
	<hr/> 15 $\frac{1}{2}$		<hr/> 15 $\frac{1}{2}$

Sophomore Year			
First Semester	Units	Second Semester	Units
Military and P. E.....	$\frac{1}{2}$ to 1 $\frac{1}{2}$	Military and P. E.....	$\frac{1}{2}$ to 1 $\frac{1}{2}$
Foreign language.....		Foreign language.....	
Social science.....	} ...15 or 14	Social science.....	} .....15 or 14
Natural science or mathematics.....		Natural science or mathematics.....	
Elective.....		Elective.....	
	<hr/> 15 $\frac{1}{2}$		<hr/> 15 $\frac{1}{2}$

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  
Zoology 1, 2, 7-8

Subjects requiring a prerequisite or not open to freshmen:

Business Adm. 41, 43, 44, 48	Botany 22, 25
Economics 1, 2	Chemistry 9-10
History 5-6	Geology 8, 9, 10, 11, 12, 14
Philosophy 21, 22, 28	Mathematics 14, 15-16, 18, 20, 22, 23-24
Psychology 5, 6, 10, 14, 40	Physics 3-4, 5-6, 7
Sociology 1, 2, 20	Zoology 9

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.<sup>1</sup>

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 designed primarily for juniors and seniors. 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

<sup>1</sup>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 2 $\frac{1}{2}$  more than the 126 and 128 hours required for graduation from arts and science and agriculture, respectively, for each semester they have been enrolled in engineering.



however, will depend upon the particular aim of the student. For example, a student making some one language his major may find it desirable to elect a considerable amount of history. A student planning to study medicine should elect a major in biology or chemistry, but may find it desirable to take additional work in physics. Those intending to study law, should elect a major in political science or economics, but may find it desirable to take advanced work in English. Students taking a science major will generally find it profitable to have a good reading knowledge of French and German.

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 should bear the approval of the instructors concerned.

Any student after electing his major and minor departments may, with the consent of the department concerned and of the Dean, change his major department or major and minor departments, as the case may be, provided he complies with all the requirements in the case of the new major and minor departments.

The remaining units necessary to make a total of 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
		<hr/>			<hr/>
		16			16

#### 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
		<hr/>			<hr/>
		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
		<hr/>			<hr/>
		16			16

#### Senior Year

First Semester		Units	Second Semester		Units
Chemistry 81	.....	3	Chemistry 82	.....	3
Chemistry 75	.....	2	Chemistry 72	.....	3
Chemistry 95	.....	$\frac{1}{2}$	Chemistry 92	.....	2
Chemistry 99	.....	2	Chemistry 96	.....	$\frac{1}{2}$
Political science 79	.....	$\frac{1}{2}$	Chemistry 100	.....	2
Elective	.....	8	Political science 80	.....	$\frac{1}{2}$
		<hr/>	Elective	.....	5
		16			<hr/>
					16

\*Subject to provisions stated under course of study, p. 225.

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 167 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 newspaper and magazine work, 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 so flexible as to enable the student to fit himself, in addition, for special journalistic activities in which he may be interested.

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 internship (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 fine arts.

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, 51, 61\*, 64\*, 73, 74\*, 91, 92.

*History*—1-2, 5\*-6\*, 54, 57-58, 59\*-60\*, 62, 63\*-64\*, 81-82\*.

*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\*, 20, 71\*, 79\*, 80\*, 81, 82, 83\*, 84.

#### *The Fine Arts:*

*Art*—1-2.

*Classics*—41\*, 42\*, 51-52, 61-62.

*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*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
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 hrs.		Electives to make total of 15½ hrs.	

#### *Sophomore Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Journalism 21 .....	3	Journalism 22 .....	3
Group 1 elective (if needed) ..	3	Group 1 elective (if needed) ..	3
Groups 1 and 2 electives (as required) .....	7-8	Groups 1 and 2 electives (as required) .....	7-8
Elective or English literature .....	2-3	Elective or English literature .....	2-3
Elective to make total of 16 hrs.		Elective to make total of 16 hrs.	

Junior Year			
First Semester		Second Semester	
	Units		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
Elective	2	Elective	2
	15		15

Sophomore Year			
First Semester		Second Semester	
	Units		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

## PRELEGAL COURSES

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 Professor Sutherland, who is designated adviser 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 analysis 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		Second Semester	
	Units		Units
English 1	3	English 2	3
General chemistry	4	General chemistry	4
Botany 3	4	Zoology 2	4
Military and physical education	$\frac{1}{2}$ -1 $\frac{1}{2}$	Military and physical education	$\frac{1}{2}$ -1 $\frac{1}{2}$
Elective to make total of	15 $\frac{1}{2}$	Elective to make total of	15 $\frac{1}{2}$

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		Second Semester	
	Units		Units
German 1	5	German 2	5
Chemistry 9	4	Chemistry 10	4
Zoology 9	4	Mathematics 22	4
Military and physical education	1 $\frac{1}{2}$	Military and physical education	1 $\frac{1}{2}$
Elective to make total of	15 $\frac{1}{2}$	Elective to make total of	15 $\frac{1}{2}$

<i>Junior Year</i>	
<i>First Semester</i>	<i>Second Semester</i>
<i>Units</i>	<i>Units</i>
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
Elective to make total of.....16	Elective to make total of.....16

*Senior Year*

Elective or approved credential from professional school.

The University will confer the degree of Bachelor of Arts upon any student of high rank who, after completing three years of approved work in this University, shall enter a medical school rated Class A by the American Medical Association, and shall complete worthily one year's work in such medical school. In order to receive the degree in this way, the student must, at the end of his first year in the medical school, present a signed testimonial from the Dean of the Medical School to the Dean of the College of Arts and Science, such testimonial to include a statement of courses taken, grades achieved, and a recommendation that the degree be granted.

For further advice relative to this work, the student is referred to Professor Frandsen, who is designated adviser of premedical students.

## PRENURSING COURSE

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

<i>First Year</i>	
<i>First Semester</i>	<i>Second Semester</i>
<i>Units</i>	<i>Units</i>
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
<hr/>	<hr/>
15½	15½

*Second Year*

<i>First Semester</i>	<i>Second Semester</i>
<i>Units</i>	<i>Units</i>
Zoology 7 (Physiology)..... 3	Zoology 8 (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	
<hr/>	<hr/>
16	16

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 50 percent of the grades above a 3. 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.

## TEACHERS' DIPLOMAS

For the requirements for a teacher's diploma see School of Education pages 160-162.

## THE MASTER'S DEGREE IN ARTS AND SCIENCE

For the requirements for the master's degree, see pages 138-141.



## THE SCHOOL OF EDUCATION

## FACULTY

- WALTER E. CLARK, Ph.D., LL.D., President of the University.  
 FRED W. TRAINER, Ph.D., Dean of the School of Education; Professor of Education.  
 JOHN W. HALL, M.A., Emeritus Professor of Education.  
 REUBEN CYRIL THOMPSON, M.A., Professor of Philosophy.  
 THEODORE H. POST, A.M., Professor and Director of Music.  
 ELSA SAMETH, M.S., Professor of Physical Education for Women.  
 FREDRICK WOOD, Ph.D., Professor and Head of the Department of Mathematics.  
 KATHERINE LEWERS, Associate Professor of Freehand Drawing and Art.  
 KATHARINE RIEGELHUTH, A.M., Associate Professor of English.  
 MARGARET ELIZABETH MACK, M.A., Associate Professor of Biology.  
 SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.  
 JESSIE POPE, M.A., Associate Professor of Home Economics.  
 EDITH M. RUEBSAM, M.A., Associate Professor of Education.  
 HAROLD N. BROWN, Ed.D., Associate Professor of Education.  
 RALPH A. IRWIN, M.S., Associate Professor of Psychology.  
 MAE SIMAS, M.A., Assistant Professor of Physical Education for Women.  
 ROBERT STUART GRIFFIN, B.S., Assistant Professor of English.  
 HARRY E. WHEELER, Ph.D., Assistant Professor of Geology.  
 DOUGLAS DASHIELL, M.A., Assistant Professor of Physical Education and Athletics for Men.  
 J. P. PUFFINBARGER, Ed.M., Assistant Professor of Education.  
 EVA ADAMS, M.A., Assistant in English.  
 W. R. WHIDDEN, Lecturer in Education.  
 W. C. HIGGINS, B.S., Teacher Trainer, Vocational Agriculture Education.  
 DORIS NESBITT, M.S., Teacher Trainer in Home Economics.  
 HELEN KANNENBERG, Secretary to the Dean.

## COOPERATING TEACHERS

*In the Reno High School—*

- ALBERT W. ALEGRE, M.A., Spanish, English.  
 BUD L. BEASLEY, B.A., History, Coaching.  
 AGNES BELL, B.A., French.  
 DON HARVEY BELL, B.A., English.  
 BLYTHE BULMER, B.A., English.  
 JOHN L. CARLSON, B.S., Biology.  
 MARGARET ERNST, B.A., Mathematics.  
 DAVID FINCH, B.A., English.  
 KARL W. GALLAGHER, B.A., Geometry, Physics.  
 FRANCES HUMPHREY, B.A., English.

- MARGUERITE HUGHES, B.S., Home Economics.  
 EFFIE M. MACK, Ph.D., History and Civics.  
 BERRY McANALLY, B.A., English.  
 RANDALL ROSS, B.A., Public Speaking and English.  
 LUCILE SANFORD, B.S., Spanish and History.  
 ALWINE E. SIELAFF, B.A., Mathematics.  
 BUELAH SINGLETON, B.A., History.  
 EDWIN C. STRENG, M.S., Opt.D., Chemistry.

*In the Sparks High School—*

- BLANCHE KEEGAN, B.S., Home Economics.  
 EVELYN MANTLE, B.A., English.  
 EDWIN WHITEHEAD, B.A., History and Coaching.

*In the North Side Junior High School—*

- JOHN AGRUSA, B.A., Mathematics and Social Science.  
 ANNA FREY, B.S., Arithmetic and Home Economics.  
 MARIE LLOYD, B.A., Art and English.  
 MRS. CATHERINE LUKE, B.A., History.  
 MARGARET RAWSON, B.A., English and History.  
 ESTHER SCOFIELD, B.S., Home Economics.  
 ELSIE SEABORN, B.A., English.  
 YVONNE SPEER, B.A., English and French.  
 S. S. WHEELER, B.S., Mathematics.

*In the B. D. Billingshurst Junior High School—*

- GLADYS CAFFERATA, B.A., English and French.  
 HELEN DUNN, B.A., English and History.  
 HAZEL DURHAM, B.A., Art and English.  
 RUTH JONES, B.S., Home Economics.  
 BRUCE K. MOORE, B.A., Geography.  
 CLAIRE O'SULLIVAN, B.A., Algebra.  
 NEIL P. SCOTT, B.A., Mathematics and Physical Education.  
 ANNA MAUD STERN, B.A., Spanish and History.  
 ROSE TAVERNA, B.A., English.  
 HELENE STARK, B.A., English.

*In the Reno Elementary Schools—*

- MRS. ETHEL B. MCGUIRE, Principal Sixth Grade.  
 MRS. ELSIE R. JOHNSON, Sixth Grade.  
 GRACE WARNER, Fifth Grade.  
 KATHRYN CLARK, Fifth Grade.  
 FAIRY ADAMS, Fourth Grade.  
 VALENTINE OLDS, B.A., Fourth Grade.  
 EILEEN HAFFEY, B.A., Third Grade.  
 HELENE BANTA, Second Grade.  
 MARGARET HARTMAN, M.A., First Grade.  
 MARGARET ROBINSON, B.A., First Grade.  
 RITA A. CANNON, Principal Sixth Grade.  
 ISABELLE MOE, Fifth Grade.  
 EMMA SMITH, Fourth Grade.  
 ELEANOR MILLER, Third Grade.  
 MARGARET SULLIVAN, B.A., Second Grade.  
 MAE CLARESSE, First Grade.  
 MRS. PEARL C. DOMINGUEZ, Principal Sixth Grade.

*In the Reno Elementary Schools—Continued*

ALICE B. TWADDLE, B.A., Sixth Grade.  
 DOROTHEA SHIDLER, B.A., Fourth Grade.  
 HELEN HANLEY, Fifth Grade.  
 EMILE YPARRAGUIRRE, B.A., Fourth Grade.  
 AGNES MAXWELL, B.A., Fourth Grade.  
 MRS. EVA POSVAR, Third Grade.  
 MRS. INA ANGUS, B.A., Second Grade.  
 KATHRYN MARTIN, B.A., Second Grade.  
 MAMIE TOWLES, Principal Sixth Grade.  
 MRS. REINE ASHLEY, Fifth Grade.  
 MARCELLE BARKLEY, B.A., Fourth Grade.  
 ELLEN RUSSELL, B.A., Third Grade.  
 ALPHONSINE LIOTARD, Second Grade.  
 TRUE GIFFORD, B.A., First Grade.  
 RUBEL HANSEN, Principal Sixth Grade.  
 EDITH PEDDICORD, Fifth Grade.  
 MATILDA FERETTI, Fourth Grade.  
 DAISY BENJAMIN, First Grade.  
 ELIZABETH McCORMACK, B.A., First Grade.  
 RENA SEMENZA, B.A., Kindergarten.  
 THELMA WILLIAMS, Kindergarten.

*In the Sparks Elementary Schools—*

MRS. GLADYS PUTNEY, Principal Fourth Grade.

## TEACHER APPOINTMENT SERVICE

F. W. TRAINER, Director.  
 HELEN KANNENBERG, 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.

## 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.

## THE COURSE FOR HIGH SCHOOL TEACHERS

This course requires four years for its completion and leads also to the Bachelor of Arts degree. A student must meet the regular requirements of the College of Arts and

Science including a major and a minor. At the beginning of his second year the student may begin his professional training by taking psychology 5 and psychology 6. In his junior year he takes education 60, education 63, and two units of a method course: education 64, 65, 66, 86, or 88; in his senior year he takes education 71, 87 or 89; education 75, education 76, and education 82.

The completion of this course entitles the student to a high school teachers' certificate good for five years, which may be renewed, or, after 45 months of teaching, be converted into a life diploma.

By meeting certain regulations of the State Board of Education, graduates of the University may qualify for the high school teachers' certificate without pursuing the above course. These regulations require 18 units of work in education, of which ten must be in the field of secondary education and four must be in supervised teaching.

#### THE COURSE FOR ELEMENTARY TEACHERS

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.

By the laws of the State, students who have satisfactorily completed two years in the School of Education may be granted a first-grade elementary certificate which is good for five years and entitles the holder to teach in any elementary school in the State. It may be renewed, or, after 45 months of teaching experience, may be converted into a life diploma.

Likewise, students who can complete only one year of this course may be granted a second grade certificate which entitles the holder to teach in any elementary school for three years. This certificate is not renewable.

These abbreviated courses of one year or two years are

not recommended by the School of Education because they cannot give the prospective teacher the necessary foundation of a liberal education, upon which to build the desired professional training.

For those students, however, who feel they may not be able to complete a longer course, definite curricula have been set up for one year and for two years. Such students when registering should report to the Dean of the School of Education for instruction concerning courses to be taken.

By taking certain specified subjects in education and thus meeting regulations set up by the State Board of Education, students who graduate from the University may qualify for an elementary certificate. These regulations require 18 units of work in education, four of which must be in methods of teaching elementary subjects and four of which must be in supervised teaching in the elementary school.

#### 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 privilege 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.

For teaching in the high school the student must have senior standing; must give evidence of preparation to teach in two high school subjects by having at least 12 semester hours or its equivalent in each; must have a general average of 2.5; must have an average in his teaching subjects of 2; must have an average of 2.5 in his introductory educational subjects; and must have demonstrated a genuine interest in the teaching field. If a student should fail in any of these points his eligibility to teach will be subjected to serious question.

#### 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, \$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
5. THE ENGINEERING EXPERIMENT STATION



## THE COLLEGE OF ENGINEERING

## FACULTY

- WALTER E. CLARK, Ph.D., LL.D., President of the University.  
 MAXWELL ADAMS, Ph.D., Vice President and Professor of Chemistry.  
 FREDERICK H. SIBLEY, M.E., Dean of the College of Engineering;  
 Professor of Mechanical Engineering.  
 JOHN ALLEN FULTON, E.M., Director Mackay School of Mines and  
 Professor of Mining.  
 HORACE PRENTISS BOARDMAN, C.E., Professor of Civil Engineering.  
 PETER FRANSSEN, A.M., LL.D., Professor of Biology.  
 LEON WILSON HARTMAN, Ph.D., Professor of Physics.  
 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., Professor of Mining.  
 JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education and  
 Athletics for men.  
 FREDRICK WOOD, Ph.D., Professor of Mathematics.  
 U. S. A., Professor of Military Science and Tactics.  
 SIGMUND W. LEIFSON, Ph.D., Professor of Physics.  
 VINCENT P. GIANELLA, Ph.D., Professor of Geology.  
 KATHERINE LEWERS, Associate Professor of Freehand Drawing.  
 KATHARINE RIEGELHUTH, A.M., Associate Professor of English.  
 GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and  
 Astronomy.  
 SILAS CALVIN FREEMSTER, A.M., Associate Professor of History and  
 Political Science.  
 PAUL A. HARWOOD, M.A., Associate Professor of English.  
 WILLIAM I. SMYTH, E.M., Associate Professor of Metallurgy.  
 S. ALLAN LOUGH, Ph.D., Associate Professor of Chemistry.  
 MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.  
 IRVING J. SANDORF, M.S., Associate Professor of Electrical Engineer-  
 ing.  
 CHESTER M. SCRANTON, M.A., Associate Professor of Physical Edu-  
 cation and Athletics for Men.  
 RICHARD O. BASSETT, JR., Major of Infantry, U. S. A., Assistant Pro-  
 fessor of Military Science and Tactics; Commandant of  
 Cadets.  
 HAROLD CLARK AMENS, M.S., Assistant Professor of Mechanical  
 Engineering.  
 ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics.  
 ROBERT STUART GRIFFIN, B.S., Assistant Professor of English.  
 HARRY E. WHEELER, Ph.D., Assistant Professor of Geology.

- DOUGLAS DASHIELL, M.A., Assistant Professor of Physical Education  
 and Athletics for Men.  
 JAMES W. COLEMAN, M.A., Assistant Professor of Physical Educa-  
 tion and Athletics for Men.  
 EMILY ROSS, M.A., Assistant Professor of Mathematics.  
 WILLIAM C. MILLER, Assistant Professor of English.  
 INGO MADDAUS, JR., Assistant Professor of Mathematics.  
 BERTRAND F. COUCH, Instructor in Mine Accounting.  
 GRANT H. HUSTIS, Sgt., U. S. A., Instructor in Military Science and  
 Tactics.  
 JOHN TORNEY RYAN, Instructor in Shop Practice.  
 EVA ADAMS, M.A., Assistant in English.

## 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 catalogue.

## 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 pages 120-128 and footnote, p. 121.

\*In the Engineering College 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. A "restricted" freshman shall be limited in registration to 16 hours. If he has not presented 2 units of mathematics, he will be enrolled in mathematics A, a freshman course. This in no manner affects the University regulation regarding "special" students.

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.

Students over 26 years of age are excused from physical education, military, hygiene and orientation.

COLLEGE OF ENGINEERING

UNIFORM FRESHMAN COURSE

COMMON TO ALL FOUR SCHOOLS OF ENGINEERING

<i>Freshman Year—First Semester</i>		LAB.	LEC.
English 1.....	Composition and Rhetoric.....	2	3
Chemistry 7.....	General Inorganic Chemistry.....	2	3
Mathematics 15.....	Mathematical Analysis.....	2	3
General Engineering 5.....	Elementary Mechanical Drawing.....	2	2
*General Engineering 2.....	Freehand Drawing.....	1	1
General Engineering 1.....	Orientation.....	1	1
Military 1.....	Basic Course.....	1	1
Physical Education 1.....	Developmental Exercises.....	1	1
		<b>17½</b>	
<i>Freshman Year—Second Semester</i>			
English 2.....	Composition and Rhetoric.....	2	3
Chemistry 8.....	General Inorganic Chemistry.....	2	3
Mathematics 16.....	Mathematical Analysis.....	2	3
General Engineering 6.....	Descriptive Geometry.....	2	2
Geology 10.....	Engineering Geology.....	2	2
*Hygiene 1.....	Personal Hygiene.....	1	1
Military 2.....	Basic Course.....	1	1
Physical Education 2.....	Developmental Exercises.....	1	1
		<b>19½</b>	

\*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.

SCHOOL OF MINES

*Summer Work*

Mining 5..... Practical Mine Work..... Four Weeks

*Sophomore Year—First Semester*

		LAB.	LEC.
Mathematics 25.....	Differential Calculus.....	2	3
Physics 3.....	Engineering Physics.....	2	5
Geology 11.....	Determinative Mineralogy.....	2	1
Chemistry 9.....	Qualitative Analysis.....	3	1
Geology 9.....	Historical Geology.....	2	3
Military 3.....	Basic Course.....	1	1
Physical Education 3.....	Basic Course.....	1	1
		<b>5½</b>	<b>13</b>

18½

*Sophomore Year—Second Semester*

Chemistry 10.....	Volume Analysis.....	3	1
Mathematics 26.....	Integral Calculus.....	2	3
Physics 4.....	General Physics for Engineers.....	2	5
Metallurgy 4.....	Engineering Metallurgy.....	2	2
Geology 12.....	Blowpipe Analysis.....	2	2
Geology 14.....	Descriptive Mineralogy.....	2	2
Military 4.....	Basic Course.....	1	1
Physical Education 4.....	Basic Course.....	1	1
		<b>5½</b>	<b>14</b>

19½

*Junior Year—First Semester*

Mining 51.....	Excavation.....	2	3
Metallurgy 51.....	Assaying.....	3	1
Mathematics 55.....	Analytic Mechanics.....	2	3
Economics 65.....	Introduction to Economics, Business and Sociology.....	2	3
Civil Engineering 51 and 52.....	Surveying.....	2	2
Geology 51.....	Petrology.....	1	1
		<b>6</b>	<b>13</b>

19

*Junior Year—Second Semester*

Mining 52.....	Mine Plant.....	2	3
Metallurgy 66.....	Ore Dressing.....	2	2
Metallurgy 68.....	Ore Dressing.....	2	2
Geology 60.....	Economics Geology Nonmetallic.....	2	3
Civil Engineering 53 and 54.....	Surveying.....	2	2
Geology 52 (or Metal- lurgy 56).....	Petrography (Metallography).....	2	1
		<b>6</b>	<b>11</b>

17

*Summer Work*

Civil Engineering 58..... Summer Surveying..... Four Weeks

*Senior Year—First Semester*

Geology 61.....	Economic Geology of Metals.....	2	3
Mining 61.....	Mining Methods.....	2	3
Metallurgy 71.....	Hydro-Metallurgy.....	1	2
Metallurgy 61.....	Pyro-Metallurgy, nonferrous metals.....	2	3
Political Science 79.....	.....	2	1
Project in Mining 79, Metallurgy 79 or Geology 79.....	.....	2	1
Electrical Engineering 75.....	Electricity in Mining.....	2	3
		<b>3</b>	<b>14½</b>

17½

<i>Senior Year—Second Semester</i>		LAB.	LEC.
Mining 72	Mine Administration	—	—
Mining 74	Mineral Industry Economics	—	—
Civil Engineering 90	Hydraulics	—	—
Civil Engineering 72	Testing Materials	—	—
Civil Engineering 74	Strength of Materials	1	—
Political Science 80	—	—	—
Project in Mining 80, Metallurgy 80 or Geology 80	—	2	—
		3	12½
		15½	

## SCHOOL OF MECHANICAL ENGINEERING

*Freshman Year—Both Semesters*

Uniform course for all Engineering Schools. See page 166.

<i>Sophomore Year—First Semester</i>		LAB.	LEC.
Physics 3	General Physics for Engineers	—	5
Physics 5	Physical Measurements	2	—
Mathematics 25	Differential Calculus	—	3
Civil Engineering 51	—	—	—
and 52	Elementary Surveying	2	2
Mechanic Arts 2	Forging	1	—
Military 3	Basic Course, second year	1	—
Mechanical Engineering 19	Mechanical Engineering Literature	—	1
Physical Education 3	Advanced Exercises	—	2
Elective	—	—	1
		18	

*Sophomore Year—Second Semester*

Physics 4	General Physics for Engineers	—	5
Physics 6	Physical Measurements	2	—
Mathematics 26	Integral Calculus	—	3
Metallurgy 4	Engineering Metallurgy	—	2
Military 4	Basic Course second year	1	—
Physical Education	Advanced Exercises	—	2
*History or Language	—	—	—
Mechanical Engineering 20	Mechanical Engineering Literature	—	1
Elective	—	—	1
		18	

*Junior Year—First Semester*

Mathematics 55	Analytic Mechanics	—	3
Mechanical Engineering 51	Kinematics	1	2
Mechanical Engineering 54	Engines and Boilers	—	3
Mechanical Engineering 64	Power Laboratory	2	1
Economics 65	Introduction to Economics and Business	—	3
*History or Language	—	—	—
		18	

*Junior Year—Second Semester*

Mathematics 56	Analytic Mechanics	—	2
Mechanical Engineering 65	Mechanical Laboratory	3	—
Mechanic Arts 3	Machine Shop	2	—
Civil Engineering 72	Testing Materials	1	—
Civil Engineering 74	Strength of Materials	—	—
Civil Engineering 90	Hydraulics	—	—
*Economics 66	Financial and Business Organization	—	—
Elective	—	—	1
		18	

\*See footnote, p. 166.

*Senior Year—First Semester*

		LAB.	LEC.
Mechanical Engineering 53	Machine Design	—	3
Mechanical Engineering 55	Thermodynamics	—	3
Electrical Engineering 51	Direct Current Machinery	—	3
Electrical Engineering 61	Electrical Laboratory	1	1
*Mechanical Engineering 66	Advanced Mechanical Laboratory	3	—
*Mechanic Arts 5	Machine Shop	2	—
†Political Science 79	Constitutions of the United States and Nevada	—	½
Elective	—	—	1½
		18	

*Senior Year—Second Semester*

Mechanical Engineering 56	Thermodynamics	—	3
Mechanical Engineering 58	Advanced Machine Design	—	3
Electrical Engineering 52	Alternating Current Machinery	—	3
Mechanic Arts 6	Pattern Shop	1	—
*Business Administration 48	Fundamental Principles of Law	—	3
*Mechanical Engineering 80	Thesis	3	—
†Political Science 80	Constitutions of United States and Nevada	—	½
Elective	—	—	1½
		18	

## SCHOOL OF ELECTRICAL ENGINEERING

*Freshman Year—Both Semesters*

Uniform course for all Engineering Schools. See page 166.

<i>Sophomore Year—First Semester</i>		LAB.	LEC.
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	—	2
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	—	2
Elective	—	—	3
		18½	

*Junior Year—First Semester*

Electrical Engineering 51	Direct Current Machinery	—	3
Electrical Engineering 61	Electrical Engineering Laboratory	1	1
*Electrical Engineering 57	Electricity and Magnetism	—	2
Mechanical Engineering 54	Engines and Boilers	—	3
Mechanical Engineering 64	Mechanical Laboratory	1	2
Mathematics 85	Differential Equations	—	3
Elective	—	—	2
		18	

\*See footnote, p. 166.

†Students who take history both semesters are not required to take political science 79 and 80.

‡Students desiring to do so may substitute physics 73 for electrical engineering 57 and physics 57 for electrical engineering 70.

## Junior Year—Second Semester

	LAB.	LEC.
Electrical Engineering 52..Alternating Current Machinery.....	1	2
Electrical Engineering 56..Alternating Current Circuits.....	1	2
Electrical Engineering 62..Electrical Engineering Laboratory.....	1	1
Civil Engineering 74.....Strength of Materials.....	1	1
Civil Engineering 72.....Testing Materials Laboratory.....	1	1
Civil Engineering 79.....Hydraulics.....	1	1
Elective.....	1	1
	18	

## Senior Year—First Semester

Electrical Engineering 53..Alternating Current Machinery.....	1	2
Electrical Engineering 63..Electrical Engineering Laboratory.....	1	2
Electrical Engineering 67..Communication Engineering.....	1	1
Mathematics 55.....Analytic Mechanics.....	1	1
Economics 65.....Introduction to Economics and Business.....	1	1
Political Science 79.....Constitutions of the United States and Nevada.....	1	1
Elective.....	1	1
	18½	

## Senior Year—Second Semester

Electrical Engineering 54..Electrical Design.....	1	2
Electrical Engineering 64..Electrical Engineering Laboratory.....	1	2
Electrical Engineering 68..Communications Engineering.....	1	1
Electrical Engineering 70..Industrial Electrical Measurements.....	1	1
Mathematics 56.....Analytic Mechanics.....	1	1
Elective.....	1	1
	17½	

## SCHOOL OF CIVIL ENGINEERING

## Freshman Year—Both Semesters

Uniform course for all Engineering Schools. See page 166.

## Sophomore Year—First Semester

	LAB.	LEC.
Mathematics 25.....Differential Calculus.....	1	2
Physics 3.....General Physics for Engineers.....	1	2
Civil Engineering 51-52.....Elementary Surveying.....	1	2
*Geology 9.....Historical Geology.....	1	1
*Geology 11.....Determinative Mineralogy.....	1	1
Military 3.....Basic Course.....	1	1
Physical Education 3.....Advanced Exercises.....	1	1
	18½	

## Sophomore Year—Second Semester

Mathematics 26.....Integral Calculus.....	1	2
Metallurgy 4.....Engineering Metallurgy.....	1	2
Physics 4.....General Physics for Engineers.....	1	2
Civil Engineering 20.....Technical Report.....	1	1
Civil Engineering 53-54.....Advanced Surveying.....	1	2
Civil Engineering 69.....Graphic Statics.....	1	1
Military 4.....Basic Course.....	1	1
Physical Education 4.....Advanced Exercises.....	1	1
	18½	

## Junior Year—First Semester

Mathematics 55.....Analytic Mechanics.....	1	2
Civil Engineering 63-64.....Railroad Engineering.....	1	2
Civil Engineering 75.....Structural Analysis.....	1	2
*Mechanical Engineering 54.....Engines and Boilers.....	1	2
Electrical Engineering 75.....Electricity in Mining.....	1	2
Political Science 79.....Constitutions of United States and Nevada.....	1	1
	17½	

\*See footnote, p. 166. †See footnote, p. 169.

## Junior Year—Second Semester

	LAB.	LEC.
Mathematics 56.....Analytic Mechanics.....	1	2
†Civil Engineering 55A-55B.....Foundations and Substructures.....	1	2
Civil Engineering 72.....Testing of Materials.....	1	1
Civil Engineering 74.....Mechanics of Materials.....	1	2
Civil Engineering 76.....Structural Analysis.....	1	2
Civil Engineering 90.....Hydraulics.....	1	2
Political Science 80.....Constitutions of United States and Nevada.....	1	1
Elective.....	1	1
	17½	

CIVIL ENGINEERING 58. *Summer Surveying*. Required of all civil engineering students who cannot furnish a satisfactory substitution of practical experience on survey work, including considerable instrument work.

## Senior Year—First Semester

	LAB.	LEC.
†Civil Engineering 67.....Engineering Economics.....	1	2
Civil Engineering 77.....Structural Design.....	1	2
Civil Engineering 85.....Reinforced Concrete.....	1	2
Civil Engineering 94.....Irrigation Engineering.....	1	2
*Business Adm. 43.....Elementary Accounting.....	1	2
Elective.....	1	2
	18	

## Senior Year—Second Semester

Civil Engineering 78.....Structural Design.....	1	2
Civil Engineering 86.....Reinforced Concrete.....	1	2
Civil Engineering 91.....Sanitary Engineering.....	1	2
Civil Engineering 99.....Engineering Problems or Civil Engineering 100.....Thesis.....	1	2
*Business Adm. 44 (or 48)...Accounting (or Business Law).....	1	2
Elective.....	1	2
	18	

\*See footnote, p. 166.

†Civil Engineering 55A and B and 67 given alternate years. See page 171.



## THE ENGINEERING EXPERIMENT STATION

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WALTER E. CLARK, Ph.D., LL.D., President of the University.  
HORACE P. BOARDMAN, C.E., Director, Chairman Executive Com-  
mittee.  
FREDERICK H. SIBLEY, M.E., Member Executive Committee.  
STANLEY G. PALMER, M.E., Member Executive Committee.

The Engineering Experiment Station was established by the Board of Regents November 1, 1921.

The objects are to cooperate with engineering experiment stations in other institutions and to conduct useful investigations along engineering lines and publish bulletins from time to time whenever the results justify such publication.

## THE COLLEGE OF AGRICULTURE

1. THE SCHOOL OF AGRICULTURE
2. THE SCHOOL OF HOME ECONOMICS

## THE COLLEGE OF AGRICULTURE

## FACULTY

- WALTER E. CLARK, Ph.D., LL.D., President of the University.  
 MAXWELL ADAMS, Ph.D., Vice President, Professor of Chemistry.  
 ROBERT STEWART, Ph.D., Dean of the College of Agriculture; Professor of Agronomy.  
 PETER FRANDSEN, A.M., LL.D., Professor of Biology.  
 HORACE PRENTISS BOARDMAN, C.E., Professor of Civil Engineering.  
 LEON W. HARTMAN, Ph.D., Professor of Physics.  
 FREDERICK WESTON WILSON, M.S., Professor of Animal Husbandry.  
 RUEBEN CYRIL THOMPSON, M.A., Professor of Philosophy.  
 FREDERICK H. SIBLEY, M.E., Dean of the College of Engineering, Professor of Mechanical Engineering.  
 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 and Athletics for Men.  
 ELSA SAMETH, M.S., Professor of Physical Education for Women.  
 FREDRICK WOOD, Ph.D., Professor of Mathematics.  
 VINCENT P. GIANELLA, Ph.D., Professor of Geology.  
 ..... U.S.A., Professor of Military Science and Tactics.  
 KATHERINE LEWERS, Associate Professor of Freehand Drawing.  
 KATHARINE RIEGELHUTH, A.M., Associate Professor of English.  
 MARGARET ELIZABETH MACK, A.M., Associate Professor of Biology.  
 SILAS CALVIN FEEMSTER, A.M., Associate Professor of History and Political Science.  
 GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics 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.  
 S. ALLAN LOUGH, Ph.D., Associate Professor of Chemistry.  
 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 and Athletics for Men.  
 RALPH A. IRWIN, M.S., Associate Professor of Psychology.  
 ELDON WITTEWER, Ph.D., Associate Professor of Agricultural Economics.  
 RICHARD O. BASSETT, JR., Major of Infantry, U. S. A., Assistant Professor of Military Science and Tactics; Commandant of Cadets.

- MAE SIMAS, M.A., Assistant Professor of Physical Education for Women.  
 HAROLD CLARK AMENS, M.S., Assistant Professor of Engineering.  
 ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business and Sociology.  
 ROBERT STUART GRIFFIN, B.S., Assistant Professor of English.  
 DOUGLAS DASHIELL, M.A., Assistant Professor of Physical Education and Athletics for Men.  
 JAMES W. COLEMAN, M.A., Assistant Professor of Physical Education and Athletics for Men.  
 WILLIAM C. MILLER, M.A., Assistant Professor of English.  
 EMILY ROSS, M.A., Assistant Professor of Mathematics.  
 INGO MADDAUS, JR., M.A., Assistant Professor of Mathematics.  
 MRS. ALICE B. MARSH, M.S., Assistant Professor of Home Economics.  
 GRANT H. HUSTIS, Sgt. U. S. A., Instructor in Military Science and Tactics.  
 JACK L. RYAN, Instructor in Shop Practice.  
 CLARENCE J. THORNTON, B.S., Instructor in Poultry Husbandry.  
 GEORGE ERNEST BROOKS, B.S., Instructor in Dairying.  
 W. DWIGHT BILLINGS, Ph.D., Instructor in Botany.  
 EDWARD W. LOWRANCE, Ph.D., Instructor in Biology.  
 EVA ADAMS, M.A., Assistant in English.

## AIM

The aim of the School of Agriculture is to give such training in farming, gardening, and stock raising, and in the sciences and other related subjects as will furnish a well-rounded education.

## EQUIPMENT

AGRICULTURE BUILDING—For description of Agriculture Building, see p. 43.

UNIVERSITY FARM—The University Farm, comprising 213 acres formerly owned by the D. C. Wheeler Company, Incorporated, is located three miles south of Reno along the Virginia road.

DAIRY—The laboratory in the Agriculture Building, equipped with up-to-date 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.

EXPERIMENT STATION FARM—This is a farm of sixty acres lying east of the campus and devoted to research projects of the University Agricultural Experiment Station.

SHOPS—The shops for teaching of wood-work and blacksmithing are equipped for the best of work.

## ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of credits belonging to each, see pages 120-128.

## REQUIREMENTS FOR A BACCALAUREATE DEGREE IN AGRICULTURE

The degree of Bachelor of Science in Agriculture will be conferred upon students who satisfactorily complete the full course of study in the School of Agriculture, aggregating 128 semester units.

Students over 26 years of age are excused from physical education, military and hygiene.

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

COURSE	FIRST SEMESTER		SECOND SEMESTER	
	Units	Hours	Units	Hours
<b>FRESHMAN YEAR</b>				
Military 11-22	1	1	1	1
Hygiene	1	1	1	1
Physical Education 1-2	2	2	2	2
Chemistry 11-22	4	4	4	4
English 11-22	3	3	3	3
Animal Husbandry 1	3	3	3	3
Botany 11	3	3	3	3
Agricultural Engineering 10	1	1	1	1
Botany 22	2	2	2	2
Botany 33	4	4	4	4
Zoology 22	4	4	4	4
	<b>17½</b>		<b>17½</b>	
<b>SOPHOMORE YEAR</b>				
Military 33-44	1	1	1	1
Physical Education 3-4	2	2	2	2
Agricultural Economics 1-2	3	3	3	3
Zoology 33	3	3	3	3
Astronomy 44-55	3	3	3	3
Animal Husbandry 4-30	4	4	4	4
Plant Husbandry 55	3	3	3	3
Botany 22	2	2	2	2
Botany 33	4	4	4	4
Elective	1	1	1	1
	<b>17½</b>		<b>15½</b>	
<b>JUNIOR YEAR</b>				
Agricultural Electives	8	8	8	8
Nonagricultural Electives	5	5	5	5
Open Electives	2	2	2	2
	<b>15</b>		<b>15</b>	
<b>SENIOR YEAR</b>				
Physical Science 79-80	1	1	1	1
Agricultural Electives	3	3	3	3
Nonagricultural Electives	3	3	3	3
Open Electives	4½	4½	4½	4½
	<b>15</b>		<b>15</b>	

## 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 at least two years of farm experience after arriving at the age of 14 years.

B. *Education.* 1. All Agricultural College graduates who wish to qualify as teachers of vocational agriculture in Nevada must present as a part of their training at least 60 semester hours of credit in under-graduate technical agricultural subjects distributed as follows:

- Animal production courses, 20 semester hours.
- Plant production courses, 20 semester hours.
- Agricultural mechanics courses, 10 semester hours.
- Economics, agricultural economics and sociology courses, 10 semester hours.

2. 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.

PREFORESTRY AND RANGE MANAGEMENT  
COURSES OF STUDY

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:

## Courses in Preforestry

FRESHMAN YEAR		1st Sem.	2d Sem.
Military 1-2		1	1
Physical Education 1-2		2	2
Chemistry 1-2	General Inorganic Chemistry	2	2
Botany 3	General Botany	4	4
Botany 22	General Taxonomy	4	4
Animal Husbandry 1	Breeds of Livestock	4	4
English 1-2	Composition and Rhetoric	3	3
Hygiene 2	General Hygiene	3	3
Agronomy 53	Forage Crops	1	1
		15½	16½
SOPHOMORE YEAR		15½	16½
Military 3-4		1	1
Physical Education 3-4		2	2
Botany 23	Dendrology	4	4
Botany 27	Elements of Forestry	4	4
Zoology 2	General Zoology	2	2
Agricultural Economics 1-2	Principles of Economics	4	4
Mathematics 22	Math. for Agriculture Students	3	3
Animal Husbandry 4	Livestock Judging	4	4
Botany 54	Agrostology	3	3
Nonagricultural electives		3	3
		16½	16½
JUNIOR YEAR		16½	16½
Physics 1a-1b, 2a-2b	General Physics	4	4
Agricultural Engineering	Surveying	4	4
Zoology 59	General Entomology	3	3
Zoology 60	Vertebrate Ecology	3	3
Botany 55	Plant Physiology and Anatomy	4	4
Botany 64	Plant Pathology	4	4
Animal Husbandry 30	Livestock Feeding	4	4
Nonagricultural electives		2	2
		15	16
SENIOR YEAR		15	16
Political Science 79-80	The Constitution	3	3
Agronomy 6	Soil Management	3	3
Botany 66	Ecology	3	3
Nonagricultural electives		12	11
		15½	14½

## SCHOOL OF HOME ECONOMICS

## REQUIREMENTS FOR A BACCALAUREATE DEGREE IN HOME ECONOMICS

The degree of Bachelor of Science in Home Economics is conferred upon students who have satisfactorily completed the full course of study aggregating 128 semester units (including 3 units in physical education and 1 unit in hygiene in the freshman and sophomore years) in the School of Home Economics as given on the following pages:

## AIM

The aim of the School of Home Economics is to raise the ideals of home-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 home-makers, teachers of home economics, or workers in any field where this knowledge is needed.

Experience in actual home-making, either as a daughter working in the family or as a manager of a house is a great aid to the successful work of the home economics course. Home problems are required after completing beginning courses in home economics to give students this experience.

## EQUIPMENT

School of Home Economics: For detailed description, see page 64.

## SCHOOL OF HOME ECONOMICS

## COURSES OF STUDY

Freshman Year—First Semester		LAB.	LEC.
English 1	Composition and Rhetoric	2	3
Chemistry 1	Elementary Inorganic	2	2
Physical Education 1	Freshman Practice	1	1
Home Economics 3	Introductory Course	2	2
Horticulture 1	Elements of Horticulture	2	3
Home Economics 31	Food Preparation	2	1
		16	
Freshman Year—Second Semester		16	
English 2	Composition and Rhetoric	2	3
Chemistry 2	Elementary Inorganic	2	2
Physical Education 2	Freshman Practice	1	1
Home Economics 32	Food Preparation	2	1
Hygiene 2	General Hygiene	1	1
Home Economics 16	Textiles	1	1
Home Economics 45	Related Art	2	2
		16	
Sophomore Year—First Semester		16	
English 11 or 41	Public Speaking or Literature	2	2
Physics 19	Household Physics	1	2
Physical Education 3	Sophomore Practice	1	1
Home Economics 15	Clothing	2	1
Art 5	Art Principles	2	2
Chemistry 25	Elementary Organic	1	2
Psychology 5	General Psychology	2	3
		16½	
Sophomore Year—Second Semester		16½	
English 12 or 42	Public Speaking or Literature	2	2
Physics 20	Household Physics	1	2
Physical Education 4	Sophomore Practice	1	1
Home Economics 18	Clothing	2	1
Philosophy 22	Applied Ethics	2	3
Chemistry 26	Elementary Physiological	1	3
Elective		1	1
		15½	
Junior Year—First Semester		15½	
Zoology 7	Physiology	1	2
Agricultural Economics 1	Principles of Economics	2	3
Home Economics 55	Foods and Cookery	3	1
Home Economics 42	Food Economics	1	1
Elective		4	1
		16	



<i>Junior Year—Second Semester</i>		LAB.	LEC.
Zoology 8.....	Physiology .....	1	2
Agricultural Economics 2.....	Principles of Economics.....	1	2
Home Economics 66.....	Advanced Clothing .....	2	2
Home Economics 87.....	House Decoration .....	2	2
Elective.....		4	
		16	
<i>Senior Year—First Semester</i>			
Home Economics 81.....	Nutrition .....	3	3
Home Economics 83.....	Dietetics .....	3	3
Home Economics 54.....	Care of Health and Disease.....	2	2
Elective.....		9	
		16	
<i>Senior Year—Second Semester</i>			
Home Economics 86.....	Household Administration .....	1	2
Home Economics 88.....	Household Equipment .....	1	2
Home Economics 76.....	Child Development .....	1	2
Elective.....		10	
		16	

All students in the University who do not elect history 1 and 2 are required to take political science 79-80 for graduation.

#### DIETITIANS COURSE OF STUDY

Freshmen and sophomore years the same as the regular home economics course.

<i>Junior Year—First Semester</i>		LAB.	LEC.
Zoology 7.....	Physiology .....	1	2
Agricultural Economics 1.....	Principles of Economics.....	1	2
Home Economics 55.....	Meal Planning .....	3	3
Home Economics 42.....	Food Economics .....	1	2
Home Economics 54.....	Care of Health and Disease.....	1	2
Elective.....		16	
		16	
<i>Junior Year—Second Semester</i>			
Zoology 8.....	Physiology .....	1	2
Agricultural Economics 2.....	Principles of Economics.....	1	2
Home Economics 94.....	Experimental Cookery .....	2	2
Elective.....		16	
		16	
<i>Senior Year—First Semester</i>			
Home Economics 81.....	Nutrition .....	3	3
Home Economics 83.....	Dietetics .....	3	3
Sociology 1.....	Principles of Sociology.....	2	2
Bacteriology 51.....	General Bacteriology .....	2	2
Education 88.....	Problems in Homemaking Education.....	2	2
Elective.....		16	
		16	
<i>Senior Year—Second Semester</i>			
Home Economics 86.....	Household Administration .....	1	2
Home Economics 88.....	Household Equipment .....	1	2
Home Economics 76.....	Child Development .....	1	2
Home Economics 92.....	Diet Therapy .....	1	2
Home Economics 98.....	Institution Management .....	2	2
Home Economics 96.....	Quantity Cookery .....	2	2
Elective.....		4	
		16	

#### INSTITUTION MANAGEMENT

Freshman and sophomore years the same as the regular home economics course.

<i>Junior Year—First Semester</i>		LAB.	LEC.
Zoology 7.....	Physiology .....	1	2
Agricultural Economics 1.....	Principles of Economics.....	1	2
Home Economics 55.....	Meal Planning .....	3	3
Home Economics 42.....	Food Economics .....	1	2
Home Economics 54.....	Care of Health and Disease.....	2	2
Home Economics 94.....	Experimental Cookery .....	2	2
		16	
<i>Junior Year—Second Semester</i>			
Zoology 8.....	Physiology .....	1	2
Agricultural Economics 2.....	Principles of Economics.....	1	2
Education 60.....	Problems of Secondary Education.....	2	2
Home Economics 87.....	Household Decoration .....	2	2
Electives.....		4	
		16	
<i>Senior Year—First Semester</i>			
Home Economics 81.....	Nutrition .....	3	3
Home Economics 83.....	Dietetics .....	3	3
Sociology 1.....	Principles of Sociology.....	2	2
Bacteriology 51.....	General Bacteriology .....	2	2
Education 88.....	Problems of Homemaking Education.....	2	2
Elective.....		16	
		16	
<i>Senior Year—Second Semester</i>			
Home Economics 76.....	Child Development .....	1	2
Home Economics 88.....	Household Equipment .....	1	2
Home Economics 96.....	Quantity Cookery .....	2	2
Home Economics 98.....	Institution Management .....	2	2
Electives.....		8	
		16	

#### MINOR IN HOME ECONOMICS

For a minor in home economics education, electives should be chosen as follows:

<i>Sophomore Year—Second Semester</i>		LEC.
Psychology 6.....	Elementary Educational Psychology.....	3
<i>Junior Year—First Semester</i>		
Education 63.....	School Management and Law.....	1
<i>Junior Year—Second Semester</i>		
Education 60.....	Problems of Secondary Education.....	3
<i>Senior Year—First Semester</i>		
Education 89.....	Methods in Teaching Vocational Home-making .....	3
Education 75.....	Supervised Teaching .....	2
Education 88.....	Problems in Homemaking Education.....	2
<i>Senior Year—Second Semester</i>		
Education 76.....	Supervised Teaching .....	2
Education 82.....	Noninstructional Responsibilities of the High School Teacher.....	2
Total.....		18

## RECOMMENDED ELECTIVES

*Group I—Related Subjects:*

Bacteriology 51, History 1 and 2, English 21-22, 25-26, 77, Latin 41 (Greek Art), and Latin 42 (Roman to Modern Art), Philosophy 7, 8, 61, 62, Business Administration 41-65, Sociology 20, 71-72, Art 3, 4, 51, 52, Education 34-35-56, and Physical Education 23 and 51.

*Group II—Home Economics Electives:*

Home Economics 52, 67, 68, 85, 92, 94, 96, and 98.

Courses open to non-home economics majors:

Home Ec. 3, introductory course.  
 Home Ec. 15-18, clothing.  
 Home Ec. 16, textiles.  
 Home Ec. 31-32, food preparation.  
 Home Ec. 33, food and nutrition.  
 Home Ec. 42, food economics.  
 Home Ec. 45, related art.  
 Home Ec. 54, care of health and disease.  
 Home Ec. 76, child development.  
 Home Ec. 86, household administration.  
 Home Ec. 87, house decoration.  
 Home Ec. 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

Agricultural Economics	English Language and Literature
Agricultural Engineering	Journalism
Agronomy	Literature and Composition
Animal Husbandry	Speech
Art	General Engineering
Astronomy (See Physics 7)	Geology
Athletics (See Physical Education)	History and Political Science
Biology	Home Economics
Bacteriology	Mathematics and Mechanics
Botany	Mechanic Arts
Horticulture	Mechanical Engineering
Hygiene	Metallurgy
Nature Study	Military Science and Tactics
Zoology	Mineralogy (See Geology)
Business (See Economics, Business, and Sociology)	Mining
Chemistry	Modern Languages
Civil Engineering	French
Classics	German
Latin	Italian
Art	Spanish
Literature	Music
Dairy Husbandry (See Animal Husbandry)	Orientation
Drawing (See Mechanical Engineering)	Philosophy
Economics, Business, and Sociology	Physical Education
Education	Men
Elementary Education	Women
Secondary Education	Physics
Agr. and Home Ec. Education	Political Science (See History and Political Science)
Courses Primarily for Teachers	Poultry Husbandry (See Animal Husbandry)
Electrical Engineering	Psychology
	Sociology (See Economics, Business and Sociology)

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

ASSOCIATE PROFESSOR WITTWER, HEAD OF DEPARTMENT

1. PRINCIPLES OF ECONOMICS. An introduction to the economics of production, value and exchange, money and credit, business cycles, international trade, distribution of wealth, labor, transportation, agricultural credit and marketing, public finance and taxation. *Prerequisite*: Sophomore year. *First semester. Three credits.* Agriculture Building. Wittwer.

2. PRINCIPLES OF ECONOMICS. A continuation of 1. *Second semester. Three credits.* Wittwer.

52. AGRICULTURAL ECONOMICS. Production trends in the United States. Relation of international trade to agriculture. Relation of prices to agricultural output. Business and production cycles. Advantages and limitations of agricultural planning. Taxation in relation to agriculture. Farm ownership and tenancy. Systems of farming. Farm organization. Valuation of farms. Factors which make for efficiency in farming. Law of diminishing returns. Financial analysis of the farm business. Planning farm enterprises. *Three recitations. Junior year. Second semester. Three credits.* Wittwer.

53. COOPERATION AND FARMER'S MOVEMENTS. A review of the fundamentals of cooperation followed by a discussion of agrarian organizations such as: The Grange; Farmers Union; American Society of Equity; The Gleaners; Farm Bureau; Nonpartisan Leagues; and Cooperative Organization for Production, Distribution, Consumption and Credit Purposes. *Junior year. First semester. Two 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. *Senior year. Second semester. Two credits.* Wittwer.

58. MARKETING OF AGRICULTURAL PRODUCTS. A certain study of the marketing of staples, semistaples and perishable farm products, including the geographical location of producing areas, marketing routes from producer to the consumer, types of middlemen, direct marketing, marketing costs, standardization, factors influencing prices, and a general description of our whole marketing system as it exists today. *Senior year. Second semester. Two credits.* Wittwer.

#### AGRICULTURAL ENGINEERING

PROFESSOR SIBLEY

PROFESSOR BOARDMAN

PROFESSOR BIXBY

ASSISTANT PROFESSOR AMENS

MR. CARROLL

51. FARM SURVEYING. Elementary course. Lectures, recitations and computations, covering the common types of surveying, special emphasis on topographic and farm surveying. *Prerequisite*: Mathematics. *First semester. Four credits.* Electrical Building. Boardman.

58. 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.* Bixby.

10. FARM MECHANICS. A course embracing general forge work, including heating, bending, drawing, upsetting, etc., also making and tempering punches, drills and chisels, and annealing and case-hardening. One period will be given to bench and machine work. *First semester. Two credits.* Mechanical Building. Ryan and Carroll. Fee, \$5.

72. FARM EQUIPMENT. Design and construction and cost estimates of farm buildings, including houses, barns, sheds, granaries and silos. Field trips will be taken whenever possible to observe buildings under construction. Farm implements such as road drags, levelers, irrigation boxes and forms

for concrete work will be studied. Heating, ventilating and lighting of buildings. *Second semester. Laboratory, two periods. Two credits.* Electrical Building. Sibley.

73. FARM MOTORS AND TRACTORS. The study of water, gasoline, and electric farm motors, gasoline and steam tractors. Demonstrations and practice will be given in the operation of the various types of motors. *First semester. Lecture, one hour; laboratory, two periods. Three credits.* Amens. Fee, \$2.

#### AGRONOMY

College of Agriculture

PROFESSOR STEWART, HEAD OF DEPARTMENT

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, three hours. Three credits.* Agriculture Building. Stewart.

4. 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.

6. SOIL MANAGEMENT. A general lecture and laboratory course in geology of soils, origin, formation, physical composition, soil moisture, moisture movements and conservation, physical processes, surface tension, osmosis, capillarity, aeration and temperature. Influence of washing, drainage, and irrigation. *Prerequisite: Sophomore standing. First semester. Lectures, three hours. Three credits.* Stewart.

53. FORAGE CROPS. Legumes and grasses, the special use of these crops as hay, soiling, silage, pasture, green manure, cover crops, etc.; the care and management of pastures; plans for the rotation of soiling crops; adaptation of grasses and other crops for growing under different climate and soil conditions. *Second semester. Lectures, three hours. Three credits.* Stewart.

57. FARM MANAGEMENT. The evolution of farming; the

relation of capital and labor to farm management; the general management of implements and equipment; ownership versus rental of land; the choice of a farm; system of farming; farming compared with other lines of business; marketing problems; advertising; farm records and farm accounts; the management of fields, crops, and manures. *Prerequisite: Senior standing. Second semester. Lectures, three hours. Three credits.* Given alternate years. Stewart.

58. SOIL ANALYSIS. A laboratory course involving a study of the chemical analysis 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. *Prerequisite: Junior standing, Chemistry 9 and 10. First 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 the productivity, 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.* Given alternate years.

157. ADVANCED FARM MANAGEMENT. A course for graduate students consisting of assigned special problems in



farm management. *Either semester. Three to five credits.* Stewart.

200. THESIS COURSE IN AGRONOMY. *Either semester. Credit to be arranged.* Stewart.

#### ANIMAL HUSBANDRY

College of Agriculture

PROFESSOR WILSON, HEAD OF DEPARTMENT

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 farm animals. For illustration, the animals owned by the department and stock farms 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.

4. LIVESTOCK JUDGING. Practice in judging live stock to gain familiarity with the points of excellence in the various breeds of farm 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 farm animals. *Prerequisite: Animal husbandry 1 and 4, chemistry 5, 6. 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.

51. GENETICS. A discussion of the principles underlying the science of breeding, the aim of which is to develop, maintain, and improve the various types and breeds of farm animals and farm crops, studied with special reference to their application to breeding of farm animals. *Prerequisite: Zoology 2. Second semester. Lectures, three hours. Three credits.* Wilson.

54. LIVESTOCK REGISTRATION. The details of registering pure bred animals, requiring the use of blanks for making application for registry; the use of herd books. A study of

the history of the recognized registry associations and the rules governing them; a study of the value of pedigrees and how to keep the herd records. *Prerequisite: Animal husbandry 1 and 4. First semester. One credit.* Wilson.

55. ADVANCED LIVESTOCK FEEDING. *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 livestock farmer; calculating profits under various conditions; systematic keeping of records of farming operations; selection of animals for the feed yard, show ring, market, and butcher. *Prerequisite: Animal husbandry 1, 4, 30. Second semester. Three credits.* Given alternate years. 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 1, 52. Second semester. Two credits.* Course must be taken simultaneously with botany 58. Given in alternate years. Wilson and Lehenbauer.

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, 57, 58. (May take this course with course 58.) Either semester. Four to six credits.* Fee, \$3. Wilson.

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. One credit 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

ASSOCIATE PROFESSOR LEWERS, HEAD OF DEPARTMENT

Requirements for a minor in art: Art 1-2 (2 credits), 3-4 (2 credits) and 14 additional credits in the department, at least 6 of which must be in courses numbered 50 or above.

Requirements for a major in art: Art 1-2 (2 credits), 3-4 (2 credits), and 20 additional credits in the department, at least 12 of which must be in courses numbered 50 or above.

Requirements for a special art teacher's certificate are listed elsewhere.

1-2. ELEMENTARY ART. The fundamental principles of form, color, and light and shade. Application of principles in drawing and painting in all mediums, pencil, charcoal, oil color, water color, and pastel. Drawing and painting from nature in landscape and still life. Fundamental principles of design. Applied design in manual arts. *Both semesters. One credit required each semester.* More credits may be elected. Education Building. Lewers.

3-4. INTERMEDIATE ART. A continuation of the work of art 1-2, with addition of clay modeling, drawing, and painting from life. *Both semesters. Credits to be arranged.* Lewers.

5-6. ART APPLIED TO THE HOME. (School of Home Economics.) The fundamental principles of form, color and light and shade. Color and form studied from nature in landscape and still life. Color and line harmony as applied to dress, millinery, and house furnishing. Fundamental principles of design. Original designing and its application in all ways relating to the home. *Two credits required each semester.* Lewers.

7-8. TEACHERS' COURSE. A continuation of the first year's course (art 1-2) in all branches and its application to each grade in public school work. *Second semester. One credit.* Lewers.

51-52. ADVANCED ART. The continuation of art 3-4 in more advanced work. *Both semesters.* Lewers.

53-54. ADVANCED ART. Continuation of art 51-52 in more advanced work. *Both semesters. Credits to be arranged.* Lewers.

For the history of art, see Latin 41, 42, 43 and 44.

## BIOLOGY

PROFESSOR FRANDSEN, HEAD OF DEPARTMENT

PROFESSOR LEHENBAUER

ASSOCIATE PROFESSOR MACK

MR. BILLINGS

MR. LOWRANCE

MRS. YOUNG

The Department of biology includes the following divisions: Bacteriology, botany, horticulture, hygiene, nature study, 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 from the following: Zoology 59 (3 credits), zoology 60 (3 credits), zoology 55 (2 credits), botany 51 (3 credits).

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 hygiene 7-8. *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 and Mrs. Young. Fee, \$5.

*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 22 (4 credits), zoology 1 (3 credits), and 12 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. GENERAL BOTANY. The morphology, histology, and physiology of the flowering plants. *First semester. Two lectures; one laboratory period. Three credits.* 109 and 9 Agriculture Building. Billings. Fee, \$3.

2. GENERAL 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. Billings. Fee, \$3.

3. GENERAL BOTANY. For Agricultural, Premedical and Preforestry students. The morphology, histology, physiology, and development of seed plants. *First semester. Two lectures; two laboratory periods. Four credits.* 9 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 identification 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.

23. 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. Billings. Fee, \$2.

25. ECONOMIC BOTANY. Plants as the source of commercial materials. The geographical distribution of economic plants and their useful and harmful products. *Prerequisite: Botany 1 or 2 or 3. Second semester. Two lectures and assigned readings. Two credits.* 110 Agriculture Building. Lehenbauer.

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. Billings.

54. AGROSTOLOGY. The study of grasses, and practice in identification. Particular emphasis will be given to range grasses. *Prerequisite: Botany 22. Second semester. Two lectures; two laboratory periods.* 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. First semester. Two lectures; two laboratory periods. Four credits.* 8 Agriculture Building. Lehenbauer. Fee, \$4.

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, \$1.

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. Fee, \$4.

66. PLANT ECOLOGY. The study of the principles governing the interrelations of plants and their environmental factors: light, heat, soil, living agencies, etc. A study of field methods in ecology. *Prerequisite: Botany 22, and preferably botany 55. Second semester. Three lectures. Three credits.* 110 Agriculture Building. Lehenbauer.

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 three credits each semester.* 8 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.

4. TEACHERS' HYGIENE. This course consists of lectures, assigned readings, and demonstrations covering the elementary principles of human anatomy and physiology, and paying particular attention to the hygienic applications. The problems of sex hygiene, including the control, the suppression and the prevention of venereal diseases, are discussed both in their individual and in their public bearings. Special attention is placed upon that phase of the subject pertaining to school life, as ventilation, cleanliness, etc. *First semester. Two lectures. Two credits.* 210 Agriculture Building. Mack.

#### Nature Study

1-2. GENERAL NATURE STUDY. The object of this course is two-fold: (1) To cultivate a better understanding and appreciation of natural phenomena with emphasis on the biological features; and (2) to prepare for the teaching of nature study in the public schools. It comprises the study of life histories, pond life, native birds, etc., and includes the making and care of aquaria, terraria, school garden, etc. *Both semesters. Two credits each semester.* 110 and 210 Agriculture Building. Mack. Fee, \$1.

#### Zoology

Requirements for a minor in zoology: Zoology 2 (4 credits), botany 1 or 2 (3 credits), zoology 7-8, or zoology 9 (5 or 6 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 7-8, or zoology 9 (5 or 6 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 Brown. 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 Brown. Fee, \$4.

7-8. PHYSIOLOGY. The general principles of animal physiology, with special reference to the human being. The laboratory work consists of the dissection of some vertebrate, microscopic study of tissues and organs, physiological experiments and demonstrations, and the study of anatomical and physiological models. Some work on microorganisms is included. *Both semesters. Lectures, two hours; laboratory, one period. Three credits each semester.* 110 and 210 Agriculture Building. Brown. Fee, \$2.50 each semester.

9. COMPARATIVE ANATOMY OF VERTEBRATES. Lectures on the progressive development of structures and functions from the lower to the higher vertebrates, leading up to human anatomy. Laboratory dissection of the dog-fish, salamander, and a mammal. *Prerequisite: Zoology 2, or 7-8. 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 or seniors. Open to sophomores who have had one year of college biology. *First semester. Two credits.* 110 Agriculture Building. Frandsen.

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 and to discover their places of hiding, hibernation and transformation. *Prerequisite*: Zoology 2, or a working knowledge of the subject. *First semester. Lectures, two hours; laboratory, one period.* Agriculture Building. Brown. Fee, \$3.

60. VERTEBRATE 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 mammals, birds and reptiles, primarily of Nevada. Occasional field trips will be taken. *Prerequisite*: Zoology 2 or 59. *Second semester. Lectures, two hours; laboratory, one period. Three credits.* Agriculture Building. Brown. 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 7-8. *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 micro-manipulation. Preparation of slides and recognition of tissues. *Prerequisite*: Zoology 2 and 9 or 7 and 8. *Second semester. Two laboratory periods.* Brown. 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  
PROFESSOR ADAMS  
ASSOCIATE PROFESSOR LOUGH  
ASSOCIATE PROFESSOR DEMING

Requirements for a minor in chemistry: Chemistry 5-6 (6 credits), 9 (4 credits), 10 (4 credits), and 4 additional credits in the department in courses numbered 50 or above.

Requirements for a major in chemistry: Chemistry 5-6 (6 credits), 9 (4 credits), 10 (4 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 149.

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. PRINCIPLES OF INORGANIC AND ANALYTICAL CHEMISTRY. A lecture and laboratory course designed to give the student a knowledge of the fundamental principles underlying

chemical change and to give him training in the methods of qualitative and a few of the more fundamental and simpler processes of gravimetric analysis. Numerous equations and problems involving chemical manufacture and the mass law will be assigned. *One lecture and three laboratory periods each week. Prerequisite:* Chemistry 2 or 8. *First semester. Four credits.* Mackay Science Hall. Sears and Deming. Fee, \$12.

10. QUANTITATIVE ANALYSIS. A lecture and laboratory course covering the more important methods used in both gravimetric and volumetric analysis. Designed to train the student in the technique of quantitative analysis and to give him a knowledge of the principles and problems involved. *One lecture and three laboratory periods each week. Prerequisite:* Chemistry 9, Mathematics 11. *Second semester. Four credits.* Mackay Science Hall. Sears and Lough. Fee, \$12.

25. ELEMENTARY ORGANIC CHEMISTRY. (College of Agriculture.) A lecture and laboratory course in which are presented briefly the principal features of the aliphatic compounds as well as some discussion of the aromatic compounds. Open only to students of home economics. *Prerequisite:* Chemistry 1 and 2. *First semester. Two lectures; one laboratory period. Three credits.* Mackay Science Hall. Lough. Fee, \$4.

26. ELEMENTARY PHYSIOLOGICAL CHEMISTRY. (College of Agriculture.) A lecture course designed to present briefly the fundamental aspects of the chemistry of foods, of digestion, of metabolism, and of excretion. Open only to students of home economics. *Prerequisite:* Chemistry 25. *Second semester. Three lectures. Three credits.* Mackay Science Hall. Lough.

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. Adams. Fee, \$8.

53. ADVANCED ORGANIC CHEMISTRY. (Graduate credit given with consent of instructor.) A lecture and laboratory course

on special chapters in organic chemistry. *Prerequisite:* Chemistry 51-52. *First semester. Two lectures and two laboratory periods. Four credits.* Mackay Science Hall. Adams. Fee, \$8.

64. SPECIAL PROBLEMS. A laboratory course designed to give the student training in various special fields. Water and gas analysis, qualitative organic, potentiometric and 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, Adams, Lough, Deming. Fee, \$8.

67. PHYSIOLOGICAL CHEMISTRY. (Graduate credit given with consent of instructor.) For students of chemistry, medicine, biology, bacteriology and nutrition. Lectures and recitations on the chemistry of carbohydrates, fats, proteins, body tissues, blood, secretions, putrefaction and the physiological processes such as digestion, absorption and assimilation of food, general enzyme action, metabolism and the fundamental principles of nutrition. The laboratory work consists of qualitative and quantitative experiments on the lecture material. *Prerequisite:* Chemistry 10 and 52. *First semester. Two lectures, two laboratory periods. Four credits.* Mackay Science Hall. Lough. 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 and discussion course. The student will be expected to prepare a number of inorganic substances involving some of the more difficult reactions and technique. Special emphasis will be given to method, technique, and equations involved. *Prerequisite:* Chemistry 51. *Second semester. One recitation and two laboratory periods. Three credits.* Mackay Science Hall. Sears. Fee, \$8.

74. CHEMISTRY OF THE RARER METALS. (Graduate credit



given with consent of instructor.) A lecture and laboratory course designed to give a more intimate knowledge of the elements. Emphasis will be given to the preparation and properties of the metals and their more important compounds. *Prerequisite:* Chemistry 10. *Second semester. One lecture and two laboratory periods. Three credits.* Mackay Science Hall. Sears. Fee, \$8.

75. THE PERIODIC LAW. (Graduate credit given with consent of instructor.) A lecture and seminar course designed to give the student a rather intimate knowledge of the less common elements and their relation to the more common elements. A critical study is made of the more important periodic tables in the light of recent developments in atomic structure and the known properties of the elements. Practical use is made of the periodic law to correlate the facts of chemistry. *Prerequisite:* Three years of college chemistry. *First semester. Two credits.* 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. The following topics are taken up: Empirical laws of chemical combination, atomic-molecular theory; gases; liquids and solids; solutions, electrolytes and nonelectrolytes. *Prerequisite:* Chemistry 10 and mathematics 16. *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. The following subjects are introduced: Surface chemistry and solutions; structure of crystals; the metallic state; colloidal state of matter, absorption; rate and mechanism of chemical reactions, catalysis; electrochemistry, electrolysis and polarization. *Prerequisite:* Chemistry 80, physics 2A, mathematics 26. *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.* Adams.

95-96. CURRENT CHEMICAL LITERATURE. (Graduate credit given with consent of instructor.) A seminar course designed to help the student become familiar with the various sources of chemical information as well as to afford him practice in summarizing such information for discussion. Each student will be required to present at least one report each semester upon an assigned topic. The class will meet not oftener than once each week for the presentation and discussion of assigned topics. *Prerequisite:* Two years of college chemistry. *Both semesters. One credit per year.* May be repeated for credit. 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, Adams, Lough, and Deming. Fee, \$8.

101. ADVANCED PHYSICAL CHEMISTRY. Either A or B is given, depending upon the needs of the class.

A. A lecture course dealing with the thermodynamic functions, energy, free energy and entropy, and their partial derivatives. The method employed is essentially that of G. N. Lewis.

B. A lecture course dealing with the general subject, structure of matter. Topics introduced include: Electrical theory of matter, radio-activity; quantum theory, photochemistry; structure of the atom and molecule; nature of chemical valence. *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. Adams, Sears, Lough and Deming. Fee, \$4 per credit hour, according to work.

## CIVIL ENGINEERING

College of Engineering

PROFESSOR BOARDMAN, HEAD OF DEPARTMENT

PROFESSOR BIXBY

ASSISTANT PROFESSOR AMENS

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. Boardman.

20. TECHNICAL REPORT. A systematic write-up of an approved technical subject in civil engineering. This course is designed primarily for civil engineering students, and those registering in same will be required to obtain their assignments within the first two weeks after registration. Outlines and bibliography, together with a reasonable showing of progress, must be presented for approval within six weeks after registration. *Prerequisite: English 1-2. First semester. One credit.* Electrical Building. Bixby.

51-53. SURVEYING. Lectures, recitations and computations, covering the common types of surveying, elementary in the first semester and more advanced in the second semester with special emphasis on Polaris and sun observations for meridian, and topographic and mine surveying. *Prerequisite: Trigonometry. Both semesters. Two credits each semester.* Electrical Building. Boardman.

52-54. SURVEYING LABORATORY. Field practice in the use and adjustment of surveying instruments and drafting room work in the reduction and plotting of the field notes. This work is made practical by the actual survey and mapping of a portion of the University grounds. This course accompanies civil engineering 51-53. *Both semesters. Two credits*

*each semester.* Campus and Electrical Building. Bixby. Fee, \$3 each semester.

55A-55B. FOUNDATIONS AND SUBSTRUCTURES. A study of the principles and practice of design and construction of substructures and of the materials and manufacture of concrete. *A. Lectures, two credits; B. Laboratory, one credit. Second semester.* Electrical Building. Boardman. (Alternates with C. E. 67.) Not offered in 1938-1939.

58. Sm. SUMMER SURVEYING. This course starts directly after the close of the regular college year in May. The work consists principally of topographic and mine surveying accompanied by related computations and mapping. The former involves careful base line measurement and triangulation for control, followed by topographic surveying by the plane table method. In the mine surveying, both surface and underground work is done and a mine map showing the underground working is made by each student. Direct solar observations are taken for meridian and latitude and special emphasis is given to computations. *Prerequisite: C. E. 51, 52, 53, and 54.* Four weeks. Fee, \$20, including automobile transportation costs. Bixby.

60. HIGHWAY ENGINEERING. A detailed study is made of the location, construction, and maintenance of highways. *Second semester. Two credits.* Electrical Building. Bixby.

63-64. RAILROAD ENGINEERING. Lectures, recitations, and field work on the location and construction of railroads. Also a study of locomotive tractive power and train resistances and their effects on the economic location and operation of railroads. *Prerequisite: Civil Engineering 53-54. First semester. Lectures, three credits; laboratory, two credits.* Electrical Building. Bixby. Fee, \$3.

67. ENGINEERING ECONOMICS. Economic selection, sinking funds, salvage value, depreciation, estimating etc. Illustrated by engineering problems. *First semester. Lectures, two credits.* Electrical Building, Boardman. (Alternates with C. E. 55.)

69. GRAPHIC STATICS. A course which covers the principles of graphic statics, and their applications to the analysis of stresses in statically determinate structures for various conditions of loadings. *Second semester. Lectures, one credit; laboratory, one credit.* Electrical Building. Bixby.

72. TESTING MATERIALS LABORATORY. The experiments are as follows: Tension tests on steel, wrought and cast iron; compression tests on wood, building stone, brick, cast iron, wrought iron, and steel; effects on the strength of mortar by varying the proportions of sand, water, and cement; tests on standard cement briquettes; cross-bending tests on wooden and steel beams; cross-breaking tests on standard cast-iron test bars; tests of small iron, steel, and wood columns. A carefully prepared report clearly stated is required of each test. *Prerequisite*: C. E. 74 must be taken as a prerequisite or at the same time as C. E. 72. *Second semester. Laboratory, one period. One credit.* Electrical Building. Bixby. Fee, \$2.50.

74. STRENGTH OF MATERIALS. A study of the behavior of materials under stress and a discussion of stress and strain due to bending and torsion. The applications of the cardinal principles of mechanics to riveted joints, pipes, cylinders, beams, columns, and shafts. The principle of work and area moments applied to finding deflections and moments of continuous beams. An extended discussion covering the general relations between stress and strain, with applications to combined stress, composite beams, resilience, hooks, and fatigue of metals. *Prerequisite*: Physics 1a and 2a or 3 and 4; mathematics 25, 26 and 55. *Second semester. Lectures, three hours. Three credits.* Electrical Building. Amens.

75-76. STRUCTURAL ANALYSIS. A study of the determination of stresses in roof and bridge trusses and girders, and of the economic problems involved in the selection of the type of structure, materials to be used, length and number of bridge spans. *Prerequisite*: Mathematics 26. *Both semesters. Lectures, three credits first semester, two credits second semester.* Electrical Building. Boardman.

77-78. STRUCTURAL DESIGN. Application of courses 75-76 and the principles and standard practice methods of design to the designs of several common types of steel structures. Complete working drawings are made of at least two structures, one of them being a railroad plate girder bridge. *Prerequisite*: Civil engineering 75-76. *Laboratory, three credits first semester, two credits second semester.* Electrical Building. Boardman.

85-86. REINFORCED CONCRETE. The theory and practice

of reinforced concrete design and construction. In the laboratory part of the course applications are made to the design of several types of structures, including a retaining wall and an arch bridge. *Prerequisites*: Mathematics 55 and civil engineering 74. *First semester, lectures, two credits; laboratory, two credits. Second semester, lectures, one credit; laboratory, two credits.* Electrical Building. Bixby.

90. HYDRAULICS. A study of the principles of hydraulics and hydrostatics, the pressure and buoyancy of water and the laws of its flow through openings and in channels of various kinds. Especial emphasis is laid on the solution of numerous practical problems by the student. *Prerequisites*: Mathematics 25 and 26, physics 1a, 1b and 2a, 2b, or physics 3 and 4. *Second semester. Lectures, three hours. Three credits.* Electrical Building. Boardman. Fee, \$1.

91. SANITARY ENGINEERING. A combination course dealing with public water supplies and the sewerage and drainage of towns. Especial attention is given to methods of sewage disposal and to the purification of water. *Prerequisite*: C. E. 90. *Second semester. Lectures, three credits.* Electrical Building. Bixby.

94. IRRIGATION ENGINEERING. A study is made of the collection, storage, and distribution of water for irrigation, with special reference to the structures involved. *Prerequisite*: C. E. 90. *First semester. Lectures. Three credits.* Electrical Building. Bixby.

97-98. HYDROLOGY. The occurrence of water in the atmosphere, on the earth's surface and beneath the surface. The understanding of some of the many divisions of this subject is essential to a proper planning for any utilization or control of water by man. *Prerequisite*: Junior standing. *Two credits each semester.* Electrical Building. Boardman.

99. ENGINEERING PROBLEMS. This course consists of the working of assigned problems, the solution of which requires the application of various phases of engineering practice. A complete report of the work done on each problem, including all necessary drawings, costs, estimates, and conclusions, must be furnished to the department. This course is intended as an optional substitute for a thesis. *Second semester. Two credits.* Electrical Building. Boardman.

100. THESIS. Thesis on an approved subject in which the

student is especially interested. *Second semester. Two credits.* Boardman.

121-122. ADVANCED STRUCTURAL ENGINEERING. The analysis and design of one or more of the following types: Arch, cantilever, suspension and various types of movable bridges. *Prerequisite:* Civil Engineering 75, 76 and 77. *Lectures and laboratory. Four to six credits for the year according to work accomplished.* Electrical Building. Boardman.

199-200. GRADUATE THESIS. Advanced research work in the investigation of engineering materials or other engineering problems. *Both semesters. Credits to be arranged.* Electrical Building. Boardman.

### THE CLASSICS

PROFESSOR CHURCH

Requirements for a minor in classics: With no admission credits in Latin, classics 1-2 (6 credits), 3-4 (6 credits), and 6 credits in the department in courses numbered 50 or above; with 2 admission credits, classics 3-4 (6 credits), and 6 credits in the department in courses numbered 50 or above.

Requirements for a major in classics: With no admission credits, classics 1-2 (6 credits), 3-4 (6 credits), 57-58 (2 credits), and 10 credits in the department in courses numbered 50 or above; with 2 admission credits, classics 3-4 (6 credits), 57-58 (2 credits), and 10 credits in the department in courses numbered 50 or above.

Entrance credits in Latin above 2, especially if they include Vergil's *Aeneid*, will be accepted in meeting major and minor requirements.

#### I. LANGUAGE

Only the courses in language can be used to satisfy the general language requirement in the University.

##### 1. LATIN

1-2. BEGINNING LATIN. This course is designed to prepare for the reading of Vergil and also for admission to the professional schools. Comparative language, medical Latin and law Latin are stressed. *Both semesters. For students entering without high school credit in Latin, three credits each semester.*

*For students entering with one year credit in high school Latin, two credits first semester and three credits second semester.*

*For students entering with two years' credit in high school Latin, three credits second semester only.* 205 Morrill Hall Church.

*These restrictions apply to graduation only.*

3-4. VERGIL. *Aeneid*. This course is intended for such students as present one or two years of Latin at entrance, but wish to continue the study in college. *Both semesters. Three credits each semester.* 205 Morrill Hall. Church.

55. CICERO. *De Senectute*. *First semester. Three credits.* 205 Morrill Hall. Church.

56. HORACE AND CATULLUS. Latin lyric poetry. *Second semester. Three credits.* 205 Morrill Hall. Church.

Courses 55-56 given alternate years.

57-58. LATIN PROSE COMPOSITION. Required of all students who have elected Latin as their major department, or who seek to be recommended as teachers of Latin. *Both semesters. One credit each semester.* 205 Morrill Hall. Church.

101. SEMINAR FOR GRADUATES. (a) The study of the Roman burial formulae, their development, and religious significance. (b) Comparative mythology. Its religious, art, and literary forms. (c) Comparative classical literature.

#### II. ART

NOTE—A knowledge of Latin or Greek is not required for courses in art and literature.

41. GREEK ART. Illustrated by lantern slides and reproductions. *First semester. Two credits.* 205 Morrill Hall. Church.

42. ROMAN TO MODERN ART. Illustrated by lantern slides and reproductions in color. *Second semester. Two credits.* 205 Morrill Hall. Church.

43-44. SUPPLEMENTARY COURSE IN APPRECIATION OF ART. Readings and reports. Open only to those who are taking or have taken the corresponding semester of classics 41 or 42 or its equivalent. Particularly for students who desire to increase their credit hours in 41-42. *Either semester. One credit per semester.* 203 Morrill Hall. Church.

61. AMERICAN PAINTING. Readings and discussions. Open only to those who have taken or are taking 42 or 72 or equivalent. *First semester. One credit.* 203 Morrill Hall. Church.

62. AMERICAN SCULPTURE AND ARCHITECTURE. Readings and discussions. Open only to those who have taken or are taking 41-42 or 71-72 or equivalent. *Second semester. One credit.* 203 Morrill Hall. Church.

71. ADVANCED GREEK ART. *Prerequisite, or to be taken simultaneously:* Classics 41. *First semester. Two credits.* 205 Morrill Hall. Church.

72. ADVANCED ROMAN TO MODERN ART. *Prerequisite, or to be taken simultaneously:* Classics 42. *Second semester. Two credits.* 205 Morrill Hall. Church.

73-74. ADVANCED PROJECTS IN APPRECIATION OF ART. Open only to those who have taken or are taking classics 41-42 or 71-72. *Either semester. One credit per semester.* 203 Morrill Hall. Church.

75. BEAUTY IN NATURE. Landscape, gardens, exploration. Lectures, with readings and discussions. *First semester. One credit.* Morrill Hall. Church.

### III. LITERATURE

51-52. COMPARATIVE CLASSICAL POETRY IN ENGLISH. The epic lyric drama and pastoral with supplemental reference to classical and Teutonic mythology and modern literature and opera. *Both semesters. Two credits each semester.* 205 Morrill Hall. Church.

### ECONOMICS, BUSINESS, AND SOCIOLOGY

ASSOCIATE PROFESSOR SUTHERLAND, ACTING HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR WEBSTER

ASSOCIATE PROFESSOR INWOOD

ASSISTANT PROFESSOR PLUMLEY

MR. ROBERTSON

MR. COLLINS

JUDGE SOUTER

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), and 15 additional credits in the department, not less than 12 of which shall be in 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. *First 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 in modern times. *First semester. Two credits.* Open to freshmen. Education Building. Inwood.

5. 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.

51. PUBLIC FINANCE. Public expenditures and sources of public revenue. *Prerequisite:* Economics 1-2. *First semester. Three credits.* Education Building. Sutherland.

52. MONEY AND BANKING. *Prerequisite:* Economics 1-2. *First semester. Three credits.* Education Building. Sutherland.

53. INTERNATIONAL TRADE. Theory of international trade. Tariffs and tariff history. *Prerequisite:* Economics 1-2. *First semester. Two credits.* Education Building. Inwood.

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.

55. TRANSPORTATION. The growth and development of transportation in the United States. *Prerequisite:* Economics 1-2, business 41. *Second semester. Two credits.* Education Building. Inwood.

56. INSURANCE. *Prerequisite:* Economics 1-2, business 41. *Second semester. Two credits.* Education Building. Collins.

61. STATISTICAL METHODS. Elementary statistical methods as used in business and in the social sciences. *First semester. Two credits.* Education Building. Collins.

64. LABOR ECONOMICS. *Prerequisite:* Economics 1-2. *Second semester. Three credits.* Education Building. Sutherland.

65. INTRODUCTION TO ECONOMICS AND BUSINESS ADMINISTRATION. (College of Engineering). *Prerequisite:* Junior Standing. *First semester. Three credits.* Education Building. Inwood.

66. INDUSTRIAL AND FINANCIAL ORGANIZATION. (College of Engineering.) *Prerequisite:* Economics 65. *Second semester. Three credits.* Education Building. Inwood.



69. ECONOMICS OF MARKETING. *Prerequisite:* Economics 1-2. *Second semester. Three credits.* Education Building. Inwood.

73. BUSINESS CYCLES. Open to seniors and graduates majoring or minoring in the department. *First semester. Three credits.* Education Building. Collins.

74. CONSUMPTION ECONOMICS. Open to seniors and graduates majoring or minoring in the department. *Second semester. Three credits.* Education Building. Collins.

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.

95. SEMINAR IN ECONOMICS. Hours to be arranged with individual students. *First semester. One credit.* Education Building. The Staff.

96. SEMINAR IN ECONOMICS. Hours to be arranged with individual students. *Second semester. One credit.* Education Building. The Staff.

#### *Business*

41. FUNDAMENTALS OF BUSINESS ORGANIZATION. An introductory survey course in business 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. Robertson and Collins.

48. FUNDAMENTAL PRINCIPLES OF LAW PRACTICALLY APPLIED TO THE PROFESSIONS, BUSINESS AND CITIZENSHIP. A comprehensive investigation of the fundamental principles of law, designed to provide the prospective engineer, architect, physician or other professional or business man with an intelligent understanding of legal problems which arise in the practice of any profession or business. *Second semester. Three credits.* Mackay Science Hall. Souter.

55-56. ADVANCED ACCOUNTING. Study of the advanced

theory of accounts and its application. Selected problems and readings. *Prerequisite:* Business 43-44. *Both semesters. Three credits each semester.* Education Building. Robertson.

65. ADMINISTRATION OF FINANCE. Principles and problems of financing business enterprises. *Prerequisite:* Business 41. *First semester. Three credits.* Education Building. Inwood.

66. ADMINISTRATION OF PRODUCTION. Internal organization and control of different forms of business enterprise. *Prerequisite:* Business 41. *Second semester. Three credits.* Inwood.

74. ADVANCED BUSINESS LAW. An advanced course in business law for those who are specializing in a preparation for business. *Prerequisite:* Business 48. *Second semester. Three credits.* Mackay Science Hall. Souter. (Not given in 1938-1939.)

85. COST ACCOUNTING. A comprehensive study of all elements of manufacturing cost accounting. *Prerequisite:* Business 43-44. *First semester. Two credits.* Education Building. Robertson. (Not given unless elected by six or more students.)

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. Robertson. (Not offered unless elected by six or more students.)

91-92. AUDITING. The principles and practice of auditing. Practice problems. *Prerequisite:* Business 43-44. *Both semesters. Two credits each semester.* Education Building. Robertson.

93-94. PAY ROLL TAX ACCOUNTING. A study of Federal social security taxes and State unemployment compensation insurance as applied to pay roll accounting. *Prerequisite:* Business 43-44. *Both semesters. One credit each semester.* Education Building. Robertson.

95-96. SEMINAR IN BUSINESS. *One hour each semester.* Education Building. The Staff.

## 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.* Webster.

20. RURAL SOCIOLOGY. Rural life and problems with special reference to Nevada conditions. *Prerequisite*: Sophomore standing. *Second semester. Two credits.* Webster.

71. SOCIAL ORGANIZATION. The structure, forms, functions and development of major social groups and institutions. *First semester. Three credits.* Webster.

79. RACE PROBLEMS. The social significance of race and racial minorities. Emphasis on the American Indian. To alternate with sociology 83. *First semester. Two credits.* Webster.

80. THE FAMILY. Forms and functions of the family as a social institution. Emphasis on present trends. To alternate with sociology 84. *Second semester. Two credits.* Webster.

81. POVERTY AND DEPENDENCY. Causes of economic inefficiency, and methods of relief. Public and private charity. Field work. *Prerequisite*: Economics 1-2. *First semester. Two credits.* Webster.

82. CRIMINOLOGY. Conditions, causes and correction of antisocial behavior. Field work. *Prerequisite*: Sociology 1. To alternate with sociology 86. *Second semester. Two credits.* Webster.

83. POPULATION. The social and economic significance of numbers and quality of population. Migration. To alternate with sociology 79. *First semester. Two credits.* Webster.

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. To alternate with sociology 80. *Second semester. Two credits.* Webster.

86. METHODS IN SOCIAL WORK. Principles and methods in

applied sociology. The social survey. Field work. *Prerequisite*: Six credits in sociology. To alternate with sociology 82. *Second semester. Two credits.* Webster.

95-96. SEMINAR IN SOCIAL THEORY. *Both semesters.* For seniors and graduates only. *One credit each semester.* Webster.

## EDUCATION

PROFESSOR TRAINER, HEAD OF DEPARTMENT  
 PROFESSOR EMERITUS JOHN W. HALL  
 ASSOCIATE PROFESSOR RUEBSAM  
 ASSOCIATE PROFESSOR BROWN  
 ASSISTANT PROFESSOR PUFFINBARGER  
 MR. HIGGINS  
 MISS NESBITT  
 MR. WHIDDEN  
 COOPERATING TEACHERS

Requirements for a minor in education: Psychology 6 (3 credits), education 60 (3 credits), education 63 (1 credit), 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: Psychology 6 (3 credits), education 60 (3 credits), 63 (1 credit), 71 (3 credits), 75 (2 credits), 76 (2 credits), 82 (2 credits), and 11 additional credits approved by the Dean.

## Elementary Education

20. PRINCIPLES OF TEACHING. For teachers in elementary schools. A study of the various types of classroom teaching to discover the principles of selection, organization and presentation of subject matter to children of the first six grades. *Second semester. Three credits.* Education Building.

21. TEACHING OF MUSIC. The aims and principles of music teaching in the kindergarten, elementary and upper grades and high school. Rote songs, folk songs, part songs, care of problems confronting the teacher generally. *First semester. Two credits.* Education Building. Post.

24. SCHOOL LAW. A consideration of the fundamental facts of school law and the fundamental problems of school organization from the point of view of the teacher in the elementary school. *Second semester. One credit.* Education Building. Brown.

25. OBSERVATION OF TEACHING. Observation and discussion of specific classroom work as a preparation for practice

teaching. *First semester. One credit.* Public Schools. Ruebsam.

28-29. SUPERVISED TEACHING IN 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.* Rubesam. Fee, \$1.

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.* Education Building.

35. THE TEACHING OF ENGLISH. Principles underlying the selection, organization and presentation of subject matter for grades 5 to 8 and the study of children's literature for these grades. *Second semester. Two credits.* Education Building. Ruebsam.

34. THE TEACHING OF ENGLISH. Principles underlying the selection, organization and presentation of subject matter for the first four grades and the study of children's literature for these grades. *Both semesters. Three credits.* Education Building. Ruebsam.

41. CONSTRUCTIVE ACTIVITIES FOR 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. *Second semester. Two credits.* Education Building. Fee, \$2. Ruebsam.

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 education 30 or education 38. 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. A continuation of education 20. *Second semester. Two credits.* Education Building. Puffinbarger.

48. 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, second year. Two credits.* Education Building. Puffinbarger. Fee, \$1.

56A. SCOUTCRAFT 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. *Two credits. One lecture, one laboratory. Second semester only.* Simas.

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. *Either semester. One credit.* Whidden.

57. HISTORY OF EDUCATION. General Course. The development of educational thought and practice viewed as a phase of social progress. Primarily for teachers in service. *First semester. Two credits.* Education Building. Brown.

58. HISTORY OF EDUCATION IN THE UNITED STATES. A study of forces and conditions which have been most influential in the shaping of educational ideals, theories, practices and problems at the present time. Primarily for teachers in

service. *Second semester. Two credits.* Education Building. Brown.

59. TEACHING OF SOCIAL STUDIES. A study of the aims, objectives, materials, and methods of teaching social studies. Especial stress will be placed upon lesson planning. The course will be particularly helpful for teachers in the upper elementary or junior high school grades. Primarily for teachers in service. *Two credits.* Brown. (Not given 1938-1939.)

#### *Secondary Education*

NOTE—Since the candidates for high school positions greatly exceed the number of vacancies open to inexperienced teachers, it is highly desirable that students qualify to do effective service in elementary schools. This would necessitate taking ten elementary school units including one semester of practice teaching. This work should be started during the sophomore year.

60. PROBLEMS OF SECONDARY EDUCATION. This course involves the study of some of the major problems that confront the high school classroom teacher, as: the problem of evaluating student ability and achievement, adapting instruction to individual differences, the function and place of the high school in our educational system and the educational values of high school subjects. Open to juniors only. *Both semesters. Three credits.* Education Building. Traner.

63. SCHOOL MANAGEMENT AND SCHOOL LAW. A consideration of the fundamental facts of school law and the fundamental problems of school organization and school hygiene from the point of view of the teacher in the secondary school. *First semester. One credit.* Education Building. Brown.

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.* Dashiell.

65. HIGH SCHOOL MUSIC. Study of conducting choral and orchestral technique, appreciation classes, theoretical subjects and practical demonstrations. 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.

66. SUBJECT MATTER AND METHODS. A study of the most

suitable subject matter for the different high school subjects 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: Two credits.* Adams.

Section C, mathematics. *First semester. Two credits.* Wood.

Section D, social subjects. *Second semester. Two credits.* Brown.

Section E, science. *First semester. One credit.* Brown.

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, the emotionally unstable, and the delinquent. *Two credits.* Puffinbarger. (Not given 1938-1939.)

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.* Education Building.

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 and Puffinbarger. 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. *Second semester. Two credits.* Education Building. Traner.

#### AGRICULTURE AND HOME ECONOMICS

86. PROBLEMS IN AGRICULTURAL EDUCATION. This course is a study of the most important problems that an agricultural teacher must meet: Selecting the subject matter for high school courses in agriculture and for farmer's short courses; preparing plans for teaching this subject matter; and making contact with the adult farmer. Open to juniors and seniors in the College of Agriculture to meet in part the requirements of the Smith-Hughes Act. *Second semester. Two credits.* Education Building. 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.* Agriculture Building. 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 of the Smith-Hughes Act. *First semester. Two credits.* Education Building. 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.

#### COURSES OFFERED PRIMARILY FOR TEACHERS IN SERVICE WORKING FOR A MASTERS DEGREE

Time and place according to the convenience of the teachers.  
No fees for teachers in service.

103. ADMINISTRATION OF STATE SCHOOL SYSTEMS. A consideration of the problems involved in organizing and administering an effective State system of schools, especially as these problems affect the State of Nevada. Topics for study are satisfactory units of organization, proper certification standards, appointment and tenure of teachers, adequate supervision, the financing of the schools. Designed for those who wish to understand the basic principles upon which a good State system must rest and for those who may be looking forward to a connection with a State Department of Education. *Either semester. Two credits.* Education Building. Traner.

104. PRESCHOOL AND PRIMARY PROBLEMS. Reading and discussion of current educational problems with some practical work in educational activities. This course is open to teachers and parents. *Second semester. Two credits.* Education Building. Ruebsam.

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. *First semester. Two credits.* Education Building. Hall.

## ELECTRICAL ENGINEERING

College of Engineering

PROFESSOR S. G. PALMER, HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR SANDORF

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.

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 the 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.* Palmer.

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 synchronous 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.

65. ELECTRICAL ILLUMINATION. A study of the principles of electric lighting and illumination and the practical application of modern lighting equipment. *First semester. Two lecture periods. 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 electrical engineering 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 per credit.

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 per credit.

70. INDUSTRIAL ELECTRICAL MEASUREMENTS. A course for senior electrical engineering students, intended to give instruction in those electrical measurements, a knowledge of which is necessary for a fuller understanding of the principles involved in the design and operation of electrical equipment. *One lecture and one laboratory period. Two credits.* *Second semester.* Palmer and 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. First semester.* Sandorf.

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. Fee, \$2.50 per credit.

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. ELECTRICAL INVESTIGATION. Original investigation of some electrical engineering problem and writing of report. The report is intended to be the equivalent of a thesis. Elective for seniors in electrical engineering, who, in the opinion of the instructor, are qualified to undertake the work chosen and are particularly interested in it. *Second semester. One to three credits.* Palmer or Sandorf. Fee, \$2.50 per credit.

85-86. COMMUNICATIONS LABORATORY. The course consists of assembling and testing circuits and apparatus used in electrical communication. 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

MISS ADAMS, ASSISTANT

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

ENGLISH 0. Required of students in English 1 found deficient in their English preparation. To be taken along with English 1. *Two periods a week. No credit.*

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 1 or 1.5 in English 1 may substitute for English 2 one of the courses in the department numbered 3 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. Two credits each semester.*



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 Harwood.

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 3 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.

66. THE ENGLISH ESSAY. A study of the development of the essay as a literary form from Bacon to the present day. *Second semester. Three credits.* 103 Hall of English. Riegelhuth. (Not offered in 1938-1939.)

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 1938-1939.)

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. *First semester. Three credits.* 101 Hall of English. Hill. (Not offered in 1938-1939.)

78. MILTON. Minor poems, dramas, and Paradise Lost. *Second semester. Three credits.* 101 Hall of English. Hill. (Not offered in 1938-1939.)

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 1938-1939.)

80. VICTORIAN POETS. A study of the major poets against the background of the age. *First semester. Three credits.* 103 Hall of English. Riegelhuth.

85-96. 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 1938-1939.)

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 1938-1939.)

94. CHAUCER. "The Canterbury Tales," with stress on the literary aspects of the work, rather than on the purely philological. *Second 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 2.0 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 150-152.

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 is 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 1938-1939.)

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 1938-1939.)

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 1938-1939.)

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. (Not offered in 1938-1939.)

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. PROBLEMS IN JOURNALISM. A special phase of journalism, not covered by other courses and adapted to the particular needs of the group of students eligible will be studied. *Prerequisite:* Journalism 21-22, or the consent of the instructor. *Second semester. Three credits.* 105 Hall of English. Higginbotham. (Not offered in 1938-1939.)

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 2.0 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. (Not offered in 1938-1939.)

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.

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. (Not offered in 1938-1939.)

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.

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. *First 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.

### GENERAL ENGINEERING

1. ENGINEERING ORIENTATION. See page 269 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. Lewers.

3-4. ARCHITECTURAL DRAWING. Perspective drawing, building plans, historical basis of architectural design. The five orders of classical architecture; influence of Roman, Medieval and Renaissance architecture on modern design. *Both semesters. Two credits per semester.* Education Building. Lewers.

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.

#### 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.

1. PHYSIOGRAPHY. (Open only to normal school students for credit.) A study of processes active upon or within the crust of the earth, with special emphasis on the resultant surface expression. *First semester. Two credits.* Mackay School of Mines. Wheeler.

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 5 and 6, 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 5 and 6, 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. Gianella. 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 and Carpenter.

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). *Second 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. Twelve 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.* Course begins

directly after commencement. Gianella, Wheeler and Carpenter.

*NOTE*—Geology 71 may be substituted for civil engineering 5S (summer surveying) by applying to Director of the Mackay School of Mines.

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. A charge based on equipment and material used.

80. GEOLOGIC INVESTIGATION. A continuation of geology 79. *Second semester. Credits to be arranged.* Mackay School of Mines. Gianella and Wheeler. A charge based on equipment and material used.

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.

#### HISTORY AND POLITICAL SCIENCE

PROFESSOR WIER, HEAD OF DEPARTMENT  
 PROFESSOR HICKS  
 ASSOCIATE PROFESSOR FEEMSTER  
 ASSOCIATE PROFESSOR SMITH  
 ASSISTANT PROFESSOR STEWART

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 4 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. 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.

### History

1-2. HISTORY OF THE AMERICAS. Against a broad European background the spread of civilization in America will be traced. The development of each geographical section will be presented and the relation shown of each section to America as a whole. Culmination of the study will be found in a survey of the Great Basin and the place of Nevada in that basin. The course will deal in a comprehensive way with the large movements of a political, economic, and social nature in the New World. It is intended to give a new and large American perspective. The Constitutions of the United States and of Nevada will be studied in fulfillment of the State legal requirement. *Either semester. Three credits each semester.* Regular freshman history course. 102 Stewart Hall. Wier, Hicks, Stewart, 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 semester. Three credits each semester.* 204 Morrill Hall. 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. Wier.

53. INSTITUTIONAL RELATIONS OF WOMAN IN HISTORY. A study of woman's characteristics in relation to social and industrial life both in past centuries and at the present time. Especial emphasis on the vocations now open to women and the significance of college education in preparation for the same. Lectures on various vocations will be given by representatives of these professions and industries. Open to freshmen women, as well as to all other women students. *First semester. Two credits.* 101 Stewart Hall. Wier.

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. Wier. (Not given in 1938-1939.)

55-56. WESTWARD EXPANSION OF THE UNITED STATES. A study of the westward movement from the Atlantic to the Pacific and of the continuous influence of the West upon national and international affairs. Particular attention will be given to the political, economic, and social aspects of the occupation of the various sections. Required for departmental recommendation for high school teaching of history. *Both semesters. Two credits each semester.* 101 Stewart Hall. Wier. (Not given in 1938-1939.)

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 north-westward 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. Stewart. (Not given in 1938-1939.)

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. Wier.

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 1938-1939.)

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. Wier.

71-72. ANCIENT CIVILIZATION. A study of the rise of the institutions of civilization, of nationality, and of empire, culminating in Imperial Rome. This course is designed for those preparing to teach history or Latin, for classical students, and for all who desire a collegiate course in ancient civilization. *Both semesters. Two credits each semester.* 105 Stewart Hall. Feemster.

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. Feemster. (Not given in 1938-1939.)

76. MEDIEVAL CIVILIZATION AND INSTITUTIONS. A study of the feudal system, the system of universal monarchy as embodied in the Holy Roman Empire, of the Church as the controlling force, etc. *Second semester. Three credits.* 101 Stewart Hall. Wier. (Given on sufficient demand.)

79-80. THE FRENCH REVOLUTION. Its causes and constitutional experiments. Studied from the European and American standpoint rather than as a French local crisis. *Both semesters. Two credits each semester.* (Alternates with 55-56.) 101 Stewart Hall. Wier.

81-82. THE FAR EAST. The aim of this course is to give students a better understanding of the peoples of the Orient. The history of China and Japan is dealt with, stress being laid upon the relations of the western nations and the peoples of the two leading oriental countries especially since the middle of the nineteenth century. *Both semesters. Two credits each semester.* Hicks.

83. RUSSIA AND HER NEIGHBORS. The course is essentially a study of modern Russia in the light of historical development. A standard work like Wallace is read and applied to Russia of today as a method of approaching the present

Russian enigma. *First semester. Two credits.* 105 Stewart Hall. Feemster.

85-86. THE MIDDLE PERIOD. United States History from the Second War with Britain to the Rebellion of the Cotton States. A more intensive study from the standard historians and sources of the formative period of American political character as distinct from inherited Anglo-Saxon institutions. The rise of the protective tariff system, and fall of the national banking system and currency. Jacksonian democracy and the rise of the National Party system, United States hegemony in the rising group of western republics, expansion and territorial imperialism, the losing struggle of the Slave States to control Congress, political constitutional philosophy on the nature of the Union, nullification, the rise of the New Republican Party, the breakdown of Constitutional Federal Government and the appeal to the sword. *Both semesters. Two credits each semester.* 105 Stewart Hall. Feemster.

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. Feemster. (Not given in 1938-1939.)

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. Feemster.

91. THE TWENTIETH CENTURY: THE RIVALRY OF THE NATIONS. An intensive prewar study. Not given for less than five students. Open to history majors and those specially qualified. The course will trace world movements from the Spanish-American War to the outbreak of the War of 1914. *First semester. Two credits.* 105 Stewart Hall. Feemster.

92. THE TWENTIETH CENTURY: THE STRUGGLE OF THE NATIONS. A continuation of course 91. A critical study of

war history and war historians, with source studies on selected topics. *Second semester. Two credits.* Feemster.

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. Stewart.

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.* 202 Stewart Hall. Stewart.

99-100. HISTORY THESIS WORK. *Both semesters. Credits to be arranged.* 101 Stewart Hall. Wier and other members of the Staff.

199-200. GRADUATE THESIS. *Both semesters. Credits to be arranged.* Wier and other members of the Staff.

#### *Political Science*

1-2. COMPARATIVE GOVERNMENT. This course is to be regarded as introductory to the other courses in the department. A survey is made of the structure and chief features of the practical operation of the governmental systems of the United States, England, the leading countries of Europe, and certain typical countries of South America. *Both semesters. Two credits each semester.* 105 Stewart Hall. Feemster, Hicks, and Stewart.

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. Feemster. (Not given in 1938-1939.)

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. Feemster.

64. INTERNATIONAL LAW. An elementary study of the principal topics, accompanied by examination of leading cases. *Second semester. Two credits.* 105 Stewart Hall. Feemster.

66. INTERNATIONAL GOVERNMENT AND INSTITUTIONS. The course correlates with the course in international law and will examine in the order of their rise, the Monroe Doctrine and the Pan-American System, the Hague Conferences and Court, The League of Nations and its organs and activities. *Second semester. Two credits.* Feemster. (Not given in 1938-1939.)

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. Feemster. (Not given in 1938-1939.)

79-80. THE CONSTITUTIONS OF THE UNITED STATES AND NEVADA. For seniors of all colleges. *Both semesters. One credit.* Feemster.

85-86. COLONIAL EXPANSION. The history of the colonial acquisitions of the great nations and a comparative study of institutions developed therein, with special emphasis on the United States. *Both semesters. Two credits each semester.* 101 Stewart Hall. Wier. (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. Feemster. Given in alternate years. (Not given in 1938-1939.)*

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. Feemster.*

93-94. POLITICAL PROBLEMS. Open to accredited students in the department and by permission to intercollegiate debaters. Current controversial issues will be selected each semester for analysis and investigation in the best current departmental periodicals. *One-half to two credits per semester according to work done. 105 Stewart Hall. Feemster.*

99-100. THESIS.

199-200. GRADUATE THESIS. Library facilities are available in two subjects. The Constitutional Convention of 1787, and the diplomacy of the outbreak of the war of 1914. *Both semesters. Credits to be arranged. Library. Feemster.*

#### HOME ECONOMICS

College of Agriculture

PROFESSOR LEWIS, HEAD OF DEPARTMENT

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.*

9. GENERAL HOME ECONOMICS. This course, offered for students in elementary education, deals with the following units: Selection and care of clothing; community and family relationships; hot school lunch; and school hygiene. *First semester. Lecture, two hours; laboratory, one period. Three credits. 203 Agriculture Building. Lewis and Pope. Fee, \$2.*

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, one hour; laboratory, one period. Two 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.*

33. 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. A brief study of the composition and cost of foods; the essentials of an adequate diet. Food plans to meet these essentials are discussed. In the laboratory an application is made of some of the modern theories of cooking, planning, and serving of meals. Not open to freshmen. *Second semester. Lecture, two periods. Laboratory, one period. Two or three credits. 204 Agriculture Building. Lewis. Fee, \$3.*

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. *First 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. *Either semester. Laboratory, two periods. Two credits.* 108 Agriculture Building. Pope. Fee, \$2.50.

52. PRINCIPLES OF EXTENSION WORK. This course is designed to give a survey of rural conditions as they exist in the country today, with particular emphasis on Nevada. The importance of farmer movements and their relation to national development will be touched upon. A history of the development of the land-grant colleges and agricultural extension work will be given, and particular emphasis placed on the organization of this work in Nevada. The farm, the farm home and rural community will be the basis for discussion, and short field trips will be made to observe the work of agricultural extension agents in near-by counties. The purpose of this course is to assist students to qualify for positions as county extension agents, boys and girls club leaders, local community leaders, etc. *To be given on sufficient demand. Second semester. Lecture, two periods. Two credits.*

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. Lectures, 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.

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. Lectures, 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 7-8. *First semester. Two 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 7-8. *Parallel:* Home economics 81-83. *First 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 unit 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. *Second semester. Lectures, 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. *Second 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. *Second 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. *Prerequisites:* 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. 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. Fee, \$2.

96. QUANTITY COOKERY. A course in quantity cookery which includes the care and use of institutional equipment, menu planning, food preparation and the application of principles and methods in organization and management of food unit. Laboratories available for this purpose are commercial restaurants, bakeries, University residence hall and a field trip to San Francisco. *Prerequisite:* Home economics 42 and 55. *Laboratory, two periods. Two or more credits according to work done.* Given alternate years. 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, two hours. Two credits.* 108 Agriculture Building. Marsh.

Ed. 88. TEACHER-TRAINING COURSES IN HOME ECONOMICS. See Education.

#### MATHEMATICS AND MECHANICS

PROFESSOR WOOD, HEAD OF DEPARTMENT  
ASSISTANT PROFESSOR ROSS  
ASSISTANT PROFESSOR MADDAUS  
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. Required of "restricted" freshmen presenting but two units of required mathematics. *First semester.* Mackay Science Hall. Maddaus.

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. *Second semester. Two credits.* Mackay Science Hall. Maddaus.

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  $1\frac{1}{2}$  years of high school algebra. *Each semester. Three credits.* Mackay Science Hall. Ross.

13. PLANE TRIGONOMETRY. A study of the trigonometric functions, identities, and the solution of triangles. Not required of students who have had a good course in high school trigonometry. *Each semester. Two credits.* Mackay Science Hall. Ross.

14. ANALYTIC GEOMETRY. An analytical treatment of the properties of the straight line, circle, parabola, ellipse, and hyperbola. Polar coordinates, the transformation of coordinates, and the general second-degree equation in two variables will also be studied. *Prerequisites:* Mathematics 11, 13. *Second semester. Three credits.* Mackay Science Hall. Ross.

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. Ross.

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. *Prerequisites:* Mathematics 11. *Second semester. Three credits.* Mackay Science Hall. Alternates with mathematics 18. Ross. (Not given in 1938-1939.)

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. It may be used toward satisfying the science requirement for graduation. Students planning to continue their mathematical work should take mathematics 14 upon completion of this course. *Second semester. Four credits.* Mackay Science Hall. Maddaus.

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. Ross.

25-26. CALCULUS. A unified course in differential and integral calculus, with special emphasis upon the applications. This course is 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. Ross. (Not given in 1938-1939.)

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. Wood.

52. THEORY OF NUMBERS. A study of the elementary properties of integers, congruences, the theorems of Fermat and Wilson. *First semester. Three credits.* Mackay Science Hall. Wood. (Not given in 1938-1939.)

53. SPHERICAL TRIGONOMETRY. A study of the properties of the spherical triangle and methods of solution of triangle problems. Numerous applications from astronomy and navigation will be considered. *Second semester. Two credits.* Mackay Science Hall. Wood. (Not given in 1938-1939.)

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. *First semester, three credits. Second semester, two credits.* Mackay Science Hall. Wood and Maddaus.

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 1938-1939.)

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. Ross. (Not given in 1938-1939.)

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. Ross.

85. DIFFERENTIAL EQUATIONS. A study of ordinary and partial differential equations of the first and second orders with special attention to geometrical and physical applications. *First semester. Three credits.* Mackay Science Hall. Wood.

86. 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. Wood.

105-106. THEORY OF FUNCTIONS OF THE COMPLEX VARIABLE. The fundamental operations applied to the complex number, the series, Riemann surfaces, etc. *First semester, three credits. Second semester, two 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. Wood. (Not given in 1938-1939.)

129-130. MODERN ANALYTICAL GEOMETRY. A comprehensive treatment of homogeneous coordinates and abridged notation with their applications in investigating analytically metrical and projective properties of lines and conics. *Both semesters. Two credits each semester.* Mackay Science Hall. Wood. (Not given in 1938-1939.)

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. Wood. Given in alternate years. (Not given in 1938-1939.)

150. SEMINAR. Library work and reports on various topics of mathematical interest. *Both semesters. Two credits each semester.* Mackay Science Hall. Wood and Maddaus.

199-200. THESIS COURSE FOR GRADUATE STUDENTS. *Six credits.* Mackay Science Hall. Wood and Maddaus.



## MECHANIC ARTS

College of Engineering  
 PROFESSOR SIBLEY, HEAD OF DEPARTMENT  
 SUPERINTENDENT RYAN  
 MR. CARROLL, ASSISTANT.

2. FORGING. The work in forging includes exercises in heating, bending, drawing, upsetting, plain welding, butt welding, lap welding, ring welding, tee welding, etc. In steel forging the exercises include the making and tempering of punches, drills, chisels, annealing and casehardening. *Sophomore year. One or two credits either semester, according to the requirements of the respective departments.* 101 Mechanical Building. Carroll. Fee, \$5 per credit.

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. First semester. Two credits.* Mechanical Building. Ryan. Fee, \$5 per credit.

5. MACHINE SHOP. Advanced work in machine shop practice. A course in practical design and cutting of gears; includes illustration and discussion of methods used in manufacture, measuring and checking of tooth forms, design and cutting of hobs, principles of broaching. *Both semesters. Two credits. Prerequisite:* Mechanic arts 3. Mechanical Building. Ryan. Fee, \$5 per credit.

6. PATTERN AND MOULD MAKING. Instruction is given in making of wood patterns, solid and built up, also dry and green sand cores, segment boxing two and three part flask, and moulding. *Senior year, second semester. One credit.* 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 course in machine work for students in E. E. only. Similar to M. A. 3, but not as complete. *Both semesters. One credit.* Ryan. Fee, \$5.

## MECHANICAL ENGINEERING

College of Engineering  
 PROFESSOR SIBLEY, HEAD OF DEPARTMENT  
 ASSISTANT PROFESSOR AMENS

19-20. MECHANICAL ENGINEERING LITERATURE. A study of current magazine articles, particularly in the journals of the engineering societies. No prerequisite. Required of all mechanical engineers. *Both semesters. One-half credit each semester.* Sibley.

21. TECHNICAL REPORT. A systematic write-up of three to four thousand words on some selected or assigned engineering topic. *One credit.* Sibley.

51. KINEMATICS. The kinematics of machinery, showing the laws which govern the velocity of moving parts, the correct forms of gear teeth and the manner of designing trains of mechanism. *Prerequisite:* Physics 1A and 2A, or 3 and 4, and mathematics 25 and 26. *First semester. Three credits.* Electrical Building. Sibley.

53. MACHINE DESIGN. The study of the application of the laws of velocity, force, and strength of materials to the design of machinery; tooth and belt gearing, shafts, journals, hangars, cylinders, springs, bolts, keys, etc. *Prerequisite:* Mathematics, M. E. 6, and C. E. 72 and 74. *Second semester. Three credits.* Electrical Building. Sibley.

54. 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.* Electrical Building. Amens.

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. *Prerequisites:* Physics, chemistry, mathematics and M. E. 54. *Both semesters. Three credits each semester.* Electrical Building. Sibley.

58. ADVANCED MACHINE DESIGN. Balancing inertia forces in moving parts of reciprocating engines. Design of governors, fly-wheels and valve mechanism. Practical problems

in machine design may be substituted for the above with the approval of the instructor. *Prerequisite:* Senior standing in mechanical engineering. *Second semester. Three credits.* Electrical Building. Sibley.

64. MECHANICAL POWER LABORATORY. Operation and testing of steam and internal combustion engines, steam turbines, steam boilers and auxiliaries, water turbines and pumps, flue gas analysis, valve setting, making indicator cards, steam calorimetry. *Prerequisite:* Mechanical engineering 54. *First semester. Lecture, one hour. Laboratory, two periods. Three credits.* Electrical Building. Amens. Fee, \$5.

65. MECHANICAL LABORATORY. Calibration of laboratory equipment. Testing fuels and lubricants, flow of air, fuel analysis. *Prerequisite:* Physics 3 and 4, mechanical engineering 54. *Second semester. Lecture, one hour. Laboratory, two periods. Three credits.* Mechanical Building. Sibley. Fee, \$5.

66. MECHANICAL LABORATORY. Advanced problems in laboratory practice, such as the design and construction of apparatus. Elective for seniors and graduates. *Either or both semesters. Three to six credits, as arranged.* Sibley or Amens. Fee, \$5.

67-68. ADVANCED MACHINE DRAWING. An exacting drill in projections, intersections, accurate and neat instrumental drawing; including layout, detail, and assembly drawings. Instruction in drafting-room procedure, and methods of reproducing drawings. To include applications directly connected with the students chosen field. *Prerequisites:* G. E. 5 and 6; M. E. 51 and 53. *First and/or second semester. Three or six credits.* Staff.

70. HEATING, VENTILATING AND AIR CONDITIONING. *Prerequisites:* M. E. 55 and 56, and M. E. 54. Elective for juniors and seniors. *Two credits. Either semester.* Staff.

74. INDUSTRIAL PLANT DESIGN. A problem and design course for the study of industrial plant layout and organization for production. Elective for seniors. *Second semester. Two laboratory and one recitation period. Three credits.* Electrical Building. 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. *Prerequisite:* E. E. 51 and 72, M. E. 54 and 64. *First semester. One recitation and two laboratory periods. Three credits.* Sibley.

77A-77B. INTERNAL COMBUSTION ENGINES. *Prerequisites:* M. E. 55 and 56, M. E. 54, elective for juniors and seniors. *First and second semesters. Two credits each.* Staff.

78. AERODYNAMICS. An elementary course in the theoretical aspects of aeronautics. Study of aerodynamics, theory of flight, history and development of the art. Laboratory work so far as available equipment permits. *Prerequisite:* Mathematics 55, 56 and M. E. 54. *First semester. Three credits.* Amens.

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.* Sibley or Assistants. 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. *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 ..... INFANTRY, U. S. ARMY  
 ASSISTANT PROFESSOR BASSETT, DEML (ROTC), MAJOR  
 INFANTRY, U. S. ARMY, COMMANDANT  
 INSTRUCTOR HUSTIS, 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. *Prerequisites: 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 and Smyth.

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.* Carpenter.

74. MINERAL INDUSTRY ECONOMICS. Lectures and recitations on economic problems of mining and metallurgy and mine accounting, including incorporations and securities, depreciation, depletion, amortization, taxes, assessments and dividends, and laws governing the same, the costs of mining, milling, and marketing, and cost accounting methods. *Prerequisite:* Mining 61. *Senior year. Second semester. Three credits.* Carpenter and Couch.

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.

## MODERN LANGUAGES

PROFESSOR CHAPPELE, HEAD OF DEPARTMENT

PROFESSOR MURGOTTEN

ASSOCIATE PROFESSOR GOTTARDI

ASSISTANT PROFESSOR KLINE

Requirements for a minor in French, German, Italian 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 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 modern languages are urged not to restrict their courses to the minimum requirements for a major or a minor in the particular subjects. All such candidates are to confer with the head of the department.

Courses numbered above 50 and announced as offered in any year may not be given in that year unless there are at least seven candidates for the class. 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 modern 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 modern languages: History 5-6.

*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.

\*German 9-10 may be offered in lieu of German 3-4.

*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. *Prerequisites:* 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.

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.*

#### 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.*

#### MUSIC

##### PROFESSOR POST, HEAD OF DEPARTMENT

Requirements for a minor in music: 1-2 (2 credits), 5 (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. See Education 21.

10. APPRECIATION OF MUSIC (open to all University students. Nonenrolled 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.

11-12A. MEN'S DIVISION, CAMPUS CHORAL CLUB. Open to all men students. Membership limited to those who have been examined and approved by the director. Representative selections from the best musical literature will be studied and produced in one or more public concerts. *Two semesters. One credit each semester.* 204 Education Building. 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. In recent years the band has been invited to attend the State high school music festival as the guest band to play an hour concert. This occasion has provided a spring trip to various points in the State. *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, suspensions 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. *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. See Education 65.

#### 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 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.

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.

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.

28. SOCIAL ETHICS. A brief study of the fundamental ethical principles based upon concrete social problems. Required of sophomores in the two-year normal course. *Second semester. Two credits.* 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.

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.

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 AND ATHLETICS

##### Men

PROFESSOR MARTIE, HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR SCRANTON  
ASSISTANT PROFESSOR DASHIELL  
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 7 and 8, 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.* Martie.

2. DEVELOPMENTAL EXERCISES. Continuation of course 1 with addition of calisthenics and light apparatus. *Second semester. One-half credit.* Dashiell.

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 director of the department a student may elect any of the following sports as a substitute for the practical work in courses 1, 2, 3, and 4: Football, basketball, track, tennis, volley ball, cross country and handball.

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. Dashiell.

52. BASKET BALL IN THEORY AND PRACTICE. A course of lectures and practical demonstrations in America's leading winter indoor sport. *Second semester. One lecture and one hour laboratory per week. Two credits.* The same conditions for enrollment must be met as in course 51. Martie.

53. TREATMENT OF ATHLETIC INJURIES. This is a course in first aid with special emphasis on common athletic injuries. It will include the various uses of tape, bandages, splints, etc. Time will be given to the study of the prevention of injuries such as sprains, charley horse, tackle shoulder, blood poison, blisters, etc., as well as treatment for same. *Three periods per week. Two credits. First semester.* Scranton.

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.* Scranton.

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. Dashiell.

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

adaptation 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, circulation, 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. Dashiell.*

## PHYSICAL EDUCATION

## Women

PROFESSOR SAMETH, HEAD OF DEPARTMENT  
MRS. SIMAS, ASSISTANT PROFESSOR  
MISS SCHNELL

Requirements for a minor in physical education: It is recommended, but not required, that students desiring a minor in physical education fulfill their science requirement in chemistry. It is also recommended that students interested in taking advanced dancing, take music 10 or its equivalent. Courses—Physical education 1-2 (2 credits), 3-4 (1 credit), 10 (1 credit), 23 (1 credit), 24 (2 credits), 31-32 (2 credits), 55 (3 credits), 56 (2 credits), 59-60 (4 credits), and two years of participation in athletics.

1, 2, 3, 4. COURSES REQUIRED FOR GRADUATION. Numbered in the order in which they are required to be taken. One and two have each one unit of credit (3 periods); three and four each have one-half unit of credit (2 periods). One semester of A and one of C are required of all students taking physical education. Further work in dancing or organized games may be had but is not required. No more than two semesters of dancing and two of games will be accepted in fulfilling the requirements.

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—GENERAL WORK (required of students in education, consisting of a combination of the preceding. It is recommended, but not required, that minors in physical education take 3E or 4E.)

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 20-minute periods a week. One credit each semester. Gymnasium.*

7-8. Continuation of P. E. 5-6; also additional work in gymnastics, stunts, tumbling and swimming for those who have completed 1, 2, 3 and 4.



10. FOLK DANCING FOR ELEMENTARY GRADES AND HIGH SCHOOL. Required of students in education and of physical education minors. The object of this course is to give those who intend to teach, singing games and folk dances suitable for use in the grades. Most of the semester will be used for practical work. *Prerequisite:* Physical education 1-2 or the equivalent. *Two periods. One semester. One credit.* Gymnasium.

23. FIRST AID AND HEALTH. A. Emergencies and first aid. B. Health in the school, home and community. *First semester. One laboratory period. One credit.* Gymnasium.

24. PRINCIPLES OF PHYSICAL EDUCATION. Their development in relation to general education, health education, recreation. Organization and leadership of recreational activities as applied to after-school programs, playdays, camping, clubs, etc. *Second semester. Two periods. Two credits.* Gymnasium.

31-32. DANCING. Dancing, including clog, folk and interpretation. Open to all who have had the equivalent of physical education 1-2. *Three periods. Both semesters. One credit each semester.* Gymnasium.

51. METHODS OF TEACHING SWIMMING. One lecture and one laboratory. *Prerequisite:* P. E. 23, and an American Red Cross Life Saving Certificate. *Either semester. Two credits.* (For not more than six nor less than four students.) Gymnasium.

53-54. ADVANCED DANCING. A continuation of physical education 31-32. This course will include the construction of at least two dances. *Three periods. Both semesters. One credit each semester.* Gymnasium.

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 human body, dealing particularly with the heart, lungs, shoulder, girdle, spine, abdomen, and feet, so that 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, and home economics 33. *Three periods. First semester. Three credits.* Gymnasium. (Not offered unless there is a registration of eight students.)

56. RECONSTRUCTIVE PHYSICAL EDUCATION. A study of the structure and function of the neuromuscular system (including circulation and respiration), in their relation to growth, development and physical activity. Students will be given the opportunity to prescribe exercises for students taking physical education 5-6, 7-8. *Prerequisite:* Physical education 55. *Three periods. Second semester. Two credits.* Gymnasium. (Not offered unless there is a registration of eight students.)

57. RECREATIONAL LEADERSHIP. A study of extra-curricular activities such as camping, outings, school and community recreation. There will be opportunity to direct after-school activities, either in girls athletic associations or on the playground. *One lecture, one laboratory. First semester. Two credits.* Mrs. Simas.

NOTE—This course has been so arranged that there will be no conflict or overlapping with education 56.

59-60. THEORY AND PRACTICE OF DIRECTING TEAM AND INDIVIDUAL SPORTS. This course includes a study of the essentials of the technic and game forms leading up to soccer, hockey, volley ball, basketball, baseball, archery and tennis. Opportunity will be given for actual practice in teaching and officiating. *Prerequisite:* At least two years' participation in college athletics. *Two lecture periods per week; two laboratory periods per week. Both semesters. Two credits each semester.* Gymnasium.

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 77.) 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 HARTMAN, HEAD OF DEPARTMENT  
 PROFESSOR LEIFSON  
 ASSOCIATE PROFESSOR BLAIR

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 corresponding 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 medicine and agriculture. 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. Hartman and Leifson.

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. Hartman and Leifson. 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 is to make the student an intelligent observer of the more common astronomical phenomena. Descriptive rather than mathematical in character. Not open to freshmen and not accepted as part of freshman science requirement. *Either semester. Three credits. Two scheduled periods and one evening hour per week to be arranged.* Mackay Science Hall. Blair.

19-20. HOUSEHOLD PHYSICS. A course in general physics for students in home economics. The practical applications of physics in the home will be emphasized. *Prerequisite:* A thorough knowledge of elementary algebra and plane geometry. *Both semesters. Lecture, recitation and quiz, two hours; laboratory, one period. Three credits each semester.* Mackay Science Hall. Blair. Fee, \$3.

24. PRACTICAL CALCULATION. Graphical methods of determining the relationship between physical quantities. The adjustment of graphs to increase the accuracy of computed results. Practice in the arrangement of logarithmic calculation so that the minimum amount of labor is involved in the solution of complicated equations. Differential correction of results. Interpolation and the use of interpolation formula. Computation of probable error and estimation of accuracy of data and results. *Prerequisite:* Differential calculus. *Second semester. One credit. One three-hour computing period per week.* 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. Hartman and Leifson.

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. Hartman and Leifson. 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 resistance, 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. Hartman. 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. Hartman.

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. Hartman, Blair, and Leifson. Fee, \$3.

65-66. HISTORY OF PHYSICS. Lectures and recitations. Preparation of reports and discussion of assigned topics by members of the class. *Prerequisite*: General physics. *Both semesters. Two credits each semester.* Mackay Science Hall. Hartman.

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. Hartman.

71-72. ELECTRICAL THEORY OF MATTER. Lectures and experimental illustrations. Discussion of important topics in the fields of radiation and the structure of atoms and molecules. Introduction to quantum mechanics. *Prerequisite*: General physics, integral and differential calculus. *Two credits each semester.* Mackay Science Hall. Leifson.

73-74. ELECTROMAGNETIC THEORY. 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. Leifson.

75-76. GLASSBLOWING. A laboratory course of instruction in methods of making simple glass apparatus. *Either semester. One credit.* Mackay Science Hall. Leifson. Fee, \$5.

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. Leifson. Fee, \$3.

101-102. MATHEMATICAL PHYSICS. An introduction to the more advanced mathematical analysis as applied to general physical problems. *Prerequisite*: Physics 53-54, 55-56, 57-58, and 59-60, differential and integral calculus and differential equations. *Both semesters. One credit each semester.* Mackay Science Hall. Hartman.

103-104. THESIS WORK, and all special laboratory work not in the courses announced above. *Both semesters. Credits to be arranged.* Mackay Science Hall. Hartman.



## PSYCHOLOGY

PROFESSOR YOUNG, HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR IRWIN

Requirements for a minor in psychology: Psychology 5 (3 credits), 10 (2 credits), 62 (3 credits), and 10 additional credits in the department, at least 3 of which must be in courses numbered 50 or above.

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. Second semester. 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.*

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. THE PSYCHOLOGY OF SELLING AND ADVERTISING. An intensive study of the psychological principles basic to effective buying, selling, and 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 ready-made answers. *Prerequisite: Psychology 5. First semester. Three 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. THE STATE HYGIENIC LABORATORY
6. LABORATORY FOR PURE FOOD AND DRUGS AND WEIGHTS AND MEASURES
7. THE STATE VETERINARY CONTROL SERVICE
8. THE UNITED STATES BUREAU OF MINES EXPERIMENT STATION

## AFFILIATED ORGANIZATIONS

THE NEVADA AGRICULTURAL EXPERIMENT STATION  
Staff

WALTER E. CLARK, Ph.D., LL.D., President of the University.  
 SAMUEL B. DOTEN, M.A., Director, Entomology.  
 GOLAMAE JOHNSON, Librarian and Secretary to Director.  
 CHARLES E. FLEMING, B.S.A., Range Management.  
 CHESTER A. BRENNEN, B.A., Economist in Range Management.  
 GRANT H. SMITH, JR., B.S., Assistant in Range Management.  
 MARTHA R. BRUCE, Statistician in Range Management.  
 ANDREW YOUNG, Assistant 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.  
 KERBY STODDARD, M.S., Assistant in Chemistry.  
 ROBERT STEWART, Ph.D., Soils Research.  
 V. E. SPENCER, M.S., Associate in Soils Research.  
 S. ALLAN LOUGH, Ph.D., Assistant in Soils Research.  
 FORREST M. WILLHITE, M.S., Research Fellow in Soils Research.  
 MAJORIE HOWES, Clerk in Soils Department.  
 GEORGE HARDMAN, M.S., Irrigation.  
 F. B. HEADLEY, Farm Development.  
 CRUZ VENSTROM, B.S., Assistant in Farm Development.  
 LOUIS TITUS, M.S., Assistant in Farm Accounting.  
 MABEL CONNOR, B.A., Statistician in Farm Development.  
 JAMES EDWARD CHURCH, JR., Ph.D., Meteorology.  
 CARL ELGES, 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 1936-1937 it received \$1,845.48 from the Federal Bankhead-Jones Fund. The total of these Federal appropriations for the current fiscal year will be \$91,845.48. 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 1937-1938 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, Grant Smith and Martha Bruce.

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.

## 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*. 1933-1938. 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 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—1937. 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, assisted by Louis Titus.
- 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 47—Purnell Fund. *A Study of the Tax System of Nevada in Relation to Agriculture*. 1934—Continuous. Project Leader, F. B. Headley, assisted by Cruz Venstrom.

- Project 51—Purnell Fund. *A Study of Adjustments in Farming by Regions and Type-of-Farming Areas, from the Standpoint of Agricultural Adjustment and Planning, Including Soil Conservation*. 1935—Continuous. Project Leader, F. B. Headley, assisted by George Hardman, C. E. Fleming, C. A. Brennen, Cruz Venstrom, and Dean Robert Stewart.

## 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 and S. Allan Lough.

## 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*

WALTER E. CLARK, Ph.D., LL.D., President of the University of Nevada.

CECIL W. CREEL, B.S., Director of Agricultural Extension.

THOMAS E. BUCKMAN, M.S., Assistant Director for Agriculture.

MRS. MARY S. BUOL, B.S., Assistant Director for Home Economics.

C. WILLIAM STARK, B.S., Administrative Assistant.

L. E. CLINE, M.S., Extension Agricultural Economist.

VERNER E. SCOTT, M.S., Extension Agricultural Economist.

OTTO R. SCHULZ, B.S., Soil Conservationist, Court House, Yerington.

A. L. HIGGINBOTHAM, M.A., Extension Editor, University of Nevada.

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, B.S., County Extension Agent, Clark County.

LOULE 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.

A. J. REED, B.S., County Extension Agent, Pershing County.

\*E. C. REED, 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. WITTEWER, 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.

\*On leave of absence, Executive Secretary, Agricultural Conservation Program, University of Nevada, Reno, Nevada.

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 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 cooperation 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 seventeen 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*

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

WALTER E. CLARK, Ph.D., LL.D., President of the University.  
 JOHN A. FULTON, E.M., Director.  
 WALTER S. PALMER, E.M., Metallurgist.  
 JAY A. CARPENTER, E.M., Mining Engineer.  
 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 nonmetallic deposits, with addresses of the discoverer, owner or agent; to serve as a bureau of information and exchange in Nevada mining; to collect and publish statistics relative to Nevada mining; to prepare a bibliography of literature pertaining to Nevada mining and geology; to experiment in problems of Nevada concentration, dry placer, flotation methods, etc., and to publish the results; to collect geological and mineralogical specimens; to educate miners and prospectors through lectures and publications; to collect models, drawings and descriptions of appliances used in mining and metallurgical work; and to give consideration to such other kindred scientific and economic questions as in the judgment of the board shall be deemed of value to the people of the State.

The 1937 Legislature cut the former appropriation in half so that the Bureau's activities will be seriously curtailed during the next biennium.

THE STATE HYGIENIC LABORATORY  
(Sierra and Fifth Streets)

*Staff*

WALTER E. CLARK, Ph.D., LL.D., President of the University.  
VERA L. YOUNG, M.A., Acting Director.  
CAROL SCHWEISS, Bacteriologist.  
ANNA HARGROVE, Part-Time Assistant.

The State Hygienic Laboratory was organized in 1909 under the provisions of an Act of the Legislature approved March 25 of that year. The object of the laboratory is to provide facilities for the laboratory diagnosis of infectious diseases and for research into the nature, cause, diagnosis, and methods for the control of such diseases. The services of the laboratory staff are rendered chiefly through the physicians, health officers, and health boards of the State.

The routine work of the laboratory consists chiefly of the examination of specimens for the diagnosis of tuberculosis, typhoid fever, diphtheria, malaria, gonorrhoea, and syphilis. Outfits for the collection of specimens for the diagnosis of these diseases may be obtained by any physician without charge.

Examinations are also made for meningitis, sore throat, and other infectious diseases.

Bacteriological examinations of water are made for cities, schools, mining camps, railway companies, and other organizations. The laboratory has available a small number of containers for sending water samples. Officials desiring water examinations to determine whether or not the water is polluted with sewage material or is the source of disease should write to the director of the laboratory for instructions. Samples of water to be examined for industrial purposes should be sent to the Laboratory for Pure Food and Drugs.

Advice and assistance will, on request, be rendered health officials in the control of outbreaks of infectious diseases and in securing a sanitary water supply.

LABORATORY FOR PURE FOOD AND DRUGS AND WEIGHTS  
AND MEASURES  
(Sierra and Fifth Streets)

*Staff*

WALTER E. CLARK, Ph.D., LL.D., President of the University.  
SANFORD C. DINSMORE, B.S., Commissioner.  
WAYNE B. ADAMS, B.S., Chemist.  
EDWARD L. RANDALL, M.S., Assistant Chemist.  
VICTOR COKEFAIR, Inspector.  
RUTH SHIPAUGH, Clerk.

An Act providing for the inspection and analysis of foods, drugs, and liquors, manufactured or offered for sale within the State, was passed by the 1909 session of the Legislature, and became effective on January 1, 1910. The State law is modeled after the National Food and Drugs Act of June 30, 1906, and provides that all rules, regulations, definitions, and decisions proclaimed by the Secretary of Agriculture for the enforcement of the national law shall be adopted by this department in the enforcement of the State law.

With such provisions Nevada receives valuable aid through the Federal regulations, and avoids conflict with neighboring States having laws also modeled closely after the national Act. Uniformity in State and national laws, and cooperation among officials is much to be desired, and more can be accomplished under such conditions than by working under laws that are dissimilar or antagonistic to established regulations that have been in vogue in States maintaining food laws for a number of years.

The laws of this State, being similar to the national law, obviate the necessity of manufacturers providing special labels to meet any special requirements that otherwise might exist in this State. Often labels are submitted to this department for approval or correction so that they will comply with the Nevada food law.

An Act concerning and fixing standard weights and measures, and to regulate the sale of commodities or articles of merchandise according to such standards, was passed by the 1911 session of the Nevada Legislature and became effective January 1, 1912.

The standard weights and measures adopted by the Government of the United States have been adopted as the legal

standard of weights and measures throughout the State of Nevada. With this adoption Nevada receives aid through the Federal regulations and promotes uniformity in State and national standards.

The 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*

WALTER E. CLARK, Ph.D., LL.D., President of the University.

EDWARD RECORDS, V.M.D., Director.

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.  
THOMAS A. JACKSON, B.S., Junior Analyst.  
LELAND A. YERKES, Junior Laboratory Mechanic.  
HARRY F. McCRAY, Chief Clerk.

ELECTRO-METALLURGICAL SECTION

JOHN KOSTER, Ph.D., Supervising Engineer and Metallurgist.  
STEPHEN M. SHELTON, M.A., Associate Metallurgist.  
MILES B. ROYER, M.S., Assistant Metallurgist.  
PEIRCE R. PERRY, A.B., Junior Analyst.  
ALFRED P. TOWNE, Electric Furnace Mechanic.  
LILLIAN E. JEX, Assistant Clerk-Stenographer.

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.

During the present year special studies in strategic metals and in electrometallurgy that may primarily aid the commercial use of Boulder Dam power were undertaken.

Studies of mining costs and practices in many districts of Nevada have been made and published.

SUMMER SESSION OF THE UNIVERSITY  
OF NEVADA

June 20 through July 29, 1938

THE TIME

Encouraged by the satisfactory enrollment in the 1937 Summer Session and by the resolutions of three district institutes last October favoring the continuance of a Summer Session, the University of Nevada is again undertaking to offer Summer Session opportunities in 1938 for the six-weeks period from June 20 to July 29, inclusive. This will mark the twenty-first Summer School maintained by the University. The first Summer Session was held in 1912. With the exception of 1915, sessions were held annually until the summer of 1932 when they were abandoned for a period of five years by reason of the financial stringency. The Summer Session was resumed in 1937.

THE PURPOSE

The primary purpose of the University Summer Sessions has always been to afford teachers an opportunity to take professional courses desirable for teaching certificates, for renewal of certificates, or for the improvement of teaching. In most of the former sessions the courses were designed wholly for elementary teachers, but beginning with the session in 1937 the program was expanded to offer work in education that would appeal to high school teachers as well.

In the 1938 session the purpose of the Summer Session is being further extended to offer, for the first time, advanced courses in certain academic fields to permit teachers to advance themselves for either the Bachelor's or the Master's degree.

THE PLACE

All exercises of the Summer Session will be held on the University Campus at Reno, with most classes meeting in the Education Building. Declared by many travelers to be one of the most beautiful college campuses in the United States, with a score of buildings of simple but harmonious



architecture, compactly grouped around an inner quadrangle, and an outer area of lawn and lake, the Campus is at its loveliest during the summer months.

The summer climate of Reno is generally delightful and agreeable for study; the nights are always cool, even after warm days.

Reno is a city of culture and beauty, of lovely homes and refined and intelligent people. As a cosmopolitan business community it probably has no equal among towns of similar population and can lay some just claim to its slogan of being "The Biggest Little City in the World."

#### ADMISSION AND CREDITS

Admission to the Summer Session is open to anyone with ability to do scholastic work on the University level. Students who have done less than two years of college work may enroll for courses numbered fifty or above only upon consent of the instructor of the course. Credit toward any University diploma will be granted only after the student has met all requirements for admission to the University.

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, earns one credit. Classes which meet daily for the six weeks carry, therefore, as a rule two credits; where less than two credits are allowed a corresponding diminution of outside study is assumed. Six credits is therefore as heavy a load as the student can ordinarily expect to carry, and represents the maximum amount of credit obtainable during the session, except that those who elect the observation course may carry seven credits.

#### 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 to the extent that the

certificate may demand certain specific courses as, for example, courses in secondary education which can not 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 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 department requirements may be learned upon arrival at the University or by writing the Director of the Summer Session.

#### REQUIREMENTS FOR THE MASTER'S DEGREE

Qualified graduates of the University of Nevada or of other accredited institutions may become candidates for the Master's degree. A major of not less than 12 credits acceptable for graduate work, and a minor of not less than six such credits, are required in partial fulfillment of the degree. In addition a thesis having a minimum value of six credits will be required in the major department. Certain courses numbered 50 or above in the Summer Session bulletin, may be taken for graduate credit if the student so arranges with the instructor at the time of enrollment. Students desiring to become candidates for the Master's degree should confer with the department head or representative upon arrival at the University.

#### ASSEMBLIES

Some distinctive assembly will be held each week. Particularly featured this year will be visits from the State Superintendent of Public Instruction and several of the deputies. The plan involves a presentation of the educational problems in the individual districts and in the State as a whole, with periods open for any student wishing a conference.

## 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. In general, an elementary certificate in Nevada to nonresidents is granted only to graduates of a two-year normal course; a high school certificate to graduates of an accredited college who have had 18 units of work in education, the majority of which must be in the secondary field, and 4 units of which must be practice teaching or teaching experience.

## LIVING ACCOMMODATIONS

## MANZANITA HALL FOR WOMEN

Living accommodations for women are available at Manzanita Hall on the Campus. Men will have no difficulty in finding suitable rooms in private homes near the University. Rooms in Manzanita Hall are single, or double, or two-room suites; all rooms have outside exposure and are comfortably furnished. There are general reception rooms, a general study room, tub baths, showers, laundry facilities, etc. Women planning to live in the Hall must provide their own towels, bed linen, bedding, mattress protector, dresser scarfs, window hangings and rugs as desired; pillows, mattresses and white curtains are furnished by the University. The Hall will be open for occupancy on Sunday June 19. Children are not admitted.

The rent for a double room for the six weeks is \$10 for each occupant; for a single room, \$15; and for a two-room suite, \$15 for each of two occupants. Prospective residents are advised to make advance reservations by applying early to Miss Margaret E. Mack, Dean of Women, specifying the type of room desired and enclosing the total rent for the session. Checks should be made payable to the Board of Regents. Refund in full for this rental is made if notice is given of cancellation of the reservation on or before June 20.

## THE UNIVERSITY DINING HALL

Meals are served at the University Dining Hall to both men and women (and to children at the same rate as for

adults), providing table service of very acceptable character and at a most reasonable figure. Unless students have relatives or friends with whom they wish to make arrangements, they will find it very advantageous to share the community life of the dormitory and dining hall.

The cost of board for the entire session of six weeks will be forty-five dollars. All residents of Manzanita Hall must pay this full dining service; single meals may be had by others at designated rates. The first meal served will be dinner Sunday noon, June 19; the last meal will be breakfast Saturday morning, July 30.

## CLINICAL SERVICE IN READING AND ARITHMETIC

For pupils in the elementary grades four to eight having difficulty with arithmetic or with reading or with any of the reading subjects like history and geography, the Summer Session in 1938 will maintain a clinical service. Under the guidance of the University instructors handling courses in remedial procedures in reading and arithmetic, pupils will be studied in the effort to locate fundamental difficulties on the basis of which remedial study exercises will be assigned.

Individual attention will be given regularly to every child by teachers enrolled in the Summer Session courses dealing with disabilities in reading and arithmetic. Pupils wishing assistance in arithmetic will report, beginning June 28, regularly at 8:40 to 10:30 Tuesday and Thursday and at such other times as may be necessary at an hour to be arranged with each individual. Pupils needing assistance in reading will report, beginning June 28, regularly at 9:35 to 11:20 Tuesday and Thursday and at such other times as may be necessary.

The fee for this service will be five dollars (\$5) for each pupil enrolled in arithmetic and five dollars (\$5) for each pupil enrolled in reading. This fee is necessary to cover the cost of supplies, especially tests necessary to be administered. As enrollment for this service must be limited, those interested should register early by writing the Director of the Summer Session or by phoning 7803.

## THE DEMONSTRATION PRIMARY SCHOOL

The demonstration primary room is provided by the University at considerable cost to serve as a laboratory in which

teachers attending the Summer Session may daily observe progressive theory put into practice with children of the first three grades. The work of the room will be organized on an activity basis so that teachers may actually see how to initiate and develop a unit of work and to coordinate all subjects of the curriculum into the activity. Especially important and valuable to teachers will be the opportunity to see how children are taught to read and how they develop familiarity with numbers on the basis of their own life experiences. Creative work in art and pleasure through music may also be observed. Miss Rena Semenza, who has demonstrated unusual ability in kindergarten and primary work in the Reno public schools for the past ten years, will be in charge of the demonstration school.

All teachers interested in primary teaching should enroll for the course in observation in order to understand and profit fully from the work of the demonstration room. All teachers also enrolled in the activity program course or interested in the progressive or activity movement ought to enroll in the observation course.

*Enrollment in the demonstration room is open to all children in the first three grades.* Normally, children should be six years of age to enroll in the first grade, but the deciding factor will be ability to do first grade work. The school will be in session from 8:40 to 11:20, Monday through Friday, during the session. The enrollment fee will be \$4 for each child. As the keynote of a progressive schoolroom is satisfaction and pleasure for the children, parents will find that the two and a half hours each morning will be a delightful summer experience for their children. Parents who wish to enroll their children should make early application by writing to the Director of the Summer Session or by telephoning the Education Building at the University. (Reno-7803)

#### SHORT COURSES ON SCHOOLHOUSE MANAGEMENT

In the belief that the proper care and use of the plant, in which all educational activities center, is an educational problem of great importance, the Summer Session is offering two short courses on the efficient management and up-keep of school buildings.

#### COURSE FOR TEACHERS

The one course lasting the one week, June 27 through July 1, is intended for teachers and school administrators, and is designed to give them valuable information on the subject, whether they must perform janitorial services themselves or supervise janitors. This course is given in two sections; each section meets daily, one from 2:00 to 5:30 in the afternoon, the other from 7:00 to 9:30 in the evening. Each section carries one-half unit of University credit.

Enrollment is possible in this short course without enrollment in the regular session; the fee will be \$3 for one section or \$5 for both. Students enrolled in the regular session may enroll without additional fees, counting the credit as a part of their regular program.

#### COURSE FOR JANITORS

The course for janitors will continue one week, beginning on Tuesday July 5 and continuing through Saturday July 9. The program will require each full day. This course does not carry University credit, but a certificate of attendance will be issued. In order to put the course within reach of all building custodians the only cost for attendance will be a nominal registration fee of two dollars.

#### 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 to be inaugurated this 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 for vacancies, but may be able occasionally to bring teacher and vacancy into contact.

The fee charged for enrollment is \$2.50, which covers only partially 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 that must be prepared, an additional fee of \$1.50 is charged. No commission on salary or any other fee is charged.

#### PRIVATE INSTRUCTION IN MUSIC

It is not possible for the Summer Session to offer instruction in instrumental music, valuable as such instruction is recognized to be, for many teachers. There are, however, many capable teachers of music in Reno who will give lessons to Summer Session students at rates, which vary somewhat with the professional standing of the instructor and the previous training of the pupil. For one lesson a week good instruction with band instruments will average about \$1.50 a lesson, with piano about \$2, and with violin about \$2.50. Good vocal instruction will average about \$2.50 per lesson. Some reduction in these rates may be obtained if more than one lesson a week is desired. Information concerning such private instruction in music can be secured from Professor Post of the Department of Music.

#### REGISTRATION PROCEDURE

Monday June 20 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, and 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 with the registration card to the Registrar and to the Comptroller.

#### STATEMENT OF EXPENSES

Registration fee.....	\$25.00
Room rent for women in Manzanita Hall for the six weeks—	
Single room or en suite with roommate.....	15.00
Double room, each occupant.....	10.00
Deposit (rebated in full if no breakage or other loss charged)	5.00
Board in University Dining Hall for six-weeks session.....	45.00
Textbooks (estimated).....	5.00 to 10.00
Schoolhouse Management for Janitors (registration fee).....	2.00
Schoolhouse Management for Teachers—	
Half-unit course.....	3.00
One-unit course.....	5.00
Enrollment in primary demonstration room.....	4.00
Clinical service for reading disability.....	5.00
Clinical service for arithmetic disability.....	5.00

#### ADMINISTRATIVE OFFICERS OF THE SUMMER SESSION

WALTER E. CLARK, Ph.D., President of the University.

FRED W. TRAINER, Ph.D., Dean of the School of Education and Director of the Summer Session.

MRS. JEANETTE C. RHODES, B.A., Registrar.

BETTY SHAFFER, B.A., Matron of Manzanita Hall and Director of the University Dining Hall.

THEA C. THOMPSON, Ph.B., Librarian.

CHARLES H. GORMAN, 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 career at Clifton, Kansas, as a rural elementary school teacher; became city superintendent and high school teacher at Tampa, Kansas, 1923, and coached girls' and boys' basketball in the high school. Supervisor of practice teaching in the junior high school and director of all boys' activities in the training school such as athletics, boy scouts, and 4-H Club work, at the Arizona State Teachers College, Tempe, 1927-30. Came to University of Nevada in 1930. Chairman of University Committee on Lecturers and Assemblies. Author of "History of Education in Nevada."



**B. F. CHAPPELLE, Ph.D.,** Officer d'Academie. Professor of Modern Languages.

A.B., Dickinson College, 1908; A.M. *ibid.*, 1910; Ph.D., University of Pennsylvania, 1917; "Palms academiques," 1934. Completed in addition, regular courses at the Universities of Berlin, Heidelberg, Lausanne, Poitiers and California. Further work of an academic nature in Switzerland (canton Ticino), Spain (Barcelona) and South America (Brazil). Assistant Professor of Romance Languages, Gettysburg College, 1911-1916 and at the University of Pennsylvania, 1918-1921. Professor of Modern Languages and Head of Department, University of Nevada, 1921-. Member National Federation Modern Language Teachers; American Association Teachers of Spanish; American Association Teachers of Italian; American Ethnological Society; A. A. A. S., American Anthropological Association. Author: "The German Element in Brazil."

**CHESTER V. DAVIS, M.A.,** Superintendent of Schools, Ruth, Nevada.

Five years' teaching experience in rural and town elementary schools and as elementary principal before coming to Ruth. Teaching Principal and Superintendent of Ruth Schools since 1926. Served with A. E. F. and became Supervisor of the Fifth Division, Sixth Infantry Opportunity School at Tuer, Germany. Normal training at Central Normal College, Danville, Ind.; B.S., in Education at Utah Agricultural College, 1930; M.A., at Stanford University, 1933; additional graduate study at Stanford, 1934 and University of Mexico, 1937. Member of Phi Kappa Phi, honorary scholarship fraternity and Phi Delta Kappa honorary education fraternity. Member Nevada State Textbook Commission, 1931. Author article for Nevada Education Bulletin and of the Nevada Geography Supplement to accompany, "Journeys Through North America," 1937.

**HAZEL MAI DURHAM, B.A.,** Teacher of Art, B. D. Billingshurst Junior High School, Reno.

A graduate in 1934 of the four-year course of the State accredited California School of Arts and Crafts at Oakland, receiving the degree of Bachelor of Art Education upon which the California State Department of Education granted a Special Secondary Art Credential which permits the holder to teach all arts and crafts subjects; teacher of art and music, Ely public schools, 1936-37; University of Nevada Summer Session, 1937.

**PAUL A. HARWOOD, M.A.,** Associate Professor of English.

B.A., University of Nevada, 1924; M.A., *ibid.*, 1929. Following three years' study of English literature at Oxford University on a Rhodes Scholarship, returned to the University of Nevada in 1927 as Instructor in English; Associate Professor of English since 1930; Master of Lincoln Hall. Three years editor Alumni Issue of the University of Nevada Bulletin. Chairman since 1934 of Faculty Athletic Committee and as such, Nevada representative to the Far Western Conference. State Secretary for Rhodes Scholarships.

**RALPH A. IRWIN, M.S.,** Associate Professor of Psychology.

B.S., Kansas State Agricultural College, 1928; M.S., *ibid.*, 1929; graduate work at Universities of Colorado, Washington, Wisconsin, and Ohio, with all course requirements completed for the Doctor's Degree at Ohio. Graduate research assistant in educational tests and measurements at Kansas State Agricultural College in 1929. Appointed Instructor in Psychology at the University of Nevada in 1929, Assistant Professor in 1931, Associate Professor in 1937. On leave of absence from 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 other student personnel records at the University of Nevada; specialized experience in the fields of vocational guidance and juvenile delinquency.

**MRS. ALICE B. MARSH, M.A., and M.S.,** Assistant Professor of Home Economics.

B.S., in Home Economics, Oregon State College, 1914; M.S., Kansas State College, 1934; M.A., in Social Supervision and Sociology, Ohio University, 1936; Served as primary teacher and teacher of home economics in Oregon public schools for 11 years, managed a lunch room at Chautauqua, New York, serving a thousand guests daily; acted as Kansas State Supervisor for canning project for United States Government during drought period. Graduate Assistant in Home Economics, Kansas State College, 1934; assistant to Dean of Women at Ohio University, 1936; appointed Instructor at University of Nevada, 1936, Assistant Professor, 1937. Member of honorary scholastic fraternities, Phi Kappa Phi, Kappa Delta Pi and Omicron Nu.

**WILLIAM C. MILLER, M.A.,** Assistant Professor of English.

Came to the University of Nevada in 1932; acts as director of all University play productions, having presented to date eighteen notable plays of such type as "Both Your Houses," "Ghosts," and "Much Ado About Nothing"; director of the "Wolves Frolic," annual University Homecoming variety show; as undergraduate at University of Southern California was play production manager, stage manager, and student director of plays; member of Louis Dean Players at Long Beach, season of 1926; member of National Collegiate Players; Regional Director for Nevada of Membership and Publicity for Western Association of Teachers of Speech. B.S. Degree in Speech, 1931, and M.A., 1932, from the University of Southern California.

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

At the University of Nevada since 1927; Professor and Director of the Department of Music, Teacher of Theory, Conductor of University Band, Campus Choral Club, and of the University-Community Little Symphony Orchestra. Composer of songs; choral works and "Ghost Cities," a symphonic poem for orchestra; editor of the University Song Book. Special work in public school music supervision, Boston University. Graduate of New England Conservatory of Music, 1918; A.B., Washburn College, 1922; M.A. in Music, Harvard, 1926. Teaching experience in public schools, the New England Conservatory of Music, Smith College, and Washburn College.

**JOHN PARK 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, 1933-35; Assistant Instructor, Department of Education at Kansas University, 1935-37; Assistant Professor of Education, University of Nevada, 1937-. 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.

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

Graduate Teachers' Training School at Davenport, Iowa; Kindergarten Demonstration Teacher and Supervisor Student Teaching at San Jose State Teachers College for nine years; Instructor in the Summer Session Play School, University of California; Rural Supervisor of 47 schools in Sonoma County, California; University of Nevada since 1925. B.S., Columbia University in 1921; M.A., University of California, 1934.

RENA SEMENZA, A.B., Kindergarten and Primary Teacher, Reno Public Schools.

A.B., University of Nevada, 1926; Summer School, San Francisco State and University of California Play School, 1927; University of California at Los Angeles, 1929; special instruction in music in Los Angeles, summers of 1932, 1933, and 1934. Toured Europe summer 1930; four months in China and Japan, 1934; summer 1935 in Panama and Havana; six months, 1937, toured Hawaiian Islands. Opened new kindergarten at Lake Field Air Base, Oahu, T. H. Taught primary and kindergarten in Reno and Sparks since 1926. Active in Reno Little Theatre and music groups in Reno.

CHARLES L. STEWART, Ph.D., Assistant Professor of History and Political Science.

A.B., University of California, 1927. M.A., *ibid.*, 1929. Ph.D., *ibid.*, 1936. Research and travel in Mexico, eastern United States, and Canada, 1931-32. Research in historical cartography, Huntington Library, San Marino, 1935. Regional Director for California, Nevada, Oregon, and Washington of Survey of Federal Archives, a project jointly sponsored by The National Archives, Washington, D. C., and Works Progress Administration, 1936-37. Came to University of Nevada, 1937.

L. O. THOMPSON, Janitor-Training Instructor.

A long period of practical service as janitor, building superintendent and manager; for the past thirteen years, time devoted exclusively to janitor training and research; has conducted schools for janitors, building custodians and engineers all over the United States. Conducted the State Training Program in North Dakota, Washington, Oregon, and Arizona.

FRED W. TRANER, Ph.D., Professor of Education.

B.B., Beloit College, 1908; M.A., University of California, 1920; Ph.D., *ibid.*, 1930. Public school experience as high school teacher and city superintendent; in latter capacity organized teacher-training courses in high school for rural teachers; began training of elementary teachers at Nevada, 1915, of secondary teachers, 1918; Head of the Department of Secondary Education, 1930; Director of Summer Session since 1926; Dean of the School of Education, 1937; Director Teacher Appointment Service; Associate Editor "Educational Law and Administration"; Member N. E. A. Committee on Higher Education; President of N. S. E. A.

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

B.D., 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 Mu. 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.

## COURSES OF INSTRUCTION

### Art

Sm. 7. THE MODERN ARTS AND CRAFTS. An elementary introduction for teachers and others who have not had opportunity for previous study. Instruction will be given in

craftwork, including leather work, elementary bookbinding, and decorative papers, 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. For students who may wish to elect this course a second time they may do so by undertaking new and advanced projects; such students will sign for the course under the number Sm. 7a. *One credit.* 1:20-3:15, Tu. Th. 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. *One and one-half credits.* 1:20-3:15, M. W. F. Durham.

### Education

Sm. 18. GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD. A study of the factors affecting the health, physical growth, and motor development of the child, his mental growth and intellectual development, his social, and his emotional development. *Two credits.* 7:45 daily. Puffinbarger.

Sm. 19. LITERATURE IN THE 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. Cost of materials will be approximately one dollar for each student. *Two credits.* 11:25 daily. Ruebsam.

Sm. 21. THE TEACHING OF MUSIC. The essentials of group technique in school music in rural, town, and high schools. Song leading, conducting, group practice in interpretation. Development of rhythmic activities. Care of the voice through the various periods of development. Music materials, rote songs, unison songs, part songs, records, radio, and methods of approach for listening periods. Demonstration of the Seashore Measures of Musical talent. *Two credits.* 11:25 daily. Post.

Sm. 26. OBSERVATION OF DEMONSTRATION TEACHING. Designed to permit teachers to observe, under competent supervision, the most progressive practices in present-day primary teaching as exemplified in the primary demonstration room, for a description of which see page 5 of this bulletin. Observation will be accompanied by readings and discussion on primary methods and activities. Particularly valuable to primary teachers. *One credit.* Two sections. 8:40 daily, Ruebsam; 9:35 daily, Traner.

Sm. 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. The clinical service for school children having difficulty with arithmetic will provide practical laboratory experience for the members of the class. *Two credits.* 8:40 daily. Brown.

Sm. 36. DIAGNOSIS AND REMEDIAL PROCEDURES IN READING. Study will be concentrated on the difficulties children experience in reading; determination and diagnosis of these difficulties, and the use of standardized tests and other means for reeducating pupils who are backward in reading. Necessary consideration will be given to the general methods of teaching beginning reading and to suitable reading material. The clinical service for school children having difficulty with reading or with the reading subjects will provide practical laboratory experience for members of the class. *Two credits.* 9:35 daily. Ruebsam.

Sm. 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. *Two credits.* 10:30 daily. Davis.

Sm. 47. SCHOOLHOUSE MANAGEMENT. A specialized course in school management dealing with the proper care and upkeep of the school building. Designed to give all teachers an appreciation of the need for preserving the school property, but especially helpful to those responsible in any way

for janitorial service in the school. *Two sections, one-half credit for each section.* Section I, 2:30-5:00, M.-F; June 27-July 1. Section II, 7:00-9:30 p. m., M.-F; June 27-July 1. Thompson.

Sm. 58. HISTORY OF EDUCATION IN THE UNITED STATES. The fundamental objective of this course will be to throw light upon present-day educational problems. Practical as well as cultural values will be sought. Those forces which have been most influential in the shaping of educational ideals and practices will be stressed. Trends in education from early colonial times to the present will be shown to reveal the direction in which education has been proceeding. By consultation with the instructor in advance, this work may be taken for graduate credit. *Two credits.* 7:45 daily. Brown.

Sm. 59. TEACHING THE SOCIAL STUDIES. This course will be based upon fourteen major problems related directly to the teaching of elementary history. Use of the unit, the problem discussion, and the project method, will be stressed. Problems dealing with directed study, with thought and factual relations, with testing results and with aims and objectives of the social studies will be taken up. Those desirous to receive graduate credit should consult the instructor in advance. *Two credits.* 10:30 daily. Brown.

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. Davis.

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, the emotionally unstable, and the delinquent. Those who desire graduate credit should confer



with the instructor. *Two credits.* 9:35 daily. Puffinbarger.

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 principalship, and rural teachers who may wish to increase their value to school boards through knowledge of administrative principles. *Two credits.* 11:25 daily. Davis.

Sm. 103. ADMINISTRATION OF STATE SCHOOL SYSTEMS. A consideration of the problems involved in organizing and administering an effective State system of schools, especially as these problems affect the State of Nevada. Topics for study: satisfactory units of organization, proper certification standards, appointment and tenure of teachers, adequate supervision, the financing of the schools, with especial attention to the development of an equalization program for Nevada. Designed for those who wish to understand the basic principles upon which a good State system must rest and for those who may be looking forward to a connection with a State Department of Education. *Two credits.* 8:40 daily. Traner.

#### English

Sm. 22. SPEECH DEVELOPMENT. Through training in diction, voice, gesture, and platform poise, the course will attempt to develop good speech habits. Special attention will be given to oral reading and public speaking. Minor speech defects and their remedies will be considered. For elementary teachers and for high school teacher of English and those in charge of forensics. *Two credits.* 10:30 daily. Miller.

Sm. 45. POETRY. The purpose of this course is to suggest methods for the reading and interpretation of poetry which should lead to its genuine appreciation and enjoyment. *Two credits.* 8:40 daily. Harwood.

Sm. 79. THE ROMANTIC PERIOD. A study of the romantic movement in English literature with emphasis on the major poets of the period. May be taken for graduate credit if

arrangement is made with instructor in advance. *Two credits.* 9:35 daily. Harwood.

Sm. 82. PLAY PRODUCTION. Every attempt will be made to consider the problems of the smaller schools with limited facilities. Practice work is offered in all the aspects of play production: management, lighting, scenery, make-up, directing, acting, etc. *Two credits.* 11:25, M. W. F.; 1:15-3:45, Tu. Th. Miller.

Sm. 100. INDEPENDENT STUDY. Open to students qualified to do independent study in literature. The Oxford tutorial method will be employed for semiweekly conferences with each student. *Two credits.* Tutorial hours to be arranged. Harwood.

#### History and Political Science

Sm. 66. NEVADA HISTORY. A study of the early settlement and growth of Nevada Territory, its development toward statehood and its tendencies during period of statehood. Acceptable for graduate credit if arrangement is made with instructor in advance. *Two credits.* 7:45 daily. Wier.

Sm. 84. HISTORY AND GOVERNMENTS OF POST-WAR EUROPE. A study of the history and governments of the major European nations since the World War, with especial attention to Italy, Germany, and the Soviet Union. *Prerequisite:* Sufficient maturity or previous college training in history to profit from course. *Two credits.* 11:25 daily. Stewart.

Sm. 94. HISTORY OF THE UNITED STATES IN THE TWENTIETH CENTURY. A survey of the history of the United States since about 1890, with attention to the significance of the disappearance of the frontier, the emergence of large-scale business, and American overseas expansions; the Progressive movement; the United States in the World War; the crisis of 1929, and subsequent efforts to solve the economic problems arising out of it. *Prerequisite:* Sufficient maturity or previous college training in history to profit from course. *Two credits.* 10:30 daily. Stewart.

#### Political Science

Sm. 79-80. THE CONSTITUTION OF THE UNITED STATES AND OF NEVADA. The structural and functional sides of the



American governmental system, with attention to the economic and social conditions which produced the Constitution and the manner in which it has been modified or adapted to changing conditions. This course is designed to fulfill the statutory requirement that all candidates for a diploma or certificate complete a course in the Constitution. *Two credits.* 1:20 daily. Stewart.

#### Home Economics

Sm. 42. **FOOD ECONOMICS.** A study of the principles of marketing, from the consumer-buyer and institutional purchasing standpoints, which includes methods of selection, as to qualities, grades, brands, and price influences. *Two credits.* 7:45 daily. Marsh.

Sm. 76. **CHILD CARE.** A study of the child, which deals with the physical, mental, emotional, and spiritual development of the pre-school 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. *Two credits.* 8:40 daily. Marsh.

Sm. 85. **SPECIAL PROBLEMS IN FOODS.** A study which deals with assembling and organizing scientific research materials and minor experimental problems in foods. May be taken for graduate credit if arrangement is made with instructor in advance. *Two credits.* 7:45 daily. Marsh.

#### Modern Languages

Sm. 40. **FRENCH.** A study of modern French prose writers with readings from the works of Alphonse Daudet. Conversation. *Prerequisite:* Ten hours college French or two years of high school French or demonstrated ability to carry the course. *Two credits.* 9:35 daily. Chappelle.

Sm. 62. **FRENCH.** French diction, composition, and conversation. Counts towards a minor or a major. May be offered for graduate credit by completing additional assignments of a more advanced nature. *Prerequisite:* Fifteen hours college or four years of high school French, or demonstrated ability to carry the course. *Two credits.* 8:40 daily. Chappelle.

Sm. 100. **MODERN LANGUAGE SEMINAR.** Work may be

done in French, German, Italian, or Spanish. An introductory course for research work in modern foreign languages. Advanced undergraduate or graduate credit, after consultation with instructor. *Prerequisite:* Four credits in courses numbered above 50 in the language offered as the basis for work. *Two credits.* Hours to be arranged by instructor. Chappelle.

#### Music

Sm. 10. **MUSIC APPRECIATION.** A nontechnical course in hearing and appreciating great musical literature with a brief chronological view of the history of music. Limited assigned biographical readings. The library of one thousand records and scores and the automatic Capehart phonograph will be used for demonstration. *One and one-half credits.* 9:35, M. W. F. Post.

Sm. 11. **RECREATION CHORUS.** Actual participation in part singing of selections as a form of recreation for those participating, with suggestions on the conduct of choruses for leaders of glee clubs and choruses. *One-half credit.* 9:35, Tu. Th. Post.

Sm. 21. See Education 21.

#### Psychology

Sm. 40. **MENTAL HYGIENE.** A study of mental health and mental efficiency. Practical means, based on sound psychological principles, of preventing, detecting, and correcting the emotional, intellectual, social, and other behavior difficulties of normal children and adults. The course is oriented with the needs of teachers, social workers, parents and other adults in mind. *Two credits.* 10:30 daily. Irwin.

Sm. 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 practical test uses for school purposes, vocational guidance and social service. The same information and skills may be used in business, industrial, personnel, legal, and clinical practice. May be taken for graduate credit if arrangement is made with instructor in advance. *Two credits.* 11:25 daily. Irwin.

Sm. 102. RESEARCH IN PSYCHOLOGY. Special problems in some field of psychology in which the student is interested and has had advanced work. *Two credits.* Hours to be arranged by instructor. Irwin.

SCHEDULE OF CLASSES  
SUMMER SESSION, 1938

7:45—

Education Sm. 18.....	Puffinbarger
Education Sm. 58.....	Brown
Education Sm. 63.....	Davis
History Sm. 66.....	Wier
Home Economics Sm. 42 and Sm. 85.....	Marsh

8:40—

Education Sm. 26, Sec. I.....	Ruebsam
Education Sm. 31.....	Brown
Education Sm. 103.....	Traner
English Sm. 45.....	Harwood
French Sm. 62.....	Chappelle
Home Economics Sm. 76.....	Marsh

9:35—

Education Sm. 26, Sec. II.....	Traner
Education Sm. 36.....	Ruebsam
Education Sm. 70.....	Puffinbarger
English Sm. 79.....	Harwood
French Sm. 40.....	Chappelle
Music Sm. 10 and 11.....	Post
Psychology Sm. 102.....	Irwin

10:30—

Education Sm. 37.....	Davis
Education Sm. 59.....	Brown
English Sm. 22.....	Miller
English Sm. 100.....	Harwood
History Sm. 94.....	Stewart
Modern Languages Sm. 100.....	Chappelle
Psychology Sm. 40.....	Irwin

11:25—

Education Sm. 19.....	Ruebsam
Education Sm. 21.....	Post
Education Sm. 91.....	Davis
English Sm. 82.....	Miller
History Sm. 84.....	Stewart
Psychology Sm. 59.....	Irwin

## SCHEDULE OF CLASSES—Continued

1:20—

Art Sm. 7.....	Durham
Art Sm. 8.....	Durham
English Sm. 82.....	Miller
Political Science Sm. 79.....	Stewart

2:15—

Art Sm. 7.....	Durham
Art Sm. 8.....	Durham
English Sm. 82.....	Miller

2:30—

Education Sm. 47, Sec. I.....	Thompson
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7:00 p. m.—

Education Sm. 47, Sec. II.....	Thompson
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## RECIPIENTS OF SCHOLARSHIPS AND HONORS

1937

The five REGENTS' SCHOLARSHIPS of \$50 each for excellence in scholarship, awarded to

Alice Sauer	Herbert Jacobs
Jessie McClure	Maurice Sheppard
John Barber	

The ELLA SPRENGLE STUBBS SCHOLARSHIP of \$100, awarded to  
Margaret Jensen

The UNIVERSITY ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP of \$25, awarded to

Rebecca Taitel

The LEWIS D. FOLSOM SCHOLARSHIP of \$100, awarded to  
Richard Taw

The ROSE SIGLER MATHEWS SCHOLARSHIPS of \$200, awarded to  
Mary Mathews  
and of \$50, awarded to

Melva Lauritzen

The THEODORA STUBBS FULTON MEMORIAL SCHOLARSHIP of \$100 was not offered this year.

The MARYE WILLIAMS BUTLER SCHOLARSHIP of \$50, awarded to  
James Galvin

The AZRO E. CHENEY SCHOLARSHIP of \$300, awarded to  
Elizabeth D'Alessandro

The GENERAL O. M. MITCHELL WOMAN'S RELIEF CORPS MILITARY SCHOLARSHIP of \$50. No award this year.

The MRS. CARL OTTO HERZ ELECTRICAL ENGINEERING SCHOLARSHIP of \$50, awarded to

Guy Patterson

The CHARLES ELMER CLOUGH SCHOLARSHIPS of \$100 each, awarded to

Ben Morehouse	John Marean
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The GRAND ARMY OF THE REPUBLIC SCHOLARSHIP of \$50, awarded to

Elmer L. Isaacs

## WINNERS OF SCHOLARSHIPS AND HONORS, 1937

## ROLL OF DEGREES GRANTED, 1937

## ENROLLMENT SUMMARY FOR 1937-1938

## ROSTER OF STUDENTS—August 1937-May 1938

The JAMES WARD GERMAN FORENSICS SCHOLARSHIP of \$100, awarded to

Francis Breen

The CARRIE BROOKS LAYMAN MEMORIAL SCHOLARSHIP of \$300, awarded to

Lloyd N. Bowen

The PREMEDICAL SCHOLARSHIP of \$100, awarded to  
Richard Summerbell

The WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM of \$75, awarded to

Murray Moler

The VERN F. HENRY MEMORIAL MASONIC SCHOLARSHIP of \$50, awarded to

Betty Kornmayer

The RAYMOND SPENCER SCHOLARSHIP of \$250, awarded to  
Marvin Moler

The RENO CHAPTER WOMAN'S CHRISTIAN TEMPERANCE UNION ESSAY PRIZE of \$20 was not given this year.

The PHILO S. BENNETT PRIZE for the best essay on "The Principles of Free Government." No award.

The HENRY ALBERT SENIOR PUBLIC SERVICE PRIZE of \$25, awarded to

William Cashill

The ARMANKO SENIOR LIBRARY PRIZE of \$100 worth of books, awarded to

Walter Palmer, Jr.

#### 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.

Walter Palmer, 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

Emil Gezelin

Commissions as Second Lieutenants, Infantry, Officers' Reserve Corps, United States Army:

Charles L. Allen	John K. Carr
Robert C. Davey	Mathias W. Kennedy
James T. McNeely	Jack A. Richardson

Certificates of Eligibility for Appointment as Second Lieutenants, Infantry, Officers' Reserve Corps, United States Army, upon attainment of majority:

Craig W. Moore	Frederick L. Wood, Jr.
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Designated as Honor Graduate under the provisions of Army Regulations 145-10:

Charles L. Allen

Awarded Governor's Medal for proficiency in military training, observance of the rules of military courtesy, and intelligent attention to duty:

Cadet Sergeant John Etchemendy

Awarded Reserve Officers' Association Medal for attendance, discipline, and proficiency:

Cadet Corporal Albert J. Caton, Jr.

Awarded Medals for Marksmanship by Company C, 7th Regiment, Scabbard and Blade:

1st Place, Gold Medal—Cadet Lieut. Robert E. Leaver
2d Place, Silver Medal—Cadet Private Clovis E. Bull
3d Place, Bronze Medal—Cadet Captain James T. McNeely

Utah Society, Sons of the American Revolution, Bronze Medals for Excellence:

2d Year Advanced Course—Cadet Major Charles L. Allen
1st Year Advanced Course—Cadet. Lieut. Dorence Jameson
2d Year Basic Course—Cadet Sgt. Herbert N. Jacobs
1st Year Basic Course—Cadet Pvt. Ned Dickson

Seniors elected to the National Honor Fraternity, PHI KAPPA PHI, election being based upon scholarship:

Charles L. Allen	Ida Louise De Nevi
Betty Gloria Bowman	Billy Clifford Morris
Jean Elizabeth Cameron	Kenyon Elrod Richard
John Franklin Sharp	

HONOR ROLL OF THE SENIOR CLASS, whose average for the four years is 1.5 or higher:

None qualified.



Students whose names appeared on the HONOR SCHOLARSHIP ROLL  
both semesters of the year 1936-1937:

SENIORS	
Walter Palmer	Charles Allen
Betty Bowman	Frank Sharp
JUNIORS	
Russell McDonald	Rebecca Taitel
Joseph Littlefield	Elizabeth Best
Alice Sauer	Guy Patterson
Jessie McClure	Margaret Jensen
SOPHOMORES	
Herbert N. Jacobs	Maurice Sheppard
George W. Sears	Harold White
Elizabeth D'Alessandro	Roy Stott
FRESHMAN	
John Barber	Ross Ashley
David K. Hartman	Dorothy Jones
Helen L. Byrd	Byron S. Hardie
Ned R. Dickson	Melva Lauritzen
Albert J. Caton	Nellie Little
Sybil Furchner	

## GRADUATES

Diplomas and Degrees were awarded on Commencement  
Day, May 10, 1937, as follows:

## ADVANCED DEGREES

## MASTER OF ARTS

Raymond Kilian

## MASTER OF SCIENCE

Kenneth Stephen Karsten

## ELECTRICAL ENGINEER

Arnold Benson

## ENGINEER OF MINES

Raymond M. Henricksen

## BACHELOR OF ARTS

Oliver C. Aymar	Ida Louise De Nevi
Richard Oliver Bagley (December 23, 1936)	Lucia M. Devore (December 23, 1936)
Elizabeth Ann Barnes	Dorothy Dignan
Eleanor Lorraine Barry	Joyce N. Dodge
Evamae Beemer	Jack C. Elliott
Mary Elizabeth Blum	Louise Emminger
Lottie Boulden	Gwenevere Erikson
Barbara Marion Bryant	Eleanor J. Fisher (December 23, 1936)
Frances H. Burke	Emile Justin Gezelin
George D. Calderwood	Anne Gibbs
Jean Elizabeth Cameron	Alanson Arthur Gibeaut
John K. Carr	Obren Glusovich
Mary Elizabeth Casey	Ruthe Viola Goldsworthy
William J. Cashill	Emery W. Graunke
Harriet Nevada Cazier	Leslie B. Gray
Chester W. Cheel	Lillian Guisti
Emmeline Christensen	George H. Harlan, Jr.
Jess R. Christensen	Georgianna Harriman
Miriam Ladd Clark	Jeremiah R. Havens
Tyrus Cobb	Ann Sourwine Hayden
Myrtle Laverne Cox	Paul Clay Heilman (December 23, 1936)
Frances Ellen Creek	
Virginia D. Crosby	

## BACHELOR OF ARTS—Continued.

Harold Otto Herz	Adam M. Patterson
James Rudolph Herz	Russell Vernon Poulsen
Helen M. Jenkins	Wayne Eddlemon Poulsen
(December 23, 1936)	J. Lewis Pulsipher
Virginia Elizabeth Kearns	(December 23, 1936)
Ethel Katherine Kent	Charles Bryce Rhodes
Maxwell Kepl	Jack A. Richardson
Cletis J. Libbey	Gerald Austin Roberts
Byron Curtis Lowry	John Evans Robinson
Ruth N. Lyons	Isabelle J. Scossa
(December 23, 1936)	Frank M. Showalter
Albert Roger Manhan	Lillian M. Smith
Betty M. McCuiston	(December 23, 1936)
Betty Jane McCulloch	Orval Tregellas
Sylvia A. Michal	(December 23, 1936)
(December 23, 1936)	Ethel Maurine Trim
Gordon W. Miles	Ruth Elizabeth Tucker
Mary Shaw Millard	Marion Ann Uhart
Norma Jean Mills	Leland G. Ward
Ruth Estella Palmer	Louis I. Wiener, Jr.
Walter S. Palmer, Jr.	Christopher W. Wogan
	Samuel Saul Zackheim

## BACHELOR OF SCIENCE

John Francis Armstrong	Ira La Rivers
(December 23, 1936)	Ellen Louise Mornston
James Hawthorne Ashbaugh	Rodney E. Morrin
Darrell A. Berry	(December 23, 1936)
(December 23, 1936)	Nelda Oppedyk
George C. Bump	Clayton D. Phillips
George William Burke	Margaret Piercy
(December 23, 1936)	Silas Earl Ross, Jr.
Helen June Crabtree	Evelyn Matson Tannehill
Jack R. Hughes	(December 23, 1936)
Walter A. Hunting	Aldo Roy Vacchina
Clara Elizabeth Juniper	Leland A. Yerkes

## BACHELOR OF SCIENCE IN MINING ENGINEERING

Robert Harlan Barrett	Albert G. Cummings
Betty Gloria Bowman	Leslie Aaron Green
Herbert Burrus	Samuel Thomas Hilberg
James Roy Caldwell	Craig W. Moore

Eldridge Nash	Chauncey Lorenzo Sharpe
John Franklin Sharp	Emmett Luther Spencer
	Fred E. Tong

## BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Charles L. Allen	Tom Q. Morris
Wilton Margrave	(December 23, 1936)
Guy P. Morris	J. Kenneth Ward
	Frederick Leslie Wood, Jr.

## BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Peter F. Anker	Claude E. Hunter, Jr.
George Devore	Charles F. Keeler
Thoon Teng Gee	Frank J. Kornmayer, Jr.
Charles Leland Gundlach	(December 23, 1936)
Frank Layton, Howland	Anthony Leone
	Robert O. Zadow

## BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Robert Charles Davey	Frank W. Hickey, Jr.
Forrest G. Hagadorn	Billy Clifford Morris
	William Stuart Neville

## BACHELOR OF SCIENCE IN GEOLOGICAL ENGINEERING

Kenyon Elrod Richard

## BACHELOR OF SCIENCE IN AGRICULTURE

Gordon Wesley Kennedy	Vernon J. Tapogna
Antoine Primeaux	Marvin Turner
(December 23, 1936)	(December 23, 1936)
Don Small	Paul R. Walker

## BACHELOR OF SCIENCE IN HOME ECONOMICS

Arlene Boerlin	Marguerite Marie Fuetsch
(October 28, 1936)	Genevieve Hansen
Ellen Agnes De Armond	Kathryn Luke
Fredrica Marie Dwyer	Orpah Rose Morgan
Chrissie J. Finn	Miriam I. Perry
	Mary Louise Waltenspiel

## TEACHER'S DIPLOMA OF HIGH SCHOOL GRADE

Eleanor Lorraine Barry	Robert T. Best
Evamae Beemer	Arlene Boerlin
	(October 28, 1936)

TEACHER'S DIPLOMA OF HIGH SCHOOL GRADE--Continued	
Frances H. Burke	Genevieve Hansen
Jean Elizabeth Cameron	Clara Elizabeth Juniper
Emmeline Christensen	Virginia Elizabeth Kearns
Miriam Ladd Clark	Kathryn Luke
Myrtle Laverne Cox	Ruth N. Lyons
Helen June Crabtree	(December 23, 1936)
Frances Ellen Creek	Albert Roger Manhan
Virginia D. Crosby	Gordon W. Miles
Ellen Agnes De Armond	Norma Jean Mills
Ida Louise De Nevi	Orpah Ruth Morgan
Dorothy Dignan	Ruth Estella Palmer
Joyce N. Dodge	Margaret Piercy
Fredrica Marie Dwyer	J. Lewis Pulsipher
Gwenevere Erikson	(December 23, 1936)
Chrissie J. Finn	Isabella J. Scossa
Marguerite Marie Fuetsch	Ethel Maurine Trim
Emile Justin Gezelin	Marion Ann Uhart
Anne Gibbs	Mary Louise Waltenspiel
Lillian Guisti	Samuel Saul Zackheim
TEACHER'S DIPLOMA OF GRAMMAR GRADE	
Anne R. Banovich	Isabelle Dorlene Jaynes
(October 28, 1936)	Thelma L. King
Bessie M. Barrett	Lyda Lee Perry
Fay Marie Caple	Theodora Abbott Putney
Bessie McDonald Christensen	James A. Schultz
Geneva-Beth Ellis	Yvonne A. Siard
Thelma Ruth Gillies	Ethel Dorothy Sneeegas
	Mary Venturino

## ENROLLMENT SUMMARY

Year 1937-1938

COLLEGE OF ARTS AND SCIENCE	
Seniors.....	121
Juniors.....	67
Sophomores.....	128
Freshmen.....	334
Graduate.....	75
Unclassified.....	61
Specials.....	13
	799
NORMAL SCHOOL	
Sophomores.....	8
Freshmen.....	20
Unclassified.....	1
	29
COLLEGE OF ENGINEERING	
<i>Mackay School of Mines</i> —	
Seniors.....	17
Juniors.....	7
Sophomores.....	23
Freshmen.....	54
Unclassified.....	4
Specials.....	5
	110
<i>School of Mechanical Engineering</i> —	
Seniors.....	3
Juniors.....	1
Sophomores.....	7
Freshmen.....	24
Graduate.....	1
Unclassified.....	4
	40
<i>School of Civil Engineering</i> —	
Seniors.....	7
Juniors.....	1
Sophomores.....	14
Freshmen.....	27
Unclassified.....	1
	50
<i>School of Electrical Engineering</i> —	
Seniors.....	10
Juniors.....	6
Sophomores.....	10
Freshmen.....	22
Unclassified.....	2
	50
COLLEGE OF AGRICULTURE	
<i>School of Agriculture</i> —	
Seniors.....	10
Juniors.....	8
Sophomores.....	19
Freshmen.....	49
Unclassified.....	2
Specials.....	2
	90
<i>School of Home Economics</i> —	
Seniors.....	6
Juniors.....	11
Sophomores.....	7
Freshmen.....	29
Unclassified.....	5
Specials.....	2
	53
Total University.....	1221
Enrollment of Men.....	741
Enrollment of Women.....	480
Total Summer School, 1937.....	133
	1354
	22
Less names counted twice.....	1332
Grand total enrollment.....	1332

## ROSTER OF STUDENTS

Year 1937-1938

## GRADUATE

Albert W. Alegre.....	Arts and Science.....	Reno
Clark Amens.....	Mechanical Engineering.....	Reno
Mrs. Ina Angus.....	Arts and Science.....	Reno
Cornelia Arentz.....	Arts and Science.....	Smith
Mable Armstrong.....	Arts and Science.....	Reno
Clyde E. Arrington.....	Arts and Science.....	Reno
James H. Ashbaugh.....	Arts and Science.....	Reno
Marcelle Barkley.....	Arts and Science.....	Reno
Anita Becaas.....	Arts and Science.....	Reno
Emily R. Beck.....	Arts and Science.....	Reno
Mrs. Lois Bicknell.....	Arts and Science.....	Reno
Gladys Blair.....	Arts and Science.....	Reno
Dorothy Boardman.....	Arts and Science.....	Reno
Lawrence W. Carter.....	Arts and Science.....	Reno
Chester W. Cheel.....	Arts and Science.....	Reno
Robert Creps.....	Arts and Science.....	Reno
Mrs. Gladys J. Crosby.....	Arts and Science.....	Reno
James C. Currie.....	Arts and Science.....	Reno
Delvan W. Dean.....	Arts and Science.....	Reno
Ida L. DeNevi.....	Arts and Science.....	Dayton
Mae Denevi.....	Arts and Science.....	Sparks
Mrs. Lucia Devore.....	Arts and Science.....	Reno
Dorothy Dignan.....	Arts and Science.....	Reno
Mrs. Ethel Feemster.....	Arts and Science.....	Reno
Mary Gates.....	Arts and Science.....	Reno
June S. Gregory.....	Arts and Science.....	Reno
Kathleen Griffin.....	Arts and Science.....	Reno
Margaret Griffin.....	Arts and Science.....	Reno
Eileen Haffey.....	Arts and Science.....	Reno
Margaret Hartman.....	Arts and Science.....	Reno
Harold J. Heinen.....	Arts and Science.....	Reno
C. Leland Hill.....	Arts and Science.....	Reno
William O. Holmes.....	Arts and Science.....	Reno
Lois Hutchinson.....	Arts and Science.....	Reno

Elizabeth Juniper.....	Arts and Science.....	Reno
Blanche Keegan.....	Arts and Science.....	Sparks
Lois C. Kelley.....	Arts and Science.....	Eureka
Chanucey King.....	Arts and Science.....	Yerington
Mildred Klaus.....	Arts and Science.....	Reno
Virginia LaRue.....	Arts and Science.....	Reno
Frandsen Loomis.....	Arts and Science.....	Reno
Kathryn Martin.....	Arts and Science.....	Reno
Isabelle Matley.....	Arts and Science.....	Reno
Russell W. McDonald.....	Arts and Science.....	Reno
C. E. Mitchell.....	Arts and Science.....	Sparks
Bruce K. Moore.....	Arts and Science.....	Reno
Mrs. Augusta C. Nichols.....	Arts and Science.....	Reno
Clare O'Sullivan.....	Arts and Science.....	Reno
Thomas Prunty.....	Arts and Science.....	Sparks
Embree Raiford.....	Arts and Science.....	Reno
Margaret Rawson.....	Arts and Science.....	Reno
Ellinor Robinson.....	Arts and Science.....	Reno
Ellen Russell.....	Arts and Science.....	Reno
Mrs. Ruth Schmuck.....	Arts and Science.....	New York City, N. Y.
Katherine Schnell.....	Arts and Science.....	Reno
Carl F. Schroeder.....	Arts and Science.....	Reno
Neil P. Scott.....	Arts and Science.....	Reno
Chester M. Scranton.....	Arts and Science.....	Reno
Rena Semenza.....	Arts and Science.....	Reno
Dorothea Shidler.....	Arts and Science.....	Reno
Merle Singleton.....	Arts and Science.....	Sparks
Lillian Smith.....	Arts and Science.....	Reno
Nevada Solari.....	Arts and Science.....	Reno
Lucile Stone.....	Arts and Science.....	Sparks
Margaret Sullivan.....	Arts and Science.....	Reno
Rose Taverna.....	Arts and Science.....	Reno
Winifred Thomas.....	Arts and Science.....	Reno
Alice Twaddle.....	Arts and Science.....	Reno
Inez K. Walker.....	Arts and Science.....	Sparks
J. Ralph Warren.....	Arts and Science.....	Reno
John Wilslef.....	Arts and Science.....	Reno
Chris W. Wogan.....	Arts and Science.....	Reno
Charles Sung Wong.....	Arts and Science.....	Reno
Mrs. Frances M. Wood.....	Arts and Science.....	Reno
Philip H. Yoemans.....	Arts and Science.....	Reno
Marie Porteous York.....	Arts and Science.....	Fallon



SENIORS		
Norma G. Anderson	Arts and Science	Reno
John F. Armbruster	Arts and Science	Reno
Thelma Armstrong	Arts and Science	Sparks
Paul Aznarez	Arts and Science	Wellington
Thomas Bafford	Agriculture	Fallon
W. Russell Bailey	Arts and Science	Reno
Edmond J. Barrett	Electrical Engineering	Ruth
Samuel M. Basta	Arts and Science	Ruth
John E. Bawden	Civil Engineering	Reno
Clyde Beck	Arts and Science	Reno
Virginia Beckley	Arts and Science	Las Vegas
Elizabeth Best	Arts and Science	Fallon
Ralph Birchard	Mines	South Pasadena, Calif.
Mary Catherine Blakely	Arts and Science	Reno
Nina A. Boczkiewicz	Arts and Science	Stewart
Lloyd N. Bowen	Arts and Science	Reno
John Brackett	Arts and Science	Reno
Aldene D. Branch	Home Economics	Reno
Donald K. Brandon	Arts and Science	Twin Falls, Idaho
John D. Burgess	Mines	Melones, Calif.
Walter B. Cain	Agriculture	Reno
Charles I. Calhoun	Arts and Science	Sacramento, Calif.
Kevin Callahan	Arts and Science	Fallon
E'Lois I. Campbell	Arts and Science	Reno
Grace E. Cantlon	Arts and Science	Sparks
Mary Louise Carmody	Arts and Science	Reno
Clayton A. Carpenter	Electrical Engineering	Reno
Louis R. Carpenter	Mines	Oroville, Calif.
Denzil M. Carr	Mines	Delhi, Calif.
John H. Cleary	Mines	Reno
Robert M. Cleary	Mines	Reno
Donald K. Cole	Civil Engineering	Elko
Marshall S. Creel	Arts and Science	Reno
Parley Dean Croft	Arts and Science	Reno
Camille Crosby	Arts and Science	Wadsworth
Georgia Curnow	Arts and Science	Reno
Grover W. De La Mare	Mines	Reno
Charles Doherty	Arts and Science	East Ely
George E. Dukes	Arts and Science	Reno
Earl A. Edmonds	Arts and Science	Reno
William Elwell	Arts and Science	Las Vegas

Dorothy Evans	Arts and Science	Reno
Howard A. Evans	Electrical Engineering	McGill
Kirk S. Fairhurst	Mechanical Engineering	Reno
G. Donald Fanning	Agriculture	Reno
Harold Foremaster	Arts and Science	Las Vegas
Beth M. Fredrickson	Arts and Science	Goodsprings
James A. Galvin	Arts and Science	Tonopah
Eleanor L. Gardella	Arts and Science	Wadsworth
Ellis H. Gates	Mines	Boise, Idaho
Margaret L. Gill	Arts and Science	Reno
Gaynell Giblin	Arts and Science	Fallon
Jeanette Green	Arts and Science	Sparks
Eugene Grutt	Mines	Reno
Peter Guisti	Civil Engineering	Reno
Frances Haire	Arts and Science	Reno
O. Floyd Hand	Arts and Science	Reno
Berna M. Hansen	Arts and Science	Wells
Hattie B. Hard	Arts and Science	Wadsworth
Elda E. Haslett	Arts and Science	Reno
Christie L. Hermansen	Arts and Science	Preston
Felton Hickman	Arts and Science	Preston
Winifred Hiltonen	Arts and Science	Goldfield
Ellen I. Hoffman	Arts and Science	Reno
George W. Hogg	Arts and Science	Sparks
Mrs. W. O. Holmes	Arts and Science	Reno
Chester W. Howard	Arts and Science	Carlin
Dorence Jameson	Arts and Science	Round Mountain
Laurada Jarvis	Arts and Science	Fallon
Margaret Jensen	Arts and Science	Gardnerville
Maxwell O. Jensen	Arts and Science	Ely
Charlotte B. Johnson	Arts and Science	Fernley
Beverly M. Jones	Arts and Science	Gardnerville
P. Malcolm Jones	Arts and Science	Reno
Beverly Joyce	Arts and Science	Reno
Clyde E. Keegel	Mines	Las Vegas
Wayne L. Keeley	Arts and Science	Franklin, Pa.
Basil T. Kehoe, Jr.	Arts and Science	Boulder City
Grant M. Kennedy	Agriculture	Lovelock
M. Wayne Kennedy	Civil Engineering	Reno
Harvey O. Kolhoss	Mines	Fallon
Paul R. Laiolo	Arts and Science	Reno
Henry A. Lang	Mines	San Francisco, Calif.

Ernest E. Larkin, Jr.	Arts and Science	Reno
Richard H. Laub	Arts and Science	Goldfield
Melva Lauritzen	Arts and Science	Fernley
Doris Bath Layson	Home Economics	Reno
Robert E. Leaver	Civil Engineering	Reno
Donald M. Leighton	Arts and Science	Wells
Paul Leonard	Arts and Science	McGill
Lincoln W. Laston	Arts and Science	Caliente
Josephine M. Little	Arts and Science	Fernley
Joseph N. Littlefield	Civil Engineering	Elko
Mrs. Irma M. Loforth	Arts and Science	Reno
Joseph P. Lommori	Arts and Science	Yerington
Lauritz Lund	Agriculture	Reno
James Milton Mapes	Arts and Science	Litchfield, Calif.
Rosalys M. Martinez	Arts and Science	Reno
Mary F. Mathews	Arts and Science	Reno
Loren Maxwell	Electrical Engineering	Reno
Katheryne M. McCleary	Arts and Science	Colfax, Calif.
Jessie McClure	Arts and Science	Reno
Donald P. McDonnell	Arts and Science	Fallon
Gene D. McIntyre	Arts and Science	Reno
M. Hollis McKinnon	Arts and Science	Mina
Stanford W. McNair	Arts and Science	Goldfield
James T. McNeely	Arts and Science	Battle Mountain
Robert Metten	Arts and Science	Las Vegas
Lois E. Miller	Arts and Science	Sparks
Robert C. Miller	Arts and Science	Pittsburg, Calif.
Morgan H. Mills	Electrical Engineering	Las Vegas
Marvin A. Moler	Electrical Engineering	Reno
Murray M. Moler	Arts and Science	Reno
Jonas C. Moore	Arts and Science	Los Angeles, Calif.
Ben M. Morehouse	Electrical Engineering	Fallon
Elizabeth B. Naismith	Arts and Science	Tonopah
Louis Nash	Arts and Science	Las Vegas
Oliver S. Ness	Arts and Science	Fargo, N. D.
Frances V. Nichols	Arts and Science	Reno
Norman E. Nichols	Agriculture	Reno
Blaine Oakey	Agriculture	Yerington
Edward B. Olds	Mines	Silver City
Edith Dutton Orr	Arts and Science	Las Vegas
Elizabeth R. Osborn	Arts and Science	Winnemucca
Janet Parish	Arts and Science	Reno
Milton B. Parker	Mines	Reno

Guy K. Patterson	Electrical Eng.	Sacramento, Calif.
Edward Pine	Civil Engineering	Hawthorne
Virginia Posvar	Arts and Science	Reno
Kenneth P. Powell	Arts and Science	Reno
Perry B. Priest	Arts and Science	Winnemucca
Robert L. Quirk	Arts and Science	Gerlach
Joseph P. Radetich	Arts and Science	Reno
Robert E. Record	Agriculture	Reno
Melvin W. Redhead	Mines	Boulder City
John E. Robb	Arts and Science	Reno
Eugene C. Rollins	Mechanical Engineering	Sparks
Edward A. Rose	Arts and Science	Reno
Ruth Rowe	Arts and Science	Reno
Alice L. Sauer	Arts and Science	Carson City
Barbara L. Schmidt	Arts and Science	Los Angeles, Calif.
Thomas B. Shone	Arts and Science	Winnemucca
Frances E. Smith	Home Economics	Reno
George W. Smith	Arts and Science	Gardnerville
Howard N. Smith	Mechanical Eng.	Los Angeles, Calif.
Jean C. Smith	Arts and Science	Reno
Merle L. Snider	Arts and Science	Winnemucca
Hildegard M. Spieker	Home Economics	Waite Park, Minn.
Samuel W. Stark	Arts and Science	Reno
Walter L. States	Arts and Science	Reno
Milton Steinheimer	Mines	Reno
Otto Steinheimer, Jr.	Agriculture	Reno
Sarah L. Swett	Home Economics	Reno
Rebecca Taitel	Arts and Science	Chicago, Ill.
Patricia Tarner	Arts and Science	Sparks
Richard Taw	Arts and Science	Wells
Kenneth H. Tedford	Arts and Science	Fallon
Raymond Tennant	Arts and Science	Reno
Emily Tholl	Arts and Science	Sparks
W. Richard Thormeyer	Mines	Reno
Margery Totman	Arts and Science	Reno
Margaret A. Turano	Arts and Science	Reno
Charles T. Turner	Arts and Science	Las Vegas
James B. Twombly	Arts and Science	Compton, Calif.
Elona L. Van Sickle	Arts and Science	Carson City
Rose Kennedy Walker	Arts and Science	Sparks
Ned B. Westover	Electrical Engineering	Reno
Charles Burkey White	Arts and Science	Reno
Melville L. Wilder	Arts and Science	Reno

Jeanette C. Williams.....	Home Economics.....	Reno
Carroll E. Williamson.....	Agriculture.....	Reno
Prescott P. Wilson.....	Arts and Science.....	Reno
*Rita Hope Winer.....	Arts and Science.....	Reno
Llewellyn A. Young.....	Electrical Engineering.....	Lovelock

## JUNIORS

Elaine E. Adams.....	Arts and Science.....	Reno
Arthur M. Andersen.....	Arts, Science.....	Huntington Beach, Calif.
Eugene B. Anderson.....	Mines.....	Reno
Julia M. Arobio.....	Arts and Science.....	Lovelock
Theo Ashworth.....	Agriculture.....	Ruth
John W. Barrett.....	Arts and Science.....	Reno
Eunice L. Beckley.....	Arts and Science.....	Las Vegas
Mary E. Boczkiewicz.....	Arts and Science.....	Stewart
Rose I. Boggio.....	Arts and Science.....	Paradise Valley
John M. Boylan.....	Arts and Science.....	Reno
Helen H. Brown.....	Arts and Science.....	Reno
Verna E. Bullis.....	Arts and Science.....	Winnemucca
Billie Burke Cann.....	Arts and Science.....	Reno
Charlotte C. Caton.....	Arts and Science.....	Reno
Doris E. Chesnutt.....	Arts and Science.....	Reno
Jean Chism.....	Arts and Science.....	Reno
Margaret Cline.....	Home Economics.....	Reno
Loretta M. Collins.....	Home Economics.....	Reno
Georgia E. Cooper.....	Home Economics.....	Reno
Elizabeth D'Alessandro.....	Arts and Science.....	Lovelock
Patricia E. Davis.....	Arts and Science.....	Reno
William C. Davis.....	Arts and Science.....	Reno
Kenneth G. Day.....	Arts and Science.....	Sparks
Theodore Demosthenes.....	Agriculture.....	Reno
Lois A. Downs.....	Home Economics.....	Fallon
Leo W. Doyle, Jr.....	Arts and Science.....	Reno
Forrest Kelly Eccles.....	Arts and Science.....	Reno
Herbert L. Eikelberger.....	Arts and Science.....	Sparks
Chester M. Estes.....	Arts and Science.....	Battle Mountain
Leland E. Fallon.....	Agriculture.....	Yerington
Barbara R. Ferron.....	Arts and Science.....	Las Vegas
Harry E. Galloway.....	Agriculture.....	Reno
David Goldwater.....	Arts and Science.....	Reno
Frank S. Goodner.....	Electrical Engineering.....	Reno
Ethel C. Gramke.....	Arts and Science.....	Gardnerville

\*Died, December 30, 1937.

Chester A. Green.....	Arts and Science.....	Reno
John O. Gustafson.....	Agriculture.....	Milnor, N. D.
Nancy J. Hall.....	Arts and Science.....	Reno
Martin K. Hannifan.....	Mines.....	Fallon
Jack B. Hanson.....	Arts and Science.....	Sparks
Virginia E. Heany.....	Arts and Science.....	Sparks
Homer F. Herz.....	Arts and Science.....	Reno
Godfred O. Hoffman.....	Electrical Engineering.....	Reno
Julian W. Hunt.....	Mines.....	Salt Lake City, Utah
Margaret A. Hussman.....	Arts and Science.....	Gardnerville
Jeanette L. Hutchins.....	Arts and Science.....	Golconda
Elmer L. Isaac.....	Electrical Engineering.....	Austin
Herbert N. Jacobs.....	Arts and Science.....	Reno
Chester Jacobsen.....	Agriculture.....	Gardnerville
Elna Jepson.....	Arts and Science.....	Sparks
Joseph F. Kievit.....	Arts and Science.....	Reno
Teletha L. Kirn.....	Home Economics.....	Fallon
Elizabeth V. Kohlhoss.....	Arts and Science.....	Fallon
Betty Kornmayer.....	Home Economics.....	Reno
Victor Kral.....	Mines.....	Reno
Shek Y. Lam.....	Arts and Science.....	San Francisco, Calif.
Preston Larson.....	Arts and Science.....	Preston
Hudson Lee.....	Agriculture.....	Carson City
Arthur H. Leigh.....	Arts and Science.....	Reno
Avenell Manzonie.....	Arts and Science.....	Kimberly
John H. Marean.....	Electrical Engineering.....	Lovelock
Leo B. McCuddin.....	Arts and Science.....	Round Mountain
Gwen M. Meginness.....	Home Economics.....	Reno
Charlotte J. Michael.....	Arts and Science.....	Reno
Felicia A. Moos.....	Arts and Science.....	Reno
C. Richard Neville.....	Arts and Science.....	Sacramento, Calif.
William B. Newbold.....	Arts and Science.....	Pasadena, Calif.
Jed S. Oxborrow.....	Agriculture.....	Lund
Margaret M. Pearson.....	Home Economics.....	Reno
Gertrude M. Polander.....	Home Economics.....	Winnemucca
Lewis G. Porteous.....	Electrical Engineering.....	Hazen
Loring Primeaux.....	Arts and Science.....	Midas
Donald A. Purdy.....	Arts and Science.....	Sparks
Marilyn Rhoades.....	Arts and Science.....	Boulder City
Jean E. Rice.....	Arts and Science.....	Reno
Georgene M. Roberts.....	Arts and Science.....	Sparks
Ernest R. Rodriguez.....	Mines.....	Reno

Fitzgerald N. Salter.....	Arts and Science.....	Reno
Raymond T. Sancts.....	Arts and Science.....	Vallejo, Calif.
George W. Sears, Jr.....	Arts and Science.....	Reno
George F. Sheats.....	Arts and Science.....	Reno
Arthur A. Simpson.....	Arts and Science.....	Los Angeles, Calif.
Norman A. Smith.....	Electrical Engineering.....	Winnemucca
Martin Smythe.....	Mines.....	Reno
John L. Starratt.....	Arts and Science.....	Reno
Kathleen M. Starratt.....	Arts and Science.....	Tahoe City, Calif.
Lila E. Stoddard.....	Arts and Science.....	Reno
Lola Y. Stoddard.....	Arts and Science.....	Reno
Mary G. Stott.....	Home Economics.....	Eureka
James H. Sullivan.....	Arts and Science.....	Reno
Richard C. Summerbell.....	Arts and Science.....	Fallon
Alma Twist.....	Arts and Science.....	Paradise Valley
John Urrutia.....	Arts and Science.....	Reno
Marie L. Varnon.....	Arts and Science.....	Reno
Jay R. Waite.....	Civil Engineering.....	Bunkerville
Verrill V. Walker.....	Mechanical Engineering.....	Carlin
Harold M. White.....	Arts and Science.....	Reno
Nelle Price Wiley.....	Arts and Science.....	Las Vegas
Samuel G. Wilson.....	Mines.....	Reno
Mildred A. Woodward.....	Home Economics.....	Fallon
Mary Elizabeth Wood.....	Arts and Science.....	Reno

## SOPHOMORES

William G. Arbonies.....	Arts and Science.....	Winnemucca
Ross W. Ashley.....	Arts and Science.....	Reno
Dorothy A. Acheson.....	Arts and Science.....	Gardnerville
James A. Atkinson.....	Mechanical Engineering.....	McGill
Alma L. Bails.....	Arts and Science.....	Sparks
James A. Baraw.....	Mines.....	Los Angeles, Calif.
John Barber.....	Arts and Science.....	Reno
Robert A. Barnard.....	Arts and Science.....	Beverly Hills, Calif.
Roger H. Barrowman.....	Mines.....	Sacramento, Calif.
Olinto M. Barsanti.....	Arts and Science.....	Tonopah
Benjamin C. Barton.....	Agriculture.....	Yerington
George W. Beattie.....	Arts and Science.....	San Francisco, Calif.
Norrison Beatty.....	Arts and Science.....	Reno
Thomas Beko.....	Arts and Science.....	Tonopah
June Bradbury.....	Home Economics.....	Sparks
Betty J. Brannin.....	Arts and Science.....	Sparks
Francis R. Breen.....	Arts and Science.....	Reno

Earl M. Brooks.....	Agriculture.....	Reno
Guy W. Brown.....	Electrical Engineering.....	Reno
Henry G. Bryant.....	Arts and Science.....	Reno
Evelyn G. Bulmer.....	Arts and Science.....	Reno
Ferren W. Bunker.....	Agriculture.....	Bunkerville
Elisabeth Burleigh.....	Arts and Science.....	Ely
Chester A. Burt.....	Mechanical Engineering.....	Goldfield
William B. Button.....	Agriculture.....	Reno
Russell F. Byington.....	Mines.....	Reno
Helen L. Byrd.....	Home Economics.....	Reno
Frances Cafferata.....	Arts and Science.....	Reno
Cleora D. Campbell.....	Arts and Science.....	Reno
Louis J. Capurro.....	Arts and Science.....	Reno
Isaac Ralph Caraco.....	Mines.....	Los Angeles, Calif.
Ben T. Cardinal.....	Agriculture.....	Reno
Leonard R. Carpenter.....	Arts and Science.....	Las Vegas
Lorenzo C. Casia.....	Mines.....	Reno
Melanio Casia.....	Mines.....	Reno
Albert J. Caton.....	Electrical Engineering.....	Reno
Claude Cauble.....	Normal.....	Sparks
Walter C. Christensen.....	Agriculture.....	Sparks
Henry L. Clayton.....	Arts and Science.....	Reno
Margery F. Chff.....	Arts and Science.....	Carson City
Edith E. Collins.....	Arts and Science.....	Reno
Helen A. Collins.....	Arts and Science.....	Reno
Robert B. Comer.....	Arts and Science.....	Reno
Angiolena P. Cordano.....	Normal.....	Ely
Willis Dalzell.....	Arts and Science.....	Reno
Marjorie L. Davin.....	Arts and Science.....	Lovelock
Harry W. Dawson.....	Electrical Engineering.....	Victoria, B. C.
Robert H. Defosset.....	Mines.....	San Luis Obispo, Calif.
Edith J. Delmore.....	Arts and Science.....	Ely
Galen E. de Longchamps.....	Agriculture.....	Reno
George Deverell.....	Agriculture.....	Las Vegas
Ned R. Dickson.....	Arts and Science.....	Hawthorne
Dearing D. Dixon.....	Arts and Science.....	Reno
Ruth E. Doan.....	Arts and Science.....	Sparks
Thelma B. Eager.....	Arts and Science.....	Sparks
Frank Eastman.....	Mines.....	Hawthorne
James Edmunds.....	Arts and Science.....	Winnemucca
Juanita Elcano.....	Arts and Science.....	Reno
Michael W. Elcano.....	Arts and Science.....	Reno



Walter H. Elkins	Mechanical Engineering	Reno
George Escobar	Arts and Science	Austin
John M. Etchemendy	Mines	Gardnerville
Mary Evasovic	Arts and Science	Ruth
Francis Everett	Arts and Science	Wellington
Shirley E. Ferron	Arts and Science	Las Vegas
Edward R. Folsom	Arts and Science	Reno
Mary T. Fox	Arts and Science	Los Angeles, Calif.
Garnett Freeman	Mines	Fallon
Gertrude A. Freeman	Home Economics	Reno
Shirley J. Fuetsch	Arts and Science	Reno
Ezra Funk	Agriculture	Preston
Lillian Funk	Normal	Preston
Sybil Furehner	Arts and Science	
Genevieve Gardella	Arts and Science	Wadsworth
Geraldine M. Ghiglieri	Normal	Reno
William L. Goodin	Arts and Science	Reno
Harry C. Gravelle, Jr.	Arts and Science	Las Vegas
Marjorie E. Gregory	Arts and Science	Elko
Robert E. Grenig	Civil Engineering	McGill
William R. Grubbs	Arts and Science	Reno
Newell F. Hancock	Arts and Science	Sparks
Kathleen A. Hansen	Arts and Science	Wells
Reveau Hansen	Home Economics	Lovelock
Clara E. Hanson	Arts and Science	Sparks
Byron S. Hardie	Mines	Las Vegas
George F. Hardman	Agriculture	Reno
Charles M. Harris	Mines	Lewiston, Calif.
James P. Hart	Arts and Science	Austin
David K. Hartman	Electrical Engineering	Reno
Clarence A. Heckethorn	Arts and Science	Las Vegas
Margaret Heitman	Arts and Science	Minden
Teofisto A. Hermosa	Arts and Science	Reno
Evelio Hernandez	Mines	Reno
Frank D. Hickey	Arts and Science	Reno
John M. Hoffman	Mines	Trona, Calif.
Janet Holcomb	Arts and Science	Reno
Martha A. Holcomb	Arts and Science	Reno
Burwell A. Holmes	Arts and Science	Reno
Jack Holmes	Mines	Los Angeles, Calif.
Thomas G. Horgan	Electrical Engineering	Reno
Phyllis S. Horton	Arts and Science	Reno
William H. Huebner	Mines	Bingham, Utah

Betty Iuda	Arts and Science	Austin
Frank E. Inman	Arts and Science	Fallon
Robert R. Jackson	Arts and Science	Reno
Eugene E. Jahn	Electrical Engineering	Reno
Anita Jauregui	Arts and Science	Elko
Virginia M. Johnson	Arts and Science	Reno
Wilma M. Jones	Arts and Science	Colusa, Calif.
Robert Joy	Arts and Science	Reno
Donald E. Kinkel	Arts and Science	Sparks
John Kinneberg	Mines	Battle Mountain
Florence H. Koocher	Arts and Science	Reno
Charles Koontz	Arts and Science	Goldfield
Eleanor B. Kruger	Arts and Science	Reno
Edward F. Kulhan	Civil Engineering	Los Angeles, Calif.
Yen C. Kwan	Arts and Science	Reno
Fred Laing	Civil Engineering	North Fork
Beatrice Lansdon	Arts and Science	Reno
Robert A. Lauten	Mines	San Francisco, Calif.
Nellie H. Little	Arts and Science	Fernley
Bart G. Llana	Arts and Science	Hollister, Calif.
Walter H. Lobenstein, Jr.	Civil Engineering	Los Angeles, Calif.
John W. Locke	Arts and Science	Reno
Robert J. Lowry	Mechanical Engineering	Boulder City
Gordon H. Macdonald	Mines	Gardnerville
Mariem M. Marshall	Home Economics	Reno
Howard G. Mason	Agriculture	Reno
Clarethel Masterson	Home Economics	Las Vegas
Pio A. Mastroianni	Civil Engineering	Reno
Maris E. Maule	Arts and Science	Minden
Frederick A. Maynard	Civil Engineering	Caliente
Henry D. McCormack	Mines	Reno
James C. McDonald	Agriculture	Reno
Georgiana McFadden	Arts and Science	Ely
Mary Margaret McGill	Arts and Science	Reno
Charles McIntire	Arts and Science	Inglewood, Calif.
Jack L. McKenzie	Agriculture	Verdi
Clinton McKinley	Civil Engineering	Reno
Robert M. McLeod	Arts and Science	Reno
Patricia Meaker	Arts and Science	Reno
Francis Menante	Arts and Science	Reno
Ross T. Morris	Arts and Science	Tonopah
John E. Naughton	Arts and Science	Sparks
Betty Nelson	Arts and Science	Reno

Dean F. Nelson.....	Arts and Science.....	Sparks
Mark Nesbitt.....	Civil Engineering.....	Reno
William E. Ogle.....	Electrical Engineering.....	Las Vegas
Axel T. Olson.....	Agriculture.....	Reno
William L. Osborne.....	Mines.....	Reno
Hermann Owens.....	Arts and Science.....	Truckee, Calif.
Dorothy Palmer.....	Home Economics.....	Reno
Virginia S. Palmer.....	Normal.....	Reno
Betty Parish.....	Arts and Science.....	Reno
Eloise P. Parker.....	Normal.....	Smith
Lloyd Parrish.....	Civil Engineering.....	Virginia City
William E. Pasutti.....	Arts and Science.....	Sparks
Maude Patterson.....	Arts and Science.....	Reno
William Peccole.....	Arts and Science.....	Las Vegas
James Peckham.....	Arts and Science.....	Reno
Carrie A. Pimentel.....	Normal.....	Bridgeport, Calif.
Romie E. Pine.....	Arts and Science.....	Hawthorne
Harry O. Plath.....	Mines.....	Reno
Walter W. Powers.....	Arts and Science.....	Sparks
Mary K. Pray.....	Arts and Science.....	Fernley
John A. Radovich.....	Arts and Science.....	Reno
Virginia L. Raitt.....	Arts and Science.....	Sparks
Mary C. Read.....	Arts and Science.....	Las Vegas
Richard Roche.....	Agriculture.....	Reno
Oden Romwall.....	Arts and Science.....	Lovelock
Nevio Rosa.....	Arts and Science.....	Tonopah
Andrew J. Rosaschi.....	Arts and Science.....	Yerington
Frank E. Rosaschi, Jr.....	Arts and Science.....	Yerington
Nellie A. Roseberry.....	Arts and Science.....	Tuscarora
Mabel Robison Rott.....	Normal.....	Baker
John Sala.....	Arts and Science.....	Ely
Thomas J. Salter.....	Electrical Engineering.....	Reno
Edith V. Salvi.....	Arts and Science.....	McGill
Richard P. Sauer.....	Civil Engineering.....	Reno
Vernon M. Scott.....	Mechanical Engineering.....	Carlin
Josephine Seddon.....	Arts and Science.....	Smith
Gwendolen Shearer.....	Arts and Science.....	Reno
Maurice F. Sheppard.....	Agriculture.....	Reno
Betty M. Shidler.....	Arts and Science.....	Reno
Roy L. Shipp, Jr.....	Electrical Engineering.....	Boulder City
Helen Shovlin.....	Arts and Science.....	Battle Mountain
Claude D. Silverwood.....	Arts and Science.....	Reno
Virginia B. Snow.....	Arts and Science.....	Reno

Fred B. Snyder.....	Mechanical Engineering.....	Reno
Fred J. Steen.....	Arts and Science.....	Tonopah
Clinton A. Stephenson.....	Arts and Science.....	Tonopah
Cleone Stewart.....	Arts and Science.....	Sparks
Delbert C. Stewart.....	Agriculture.....	Reno
Lawrence J. Strong.....	Arts and Science.....	Reno
Harriet Swackbamer.....	Arts and Science.....	Battle Mountain
Richard Taylor.....	Arts and Science.....	Reno
Curtis R. Thomas.....	Electrical Engineering.....	Pioche
Gordon R. Thompson.....	Arts and Science.....	Reno
Pauline Tobener.....	Arts and Science.....	Reno
Leland Tucker.....	Civil Engineering.....	Reno
Robert Van Wagoner.....	Arts and Science.....	Reno
Robert Vaughn.....	Arts and Science.....	Reno
George E. Wade.....	Civil Engineering.....	Fallon
Ray Waldren.....	Arts and Science.....	Fallon
Fraser E. West.....	Agriculture.....	Reno
Thomas G. West.....	Arts and Science.....	Reno
Charles Whitham.....	Arts and Science.....	Reno
Covey L. Wills.....	Arts and Science.....	Sutter Creek, Calif.
Genevieve C. Wines.....	Arts and Science.....	Reno
William V. Winters.....	Arts and Science.....	Reno
Edward T. Wise.....	Mines.....	Sparks
Alfred M. Woodgate.....	Civil Engineering.....	Carson City
Montford Word.....	Civil Engineering.....	Calistoga, Calif.
Charles R. York.....	Agriculture.....	Fallon
Anthony P. Yriberry.....	Arts and Science.....	Ely
Edward Zareh.....	Mech. Engineering.....	Los Angeles, Calif.

## FRESHMEN

Harry Ackerman.....	Civil Engineering.....	Reno
June R. Adams.....	Arts and Science.....	Reno
Mrs. Alice Addenbrooke.....	Home Economics.....	Reno
Archie R. Albright.....	Agriculture.....	Yerington
Betty M. Anderson.....	Arts and Science.....	Reno
Grant T. Anderson.....	Electrical Engineering.....	Fernley
Ione A. Anderson.....	Arts and Science.....	Reno
Wilbourne Andrews.....	Mechanical Engineering.....	Minden
Eileen D. Angus.....	Arts and Science.....	Reno
Phyllis L. Anker.....	Arts and Science.....	Lovelock
Mary Louise Anxo.....	Arts and Science.....	Eureka
George Ardans.....	Agriculture.....	Eureka
Mary H. Arentz.....	Home Economics.....	Simpson

Godfrey J. Arlang	Arts and Science	Ely
Elaine M. Armstrong	Arts and Science	Sparks
Angelina Arobio	Arts and Science	Lovelock
Arthur Atkins	Mines	San Francisco, Calif.
Michael E. Ausich	Arts and Science	Reno
Thomas Ayooob	Mines	Quincy, Calif.
Betty Jane Baird	Arts and Science	Boulder City
Earlmond Baker	Arts and Science	Reno
Richard F. Baker	Arts and Science	Reno
Annie Laurie Ballom	Arts and Science	Sparks
David Barber	Arts and Science	Reno
Rosmino N. Barengo	Arts and Science	Reno
Jay Barker	Arts and Science	Reno
Lee Edward Barrett	Arts and Science	Reno
Evelyn Barry	Arts and Science	Reno
George Basta	Arts and Science	Ruth
Cameron M. Batjer	Arts and Science	Smith
Marcell M. Bawden	Arts and Science	Reno
Sarah G. Bawden	Arts and Science	Reno
John M. Bazzini	Agriculture	Wadsworth
John V. Beach	Arts and Science	Fallon
Edward F. Beaupourt	Arts and Science	Reno
Carl L. Bechdolt	Arts and Science	Reno
Walter J. Bedel	Civil Engineering	Reno
Allan M. Beers	Electrical Engineering	Reno
Zeron Bell	Mechanical Engineering	Las Vegas
Frank Beloso	Mines	Reno
Marie L. Belz	Arts and Science	Reno
Basil D. Benedict	Arts and Science	Reno
Mayme M. Benetti	Normal	Sparks
Orlanda E. Benetti	Arts and Science	Sparks
Noel Bennett	Arts and Science	Anderson, Calif.
William Bennett	Arts and Science	Reno
Mary Ellen Bennetts	Arts and Science	Boca, Calif.
Caroline F. Best	Home Economics	Fallon
James Bett	Electrical Engineering	Elko
Harold Biegler	Mines	Elko
Helen Biegler	Normal	Elko
Darrell J. Birch	Arts and Science	Sparks
Beverly Boles	Arts and Science	Reno
Harry F. Bony	Arts and Science	Reno
Maureen H. Bony	Arts and Science	Reno
James W. Borland	Civil Engineering	Hazen

Marie Borsini	Home Economics	Yerington
Donald H. Bowen	Arts and Science	Inverness, Calif.
Mary Boylan	Arts and Science	Reno
Blanche Brackett	Arts and Science	Reno
Jeanne Brannin	Arts and Science	Sparks
William Brooks	Agriculture	Carson
Clyve Brown	Electrical Engineering	Las Vegas
Laura J. Brown	Arts and Science	Reno
Mardelle E. Browne	Arts and Science	Reno
Carl Bruhns	Civil Engineering	Reno
Clovis E. Bull	Arts and Science	Reno
William Busey	Arts and Science	Reno
Florence R. Butler	Arts and Science	Tonopah
William A. Byington	Arts and Science	Reno
John R. Callahan	Arts and Science	Ely
Helen L. Cameron	Home Economics	Carson City
Robert E. Cameron	Mechanical Engineering	Reno
Anita Capitani	Arts and Science	Reno
Perry G. Carlson	Arts and Science	Winnemucca
Phillip H. Carroll	Civil Engineering	Carlin
William Casey	Arts and Science	Sparks
Eva L. Ceccarelli	Arts and Science	Sparks
Hubert B. Chessher, Jr.	Mines	Reno
Mike Chickese	Mines	Reno
Joseph W. Cleary	Electrical Engineering	Reno
Mary Alice Cleary	Arts and Science	Reno
Dorothy M. Cliff	Arts and Science	Carson City
Jack S. Cliff	Agriculture	Carson City
Mitchell A. Cobeaga	Arts and Science	Lovelock
Albert E. Collier	Electrical Engineering	McGill
Duane F. Collins	Agriculture	Reno
Vicente A. Comiso	Arts and Science	Reno
Emery Conaway	Agriculture	Caliente
Lee Conaway	Civil Engineering	Caliente
Edmond M. Conlon	Arts and Science	Reno
Bernard Connolly	Arts and Science	Reno
Jean E. Cook	Arts and Science	Genoa
William H. Cook	Arts and Science	Reno
John B. Cooper	Civil Engineering	Reno
Herbert L. Covington	Arts and Science	Sparks
Elizabeth Cowgill	Arts and Science	Reno
Virginia Crofut	Home Economics	Reno
Thelma G. Crosby	Arts and Science	Reno

Charles J. Crysler.....	Mines.....	Kenmore, N. Y.
Jack Cunningham.....	Arts and Science.....	Sparks
Wayne Currie.....	Agriculture.....	Reno
Robert Dale.....	Arts and Science.....	Reno
William Dale.....	Mech. Engineering.....	Culver City, Calif.
Emma L. Daley.....	Arts and Science.....	Truckee, Calif.
Katharine Dalzell.....	Arts and Science.....	Reno
David Dana.....	Mechanical Engineering.....	Boulder City
Andres D. Darang.....	Agriculture.....	Reno
James S. Darr.....	Arts and Science.....	Reno
George A. Dawson.....	Mines.....	Victoria, B. C.
Calvin W. Day.....	Arts and Science.....	Reno
Leland Day.....	Arts and Science.....	Reno
Peter C. Della Santa, Jr.....	Arts and Science.....	Sparks
Lewis W. Denton.....	Arts and Science.....	Caliente
Lawrence Devincenzi.....	Arts and Science.....	Reno
Kathryn J. Devlin.....	Arts and Science.....	Whitney
Kenneth Dimock.....	Arts and Science.....	Las Vegas
Dana E. Dodge.....	Civil Engineering.....	Fallon
Marlea Dodge.....	Arts and Science.....	Fallon
Melvin Dodson.....	Agriculture.....	Carson City
Donald Dondero.....	Civil Engineering.....	Carson City
Roy K. Dondero.....	Civil Engineering.....	Reno
Victor S. Donovan.....	Mines.....	Reno
Verona D. Doron.....	Arts and Science.....	Reno
Duncan M. Dorsey.....	Arts and Science.....	Lovelock
Donald Downs.....	Arts and Science.....	Fallon
June Drake.....	Home Economics.....	Reno
William A. Draney.....	Arts and Science.....	Reno
James E. Driscoll.....	Arts and Science.....	Reno
La Verne Drumm.....	Arts and Science.....	Fallon
Merian Ducker.....	Arts and Science.....	Carson City
Roscoe P. Duncan.....	Agriculture.....	McGill
William Dunseath.....	Arts and Science.....	Reno
Eleanor Du Pratt.....	Arts and Science.....	Reno
Jim V. Du Pratt.....	Arts and Science.....	Yerington
John V. Du Pratt.....	Arts and Science.....	Reno
Paul M. Eaton.....	Arts and Science.....	Compton, Calif.
Leland B. Eckley.....	Civil Engineering.....	Mina
Kenneth C. Edson.....	Arts and Science.....	Reno
Richard G. Edwards.....	Arts and Science.....	Reno
Roger W. Edwards.....	Arts and Science.....	Reno
Benita M. Elcano.....	Arts and Science.....	Reno

Phillip J. Eldredge.....	Arts and Science.....	Reno
Myrtle C. Elges.....	Arts and Science.....	Sparks
John D. Elkin.....	Arts and Science.....	Virginia City
Dorothy J. Elkins.....	Arts and Science.....	Reno
Jean Eller.....	Arts and Science.....	Reno
Raymond Engblom.....	Mechanical Engineering.....	Hawthorne
Georgia Ereno.....	Arts and Science.....	Reno
Jimmie Esola, Jr.....	Mines.....	Amador, Calif.
Warren C. Estes.....	Civil Engineering.....	Inglewood, Calif.
Leon Etchemendy.....	Arts and Science.....	Gardnerville
Daniel Etherton.....	Mines.....	Kellogg, Idaho
Ralph Evans.....	Arts and Science.....	Reno
Nick Evasovic.....	Agriculture.....	Ruth
Isobel Fairhurst.....	Arts and Science.....	Reno
Ira Farris.....	Arts and Science.....	Elko
Gratia Ferguson.....	Arts and Science.....	Reno
Eugene Ferrari.....	Arts and Science.....	Reno
George W. Ferrick.....	Arts and Science.....	Manhattan
John H. Fisk.....	Mines.....	Reno
Peter D. Fisler.....	Electrical Engineering.....	Tonopah
Bette A. Fodrin.....	Arts and Science.....	Carson City
Roger Foley.....	Arts and Science.....	Las Vegas
George K. Folsom.....	Arts and Science.....	Reno
Tung Shuy Fong.....	Mines.....	Reno
Wilma G. Foote.....	Home Economics.....	Sparks
Elmer Ford.....	Mechanical Engineering.....	Sparks
Robert B. Forrest.....	Mines.....	Tonopah
Leo J. Foster.....	Civil Engineering.....	Reno
Harvey B. Foulkes.....	Mechanical Engineering.....	Reno
Bill Francis.....	Arts and Science.....	Las Vegas
Charles D. Fraser.....	Mechanical Engineering.....	Tulare, Calif.
Lola K. Frazer.....	Arts and Science.....	Reno
Ray H. Frazer.....	Mines.....	Reno
Chesley Freemonth.....	Agriculture.....	Reno
George W. Friedhoff, Jr.....	Agriculture.....	Yerington
Thomas W. Friend.....	Mines.....	Searchlight
Leota Jane Frisbie.....	Arts and Science.....	Reno
Delbert D. Fryberger.....	Arts and Science.....	Lovelock
Frank D. Fuller.....	Arts and Science.....	Reno
Barbara Fulstone.....	Arts and Science.....	Gardnerville
John A. Fulton, Jr.....	Mines.....	Reno
Robert Fulton.....	Mines.....	Reno
Eugene Funk.....	Arts and Science.....	Preston



Preston L. Funkhouser	Mines	Reno
James L. Gaines	Mines	Reno
Fred C. Gallaway	Agriculture	Reno
Ann Gamble	Home Economics	Hazen
Raymond V. Garamendi	Arts and Science	Ely
Jack Gardiner	Mines	Los Angeles, Calif.
Keith Garner	Arts and Science	Sparks
Marie P. Garrett	Home Economics	Sparks
Flossy Lou George	Arts and Science	Reno
Catherine A. Gianella	Arts and Science	Reno
Jim Gibbs	Arts and Science	Fallon
Dorothy Gill	Arts and Science	Reno
Edgar E. Gill	Arts and Science	Reno
Joseph Giomi	Agriculture	Yerington
Betty Glazar	Arts and Science	Reno
Eleanor M. Goldsworthy	Arts and Science	Reno
Nonie Goldwater	Arts and Science	Reno
Jack Good	Mines	Battle Mountain
M. Dolores Grady	Arts and Science	Reno
Raymond E. Gregg	Civil Engineering	Elko
James A. Griswold	Mines	Logandale
Bessie M. Grock	Home Economics	Deeth
Betty L. Grutt	Arts and Science	Reno
Ivy Gubler	Normal	Lund
Stanley L. Guinan	Arts and Science	Sparks
Howard Guinn	Agriculture	Sparks
Marjory Gusewelle	Arts and Science	Las Vegas
Mrs. Helen M. Hall	Arts and Science	Reno
Artemus W. Ham	Arts and Science	Las Vegas
Cyril D. Ham	Electrical Engineering	Las Vegas
Mrs. Beulah C. Hand	Arts and Science	Reno
Mary E. Handley	Arts and Science	Eureka
Gerard B. Hanford	Mechanical Engineering	Las Vegas
Jessie M. Hansen	Arts and Science	Reno
Jack W. Hanson	Arts and Science	Las Vegas
Betty M. Hardy	Arts and Science	Sparks
Ethel Hardy	Arts and Science	Fernley
Harley E. Harmon	Arts and Science	Carson City
Ray E. Harris	Arts and Science	Rio Vista, Calif.
Ruth Harris	Arts and Science	Eureka
Margaret Harrison	Arts and Science	San Francisco, Calif.
William J. Hatton	Arts and Science	Tonopah
Balston O. Hawkins	Arts and Science	Winnemucca

Shirley G. Heany	Arts and Science	Sparks
Gustav A. Hebgen	Arts and Science	San Francisco, Calif.
Eleanor P. Hecker	Arts and Science	Reno
Eldred Henderson	Agriculture	Reno
Jean Henderson	Arts and Science	Reno
Margaret Hermansen	Arts and Science	Ely
Vitalino Hermosa	Civil Engineering	Reno
Kirk B. Herrick	Arts and Science	Reno
Lucille Hewes	Arts and Science	Boulder City
Raymond C. Hewitt	Normal	Sparks
Sue C. Hicks	Arts and Science	Reno
Charles B. Hill	Mechanical Engineering	Reno
Lowell E. Hillygus	Agriculture	Yerington
Elaine D. Hines	Arts and Science	Reno
Clinton Hinman	Civil Engineering	Battle Mountain
John Mills Hoff	Arts and Science	Nevada City, Calif.
Lois Holcomb	Home Economics	Reno
Nina M. Holliday	Home Economics	Hazen
Samuel Holliday	Mines	Cleveland, Ohio
Charles M. Hoover	Arts and Science	Fallon
Norman Hoover	Civil Engineering	Reno
Heath M. Hovey	Electrical Engineering	El Centro, Calif.
Helene L. Hudspeth	Normal	Verdi
Robert H. Hudspeth	Agriculture	Verdi
Eva L. Hughes	Normal	Yerington
Nathan Hughes	Mechanical Engineering	Ely
Meta I. Hunter	Arts and Science	Reno
Nadine Hursh	Arts and Science	Fallon
Ralph O. Isaac	Mechanical Engineering	Austin
Myrtle Isbell	Arts and Science	Reno
Harold J. Jacobsen	Agriculture	Eureka
Richard E. Jameson	Electrical Engineering	Reno
Inabelle Jarvis	Arts and Science	Fallon
Dyer Jensen	Arts and Science	Reno
John N. Jensen	Agriculture	Reno
Peter S. Jensen	Arts and Science	Reno
Roy D. Jensen	Agriculture	Reno
Alvin Johnson	Arts and Science	Reno
Anne Johnson	Arts and Science	Ely
Betty F. Johnson	Home Economics	Lovelock
Harold Johnson	Civil Engineering	Austin
Harvey E. Johnson	Mines	Beowawe
James W. Johnson, Jr.	Arts and Science	Fallon

Margaret Johnson	Arts and Science	Sparks
Dorence Jones	Arts and Science	Reno
Raoul Jones	Arts and Science	Reno
Wilma A. Jones	Arts and Science	Sparks
Ernest W. Jorgensen	Mines	Las Vegas
Henry J. Jorgensen	Arts and Science	Las Vegas
Kern S. Karrasch	Arts and Science	Reno
Joseph Keller	Mines	Midas
Peter Kelley	Arts and Science	Eureka
Donald J. Kemp	Arts and Science	Sparks
Gerald F. Kennedy	Arts and Science	Reno
Mildred Kibble	Arts and Science	Reno
Edward King	Civil Engineering	Reno
James H. King	Arts and Science	Reno
Richard D. Laub	Arts and Science	Reno
Lester E. Kitch	Mines	Kimberly
Eleanore E. Knobbs	Normal	Ely
Jean M. Knouse	Arts and Science	Reno
George Koocher	Arts and Science	Reno
Mary C. Kornmayer	Arts and Science	Reno
Dorothy Kunsch	Arts and Science	Reno
Ann M. Laking	Home Economics	Sparks
Matthew Laking	Mechanical Engineering	Sparks
Marybeth Lamb	Arts and Science	Reno
David Langberg	Arts and Science	Reno
Doris M. Larson	Home Economics	Reno
Clifford H. Lassen	Arts and Science	Sparks
Riley W. Lee, Jr.	Arts and Science	Elko
Leslie Leggett	Arts and Science	Reno
John Lemich	Arts and Science	Ruth
Modesto L. Leonardi	Mines	Lovelock
Elliott R. Lima	Agriculture	Fallon
Marvin G. Linson	Agriculture	Reno
Charles Robert Locke	Arts and Science	Reno
Helen Lohse	Arts and Science	Fallon
Austin Loveall	Arts and Science	Oakland, Calif.
Altice E. Lowery	Mines	Long Beach, Calif.
Catherine M. Lowney	Arts and Science	Hawthorne
Duane W. Lucas	Arts and Science	Reno
Kermit Lynch	Arts and Science	Delmas, Calif.
Verl Lytle	Mines	Pioche
Elizabeth A. MacDonald	Arts and Science	Reno
Jack MacGowan	Agriculture	Reno

Mrs. Elsie Maddaus	Arts and Science	Reno
Robert E. Madison	Arts and Science	Reno
Aileen E. Mahoney	Arts and Science	Reno
Mary M. Mahoney	Arts and Science	Reno
Clifford W. Malone	Arts and Science	Sparks
Julian W. Mapes	Agriculture	Litchfield, Calif.
Frank Margrave	Mechanical Engineering	Reno
William L. Marks	Arts and Science	Virginia City
George Austin Marsh	Arts and Science	McGill
Shirley Marshall	Arts and Science	San Francisco, Calif.
Louise E. Martin	Arts and Science	Reno
Frances L. Maxwell	Arts and Science	Reno
Robert H. Maxwell	Civil Engineering	Reno
Henry E. Mayer	Arts and Science	Reno
Betty G. McCormack	Arts and Science	Reno
Gerald M. McCormack	Mechanical Engineering	Reno
Frank W. McCulloch	Arts and Science	Reno
James W. McCutchan	Civil Engineering	Reno
Gloria McDonald	Arts and Science	Reno
Joseph F. McDonald, Jr.	Arts and Science	Reno
Eugene P. McElroy	Civil Engineering	Reno
William E. McGee	Arts and Science	Reno
Fred L. McIntyre	Arts and Science	Carlin
Margaret McKenna	Arts and Science	Reno
Barbara McKenzie	Arts and Science	Reno
Mary A. McKenzie	Home Economics	Reno
Ernest McKenzie	Electrical Engineering	Wadsworth
Jeanne McMeekin	Arts and Science	Reno
Raymond McMichael	Arts and Science	Las Vegas
Samuel McMullen	Arts and Science	Death
Mertice McQuerry	Arts and Science	Reno
Ferris J. Mecham	Arts and Science	Virginia City
Kathleen Meeks	Arts and Science	Reno
Thomas W. Menzies	Mines	Boulder City
Dale R. Miller	Mines	Fallon
Robert Miller	Electrical Engineering	Callente
William A. Miller	Mines	Reno
Frank E. Mills	Mines	Lodi, Calif.
Mike Miskulin	Mines	Kimberly
William H. Mitchell	Mech. Eng.	Bingham Canyon, Utah
Joseph Moore	Arts and Science	Reno
Henry Morehead	Mechanical Engineering	Hawthorne
Sam Morehouse	Electrical Engineering	Fallon

Harry Mornston	Arts and Science	Sparks
Maryem Morris	Arts and Science	Tonopah
John G. Morrison	Arts and Science	Sparks
Jack B. Morse	Arts and Science	Los Angeles, Calif.
Ross Mortensen	Electrical Engineering	Verdi
Mary M. Murphy	Arts and Science	Goldfield
Margaret Nash	Arts and Science	Reno
Ruby A. Nay	Arts and Science	Reno
Martha Nelson	Arts and Science	Reno
John Noyes	Arts and Science	Reno
Earl W. Nygren	Electrical Engineering	Fallon
Pauline E. Obye	Arts and Science	Paradise Valley
Daniel A. O'Keefe	Mines	Reno
Montana L. Olin	Arts and Science	Reno
Edward T. Olsen	Arts and Science	Reno
Lucille Orr	Arts and Science	Tonopah
Robert Orr	Mechanical Engineering	Pioche
George T. Oshima	Mechanical Engineering	Reno
Agnes Pacheco	Arts and Science	Sparks
Robert F. Paille	Arts and Science	Reno
Nick Pappas	Agriculture	Sparks
Charles Thomas Parke	Civil Engineering	Sparks
John R. Parker	Arts and Science	Reno
Robert S. Parker	Arts and Science	Reno
Milton A. Parsons	Arts and Science	Vancouver, B. C.
William A. Parsons	Arts and Science	Ely
George Pearson	Agriculture	Reno
Audrey R. Pedersen	Arts and Science	Reno
Margie M. Pefley	Arts and Science	Reno
Louis W. Peraldo	Arts and Science	Winnemucca
Ann Perkins	Normal	Yerington
James C. Perkins	Mines	Tonopah
Jarrell W. Perkins	Arts and Science	Reno
Grace G. Perry	Normal	Reno
Alice Pete	Arts and Science	Stewart
Eugene I. Peterson	Agriculture	Reno
Lewis T. Pettengill	Civil Engineering	Sparks
Jean Pfeiffer	Arts and Science	Reno
Edna Pflum	Home Economics	Fallon
Tracy I. Phelps	Mines	Lovelock
Jack J. Pierl	Arts and Science	Reno
Delma Pincolini	Arts and Science	Reno
Lina Pinjuv	Normal	Las Vegas

Geno C. Pisani	Agriculture	Sparks
Frederick Pischel	Mines	Reno
Mary A. Plath	Arts and Science	Reno
Steven G. Podesta	Arts and Science	Las Vegas
John Polish	Agriculture	Yerington
Perry C. Pollock	Mechanical Engineering	Sparks
William L. Potter	Electrical Engineering	Elko
Jack Potthoff	Arts and Science	Las Vegas
Ruth M. Pray	Home Economics	Fernley
Priscilla Prescott	Arts and Science	Los Angeles, Calif.
Carlyle E. Pribbernow	Arts and Science	Tonopah
Mary B. Prunty	Arts and Science	Sparks
Warine E. Pryor	Arts and Science	Carlin
Mary Purvine	Arts and Science	Yerington
Geno Questa	Arts and Science	Sparks
Clifford F. Quilici	Arts and Science	Dayton
Frank Quilici	Agriculture	Verdi
Dorothy P. Radcliffe	Arts and Science	Reno
Wilson Rebaleati	Arts and Science	Eureka
Edward Records	Arts and Science	Reno
Margaret E. Records	Arts and Science	Reno
Jack Rhoades	Arts and Science	Boulder City
Thomas R. Rice	Agriculture	Reno
Donald Richards	Arts and Science	Reno
William F. Richter	Electrical Engineering	Boulder City
Allen Rives	Arts and Science	Reno
Arling L. Roberson	Arts and Science	Walkermine, Calif.
William P. Roberts	Mines	San Francisco, Calif.
Robert H. Robinett	Arts and Science	Reno
John C. Robinson	Electrical Engineering	Reno
Sally W. Robinson	Arts and Science	Lovelock
John N. Rodgers	Mines	Tonopah
Forrest Roman	Normal	Reno
Richard Ronzone	Agriculture	Las Vegas
James D. Rookus	Mines	Hawthorne
Briscoe A. Root	Arts and Science	Pasadena, Calif.
Betty Rose	Arts and Science	Reno
John W. Rose	Arts and Science	Reno
Dorothy Rowe	Home Economics	Reno
Eugene A. Rowland	Mechanical Engineering	Reno
Frank Roylance	Arts and Science	Reno
Verle Joseph Russell	Electrical Engineering	Reno
John Russell	Civil Engineering	Ely

Mary Sala.....	Arts and Science.....	Ely
Lewis M. Sanborn.....	Mines.....	Arcadia, Calif.
Raymond C. Sandkuble.....	Civil Engineering.....	Danville, Calif.
Richard Sawyer.....	Arts and Science.....	Reno
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Walter H. Schmidt.....	Agriculture.....	Reno
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Dorothy A. Schooley.....	Home Economics.....	Reno
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Mark Sheldon.....	Arts and Science.....	Reno
James E. Shepley.....	Arts and Science.....	Reno
Jay Shurtliff.....	Arts and Science.....	Montello
Caesar S. Siard.....	Arts and Science.....	Winnemucca
Mildred Smart.....	Arts and Science.....	Reno
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Jim Strosuider.....	Agriculture.....	Yerington

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Lawson Sullivan.....	Arts and Science.....	Reno
Paulus B. Svedin.....	Arts and Science.....	Deeth
James J. Taylor.....	Mines.....	Soquel, Calif.
Robert L. Taylor.....	Arts and Science.....	Ruth
Barbara Terwilliger.....	Arts and Science.....	Reno
Lorraine Thomas.....	Normal.....	Beatty
Merlynn Thompson.....	Arts and Science.....	Reno
Anna May Thomson.....	Arts and Science.....	Reno
Earnhart Thrau.....	Mines.....	Minden
Charles E. Tibbs.....	Mines.....	Battle Mountain
Virginia N. Tibbs.....	Arts and Science.....	Battle Mountain
Grace D. Tobener.....	Normal.....	Reno
Carl Tobiansen.....	Arts and Science.....	Nevada City, Calif.
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James Trail.....	Agriculture.....	Reno
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James F. Tranter.....	Arts and Science.....	Reno
Elwyn N. Trigero.....	Agriculture.....	Reno
Earl Trousdale.....	Civil Engineering.....	Sparks
Delphine Trulove.....	Normal.....	Sparks
Thomas G. Tucker.....	Agriculture.....	Sparks
Felix Turrillas.....	Arts and Science.....	Reno
Ruby R. Ulrich.....	Arts and Science.....	Ely
Mary R. Urrutia.....	Arts and Science.....	Reno
Miller S. Vaughan.....	Mines.....	Ruby Valley
Lily May Venton.....	Arts and Science.....	Sparks
Clyde S. Vinson.....	Arts and Science.....	Reno
Vincent Vercoe.....	Agriculture.....	Reno
Virginia O. Vuich.....	Arts and Science.....	Tonopah
Alice M. Wade.....	Home Economics.....	Fallon
William J. Wald.....	Arts and Science.....	Reno
Gordon Walker.....	Agriculture.....	Carson City
Mark Wallace.....	Arts and Science.....	Carlin
Raymond E. Walts.....	Agriculture.....	Reno
Walter J. Wanke.....	Agriculture.....	Sparks
Romietta Ward.....	Arts and Science.....	Reno
Marian N. Waring.....	Normal.....	Reno
Annie May Wedertz.....	Arts and Science.....	Wellington
Willard T. Weller.....	Arts and Science.....	Reno
Henry L. Wells.....	Agriculture.....	Winnemucca
Morris J. West.....	Mines.....	Reno
Helen Westall.....	Arts and Science.....	Dayton



Herbert R. Westlund.....	Mines	Virginia City
Hugh Widaman.....	Arts and Science	Sparks
George Wilber.....	Arts and Science	Reno
Ruth Wilcox.....	Arts and Science	Reno
Walter Wilcox.....	Arts and Science	Reno
V. Ruth Wiley.....	Arts and Science	Stewart
John Willard.....	Agriculture	Fallon
Carol Williams.....	Arts and Science	Boulder City
Edna Williams.....	Arts and Science	Sparks
Maurice F. Williams.....	Mines	Sparks
Richard L. Williams.....	Arts and Science	Las Vegas
Loyal A. Willis.....	Agriculture	Yerington
Glenda C. Wilson.....	Arts and Science	Reno
William Wilson.....	Agriculture	Lovelock
Herbert Winer.....	Arts and Science	Reno
Martha J. Winter.....	Normal	Reno
Mary C. Woodward.....	Arts and Science	Reno
James E. Worden.....	Arts and Science	Reno
Robert Worts.....	Arts and Science	Las Vegas
Elinor Rose Wyatt.....	Normal	Gardnerville
David Wah Yee.....	Mines	Reno
Emma Young.....	Arts and Science	Tonopah
Lillian S. Zetony.....	Arts and Science	Reno

## UNCLASSIFIED

Mrs. Norma Abbott.....	Arts and Science	Reno
Margaret H. Ackerly.....	Arts and Science	Sparks
Wayne S. Ames.....	Arts and Science	Reno
Mrs. Claire Beisel.....	Arts and Science	Reno
Mrs. Harriet Belknap.....	Arts and Science	Reno
Leo C. Bigham.....	Arts and Science	Reno
Roberta K. Bowers.....	Arts and Science	Reno
Helen B. Brandis.....	Arts and Science	Reno
Mrs. Ruth Brownson.....	Arts and Science	Reno
Jack Call.....	Arts and Science	Los Gatos, Calif.
Neal R. Campbell.....	Agriculture	Reno
Rita Cannan.....	Arts and Science	Reno
Edwin Chapman.....	Arts and Science	Reno
Alice May Claressé.....	Arts and Science	Reno
Kathryn Clark.....	Arts and Science	Reno
Mrs. Emma Crabtree.....	Civil Engineering	Reno
Gwendolen P. Day.....	Arts and Science	Reno
Sister M. Diane.....	Arts and Science	Reno

Alexander D. Doak.....	Home Economics	Reno
Robert W. Duborg.....	Electrical Engineering	Reno
Mrs. Gertrude Dugan.....	Arts and Science	Reno
Edith Dutee.....	Arts and Science	Reno
Matilda Feretto.....	Arts and Science	Reno
Margaret Garaventa.....	Arts and Science	Wadsworth
Mrs. Anne Gibbons.....	Arts and Science	Sparks
Hugh Gibbons.....	Mines	Sparks
Inez Gillies.....	Arts and Science	Sparks
Norman Goddard.....	Mines	Reno
Ray Goodloe.....	Arts and Science	Reno
Kathryn Harrington.....	Arts and Science	Tonopah
Mrs. Charlotte Herrmann.....	Home Economics	Reno
Mrs. Phoebe Higgins.....	Arts and Science	Reno
Mrs. Felicitas Holzeit.....	Arts and Science	Reno
Melvin Hughes.....	Mech. Engineering	Sacramento, Calif.
Mrs. Josephine Hunt.....	Arts and Science	Reno
Mrs. Elsie Johnson.....	Arts and Science	Reno
Golamae Johnson.....	Arts and Science	Reno
Lenore A. Kohlepp.....	Arts and Science	Reno
Richard L. Kolbus.....	Arts and Science	Oakland, Calif.
Allen Lansdon.....	Agriculture	Reno
Louise Leonard.....	Arts and Science	Reno
Alphonsine Liotard.....	Arts and Science	Reno
Grace Little.....	Arts and Science	Fernley
Alberta Machen.....	Arts and Science	Reno
John A. Majors.....	Mechanical Engineering	Reno
James R. Marshall.....	Mines	Reno
Conrad Martin.....	Mines	Reno
Gene McDaniel.....	Electrical Engineering	Reno
Mrs. Ethel McGuire.....	Arts and Science	Reno
Mrs. Helen P. McKernon.....	Home Economics	Reno
Donald McMeekin.....	Arts and Science	Reno
Helen L. Miles.....	Normal	Reno
Eleanor Miller.....	Arts and Science	Reno
Isabelle Moe.....	Arts and Science	Reno
Benjamin O. Moore.....	Arts and Science	Reno
Billie Jean Morgan.....	Arts and Science	Reno
Rochester V. Nenzel.....	Arts and Science	Reno
Mrs. Grace Parker Nielson.....	Arts and Science	Reno
William R. Orr.....	Mechanical Engineering	Pioche
Mrs. Edna Patterson.....	Arts and Science	Reno
Jess W. Ralphs.....	Arts and Science	Verdi

Mrs. Myrtle S. Rich	Arts and Science	Reno
Russell K. Rivers	Arts and Science	Reno
Esther Romano	Home Economics	Reno
William A. Rose	Mechanical Engineering	Reno
Mrs. Elsie Rowley	Home Economics	Sparks
Raymond J. Sanborn	Arts and Science	Reno
Madjel Schlosser	Arts and Science	Reno
Mrs. Mildred Schwabenland	Arts and Science	Reno
Emma Smith	Arts and Science	Reno
Mrs. Rose Solt	Arts and Science	Reno
William Stampfl	Arts and Science	Reno
David E. Thompson	Arts and Science	Salem, Ore.
Reuben Tuttle	Arts and Science	Reno
Charles W. Waltz	Arts and Science	Reno
Grace Warner	Arts and Science	Reno
Dale Whiddett	Arts and Science	Reno
Thelma Williams	Arts and Science	Reno
Margaret Worthington	Arts and Science	Winnemucca
Mrs. Leslie O. Zurfluh	Arts and Science	Reno

## SPECIALS

Erb William Austin	Arts and Science	Reno
Mrs. Edna L. Blake	Arts and Science	Reno
Attilio Botti	Arts and Science	Reno
Mrs. Hazel Caples	Arts and Science	Reno
Homer Carson	Arts and Science	Reno
Mrs. Elizabeth Cuni	Home Economics	Reno
Ivy Freeman	Arts and Science	Reno
Ernest A. Goff, Jr.	Mines	Kenwood, Calif.
Otis A. Kittle	Mines	Reno
Nicholas Marunich	Arts and Science	Reno
Mrs. Mattie Maxwell	Arts and Science	Reno
Edward McClancy	Mines	Reno
Mrs. Blanche McGee	Arts and Science	Reno
Metta K. Moltzen	Arts and Science	Reno
Leslie R. Oppio	Agriculture	Sparks
Buford H. Perry	Mines	Mina
Mrs. Leola Pfeiffer	Home Economics	Reno
Gilmore Ross	Agriculture	Wadsworth
Mrs. Marthine Solares	Arts and Science	Reno
Mrs. Adrienne Tuttle	Arts and Science	Reno
Joseph Williams	Arts and Science	Sparks
Stanley V. Wines	Mines	Reno

## SUMMER SCHOOL, 1937

Albert W. Alegre	Reno
Wayne S. Ames	Reno
Mrs. Ina Angus	Reno
Lee Armstrong	Honolulu
Mrs. Kenneth Austin	Reno
Mrs. Maude Porch Bart	Reno
Velma Bauer	North English, Iowa
Wanda Bell	Las Vegas
Lenora Benedict	Las Vegas
Mabel Bennett	Goldfield
Lucile Berg	Round Mountain
Mrs. Lois Bicknell	Reno
Mrs. Angelina Birks	Reno
George L. Blick	Castleford, Idaho
Vera Bower	Bruneau, Idaho
Alice J. Campbell	Imlay
Ruth Bradshaw	Caliente
Mrs. Juanita M. Brown	Carson City
Browning Churn	Eastville, Virginia
Mrs. Ione Clark	Little Falls, Minnesota
Lowell Cox	Ontario, Oregon
Mrs. Lowell Cox	Ontario, Oregon
Ellen Creek	Reno
Harold Curran	Reno
Mabel Dailey	Wells
Aileen Daniels	Reno
Mrs. Dorothy M. Davison	Reno
Mrs. Laura L. Dearing	Las Vegas
Iva N. Deffler	Hinckley, Utah
Angela De Nevi	Dayton
Mrs. Olive W. Doan	Denio, Oregon
Jean Doobrovo	Las Vegas
Mabel Dowling	Reno
James Driscoll	Reno
Nellie Evasovic	Ruth
Mrs. Clara Farley	Ashbury, New Jersey
Mrs. Mildred Flagg	Reno
Mrs. Thelma Flavin	Eureka

Mrs. Marguerite Foster.....	Elko
Mrs. Rosamond Franklin.....	Sacramento, Calif.
True Gifford.....	San Francisco, Calif.
Roy Gomm.....	Tonopah
Nancy Gould.....	Medford, Oregon
Marjorie Guild.....	Carson City
Lillian Guisti.....	Reno
Doris Hancock.....	Greeley, Colorado
Mary Louise Harreld.....	Alto Pass, Illinois
Lorraine Hawkins.....	Reno
Mrs. Belle Hayes.....	Searchlight
Christie Hermansen.....	Preston
Felton Hickman.....	Preston
Mrs. Marjorie Holbrook.....	Metropolis
Mrs. Marie H. Horen.....	Las Vegas
Elizabeth Z. Hunt.....	Reno
Mrs. Laura Ingram.....	Reno
Christine Iverson.....	Ely
Ida Jensen.....	Preston
Ellen Johnson.....	Langdon, North Dakota
Margaret Johnson.....	Elko
Ruth A. Jutila.....	Reno
Mrs. Arlette Kast.....	Sparks
Fremont H. Kast.....	Sparks
Mary Donohue Koontz.....	Carson City
Freeland W. Lytle.....	Pioche
Mrs. C. G. MacGillivray.....	Reno
Mrs. Stella H. Mardis.....	Las Vegas
Clarethel Masterson.....	Las Vegas
Mary Mathews.....	Reno
Mrs. Nellie Mayett.....	Reno
Myrl McElwee.....	Centerville, Iowa
Mrs. Ethel B. McGuire.....	Reno
Howard McMullen.....	Reno
Mrs. John McNamara.....	Sparks
Eleanor Miller.....	Reno
William H. Miller.....	Reno
Camille Cerrita Monday.....	Sparks
Mrs. Hazel Montgomery.....	Kimberly, Idaho
Andrew Morby.....	Sparks
Echo Morgan.....	Fallon
Mrs. Mary Muenk.....	Reno
Margaret Neaton.....	Boulder City

Mrs. Ella M. Newell.....	Bayville, New Jersey
Virginia S. Palmer.....	Reno
May Parman.....	Reno
Mrs. Bessie Perazzo.....	Reno
Louise Peterson.....	Riley, Kansas
Mrs. Rebecca Petersen.....	Reno
Roy Petrie.....	Reno
Lois L. Petty.....	Provo, Utah
Romie Pine.....	Hawthorne
Walter W. Powers.....	Sparks
Charleen Purcell.....	Troutdale, Oregon
Jess W. Ralphs.....	Lovelock
LaRue Ramsey.....	Baker
Margaret Rather.....	Reno
Alice D. Rathsack.....	Omaha, Nebraska
Mrs. Eva Hess Reed.....	Sparks
Mrs. Beatrice Risley.....	Reno
Mrs. R. M. Ritchardson.....	Reno
Cleta Ritchey.....	Twin Falls, Idaho
Nevio Rosa.....	Tonopah
Adelyn Rotholtz.....	Reno
Evelyn Rogers.....	Reno
Mrs. Ruth Russell.....	Bozeman, Montana
Mrs. Margaret Sage.....	Lancaster, Calif.
Alma Schiappacasse.....	Reno
Madjel Schlosser.....	Reno
Lionel Scott.....	Reno
Neil Scott.....	Reno
H. C. Seranton.....	Reno
Mrs. Theo Smart Sherman.....	Fallon
F. E. Shotwell.....	Goldfield
Ione Sifton.....	Emmett, Idaho
Mrs. Paulina Slater.....	Poughkeepsie, N. Y.
Mrs. Floyd Smalley.....	Reno
Floyd Smalley.....	Reno
Wallace Smith.....	Elko
Mrs. Rose Solt.....	Reno
Yvonne Speer.....	Reno
Alice Spencer.....	Carey, Idaho
Mrs. L. G. Stuntebaek.....	Hawthorne
Mrs. Edna Swank.....	Lincoln, Calif.
Mary Swett.....	Reno
Raymond Tennant.....	Reno

Mrs. Howard Thompson.....	Cherry Creek
Mrs. Marion M. Trabert.....	Reno
Mildred Ward.....	Castleford, Idaho
Margaret Wells.....	Winnemucca
Mrs. Ruth B. Wheeler.....	Boulder City
Mary Jane White.....	Las Vegas
Lynn Williams.....	Grand Junction, Colorado
Edith Winbourn.....	Reno
Mrs. Vivien Woodward.....	Fallon

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- Hall, Lester, Chef, Dining Hall, Campus. 21538.
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