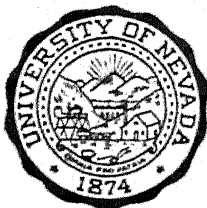


**BULLETIN**  
OF THE  
**UNIVERSITY OF NEVADA**



**CATALOGUE ISSUE**

**1944-1945**

**(WITH RECORD FOR 1943-1944)**



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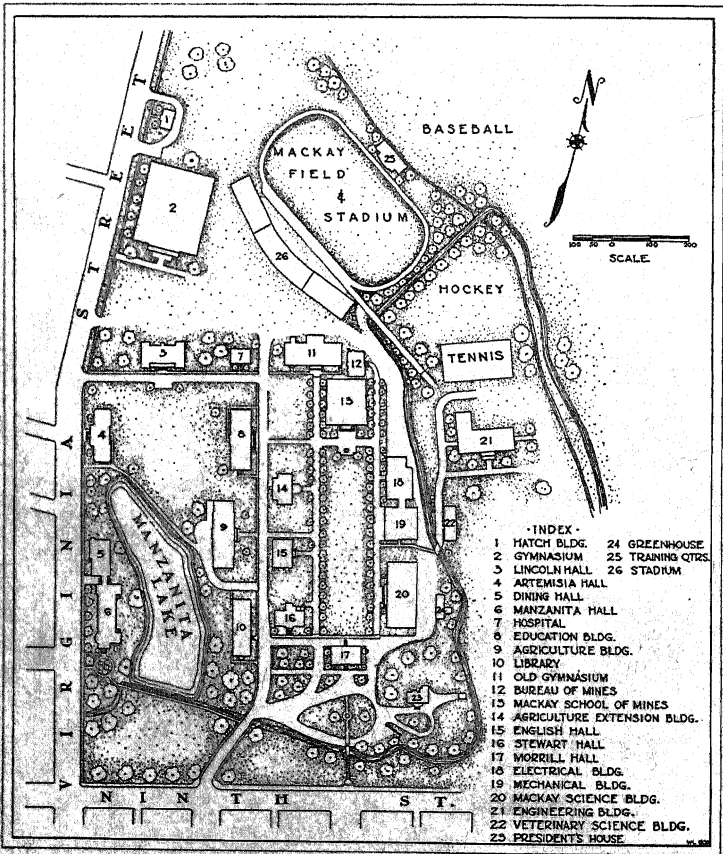
**VOLUME XXXVIII**

**JUNE 15, 1944**

**NUMBER 2**

# UNIVERSITY OF NEVADA

## Campus Plan



**BULLETIN**  
OF THE  
**UNIVERSITY OF NEVADA**



**CATALOGUE ISSUE**  
**1944-1945**  
(WITH RECORD FOR 1943-1944)



Published Quarterly  
By the  
**UNIVERSITY OF NEVADA**  
Reno, Nevada

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CARSON CITY, NEVADA

STATE PRINTING OFFICE - - JACK MCCARTHY, SUPERINTENDENT

1944

# CONTENTS

	PAGE
Letter of Transmittal.....	5
Calendar, 1944-1945.....	6
Officers of the University—	
Board of Regents.....	8
Honorary Board of Visitors.....	8
Administrative Officers.....	8
University Faculty.....	10
Standing Committees.....	23
History and Development of the University.....	24
Organization of the University—	
Colleges, Schools, and Public Service Departments.....	30
Administration.....	32
Equipment and Facilities—	
Buildings and Grounds.....	35
Scientific Collections.....	52
Public Lectures.....	55
Organizations and Publications.....	57
Physical Education and Athletics.....	67
Military Science and Tactics.....	69
Requests and Scholarships—	
Honors, Prizes, and Foundations.....	73
Scholarships.....	77
Student Regulations and Expenses—	
Expenses of Students.....	93
Admission of Students.....	101
Registration.....	106
Scholarship.....	111
Degrees and Diplomas.....	114
Student Government.....	120
Academic Divisions—	
College of Arts and Science.....	121
School of Education.....	133
College of Engineering.....	139
College of Agriculture.....	148
Courses of Instruction—	
Agricultural Economics.....	161
Agronomy.....	162
Animal Husbandry.....	165
Art.....	168
Biology.....	168
Chemistry.....	173
Civil Engineering.....	177
Economics, Business, and Sociology.....	182
Education.....	186
Electrical Engineering.....	193
English Language and Literature.....	195
Foreign Languages.....	199
General Engineering.....	203

Courses of Instruction ( <i>Continued</i> )	PAGE
Geology.....	204
History and Political Science.....	206
Home Economics.....	209
Journalism.....	211
Mathematics and Mechanics.....	213
Mechanic Arts.....	216
Mechanical Engineering.....	217
Metallurgy.....	219
Military Science and Tactics.....	220
Mining.....	222
Music.....	223
Orientation.....	225
Philosophy.....	225
Physical Education, Men.....	227
Physical Education, Women.....	229
Physics.....	231
Psychology.....	234
Summer Sessions.....	237
Research and Service Organizations—	
Agricultural Experiment Station.....	239
Agricultural Extension Division.....	242
State Analytical Laboratory.....	244
State Bureau of Mines.....	244
Pure Food and Drugs Laboratory.....	245
State Veterinary Control Service.....	246
U. S. Bureau of Mines Experiment Station.....	247
Record for 1943-1944—	
Recipients of Scholarships and Prizes.....	249
Graduates.....	253
Roster of Students.....	255
Army Specialized Training Program, R. O. T. C.....	264
Summer Session 1943.....	265
Summary of Enrollment.....	267
Directory of Officers and Employees.....	268
General Index.....	277

OFFICE OF THE  
BOARD OF REGENTS, UNIVERSITY OF NEVADA

RENO, NEVADA, APRIL 15, 1944

*To His Excellency, E. P. CARVILLE, Governor of the State of Nevada.*

SIR: The Regents of the University of Nevada have the honor to submit herewith the Annual Catalogue of the University, giving the records for the year 1943-1944, 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:

*ALICE TERRY, Secretary.*

SILAS E. ROSS,  
*Chairman.*

1944 - CALENDAR - 1944

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9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	
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30																					30	31						



## UNIVERSITY CALENDAR

1944

## FIRST SEMESTER

August 14.....	Monday.....	Applications for admission should be on file with the Registrar.
August 26.....	Saturday.....	Dormitories open.
August 27.....	Sunday, 4 to 6 p. m.....	Reception and entertainment for new students.
August 28*.....	Monday, 8 a. m.....	Registration of students.
August 29.....	Tuesday.....	Instruction begins.
August 29.....	Tuesday, 8 to 10 a. m.....	Orientation for new students.
Aug. 31-Sept. 1.....	Thursday-Friday p. m.....	Physical examinations and mental tests of new students.
September 4.....	Monday.....	Labor Day.
September 9.....	Saturday, 12 noon.....	Registration closes.
October 14.....	Saturday.....	Homecoming Day.
October 26.....	Thursday, 12 noon.....	Mid-semester reports due.
October 31.....	Tuesday.....	Admission Day.
November 11.....	Saturday.....	Armistice Day (A scheduled ceremony for R. O. T. C. Unit).
November 23-26.....	Thursday-Sunday.....	Thanksgiving recess.
December 16-21.....	Saturday-Thursday.....	Semester examinations.
December 21.....	Thursday, 4 p. m.....	Christmas vacation; first semester closes.
December 22.....	Friday.....	Dormitories close.
December 27.....	Wednesday, 9 a. m.....	Final grades must be on file with the Registrar.

1945

## SECOND SEMESTER

January 7.....	Sunday.....	Dormitories open.
January 8.....	Monday.....	Registration of students.
January 9.....	Tuesday.....	Instruction begins.
January 20.....	Saturday, 12 noon.....	Registration closes.
March 12.....	Monday, 12 noon.....	Mid-semester reports due.
March 29-April 1.....	Thursday-Sunday.....	Easter recess.
April 7.....	Saturday.....	Mackay Day.
May 7.....	Monday, 4 p. m.....	Senior grades must be on file with the Registrar.
May 11.....	Friday.....	Meeting of Honorary Board of Visitors.
May 12.....	Saturday, 12 noon.....	Second semester closes.
May 12.....	Saturday evening.....	Phi Kappa Phi banquet and address.
May 13.....	Sunday.....	Baccalaureate address.
May 14.....	Monday.....	FIFTY-FIFTH ANNUAL COMMENCEMENT.
May 16.....	Wednesday, 9 a. m.....	Final grades must be on file with the Registrar.

\*New students are expected to attend a pre-registration orientation program from 8 to 10 a. m.

## OFFICERS OF THE UNIVERSITY

## THE BOARD OF REGENTS

HON. CHRIS H. SHEERIN (1951)	Elko
HON. ANNA H. WARDIN (1949)	Reno
HON. LEO A. McNAMEE (1947)	Las Vegas
HON. PAUL J. SIRKEGIAN (1947)	Kimberly
HON. SILAS E. ROSS (1945)	Reno

## OFFICERS OF THE BOARD

HON. SILAS E. ROSS, Chairman	Reno
MISS CAROLYN M. BECKWITH, Secretary Emeritus	San Francisco
MISS GERALDINE N. HARDMAN, <sup>1</sup> Secretary	Reno
MISS ALICE TERRY, Secretary	Reno

## COMMITTEES OF THE BOARD

*Executive Committee*—SILAS E. ROSS, ANNA H. WARDIN.

*Property Committee*—SILAS E. ROSS.

*Instruction Committee*—CHRIS H. SHEERIN.

*Library Committee*—PAUL J. SIRKEGIAN.

*Student-Welfare Committee*—LEO A. McNAMEE, ANNA H. WARDIN.

## HONORARY BOARD OF VISITORS

WILLIAM E. ORR, <i>Chief Justice of the Supreme Court</i>	Chairman
A. T. BAUMANN	Fallon, Churchill County
MRS. CORINNE DEVLIN	Whitney, Clark County
C. W. HENNINGSSEN	Gardnerville, Douglas County
R. W. HADDOW	Carlin, Elko County
MRS. PETER BREEN	Goldfield, Esmeralda County
MRS. PETER MERIALDO	Eureka, Eureka County
ROGER CORBETT	Winnemucca, Humboldt County
MRS. MARIE STRESHLEY	Austin, Lander County
DARYL L. MAYHEW	Caliente, Lincoln County
MRS. MABLE BATJER	Smith, Lyon County
MRS. LOWRAN BOLDRA	Hawthorne, Mineral County
MRS. FRANK E. BELL	Tonopah, Nye County
ARNOLD A. MILLARD	Carson City, Ormsby County
T. C. JOHNSON	Lovelock, Pershing County
A. L. McFARLAND	Virginia City, Storey County
DR. H. ILER	Sparks, Washoe County
SEN. CHARLES H. RUSSELL	Ely, White Pine County

## ADMINISTRATIVE OFFICERS

JOHN O. MOSELEY, M.A., LL.D., President.

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

CHARLES H. GORMAN, Honorary M.S., Vice President; Comptroller and Treasurer.

MRS. JEANETTE C. RHODES, B.A., Registrar.

MISS LOUISE M. SISSA, Emeritus Registrar.

<sup>1</sup>Absent on leave; war service.

REUBEN C. THOMPSON, M.A., LL.D., Dean of Men.  
 MRS. ALICE B. MARSH, M.S., Acting Dean of Women.  
 MISS THEA C. THOMPSON, Ph.B., Librarian.  
 JOSEPH D. LAYMAN, B.L., Emeritus Librarian.  
 WALTER S. PALMER, E.M., Curator of the Mackay Museum.  
 ANDREW C. RICE, Ph.D., Acting Supervising Engineer, United States Bureau of  
 Mines Experiment Station.  
 ROBERT S. GRIFFIN, Ph.D., Acting Master of Lincoln Hall; Coordinator, Army  
 Training Programs.  
 JOHN D. BIBB, M.D., University Hospital Association Physician.  
 MRS. EUNICE GRIFFITH, R.N., Matron University Infirmary.  
 MRS. CLARA GARRISON DURKIN, B.S., Dietitian.  
 MRS. KATHERINE C. RAWLES, Matron of Women's Dormitory.

*Colleges and Schools—*

FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science; Academic  
 Director, Army Training Programs.  
 STANLEY G. PALMER, M.E., Dean of the College of Engineering.  
 FREDERICK W. WILSON, M.S., Acting Dean of the College of Agriculture.  
 FRED W. TRAINER, Ph.D., Dean of the School of Education.  
 JAY A. CARPENTER, E.M., Director of the Mackay School of Mines.  
 HAROLD N. BROWN, Ed.D., Director of the Summer Session.

*Public Service Division—*

WALTER S. PALMER, E.M., Director of the State Analytical Laboratory.  
 EDWARD RECORDS, V.M.D., Director of Veterinary Control Service.  
 WAYNE B. ADAMS, B.S., Acting Commissioner, Food and Drugs Control  
 and Weights and Measures.  
 SAMUEL BRADFORD DOTEN, M.A., Director of the Agricultural Experiment  
 Station.  
 CECIL W. CREEL, Agr.D., Director of Agricultural Extension.  
 JAY A. CARPENTER, E.M., Director, State Mining Bureau.

*General Library Staff—*

MISS CLARE LOUISE JOHNSON, B.A., Cataloguer.  
 MRS. DARYL JOHNSON, B.S., Loan Desk Assistant.  
 MRS. ALENE DE RUFF, B.A., Loan Desk Assistant.

*Central Clerical Staff—*

MISS ALICE TERRY, Secretary to the President.  
 MISS GERALDINE N. HARDMAN,<sup>1</sup> Secretary to the President.  
 MRS. ERNESTINE MCCLEARY, Assistant Registrar.  
 MRS. ADELAIDE STEINER, Clerk, Comptroller's Office.  
 MISS ESTHER ROMANO, Clerk, Comptroller's Office.  
 MISS PHYLLIS SCHUMACHER, Clerk, Comptroller's Office.

*Associated Students—*

JOE T. McDONNELL,<sup>1</sup> Graduate Manager.  
 LEONARD E. CHADWICK, B.S., Acting Graduate Manager.

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<sup>1</sup>Absent on leave; war service.

THE UNIVERSITY FACULTY<sup>1</sup>*President*

JOHN OHLEYER MOSELEY, M.A., LL.D., President.

A.B., Austin College, 1912; A.M., University of Oklahoma, 1916; B.A., Oxford (England), 1922; M.A., *ibid.*, 1928; LL.D., Austin College, 1936; Associate Professor of Education, Henry Kendall College, 1916-1917; Assistant Professor of Latin and Classical Archeology, University of Oklahoma, 1919-1924; Associate Professor of Latin and Classical Archeology, *ibid.*, 1924-1935; Professor of Latin and Classical Archeology, *ibid.*, 1935; President, Central State Teachers' College (Oklahoma), 1935-1939; Dean of Students, University of Tennessee, 1939-1944; President, University of Nevada, 1944-.

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

B.A., Ohio Wesleyan University, 1896; M.A., *ibid.*, 1898; Ph.D., Columbia University, 1903; LL.D., Ohio Wesleyan University, 1918; LL.D., University of Nevada, 1938; Chevalier, Légion d'Honneur, 1937; Instructor in Mathematics, Ohio Wesleyan University, 1896-1899; Instructor in Philosophy, College of the City of New York, 1902-1906; Assistant Professor of Philosophy, 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, 1917-1938; President Emeritus, *ibid.*, 1938-.

*Vice President*

CHARLES H. GORMAN, Honorary M.S., Vice President, Comptroller and Treasurer.

Honorary M. S., University of Nevada, 1939; Assistant Registrar and Auditor, *ibid.*, 1911-1912; Comptroller and Treasurer, *ibid.*, 1912-; Vice President, *ibid.*, 1941-; Acting President, *ibid.*, 1943-1944.

*Faculty Emeriti*

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

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

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

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

JAMES EDWARD CHURCH, JR., Ph.D., LL.D., Emeritus Professor of the Classics.

A.B., University of Michigan, 1892; Ph.D., University of Munich, 1901; LL.D., Nevada, 1937; Instructor in Latin and German, University of

<sup>1</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.

The record of teaching experience does not include work in high schools or academies, nor University instruction as fellows or assistants. Summer School and extension instruction is also excluded.

Nevada, 1892-1894; Assistant Professor of Latin Language and Literature, *ibid.*, 1894-1895; Associate Professor of Latin Language and Literature, *ibid.*, 1895-1896; Professor of Latin Language and Literature, *ibid.*, 1896-1918; Professor of the Classics, *ibid.*, 1918-1939; Emeritus Professor of the Classics, *ibid.*, 1939-.

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

A.B., University of Nevada, 1895; A.B., Harvard University, 1898; A.M., *ibid.*, 1899; LL.D., University of Nevada, 1924; Assistant Professor of Zoology and Bacteriology, University of Nevada, 1900-1902; Associate Professor of Zoology and Bacteriology, *ibid.*, 1902-1903; Professor of Zoology and Bacteriology, *ibid.*, 1903-1906; Professor of Biology, *ibid.*, 1906-1942; Emeritus Professor of Biology, *ibid.*, 1942-.

JOHN WILLIAM HALL, M.A., Emeritus Professor of Education.

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 of 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-.

KATHERINE LEWERS, Emeritus Associate Professor of Art.

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

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

B.S., Columbia University, 1919; A.M., Teachers College, Columbia University, 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, 1920-1942; Emeritus Professor of Home Economics, *ibid.*, 1942-.

MARGARET ELIZABETH MACK, A.M., Emeritus Associate Professor of Biology.

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.*, 1922-1942; Dean of Women, *ibid.*, 1918-1942; Emeritus Associate Professor of Biology, *ibid.*, 1942-.

KATHERINE RIEGELHUTH, A.M., Emeritus 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.*, 1922-1941; Professor of English, *ibid.*, 1941-1943; Emeritus Professor of English, *ibid.*, 1943-.

ROBERT STEWART, Ph.D., Emeritus Professor of Agronomy.

B.S., Utah Agricultural College, 1902; Ph.D., in Agronomy, University of Illinois, 1909; 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, 1920-1943; Emeritus Professor of Agronomy, *ibid.*, 1943-.

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

B.Di., Iowa State Teachers' College, 1893; B.A., Leland Stanford Junior

University, 1901; LL.D., University of Nevada, 1924; Acting Assistant Professor of History, University of Nevada, 1899-1901; Associate Professor of History, *ibid.*, 1901-1906; Professor of History and Political Science, *ibid.*, 1906-1917; Professor of History, *ibid.*, 1917-1921; Professor of History and Political Science, *ibid.*, 1921-1940; Emeritus Professor of History and Political Science, *ibid.*, 1940-.

*Professors, Associate Professors, Assistant Professors,  
and Instructors*

PHILIP GERALD AUCHAMPAUGH, Ph.D., Associate Professor of History and Political Science.

B.A., New York State College for Teachers, 1920; M.A., Syracuse University, 1921; Ph.D., Clark University, 1924; Teacher in History and Social Studies, Buffalo State Teachers College, 1921-1925; Instructor in History, Syracuse University, 1925-1926; Teacher of History and Social Studies, Duluth State Teachers College, 1926-1937; Professor of History, Blue Ridge College, Md., 1939-1941; Assistant Professor of History and Political Science, University of Nevada, 1941-1944; Associate Professor of History and Political Science, *ibid.*, 1944-.

SAMUEL BURBRIDGE BATDORF,<sup>1</sup> Ph.D., Associate Professor of Physics.

A.B., University of California, 1934; M.A., *ibid.*, 1936; Ph.D., *ibid.*, 1938; Instructor in Physics, University of Utah, spring of 1938; Assistant Professor of Physics, University of Nevada, 1938-1942; Associate Professor of Physics, *ibid.*, 1942-.

E. MAURICE BEESLEY, Ph.D., Associate Professor and Acting Head of the Department of Mathematics.

A.B., Lafayette College, 1936; Sc.M., Brown University, 1938; Ph.D., *ibid.*, Instructor in Mathematics, University of Nevada, 1940-1942; Assistant Professor of Mathematics, *ibid.*, 1942-1944; Associate Professor and Acting Head of the Department of Mathematics, *ibid.*, 1944-.

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

A.B., Butler University, 1933; M.A., Duke University, 1935; Ph.D., *ibid.*, 1936; Instructor in Botany, University of Tennessee, 1936-1937; Instructor in Botany, University of Nevada, 1938-1940; Assistant Professor of Botany, *ibid.*, 1940-1943. Associate Professor of Botany, *ibid.*, 1943-.

FREDERICK L. BIXBY, C.E., Professor and Head of the School 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-; Acting Head of the School of Civil Engineering, *ibid.*, 1939-1941; Head of the School of Civil Engineering, 1941-.

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

A.B., Tabor College, 1902; A.M., Washburn College, 1904; 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-.

<sup>1</sup>Absent on leave; war service.

HAROLD N. BROWN, Ed.D., Professor of Education and Director of Summer Sessions.

B.S., Kansas State Teachers College, 1923; A.M., Stanford University, 1927; Ed.D., University of California, 1935; Critic, Junior High School, Arizona State Teachers College, 1927-1930; Assistant Professor of Education, University of Nevada, 1930-1935; Associate Professor of Education, *ibid.*, 1935-1940; Director of the Summer Session, *ibid.*, 1940-1942; Professor of Education, *ibid.*, 1940-; Director of Summer Sessions, *ibid.*, 1942-.

J. RAYMOND BUTTERWORTH,<sup>1</sup> M.A., Instructor in English.

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

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

B.S., University of Nevada, 1907; E.M., Mackay School of Mines, *ibid.*, 1911; Instructor in Metallurgy, University of Nevada, Mackay School of Mines, 1908-1909; Assistant Professor of Metallurgy, *ibid.*, 1909-1910; Professor of Mining, South Dakota School of Mines, 1921-1922; Professor of Mining, University of Nevada, Mackay School of Mines, 1926-1937; Professor and Head of the Department of Mining Engineering, *ibid.*, 1937-; Acting Director, Mackay School of Mines, 1937-1938; Director, Mackay School of Mines and State Bureau of Mines, 1939-.

LEONARD EDWIN CHADWICK, B.S., Assistant Professor of Economics, Business, and Sociology.

B.S., University of California, 1935; Instructor in Economics, Business, and Sociology, University of Nevada, 1939-1942; Assistant Professor of Economics, Business, and Sociology, *ibid.*, 1942-.

JOANNA CHAPMAN, M.S., Assistant Professor of Education.

B.S., University of Illinois, 1926; M.S., University of Colorado, 1937; Student Teacher Supervisor in Home Economics, Oregon State College, 1940-1941; Itinerant Teacher in Home Economics Education, Colorado State College, 1941-1943; Associate in Homemaking Education, University of Nevada, 1943-1944; Assistant Professor of Education, *ibid.*, 1944-.

BENJAMIN FRANKLIN CHAPPELLE, Ph.D., Professor and Head of the Department of Foreign Languages.

A.B., Dickinson College, 1908; A.M., *ibid.*, 1911; Diplômé de L'Alliance Française, University of Poitiers, 1914; Ph.D., University of Pennsylvania, 1917; Officier d'Académie, 1934; Acting Head of the German Department, Dickinson College, 1910-1911; Instructor in French, Gettysburg College, 1911-1912; Head of the Department of Romanic Languages, *ibid.*, 1912-1916; Assistant Professor Romanic Languages and Literatures, University of Nevada, 1917-1918; Assistant Professor of Romanics, University of Pennsylvania, 1918-1921; Professor and Head of the Department of Romanic Languages, University of Nevada, 1921-1922; Professor and Head of the Department of Foreign Languages, *ibid.*, 1922-.

JAMES W. COLEMAN,<sup>1</sup> M.A., Associate Professor of Physical Education for Men.

B.S., University of Arkansas; M.A., University of Iowa, 1936; Director of Physical Education and Athletics, Georgetown College, 1922-1925; Acting Director of Athletics and Head Coach of all Sports, University

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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 for Men, University of Nevada, 1936-1941; Associate Professor of Physical Education for Men, *ibid.*, 1941-.

BERTRAND FRANKLIN COUCH,<sup>1</sup> Instructor in Mine Accounting.  
Instructor in Mine Accounting, University of Nevada, 1924-.

MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.  
B.A., University of Oregon, 1923; M.A., *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-.

ETHEL M. DIXON, B.P.E., Instructor in Physical Education for Women.  
B.P.E., University of Oregon, 1942; Instructor in Physical Education for Women, University of Nevada, 1943-.

CHARLES T. DUNCAN,<sup>1</sup> B.A., Instructor in Journalism.  
B.A., University of Minnesota, 1936; Instructor in Journalism, University of Nevada, 1940-; Acting Master of Lincoln Hall, 1941-1942.

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-.

JOHN R. GOTTARDI, M.A., Associate Professor of Foreign Languages.  
B.A., University of Nevada, 1921; M.A., *ibid.*, 1926; Instructor in Modern Languages, University of Nevada, 1922-1924; Assistant Professor of Modern Languages, University of Nevada, 1926-1930; Associate Professor of Foreign Languages, *ibid.*, 1930-.

ELDON C. GRAFTON,<sup>1</sup> M.S., Associate Professor of Structural Engineering.  
B.S., Washington State, 1926; C.E., *ibid.*, 1931; M.S., Illinois, 1933; Assistant Professor of Structural Engineering, Armour Institute, 1929-1934; Assistant Professor of Structural Engineering, University of Nevada, 1939-1944; Associate Professor of Structural Engineering, *ibid.*, 1944-.

ROBERT STUART GRIFFIN, Ph.D., Professor of English and Acting Master of Lincoln Hall.  
B.S., Oregon State College, 1928; M.A., University of Southern California, 1935; Ph.D., University of Southern California, 1941; Instructor in Public Speaking, Oregon State College, 1927; Instructor in English, University of Nevada, 1928-1936; Assistant Professor of English, *ibid.*, 1936-1941; Associate Professor of English, *ibid.*, 1941-1944; Acting Master of Lincoln Hall, 1942-; Professor of English, *ibid.*, 1944-.

EVERETT WHITE HARRIS,<sup>1</sup> Ph.D., Associate Professor of Mechanical Engineering.  
B.S. in E.E., Nevada, 1926; S.M. in E.E., Massachusetts Institute of

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Technology, 1932; Ph.D., University of California, 1941; Instructor in Mathematics, Nevada, 1938-1939; Assistant Professor of Mathematics, *ibid.*, 1939-1942; Assistant Professor of Mechanical Engineering, *ibid.*, 1942-1944; Associate Professor of Mechanical Engineering, *ibid.*, 1944-.

PAUL ATKINS HARWOOD,<sup>1</sup> M.A., Associate Professor of English and Master of Lincoln Hall.

B.A., University of Nevada, 1924; M.A., *ibid.*, 1929; 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-.

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

A.B., Clark University, 1915; A.M., Stanford University, 1922; Ph.D., Clark University, 1931; Professor of History and Political Science, Ottawa University, Kansas, 1922-1924; Instructor in History and Political Science, University of Nevada, 1924-1925; Assistant Professor of History and Political Science, *ibid.*, 1925-1928; Associate Professor of History and Political Science, *ibid.*, 1928-1931; Professor of History and Political Science, *ibid.*, 1931-; Acting Head of the Department History and Political Science, *ibid.*, 1940-1941; Head of the Department History and Political Science, *ibid.*, 1941-.

ALFRED LESLIE HIGGINBOTHAM, A.M., Professor and Head of the Department of Journalism.

A.B., Oberlin College, 1920; A.M., *ibid.*, 1920; 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-; Head of the Department of Journalism, *ibid.*, 1942-.

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

A.B., University of Chicago, 1899; Associate in English, *ibid.*, 1907-1909; Instructor in English, *ibid.*, 1909-1913; Assistant Professor of English, University of Nevada, 1913-1914; Associate Professor of English, *ibid.*, 1914-1916; Professor of English, *ibid.*, 1917-; Acting Head of the Department of English, 1928-1942; Head of the Department of English, *ibid.*, 1942-1944.

CHARLES WORTH HODGSON,<sup>2</sup> Ph.D., Associate Professor and Acting Head of the Department of Agronomy; Extension Specialist in Range Management.

B.S., University of Idaho, 1934; M.S., University of Arizona, 1936; Ph.D., Michigan State College, 1942; Instructor in Agronomy, University of Nevada, 1940-1942; Assistant Professor of Agronomy, *ibid.*, 1942-1944; Associate Professor and Acting Head of the Department of Agronomy, *ibid.*, 1944-.

WILLIAM OLMSTEAD HOLMES, B.A., Assistant Professor of English.

B.A., Nevada, 1936; Instructor in English, University of Nevada, 1940-1943; Assistant Professor of English, *ibid.*, 1943-.

JOHN C. HOWARD, A.B., Major, Army of the United States; Professor of Military Science and Tactics.

A.B., University of California, 1916; Graduate Infantry School, 1922; Assistant Professor of Military Science and Tactics, University of California, 1922-1927; Associate Professor of Military Science and Tactics, University of California, 1943; Professor of Military Science and Tactics, University of Nevada, 1943-.

<sup>1</sup>Absent on leave; war service.

<sup>2</sup>Absent on leave; Extension Agent.

AUSTIN E. HUTCHESON, Ph.D., Associate Professor of History and Political Science.

B.A., Reed College, 1925; M.A., University of California, 1929; Ph.D., University of Pennsylvania, 1937; Assistant Professor of History and Government, St. Lawrence University, 1931-1932; Instructor in Government, Goucher College, 1936-1937; Instructor in History, Pennsylvania State College, 1937-1938; Assistant Professor of History and Political Science, University of Nevada, 1940-1943; Associate Professor of History and Political Science, *ibid.*, 1943-.

ERNEST L. INWOOD,<sup>1</sup> Ph.D., Professor and Head of the Department of Economics, Business, and Sociology.

B.A., Nevada, 1927; Ph.D., California, 1935; Instructor in Economics, Nevada, 1930-1931; Instructor in Economics, The College of the City of New York, 1934-1938; Associate Professor of Economics, Business and Sociology, University of Nevada, 1938-1941; Head of the Department, *ibid.*, 1939-; Professor of Economics, Business and Sociology, *ibid.*, 1941-.

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

B.S., Kansas State Agricultural College, 1928; M.S., *ibid.*, 1929; Ph.D., Ohio State University, 1938; Instructor in Psychology, University of Nevada, 1929-1931; Assistant Professor of Psychology, *ibid.*, 1931-1937; Associate Professor of Psychology, *ibid.*, 1937-1944; Professor of Psychology, *ibid.*, 1944-.

HELEN JOSLIN, Instructor in Art.

Instructor in Art, University of Nevada, 1939-.

LAWTON B. KLINE,<sup>1</sup> M.A., Assistant Professor of Foreign Languages.

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

CHARLTON G. LAIRD, Ph.D., Associate Professor of English.

B.A., University of Iowa, 1925; M.A., *ibid.*, 1927; Ph.D., Stanford University, 1940; Instructor and News Editor, University of Iowa, 1925; Head, Department of Journalism, Drake University, 1926-1928; Instructor, Assistant Professor, Associate Professor, University of Idaho, 1932-1943 (Leave 1938-1939, 1942-1943); Acting Assistant Professor, Purdue University, 1942-1943; Associate Professor of English, University of Nevada, 1943-.

PHILIP A. LEHENBAUER, Ph.D., Professor and Head of the Department 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-; Head of Department of Biology, *ibid.*, 1944-.

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

B.S., North Dakota State Agricultural College, 1922; Ph.D., University of California, 1925; Instructor in Physics, University of Nevada, 1925-1926; Assistant Professor of Physics, *ibid.*, 1926-1929; Associate Professor of Physics, *ibid.*, 1929-1935; Professor of Physics, *ibid.*, 1935-; Acting Head of the Department, *ibid.*, 1939-1941; Head of the Department, *ibid.*, 1941-.

<sup>1</sup>Absent on leave; war service.

- EDWARD WALTON LOWRANCE, Ph.D., Associate Professor of Biology.  
A.B., M.A., University of Utah, 1930, 1932; Ph.D., Stanford, 1937; Instructor in Biology, University of Nevada, 1938-1940; Assistant Professor of Biology, 1940-1943; Associate Professor of Biology, *ibid.*, 1943-.
- ALICE B. MARSH, M.S., Assistant Professor of Home Economics; Acting Dean of Women.  
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-, Acting Dean of Women, *ibid.*, 1944-.
- JOHN EDWARD MARTIE, M.P.E., Professor and Head of the Department of Physical Education for Men.  
B.S., Central Missouri State Teachers College, 1923; M.P.E., Y. M. C. A. College, Springfield, Massachusetts, 1930; Instructor in Physical Education for Men, University of Nevada, 1923-1924; Assistant Professor of Physical Education for Men, *ibid.*, 1924-1926; 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-.
- ANATOLE G. MAZOUR, Ph.D., Associate Professor of History and Political Science.  
A.B., University of Nebraska, 1929; M.A., Yale University, 1931; Ph.D., University of California, 1934; Acting Assistant Professor, Miami University, 1936-1937; Assistant Professor of History and Political Science, University of Nevada, 1938-1941; Associate Professor of History and Political Science, *ibid.*, 1941-.
- MICHAEL J. McCORMICK, Staff Sgt. D.E.M.L.; Instructor in Military Science and Tactics.  
Instructor in Military Science and Tactics, University of Nevada, 1938-.
- HUGH O. McMILLEN, B.S., Lieutenant, Army of the United States; Assistant Professor of Military Science and Tactics.  
B.S., Kansas State College, 1939; Assistant Professor of Military Science and Tactics, University of Nevada, 1943-1944.
- CHRISTIAN W. F. MELZ, Ph.D., Assistant Professor of Foreign Languages.  
B.A., University of California, 1931; M.A., *ibid.*, 1933; Ph.D., *ibid.*, 1935; Instructor, Colegio Alemán, Santiago, Chile, 1926-1930; Instructor in German, University of California, 1936-1941; Instructor in Foreign Languages, University of Nevada, 1941-1943; Assistant Professor of Foreign Languages, *ibid.*, 1943-.
- WILLIAM C. MILLER, M.A., Assistant Professor of English.  
B.S., in Speech, University of Southern California, 1931; M.A., *ibid.*, 1932; Instructor in English, University of Nevada, 1934-1937; Visiting Instructor in Speech and Director of Dramatics, University of Southern California, 1939-1940; Assistant Professor of English, University of Nevada, 1937-.
- FRANCIS CLARK MURGOTTEN, Ph.D., Professor of Foreign 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; Assistant Professor of Modern Languages, University of Nevada, 1922-1924; Associate Professor of Modern Languages, *ibid.*, 1924-1926; Professor of Foreign Languages, *ibid.*, 1926-.

ROBERT M. OLIVER,<sup>1</sup> M.S., Assistant Professor of Mechanical Engineering.

M.S., University of California, 1940; Assistant Professor of Mechanical Engineering, University of Nevada, 1942-.

STANLEY G. PALMER, M.E., Dean of the College of Engineering; 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.*, 1918-; Acting Dean of the College of Engineering and Acting Head of the School of Mechanical Engineering, *ibid.*, 1941-1942; Dean of the College of Engineering and Head of the School of Electrical Engineering, 1942-.

WALTER S. PALMER, E.M., Professor and Head of the Department of Metallurgy; Director of the 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 and Head of the Department of Metallurgy, *ibid.*, 1917-; Director, State Analytical Laboratory, 1925-.

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-.

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

B.S., University of Nebraska, 1913; M.A., Columbia University, 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-.

THEODORE H. POST, M.A., Professor and Head of the Department of Music; Director of Music.

New England Conservatory of Music, Certificate, 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, Grinnell College, 1926-1927; Professor and Director of Music, University of Nevada, 1927-.

JOHN PARK PUFFINBARGER,<sup>1</sup> Ed.M., Assistant Professor of Education.

B.S. in Education, Kansas State Teachers College, 1926; Ed.M., University of Oklahoma, 1933; Associate Professor of Education and Principal of Training School, State Teachers College, Durant, Oklahoma, 1933-1935; Assistant Professor of Education, University of Nevada, 1937-.

FRANK RICHARDSON, Ph.D., Assistant Professor of Biology.

B.A., Pomona College, 1934; Ph.D., University of California, 1939; Instructor in Biology, University of Nevada, 1941-1943; Assistant Professor of Biology, *ibid.*, 1943-.

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; Assistant Professor of Education, University of Nevada, 1925-1935; Associate Professor of Education, *ibid.*, 1935-.

<sup>1</sup>Absent on leave; war service.

RUTH IRENE RUSSELL,<sup>1</sup> M.S., Instructor in Physical Education for Women.

B. S., Colorado, 1937; M.S., Oregon, 1939; Instructor in Physical Education for Women, University of Nevada, 1939-.

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

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

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-.

IRVING JESSE SANDORF,<sup>1</sup> M.S., Professor of Electrical Engineering.

B.S. in E.E. University of Michigan, 1923; M.S., University of Nevada, 1931; Instructor in Electrical Engineering, University of Nevada, 1928-1931; Assistant Professor of Electrical Engineering, *ibid.*, 1931-1935; Associate Professor of Electrical Engineering, *ibid.*, 1935-1944; Professor of Electrical Engineering, *ibid.*, 1944-.

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

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

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-; Head of the Department of Chemistry, *ibid.*, 1926-.

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-.

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

B.S., University of Nevada, 1914; E.M., *ibid.*, 1927; Instructor in Metallurgy and Analyst in the State Mining Laboratory, University of Nevada, 1925-1928; Assistant Professor of Metallurgy, *ibid.*, 1928-1933; Associate Professor of Metallurgy and Mining, *ibid.*, 1933-.

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

A.B., University of Utah, 1923; Instructor in Economics, Business and

<sup>1</sup>Absent on leave; war service.

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-.

MILDRED SWIFT, M.S., Professor and Head of the Department of Home Economics.

B.S., Russell Sage College, 1927; M.S., Cornell University, 1930; Director of Home Economics, Briar Cliff Junior College, 1932; Director of Home Economics, Furman University, 1933-1935; Director of Home Economics, University of Akron, 1936-1942; Professor and Acting Head of the Department of Home Economics, University of Nevada, 1942-1943; Head of the Department of Home Economics, *ibid.*, 1943-.

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

B.A., McMinnville College, 1899; B.A., Harvard University, 1901; M.A., *ibid.*, 1902; LL.D., Linfield College, 1938; 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-.

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

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

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

B.S., University of Nevada, 1924; M.S., Cornell University, 1931; Instructor, Smith-Hughes Agriculture and Farm Mechanics in State of California, 1925-1930; Assistant in charge of Farm Accounting, Agricultural Experiment Station, University of Nevada, 1933-1939; Associate Professor of Agronomy, *ibid.*, 1939-.

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

A.B., Beloit College, 1908; M.A., University of California, 1920; Ph.D., *ibid.*, 1930; Instructor in 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-.

JAMES R. VAN DYKE, M.E., Professor and Acting Head of the School of Mechanical Engineering.

B.S., Pennsylvania State College, 1918; M.E., *ibid.*, 1922; Instructor in Engineering Mathematics, University of Colorado, 1922-1924; Head of Engineering and Industrial Arts Department, New Mexico Normal University, 1924-1928; Assistant Professor of Manual Arts and Mathematics, Nebraska State Teachers College, 1928-1929; Assistant Professor of Mechanical Engineering, University of Minnesota, 1929-1930; Assistant Professor of Mechanical Engineering, North Dakota Agricultural College, 1930-1934; Associate Professor, Head of Engineering, Eastern New Mexico College, 1937-1941; Special Professor in charge of Secondary C. P. T. program, Texas Technological College, 1941; Associate Professor of Mechanical Engineering, University of Nevada, 1941-1944; Acting Head of the School of Mechanical Engineering, *ibid.*, 1942-; Professor of Mechanical Engineering, *ibid.*, 1944-.

- WARREN O. WAGNER,<sup>1</sup> M.S., Associate Professor of Civil Engineering. B.S., Washington State, 1934; M.S., Michigan, 1936; Assistant Professor of Civil Engineering, University of Nevada, 1939-1944; Associate Professor of Civil Engineering, *ibid.*, 1944-.
- MILAN J. WEBSTER, Ph.D., Professor of Economics, Business, and Sociology. B.E., Nebraska Normal College, 1908; B.A., University of Nevada, 1929; M.A., *ibid.*, 1931; Ph.D., University of Colorado, 1934; Instructor in Education, Nebraska Normal College, 1908-1909; Instructor in Economics, Business, and Sociology, University of Nevada, 1929-1931; Assistant Professor of Economics, Business, and Sociology, *ibid.*, 1931-1935; Associate Professor of Economics, Business, and Sociology, *ibid.*, 1935-1944; Professor of Economics, Business, and Sociology, *ibid.*, 1944-.
- HARRY EUGENE WHEELER,<sup>1</sup> Ph.D., Associate Professor of Geology. B.S., University of Oregon, 1930; M.A., Stanford University, 1932; Ph.D., *ibid.*, 1935; Instructor in Geology, University of Nevada, 1935-1936; Assistant Professor of Geology, *ibid.*, 1936-1942; Associate Professor of Geology, *ibid.*, 1942-.
- ALBERT G. WIEDERHOLD, Ph.D., Assistant Professor of Philosophy and Psychology. M.A., Boston University, 1936; B.Th., *ibid.*, 1937; Ph.D., Stanford University, 1940; Instructor in Philosophy and in Psychology, University of Nevada, 1941-1943; Assistant Professor of Philosophy and Psychology, *ibid.*, 1943-.
- LORING RIDER WILLIAMS, Ph.D., Associate Professor of Chemistry. B.S., West Virginia Wesleyan, 1927; M.S., West Virginia, 1932; Ph.D., Illinois, 1939; Instructor, Alderson-Brouddus College, 1932-1934; Instructor in Chemistry, University of Nevada, 1939-1941; Assistant Professor of Chemistry, *ibid.*, 1941-1944; Associate Professor of Chemistry, *ibid.*, 1944-.
- FREDERICK WESTON WILSON, M.S., Acting Dean of the College of Agriculture; 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 and Head of the Department of Animal Husbandry, University of Nevada, 1914-; Acting Dean of the College of Agriculture, *ibid.*, 1943-.
- ELDON WITTEWER, Ph.D., Professor and Head of the Department of Agricultural Economics. B.S., Nevada, 1922; Ph.D., Cornell, 1930; Instructor in Agricultural Economics, Cornell University, 1926-1930; Associate Professor and Head of the Department of Agricultural Economics, University of Nevada, 1938-1939; Professor of Agricultural Economics, *ibid.*, 1939-.
- FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science; Professor and Head of the Department of Mathematics. A.B., University of Wisconsin, 1915; M.A., *ibid.*, 1916; Ph.D., *ibid.*, 1923; Instructor in Engineering Mathematics, University of Wisconsin,

<sup>1</sup>Absent on leave; war service.

1915-1917, 1919-1923; Head of Department of Mathematics, Lake Forest College, 1924-1925; Georgia Wesleyan College, 1925-1928; Hamline University (Minnesota), 1928-1932; Professor and Head of the Department of Mathematics, University of Nevada, 1932-; Dean of the College of Arts and Science, *ibid.*, 1938-.

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; 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 and Head of the Department of Psychology, *ibid.*, 1920-.

*Assistants, Fellows, and Lecturers*

OLGA BULLINGER, B.S., Assistant in Home Economics.

B.S., South Dakota State College, 1936; Assistant in Home Economics, University of Nevada, 1944.

VIRGINIA CARROLL, M.A., Assistant in Home Economics.

B.S., Columbia University, 1927; M.A., *ibid.*, 1933; Assistant in Home Economics, University of Nevada, 1943.

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

B.A., University of Nevada, 1916; Assistant in English, *ibid.*, 1928-1929; 1932-1934; Assistant in Foreign Languages, *ibid.*, 1934-1937; Assistant in English, *ibid.*, 1942-1944.

NELL LOZANO GEROW, B.A., Lecturer in Nurses' Aid.

B.A., University of Nevada, 1935; Lecturer in Nurses' Aid, *ibid.*, 1943.

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

B.S., University of Nevada, 1927; Teacher Trainer in Vocational Agriculture Education, *ibid.*, 1937-.

HELEN BYRD INMAN, B.S., Assistant in Home Economics.

B.S., University of Nevada, 1940; Assistant in Home Economics, *ibid.*, 1943.

MILDRED KLAUS, B.A., Lecturer in Secondary Education.

B.A., University of Nevada, 1926; Lecturer in Secondary Education, *ibid.*, 1941-.

PENELOPE RICE, Ph.D., Assistant in Home Economics.

B.S., Kansas State College, 1924; Ph.D., University of California, 1925; Assistant in Home Economics, University of Nevada, 1943-1944.



## UNIVERSITY STANDING COMMITTEES

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

*Admission, Entrance Examinations, and Advanced Standing—*

S. PALMER, HICKS, WITTEW, MILLER, WOOD.

*Assemblies and Lectures—*

HUTCHESON, SMITH, BLAIR.

*Athletics—*

WILSON.

*Campus Calendar for Student Activities—*

R. THOMPSON, POST, GRIFFIN, MILLER, SAMETH, MARTIE.

*Campus Employment—*

R. THOMPSON, GIANELLA, GRIFFIN, MARSH.

*Catalogues; Rules and Regulations—*

LAIRD, WOOD, AUCHAMPAUGH.

*Ceremonials—*

WOOD, GRIFFIN, S. PALMER, HOWARD, BROWN, A. S. U. N. President.

*Graduate—*

TRANER, LEIFSON, SEARS, MAZOUR, WITTEW.

*Health—*

LOWRANCE, MARTIE, SAMETH, HOWARD, GRIFFIN, MARSH.

*Library—*

CHAPPELLE, W. PALMER, MARSH, WEBSTER, WILLIAMS, HICKS, LAIRD,  
T. THOMPSON.

*Orientation—*

IRWIN, MARSH, BROWN, BIXBY, DEMING.

*Public Relations—*

HIGGINBOTHAM, WITTEW, BROWN, MAZOUR, POST.

*Registration and Scholarship—*

WOOD, S. PALMER, TRANER, CARPENTER, WILSON, RHODES.

*Research—*

BILLINGS, BEESLEY, IRWIN, HICKS, SEARS.

*Rhodes Scholarship Nominating Committee—*

LEIFSON, R. THOMPSON, WEBSTER.

*Schedules—*

LEHENBAUER, VAN DYKE, CHADWICK, WILLIAMS.

*Scholarships and Prizes—*

BROWN, CARPENTER, SEARS, MARSH.

*Student Affairs—*

R. THOMPSON, DEMING, POPE, MARSH.

*Vocational Guidance—*

IRWIN, BILLINGS, VAN DYKE, MARSH.

*Chief Marshal of Formal Assemblies—*

HOWARD.

*University War Council—*

WOOD, HOWARD, BROWN, CARPENTER, HIGGINBOTHAM, INWOOD, LEHENBAUER,  
SWIFT, MAZOUR, MARTIE, S. PALMER, SEARS, R. THOMPSON, MARSH,  
CREEL, DOTEN, WILSON, A. S. U. N. President.

*War History Committee—*

HIGGINBOTHAM, WOOD, RIEGELHUTH, GRIFFIN, HOWARD, CARPENTER, S.  
PALMER, SEARS, LEIFSON, CHADWICK, BROWN, A. S. U. N. President.

## THE HISTORY AND DEVELOPMENT OF THE UNIVERSITY

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- 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 fund derived from the sale of this land is known as the "90,000-Acre-Grant Fund," and amounts to \$128,010.81.
- 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 derived from the sale of this land is known as the "University Irreducible Fund" and now amounts to \$60,000.13.
- 1873—*Location.* The University was first located at Elko by an Act of the Legislature approved March 7, 1873. By an Act of the Legislature approved March 7, 1885, it was moved to Reno, and formally reopened March 31, 1886.
- 1887—Administration of President LeRoy D. Brown began. Student enrollment in 1887-1888 was 50. The faculty consisted of two members, President Brown and Professor Hannah K. Clapp. During the first year two additional members were added, and by the end of the second year the faculty numbered seven.
- During the first year five departments were recognized, although not fully organized. They were the Liberal Arts, the Mining, the Normal, the Agricultural, and the Business Schools.
- 1888—The School of Mines was organized, with Robert D. Jackson, Ph.B., as Director. The Normal School was organized, with Miss Kate N. T. Tupper as the head. The Military Department was organized, with Lieutenant Arthur C. Ducat, Jr., as commandant.
- 1889—*The Hatch Act.* The Agricultural Experiment Station was organized, President Brown acting as Director. By an Act of Congress passed March 2, 1887, known as the Hatch Act, which was accepted by this State, there were established, in connection with the colleges founded upon the Congressional Act of 1862, agricultural experiment stations, "to aid in the acquiring and diffusion among the people of the United States of useful and practical information on subjects connected with agriculture, and to

- promote scientific investigation and experiment respecting the principles and applications of agricultural science." The Hatch Act of 1887 appropriated \$15,000 annually for this support.
- 1889—The first graduates from the State Normal School.
- 1889—The Administration of President Brown ended December 31.
- 1890—Administration of President Stephen A. Jones began on January 6.
- 1890—The second Morrill Act of Congress made further appropriations for endowments of institutions established under the Act of 1862. Under this endowment the University is now receiving \$25,000 per year.
- 1891—The first graduates from the School of Liberal Arts.
- 1892—The first graduates from the Schools of Mines and Agriculture.
- 1894—Administration of President Jones ended on June 30.
- 1894—Administration of President Joseph Edward Stubbs began July 1.
- 1895—The State Analytical Laboratory was organized under provisions of an Act of the Nevada Legislature of March 16, 1895.
- 1898—The first graduate in Civil Engineering.
- 1899—Washoe County presented to the University a farm of sixty acres, to be used in connection with the Agricultural Experiment Station. The cost of the farm was \$12,000.
- 1901—The first graduates in Mechanical Engineering.
- 1904—The tridecennial celebration of the establishment of the University was held.
- 1906—*The Adams Act.* Congress, under Act dated March 16, 1906, known as the Adams Act, provided for additional appropriation for the support of the Agricultural Experiment Station, limiting the money's use to necessary expenses of original research and experimental work in agriculture. This grant amounts to \$15,000 per year.
- 1907—*The Nelson Fund.* An Act of Congress of March 4, 1907, carried with it an appropriation for the further support of the universities established under the Morrill Act of 1862. The present appropriation under this fund amounts to \$25,000 per year.
- 1907—Mrs. John W. Mackay and Mr. Clarence H. Mackay began a donation to the University which founded the Mackay School of Mines, the Mackay Athletic Field, and the Mackay Training Quarters, and contributed \$25,000 toward the beautifying of the Campus. They also presented a statue in bronze by Gutzon Borglum of John W. Mackay, one of the pioneers of the Comstock.
- 1909—State Hygienic Laboratory was organized under provisions of the Act of the Nevada Legislature, approved March 25, 1909.
- 1910—Laboratory for Pure Foods and Drugs and Weights and Measures was established under provisions of Act of the Nevada Legislature of 1909, effective from January 1, 1910.
- 1911—Twenty-fifth anniversary of the establishment of the University at Reno, celebrated by Silver Jubilee and home-coming of former students and graduates.
- 1912—Mrs. John W. Mackay and Mr. Clarence H. Mackay presented to the University Board of Regents \$150,000 as an endowment for the Mackay School of Mines.

- 1914—Administration of President Stubbs closed with his death on May 27.
- 1914—By an Act of Congress known as the "Smith-Lever Act," there was established a fund for the purpose of agricultural extension. The fund, amounting to \$10,000 the first year, increased each year until it amounted in 1923, and thereafter, to \$15,699 per year.
- 1914—September 14, administration of President Archer B. Hendrick began.
- 1915—State Veterinary Control Service was organized under provisions of an Act of the Nevada Legislature, approved March 11, 1915.
- 1915—The first graduates in Electrical Engineering.
- 1917—University Farm of 213 acres purchased.
- 1917—May 1, administration of President Hendrick ended.
- 1917—September 1, administration of President Walter Ernest Clark began.
- 1918—First training detachment of 103 soldier students from June 15 to August 13; second training detachment of 103 soldier students from August 15 to October 12; Collegiate Section A—79 soldier students from October 1 to December 21; Vocational Section B—212 soldier students from October 15 to December 21.
- 1920—The School of Education was organized.
- 1920—The Rare and Precious Metals Federal Mining Experiment Station was assigned to the University July 8, 1920, by the Federal Bureau of Mines.
- 1920—A Federal Radio Station was established on the University campus in September 1920. The operant station and the Government wireless laboratory were both housed in the smaller of the two Barracks buildings until 1924 when this station was transferred to the Federal Aviation Field south of Reno, now the Municipal Airport.
- 1920—The University of Nevada was placed on the approved list of the Association of American Universities in November.
- 1921—An Engineering Experiment Station was established.
- 1924—The Semicentennial of the University was celebrated in May with a home-coming of former students and graduates. Actual University work first began in Elko in 1874.
- 1924—The Robert Lardin Fulton Lecture Foundation was established.
- 1925—Mr. Clarence H. Mackay began his additional gift of \$18,000 per year, for five years, to the Mackay School of Mines.
- 1925—*The Purnell Act*. An Act of Congress passed in February 1925, under which the income of the University's Agricultural Experiment Station was increased to \$50,000 for the year beginning July 1925, and was further increased \$10,000 per year until the annual income reached \$90,000 in 1929.
- 1926—Mr. William A. Clark, Jr., began the construction of a library building in memory of his wife, Alice McManus Clark, a native of Virginia City, Nevada.
- 1926—Mr. Clarence H. Mackay gave the University \$100,000 to enlarge the Mackay School of Mines Building and to perfect its equipment.
- 1927—Presentation of Memorial Library, completely furnished, to

- University by Mr. William Andrews Clark, Jr., October 21. This building, including the gift furnishings, cost approximately \$250,000.
- 1928—Mr. Clarence H. Mackay and his mother gave the University seven beautifully bound volumes of the *Virginia City Enterprise*—a nearly complete file of this rare newspaper for the years 1866 to 1872, inclusive.
- 1928—Mr. Clarence H. Mackay gave \$6,500 to aid in collecting historical Comstock Lode material for Mackay School of Mines Museum.
- 1928—Mr. George Wingfield financed the construction of a retaining wall back of the Engineering Buildings.
- 1928—Mr. Thomas F. Cole financed important improvements on the Lincoln Hall Men's Dormitory.
- 1928—*The Capper-Ketcham Act*. An Act of Congress was passed in May 1928, under which the income of the University's Agricultural Extension Department was increased \$20,000 per year beginning with July 1928.
- 1929—Construction begun on Mackay Science Hall. This \$415,000 building, gift of Mr. Clarence H. Mackay, houses the Departments of Chemistry, Physics, and Mathematics.
- 1929—Under Act of March 29, 1929, the Nevada Legislature established a State Bureau of Mines, putting control under the Board of Regents of the University.
- 1929—Mr. Clarence H. Mackay gave \$27,500 to enlarge the Stadium and refurnish the Training Quarters, presented the Walther Library of Desert Geology to the Mackay School of Mines and arranged to continue indefinitely the \$18,000 a year to this School.
- 1930—Dedication and Presentation of Mackay Science Hall to the University by Mr. Clarence H. Mackay, October 24.
- 1931—Under Act of March 25, 1931, the Nevada Legislature transferred to the University of Nevada the land and buildings formerly used by the Nevada Historical Society.
- 1932—Mr. Clarence H. Mackay gave \$150 to purchase a file of the *Virginia Evening Bulletin* covering the entire period of publication from July 6, 1863, to May 16, 1864. So far as is known this is the only complete file of this paper in existence.
- 1933-1940—Beginning with the summer of 1933 and continuing through 1940 repair and improvement projects were financed by the various Federal Government Relief Administration Funds. Many campus buildings were repainted, roads were improved, retaining walls erected, the spur railway relaid over a better campus site, the Mackay Field improved, an addition made to the greenhouse, several laboratories and President's house rewired, ditch section concreted, sewer mains renewed and the campus, plant and grounds generally improved.
- 1934—Through the Federal Public Arts Project Committee for Nevada the University was presented with twenty-four charcoal drawings of Nevada Indian subjects by Robert Caples. These framed drawings are in the University Library.
- 1935—The Carnegie Corporation presented to the University a college music set consisting of a Capehart phonograph, 824 classified

- records, 251 scores and 129 volumes on music with cabinets for the records and the scores. This set is valued at \$2,500.
- 1935—The Bankhead-Jones Act, passed in June 1935, authorized increased Federal Funds for resident teaching, agricultural extension and agricultural experimentation to all Land-Grant Colleges.
- 1935—The Regents, in June 1935, established the S. Frank Hunt Foundation with gifts of valuable mining stock, cash and automobiles made by Mr. S. Frank Hunt, discoverer of the Rio Tinto mine at Mountain City, Nevada. This foundation, in accord with the desire of the donor will cover the expenses of field trips for geologic study and for mineral prospecting by supervised groups of students of the Mackay School of Mines. In 1937 and 1939 Mr. Hunt made large additional gifts to the Hunt Foundation.
- 1936—Mr. Clarence H. Mackay purchased from the Evans Estate between twenty-six and twenty-seven acres of land adjoining the campus on the north, increasing the campus acreage nearly fifty percent.
- 1937—The Schools of Mining and Electrical Engineering were approved by the Engineers' Council for Professional Development.
- 1938—The University was approved in all departments by the Northwest Association of Secondary and Higher Schools.
- 1938—Administration of President Clark ended September 30, 1938.
- 1938—Mr. Clarence H. Mackay died November 12, 1938.
- 1938—Mrs. Ludovica D. Graham of Reno presented to the University, through the Department of Classics, the Cardinal Rampolla collection of Italian and other marbles and paid for its installation in the exhibit room of the University Library.
- ✓ 1938—Administration of Leon Wilson Hartman began October 1 as Acting President.
- 1938—The School of Mechanical Engineering was approved by the Engineers' Council for Professional Development.
- 1938—1941—Gifts to the University totaling approximately \$100,000 in Standard Brands stocks were made by Major Max C. Fleischmann. These gifts were made to establish scholarships.
- 1939—By an Act of the Legislature, the State Hygienic Laboratory was removed from University control.
- ✓ 1939—Administration of President Hartman began September 23, with formal inauguration December 15.
- 1939—Construction of an Engineering Building was authorized by the State Legislature at a cost not to exceed \$175,000.
- 1941—Construction of a new Gymnasium was authorized by the State Legislature at a cost not to exceed \$300,000, to be paid for by a State bond issue.
- 1941—Conversion of the University heating plant from a hot water to a steam system was authorized by the State Legislature at a cost not to exceed \$75,000, to be paid for by a State bond issue.
- 1941—Many campus improvements were completed over a two-year period through the cooperation of the Work Projects Administration, at an approximate cost to the W. P. A. of \$100,000. These projects included the new athletic field, a new stone retaining wall, excavation for a basement under the old Gymnasium, and grading of various sections of the campus.

- 1941—The fiftieth anniversary of the graduation of the University's first four-year class was celebrated at Commencement.
- 1942—The new Engineering Building was completed. Construction was authorized by the State Legislature in 1939 at a cost not to exceed \$175,000, to be paid for by a State bond issue.
- 1942—Bequests to the University were received as follows: Mrs. Luella Rhodes Garvey, approximately \$100,000; Mrs. Jewett W. Adams, approximately \$50,000; Mrs. Alice Dimmett, one-fourth interest in the Clay Peters Building in Reno; Mrs. Josephine Beam, an unspecified sum, largely in Philippine Islands mining property, the status of which remains in doubt during the war.
- 1942—An addition to the University infirmary was completed. Cost of the improvements was approximately \$9,000.
- 1942—A special Summer Session of ten weeks, in addition to the regular six-week session, was undertaken as a major item in the University's war effort.
- 1942—Joseph D. Layman deeded the house and lot at 1027 Sierra Street to the University. From the income received for the rental of this property, \$200 per year has been assigned to fulfilling the terms of the Carrie Brooks Layman Scholarship established by Mr. Layman in the Spring of 1929.
- 1943—In March and April two contingents of the Army Air Forces arrived at the University for pre-flight training.
- 1943—The residue of the Otto Hartung estate was transferred to the University to establish the Royal D. Hartung Industrial Education Fund in accordance with the provisions of the will of Otto Hartung, deceased.
- 1943—Administration of President Hartman closed with his death on August 27.
- ✓ 1943—Administration of Charles Henry Gorman began September 2 as Acting President.
- 1943—Army Specialized Training Unit No. 3996 began training in September.
- 1943—Gifts. From the estate of Dr. W. H. Hood, \$69.98 as an addition to the General Endowment; from Senator J. G. Scrugham, *The War of the Rebellion*, official history of the Civil War; from Paul L. Hartman and his friends, \$226.60 to purchase physics books for the Library as a memorial to the late President Leon W. Hartman.
- 1944—The Engineering Experiment Station, discontinued in 1939, was reestablished in January with Dean S. G. Palmer Acting Director.
- ✓ 1944—Dr. John O. Moseley, Dean of Students at the University of Tennessee, was named President by the Board of Regents, effective July 1.

## THE UNIVERSITY ORGANIZATION

### COLLEGES, SCHOOLS, AND PUBLIC SERVICE DEPARTMENTS

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#### THE COLLEGE OF ARTS AND SCIENCE

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

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

#### SCHOOL OF EDUCATION

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

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

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

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 two four-year courses, one in general mining and one in metallurgy. The first prepares the student for general practice in mining, metallurgy, and geology, and leads to the degree of Bachelor of Science in Mining Engineering. The second is a more specialized course in metallurgy, leading to the degree of Bachelor of Science in Metallurgical Engineering. With sufficient substitution of geology subjects in the general mining course, the degree of Bachelor of Science in Geological Engineering may be conferred.

The school is provided with the equipment necessary to teach efficiently the courses in mining, metallurgy and geology, which form



the basis of a mining education. The professional degree of Engineer of Mines is conferred upon graduates who have held responsible mining positions for at least five years and who present satisfactory theses.

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

### THE COLLEGE OF AGRICULTURE

The College of Agriculture curricula lead to the degree of Bachelor of Science in Agriculture with majors in Agricultural Economics, Preforestry, Vocational Agriculture, Range Management, Agronomy, Botany, General Agriculture, and Animal Husbandry. These are four-year courses, including, in addition to the prescribed agricultural subjects, such subjects in the College of Arts and Science as are necessary to establish in the student's mind a thorough knowledge of agricultural problems.

The School of Home Economics is a part of the College of Agriculture.

### 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 DIVISION

Agricultural Extension, provided for by the Federal Smith-Lever Extension Act, the Capper-Ketcham Act, and the Bankhead-Jones Act is under the immediate charge of a director.

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

### PUBLIC SERVICE DEPARTMENTS

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

#### STATE ANALYTICAL LABORATORY

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

## FOOD AND DRUGS CONTROL AND WEIGHTS AND MEASURES

The Act of the Legislature in 1909 which established the Food and Drugs Control and Weights and Measures Department, provides that all rules, regulations, definitions, and decisions proclaimed by the Secretary of Agriculture for the enforcement of the national law shall be adopted by this department in the enforcement of the State law. The Department of Weights and Measures is also charged with the enforcement of the Petroleum Products Inspection Act. 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.

## THE SUMMER SESSIONS

The Summer Sessions are organized to benefit both graduate and undergraduate students wishing to advance themselves toward degrees or to study in fields of particular interest. Courses are offered upon demand. Classes in the College of Engineering have been included when pupil need seemed to justify these offerings. There is constant demand for work leading to State certification. Hence subjects in the College of Arts and Science are always given.

ADMINISTRATION  
GOVERNMENT

The control of the University is vested by law in a Board of Regents consisting of five members elected by the people.

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, the Chairman of the University faculty, and ex officio member of all committees. It is his duty to secure through the Academic Deans, Directors of the various schools, and other administrative officers efficient, orderly, and economical administration and healthful development of the University.

### 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 principal administrative officers are the Academic Deans and the Directors of the various schools, who, under the general supervision of the President, have immediate charge of the educational work of the University. It is the duty of these Deans to secure estimates for the expenses of their departments and to submit their estimates to the President.

### 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 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 elsewhere in 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 each department is directly responsible to the Dean for the efficiency and educational effectiveness of the department. The heads of departments make all department reports to the Dean and submit estimates to him for the expenses of their departments. For general administrative work the head of the department is responsible to the Dean of that college in which his major work appears.

<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.

## EQUIPMENT

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### CLIMATE AND SURROUNDINGS

Reno, the seat of the University, is a substantially built and steadily growing city, with a population in excess of 21,000. 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 trans-continental line, the Virginia and Truckee Railway, a short line with Reno and Carson City as terminals, and the Western Pacific Railway, another trunk line between the East and the West.

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

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

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

### BUILDINGS AND GROUNDS

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

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

**AGRICULTURE BUILDING**—The Agriculture Building is a three-story structure of brick, with stone facings and trimmings, situated directly east of Manzanita lake. The first floor includes the administration offices, four classrooms, a large lecture room, a biology laboratory, and the clothing laboratory. The second floor is devoted to Home Economics and Zoology, and includes the foods laboratories, dining room, clothing laboratory, and the zoological laboratories. The basement

includes laboratories for dairying, farm crops, soils research (Experiment Station) and botany. (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)

**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)

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

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

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

**ENGINEERING BUILDING**—This new addition to the group of campus buildings is located on the flat east of the quadrangle and faces west. It houses the Departments of Civil and Mechanical Engineering. Its construction is fireproof reinforced concrete, brick, and stone with a frontage of 150 feet and an ell extending east 110 feet. The basement contains the following laboratories: Fluid mechanics, testing materials, concrete and cement testing and a well-equipped mechanical engineering laboratory. The fluid mechanics laboratory will contain the most modern and efficient equipment available. Studies in the mechanics of oils, compressed air and various other fluids in addition to water will be possible, as well as the behavior of hydraulic structures and machinery. The main offices and lecture rooms are on the first floor and the drafting rooms and offices are on the second floor. (1941)

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

**GREENHOUSE**—A working greenhouse is on the east side of the campus. It is used by the Departments of Botany and Horticulture. (1909). An addition was built with Federal Relief Funds in 1934.

**GYMNASIUM**—The old gymnasium is a brick building 150 x 60 feet. The assembly hall is 100 x 60 feet, and is used for general University purposes. The building is devoted to the Departments of Physical Education for Men and Women. When the new gymnasium is completed, this building is to be converted into an Armory for the R. O. T. C. Military unit. (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 Department of Meteorology and the Station Library occupy the first floor. The second floor is occupied by the Departments of Entomology and Range Management and the offices of the Station Director. The herbarium occupies the third floor. (1891; moved to Virginia Street, basement added, 1926)

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

**INFIRMARY**—The University Infirmary is situated between the Gymnasium and Lincoln Hall. This is a one-story building and contains nine rooms and a basement. There are four wards—two on the west for men and two on the east for women. There is a kitchen where the food for the patients is prepared. A registered nurse is in charge at all times, and the physician engaged by the University Health Service has daily office hours in this building. (1902; enlarged, 1941)

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

**LINCOLN HALL**—Lincoln Hall, the men's dormitory, is a three-story brick building, with present accommodations for seventy-two men. (1896)

**MACKAY SCHOOL OF MINES BUILDING**—The Mackay School of Mines Building, the gift of Mrs. John W. Mackay and Mr. Clarence H. Mackay, houses the Departments of Mining, Metallurgy and Geology. It is a dignified and spacious structure in the colonial style, occupying a space 112 x 118 feet and is two stories throughout with basement, except for a light well over the library in the center of the building.

In the basement are storerooms, the seismograph laboratory, mining laboratory, and museum, shower and locker rooms for the students, and the ore dressing laboratory.

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

On the second floor are the State analytical laboratory, mezzanine floor of the museum, drafting room, seminar room, instruments room, office of the Department of Geology, the Mackay Research Library, the mineralogy laboratory, maproom, petrography laboratory, petrography grinding and polishing room, classrooms and Mackay research room. (1908; enlarged, 1926)

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

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

**MECHANICAL BUILDING**—The Mechanical Building which is on the east side of the quadrangle adjoining the Electrical Building is a two-story brick structure of 80 x 80 feet. It contains a machine shop, pattern shop, mechanical laboratories and drafting room, strength of materials laboratory and the laboratories of the Civil Engineering Department. (1897)

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

**MORRILL HALL**—Morrill Hall is a three-story brick building with a large basement. On the first floor are the offices of the President, the Comptroller, and the Registrar. The Department of Philosophy, overflow classes in history and offices of the athletic coach occupy the second floor. The third floor is used for offices of the Departments of Farm Development, Soil Conservation, and Agricultural Economics of the U. S. Department of Agriculture. All three agencies are working in cooperation with the Agricultural Experiment Station. The office



and storerooms of the Superintendent of Maintenance and the University Post Office are in the basement. (1886)

**NEW GYMNASIUM**—A building of brick and reinforced concrete, 170 x 206 feet. The main floor contains a large playing court 104 x 120 feet flanked on either side by balconies for spectators, and when used as an auditorium seats approximately 3,500. The building provides offices and facilities for Physical Education. (1943)

**PRESIDENT'S HOUSE**—The President's house is situated on the south-east corner of the campus. (1900)

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

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

**THE MACKAY FIELD AND TRAINING QUARTERS**—A natural amphitheater which had been leased to the University for a number of years by former Regent Evans, was purchased for the University by Mr. Clarence H. Mackay and provision made for its improvement. Later he purchased an additional twenty-six acres to the north of and adjacent to this tract. To care for other branches of athletics, such as basket ball and tennis, the Nevada Legislature of 1909 provided for the purchase of additional land to the south of the old field, so that now about ten acres of land is being used for athletic purposes. The improvements donated by Mr. Mackay include the Training Quarters Building, situated on the east side of the field (1909). This building has showers, baths, locker and dressing rooms, a committee room, and a lounging room. On the west bank are the bleachers and colonnade. The natural slope of the bank has been utilized so that the field closely resembles the stadium used at the ancient Olympic games. Originally, in 1909, there were seventeen tiers of concrete, with a colonnade for a covered grandstand in the rear and a seating capacity of about two thousand. In the summer of 1929, through an added gift from Mr. Mackay, this stadium was enlarged to a seating capacity of more than five thousand.

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

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

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

**THE UNIVERSITY FARM**—Four miles south of Reno the State purchased, in 1917, a 213-acre farm primarily for use as a stock farm. (1917). Owing to the financial emergency, such use of this farm has been suspended since July 1931. Substitutional arrangements for using equipment and livestock of private dairy farms and equipment and flocks of private poultry farms have been in effect since July 1931 in connection with the dairy and the poultry courses.

## LIBRARIES

### GENERAL LIBRARY

The University Library, housed in the Alice McManus Clark Memorial Building, contains 65,600 bound volumes, excluding over 12,000 Federal documents not catalogued, and several thousand pamphlets. The books have been selected with particular reference to the needs of the several departments of study; but, besides the works needed by special departments, there are many general works and reference volumes of various kinds. The books are catalogued according to the Dewey Decimal Classification System.

The reading room is supplied with daily and weekly newspapers and with many of the best periodicals. These publications include some two hundred leading cultural, scientific, and technical magazines and journals.

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

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

### AGRICULTURAL EXPERIMENT STATION LIBRARY

The Agricultural Experiment Station Library, containing about 5,000 bound volumes and a large number of pamphlets, is housed in Hatch Station. The volumes and pamphlets may be classified broadly as follows: Bulletins and Reports of the various Experiment Stations, publications of the United States Department of Agriculture, and general works on agriculture and the related sciences. Many current agricultural periodicals are on the tables in the reading room. The library is catalogued and classified, and suited for ready reference. It is open daily, and, while intended primarily for the use of the Station Staff, it is also accessible to the public.

### MINING LIBRARY

Reference books, text books, the recent issues and the bound volumes of technical journals and of the American Institute of Mining

and Metallurgical Engineers, along with historical pictures and paintings are located in the attractive library room on the ground floor of the Mackay School of Mines.

The library as a whole consists of some 2,500 bound volumes in addition to which there is maintained a complete set of the publications of the United States Geological Survey and the United States Bureau of Mines, and fairly complete sets of similar publications issued by the States, and also the Nevada Bureau of Mines indexed file of the mining news of Nevada clipped from the newspapers of the State since 1929. The library is open daily during the year.

#### 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 remodel and furnish the research room were supplied by Mr. Clarence H. Mackay.

#### COMSTOCK MAPS

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

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

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

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

#### MINING EXPERIMENT STATION LIBRARY

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

#### SCHOOL MUSIC REFERENCE LIBRARY

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

## OTHER DEPARTMENTAL LIBRARIES

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

## COUNTY AND STATE LIBRARIES

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

## LABORATORIES

## ARTS AND SCIENCE LABORATORIES

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

*Chemical*—The Mackay chemical laboratory occupies the north half of Mackay Science Hall. The large lecture room, department library,

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

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

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

*Geological*—The Department of Geology is provided with reference collections illustrating the minerals, rocks, and fossils, and with class collections for study and determination. Also all folios and some 2,000 topographic maps published by the U. S. Geological Survey are provided for laboratory use. The mineralogical laboratory is arranged, for the present, for the accommodation of single sections of forty students. There is, in addition, a laboratory fitted up for microscopic work, and equipped with 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 one of the finest phonographs obtainable, an automatic Capehart.

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

The set includes 129 books of the best and latest musical biography,

history, theory and criticism, and 251 scores corresponding to the records. All are alphabetically catalogued and classified in several ways for convenient reference.

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

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

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

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

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

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

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

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

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

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

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

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

#### ENGINEERING LABORATORIES

*Civil Engineering*—The civil engineering equipment includes the following items:

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

A 100,000-lb. capacity Riehle 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.

*Electrical*—The electrical laboratory contains equipment for making the experiments usually included in undergraduate courses in

electrical engineering. The equipment is up-to-date and machines of standard types are available for study and operation. Measuring instruments covering a wide range of indicating, graphic and integrating types and in both commercial and laboratory forms are available. The main laboratory contains the following equipment:

Motor generator sets:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Direct current generators, 2¼ kw. to 15 kw.

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

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

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

The communications laboratory contains the following:

Telephone demonstration plant for two subscribers.

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

Vreeland oscillator with condenser for frequency control.

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

Impedance bridge for voice frequencies.

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

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

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

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

General Radio vacuum tube voltmeter.



General Electric two-element oscillograph.

R. C. A. cathode-ray oscillograph.

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

This equipment includes the following:

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

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

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

A 5 x 5 vertical slide valve Baker Hamilton engine.

A 7-kw. Curtis turbo-generator.

A 7-hp. DeLaval steam turbine geared to a centrifugal pump.

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

A 6-hp. vertical gas engine.

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

A Buick automobile engine.

A Chevrolet automobile engine.

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

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

One Parr adiabatic oxygen bomb calorimeter.

One Sargent gas calorimeter.

One Buffalo forge blower with motor.

Friction testing machine and motor.

One vacuum pump with motor.

One electric oven with controlling equipment.

One inclined friction plane.

One oil still.

Two Hays-Orsat gas analyzers.

One set of aviation meters and gages.

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

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

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

The machine shop on the main floor contains the following equipment: One 5-hp. motor-driven air compressor with receiver, one 16"

Whipp crank shaper, seven engine lathes, one 24" planer, one No. 1 universal tool and cutter grinder, one No. 2 and one No. 1½ universal milling machine, one 20" drilling machine, one 10" drilling machine, one centering machine, nine bench vises, floor grinder, buffer and power hack saw, with complete equipment of hand tools, instruments and gages.

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

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

#### MINING SCHOOL LABORATORIES

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

Connected with the fireroom is the weighing room. Both chemical and button balances for assaying work are placed in this room. The equipment consists of two analytical balances and eleven button balances. Different makes of balances are in use, including the Becker, Ainsworth, Keller, Oertling, Staudinger, Heusser, and Thompson.

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

*Geological and Mineralogical*—The Department of Geology is provided with reference collections illustrating ores, minerals, rocks, and fossils, with class collections for determination. Complete sets of United States Geological Survey publications and maps, most of the State Geological Surveys publications, as well as those of many foreign surveys.

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

The S. Frank Hunt Foundation field equipment consists of a tudor sedan, a 1½-ton truck, and complete camping equipment; complete engineering equipment suitable for topographic and geologic mapping, plotting, etc., and necessary prospecting equipment.

*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. The records are used chiefly for the study of earthquakes of local origin.

*Metallurgical and Ore Dressing*—The metallurgical and ore dressing laboratory equipment includes the following:

One 4 x 8 Sturtevant jaw crusher, one pair 10 x 12 crushing rolls; 2 ft. x 5 ft. Stearns-Rogers rod mill; 15-ft. Dorr classifier, one two-compartment bucket elevator and one Vezin automatic sampler. All of these machines are so arranged that ore passes mechanically through any desired series after being fed to the jaw crusher. An exhaust fan prevents dust escaping from the dry crushing machines. The overflow from the Dorr classifier is pumped to two Devereux agitators which in turn are connected to either of two classifiers, a double cone or a Fahrenwald, thence to a Deister Plat-O table or a Deister slime table. Centrifugal pumps circulate the pulps or pump them to waste.

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

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

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

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

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

One Sauvier & Boylston polishing machine; one Warner & Swasey polishing machine, and a Leitz grinding machine; two large Leitz

metallurgical microscopes with photomicrographic cameras; one Heele-Berlin spectroscope; a Bausch & Lomb quartz spectograph; a Leitz 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, belt-connected to compressor with instruments for the measurement of volumetric efficiency and power consumption; a collection of rock drills and equipment for use upon a concrete building block; mine equipment models, and equipment for mine sampling and mine examination.

The laboratories of the U. S. Bureau of Mines are equipped to carry on investigations in ore dressing, flotation, hydrometallurgy, electro-metallurgy, electrolysis, radio-activity and spectroscopy. Facilities are provided for handling large volume of fire assaying and chemical analyses requiring extreme accuracy.

The ore-dressing equipment is the best standard practice. The general metallurgical laboratories are equipped for test work covering known processes, and special apparatus is designed for proposed methods. Each research room is fitted for work on the particular problem being studied. This requires frequent redesign and installation of needed set-ups which are often of original construction.

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

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

#### AGRICULTURAL LABORATORIES

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

*Experiment Station Chemical*—This laboratory is equipped for research and analytical work in chemistry. It is used for chemical work in relation to the agriculture of the State and to the research projects of the Agricultural Experiment Station.

*Farm Crops*—This laboratory includes a large display of samples of seeds and matured plants of the different varieties of cereal and forage crops. The equipment includes a large electric germinator

for testing all kinds of farm seeds for germination; testers and cleaners; dockage machines; and other equipment used by the Federal Government for the commercial grading of grain and hay. Students will make germination and purity tests of commercial samples of farm seeds sent to the laboratory from the various farming districts of the State.

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

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

#### HOME ECONOMICS LABORATORIES

*Food*—The food laboratories are on the second floor of the south half of the Agriculture Building and are equipped to accommodate 18 students.

*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

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### 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 are the following exhibits: East side—Cases containing fossil specimens, and a systematic collection of rock specimens and small mining relics. North side—An excellent working model of a mine headframe, hoist, skip, and stamp mill, along with Comstock mining relics. West side—A display of Comstock Lode ores, relics, pictures, and maps, along with a display of mine models of various types. South side—Prehistoric footprints in sandstone as found in the prison yard at Carson City, along with pictures and plaster casts of the same.

The basement contains a display from the San Francisco Golden Gate Exposition of murals depicting mining and 1849 scenes, twenty replicas of United States gold, silver, and copper coins; sixteen illuminated Rand-McNally maps, wired to show the location and production of the chief metals and minerals of the United States; models of dredges, and an illuminated case displaying copper products from mine to brass. In addition there is a collection of rock drills from the time of the Sutro Tunnel to the present day, models of mines and equipment, and a large collection of ore specimens from various parts of the world.

Many valuable gifts have been made to the Mackay Museum too numerous to list, 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 COLLECTIONS

The biological collections are in the Agriculture Building. A portion of the 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.

## HERBARIA

The Herbarium of the University of Nevada now contains approximately 20,000 sheets, comprising what is probably the most complete collection of Nevada plants in existence. It is particularly valuable in studying the distribution of native and introduced plants in the State and for checking identifications of plants sent in by Nevada citizens. The collection of grasses is especially complete. Roughly 13,000 of the specimens were collected as a cooperative project with the Bureau of Plant Industry of the U. S. D. A., the Works Progress Administration participating. Located in the Agriculture building, the herbarium is administered by the botany staff.

The Nevada Agricultural Experiment Station herbarium now contains 15,750 mounted sheets, nearly all of western species, and at least half of them from Nevada. Certain of the forage plants, as grasses, clovers, and lupins, are especially well represented. Although, as yet small, this collection is of considerable importance, as it contains a number of types and typical plants obtained from type localities.

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

## PATHOLOGICAL MUSEUM

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

## CHEMICAL SPECIMENS

A number of substances representing the field of the chemical industries have been collected and placed in cases in Mackay Science Hall. Among these are samples purchased from chemical dealers; about 200 samples made and put up by students in the laboratory; about 80 samples of American-made dyes manufactured by the National Aniline and Chemical Company and donated by Professor Maxwell

Adams; plastics, including artificial silk and leather; explosives; alloys; lubricating oils; and all the common minerals; samples of inorganic salts prepared by J. T. Baker Chemical Company; distillation products obtained from crude petroleum prepared by the Standard Oil Company, and zinc products prepared by the New Jersey Zinc Company.



## PUBLIC LECTURES

## GENERAL ASSEMBLY

A general assembly of University students and members of the faculty is under the special direction of the Standing Committee on Assemblies and Lecturers. Lectures are given by members of the faculty and by men and women of special eminence in particular fields of study, travel, and business enterprise.

Following are some of the lectures given in 1943-1944:

## COMMENCEMENT, 1943

- May 22—Phi Kappa Phi Address, "Education and Life," by Edward M. Hulme, Professor Emeritus, Stanford University.
- May 23—Baccalaureate Address, "The Spiritual Implications of Higher Education," by The Reverend F. H. Busher, First Methodist Church of Reno.
- May 24—Commencement Address, "How Shall We Learn About Life," by Professor Edward M. Hulme.

## ASSEMBLIES

## GIVEN UNDER GENERAL AUSPICES OF THE UNIVERSITY

- October 15—"Alaska—Its Geography, History, Resources, People, and Strategic Importance," illustrated lecture by Mr. Edgar C. Raine.
- October 25—"Nursing Opportunities for Women," by Professor Mildred Newton of the University of California.
- November 17—"The Czech Student Martyrs," by Dr. A. G. Wiederhold, University of Nevada, International Students Day.
- January 17—Rubinoff and his Violin.
- February 9—"What A. A. U. W. Means to College Women," by Mrs. Kent Wallace, State President, American Association of University Women.
- February 22—"Is There a New Morality," by Dr. Paul Popenoe, internationally known lecturer in Eugenics, Phi Kappa Phi Day.
- February 29—"What University Students Can Do to Aid the O.P.A.," by Dr. Ernest Inwood, Dr. Rex Crider, and Mr. Fred Horlacher, sponsored by the Campus War Board.
- April 15—Mackay Day Addresses, by Dr. Effie Mack of the Reno High School, and Professor N. E. Wilson, formerly of the University of Nevada.
- April 17—"The Psychology of Military Aviation," by Dr. Walter Miles of Yale University, Sigma Xi Day.

## GIVEN UNDER AUSPICES OF THE RENO ROTARY CLUB

- January 24—"The Orient and the New World Order," by Judge George Malcolm.

February 7—"The Americas, the War, and the Postwar World," by President Hugh Stuntz of Scarritt College, Tennessee.

February 21—"The British Empire," by Col. E. Lascelles of England.

In addition to these lectures there were many campus lectures and addresses given under other particular auspices.

## 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 1943-1944

President, Charles D. Roeder, '09; Vice President, John E. Chism, '34;  
Secretary-Treasurer, Blythe Bulmer, '33.

## Executive Committee—Local—

Malcolm Blakely, '32.  
Lino Del Grande, '34.  
Juanita Elcano, '40.  
Harry Frost, '27.  
James Henrichs, '31.  
Proctor Hug, '27.  
Ernest Inwood, '27.  
Nevada Pedroli, '27.  
Hugo Quilici, '21.  
Edward Reed, '22.  
Grace Semenza, '35.  
George Southworth, Jr., '34.  
Fred Steiner, Jr., '33.  
Harold Taber, '32.  
Bruce Thompson, '32.  
Jack Walther, '31.  
Thomas Wilson, '29.  
Earl Wooster, '21.  
Mark Yori, Jr., '36.

## State Committee—

Albert Reed, '20, Lovelock.  
James Shaver, '24, Winnemucca.  
Willard Weaver, '31, Elko.  
Wallace Smith, '29, Elko.  
Charles Russell, '26, Ely.  
Helen Olmsted Oakberg, '33, Ely.  
Henry Cazier, '06, Wells.  
Harvey Luce, '22, Las Vegas.  
Robert Griffith, '23, Las Vegas.  
Leah Barker Cashman, '17, Las Vegas.  
Kelley Lyon, '29, Boulder City.  
Margery Mullen Cavanaugh, '34, Tonopah.  
Walter Cox, '28, Yerington.  
Edmond Recanzone, '33, Yerington.  
Catherine Slavin Barlow, '34, Hawthorne.  
Lem Allen, '28, Fallon.  
Walter Johnson, '31, Fallon.  
Duane Mack, '30, Gardnerville.

Helen Adamson Henningsen, '27, Gardnerville.  
 Pete Merialdo, '21, Eureka.  
 Gertrude Wyckoff Allen, '27, Austin.  
 Samuel Arentz, Jr., '34, Pioche.  
 Alan Bible, '30, Carson City.  
 Kenneth Johnson, '34, Carson City.  
 Gretchen Cardinal Whitehead, '31, Sparks.  
 Steve James, '42, Caliente.  
 Fred Baldini, '31, Battle Mountain.  
 Mary Kathryn Carroll, '43, Carlin.

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 the subscriptions to the *Sagebrush* and the *Artemisia* and to the payment of his class dues.

### THE UNIVERSITY HEALTH SERVICE

With the exception of graduate students and of students registered in five, or fewer, hours, all students are charged a Health Service Fee of \$6 per semester. The funds obtained from this fee are used to provide an enlarged health service in accordance with the general practice of other colleges and in line with the recommendations of The American Student Health Association. Students paying the fee are entitled to the following privileges and subject to the restrictions imposed by them:

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

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

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

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

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

6. Free daily consultation periods with the college physicians and nurses will be provided for all students who wish to consult about

health matters. The chief object of these consultations is the detection of illness before it becomes serious. Students are urged to take advantage of it. The privilege should, however, not be abused by expecting unreasonable services at unreasonable times.

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

8. A student injured or taken ill while on the campus will be given necessary emergency attention without expense. A student injured off the campus, regardless of the circumstances, must meet the expenses of transportation to the campus. The University Health Service will not be responsible for medical expenses incurred off the campus. Justifiable exceptions to rule 7 or 8 must have the approval of the University Health Committee.

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

10. In case of illness requiring hospitalization, the student will be privileged the free use of the University Infirmary for a period not exceeding two weeks in any semester, including meals, medicine, treatment, visits of physician, and general nursing.

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

12. Certain injuries and illnesses may be deemed by the University physician to be of such a nature or degree of severity that they cannot be cared for adequately at the University Infirmary. In such cases the student will be so advised, and the student will make his own arrangements for care elsewhere at his own expense.

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

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

### THE ASSOCIATED WOMEN STUDENTS

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

### THE FACULTY CLUB

The Faculty Club is composed of the members of the staff and their wives. The meetings are held monthly in the home economics rooms of the Agriculture Building. At each meeting a lecture of

general interest is given, followed by a social hour. The meetings are open to visitors. Officers for 1944-1945 are James R. Young, President; Robert S. Griffin, Vice President; Margaret E. Mack, Secretary.

#### 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 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 once 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.)

#### THE NEVADA ACADEMY OF NATURAL SCIENCES

Founded in November, 1940, the Nevada Academy of Natural Sciences has as its purpose the stimulation of interest in and study of natural sciences in Nevada. Membership is open to any person interested in the botany, geology, or zoology of the State. It is not limited, however, to Nevadans. Bimonthly meetings are held on the campus, at which speakers present papers, usually concerning some phase of the natural history of the State. The meetings are open to the

public. The Academy publishes a monthly newsletter containing items contributed by members.

### HONOR AND HONORARY SOCIETIES

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

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

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

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

*Gothic "N" Society*—An honor organization of women, election to which is based on sportsmanship, sports, participation, health habits, sophomore rank, scholarship average of C or better, participation in at least one nonathletic organization, attendance at W. A. A. meetings and practical unanimity of active members as to acceptability of candidate for election.

*Sigma Gamma Epsilon*—A national organization of geologists, mining engineers, metallurgists, and ceramists. Upperclass students in these subjects are eligible to membership in the local chapter. Biweekly meetings are held for the discussion of problems related to these professions.

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

*Sigma Sigma*—An honor organization whose membership is elected from the students majoring in home economics on the basis of scholarship and ability shown in the field of home economics.

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

few outstanding musicians associated with the campus who, by contributing their services, have rendered valuable service to the band.

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

*Scabbard and Blade*—A national honorary military society founded on the basic idea that military service is an obligation of citizenship. The active membership consists of selected cadet officers of the Reserve Officers' Training Corps at various institutions. Its purposes are: To unite the Department of Military Science and Tactics of American Universities and Colleges into closer relationship; to preserve and develop the essential qualities of efficient officers; to promote good fellowship among cadet officers; and to prepare them to take an active and influential part in the community in which they may reside and to disseminate intelligent information concerning the military requirements of our national defense. The local unit, Company C, 7th Regiment, was organized May 14, 1929.

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

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

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

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

*The Nevada Sigma Xi Club*—This organization is composed of members of the Society of Sigma Xi, national honorary scientific fraternity. Papers based on scientific research are presented by the members at regular meetings throughout the school year. Each year the Club sponsors a lecture by a nationally known scientist.

*Masque and Dagger*—The Nevada chapter of this national honorary dramatic fraternity was established to recognize students who have shown ability in dramatic work. Election to membership is based upon work done in acting and backstage.

*Sagers*—A local service organization, members of which are chosen



from among outstanding upperclass men. Its many campus activities include that of building the Homecoming bonfire. Membership in the Sagers serves as a stepping stone to membership in Blue Key.

*Sagens*—An honorary women's service and pep organization, the purpose of which is to assist at all student body functions. Membership is limited to five upperclass women in each sorority and in the Independents.

### 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 members attend except 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*—The University of Nevada Chapter, Student Affiliates of the American Chemical Society, was organized in 1941. All students registered for the degree Bachelor of Science in Chemistry or who are majoring in chemistry and whose chief academic interest is in the field of chemistry are eligible for active membership. The purpose of the club is to keep its members in touch with present activities and developments in the chemical field, and to foster interest in the science of chemistry. Meetings are held on the second Tuesday of each month.

*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.

*Mechanical Engineering Club*—An organization of students registered in Mechanical Engineering, upperclass members of which are affiliated with the parent organization, the American Society of Mechanical Engineers. Meetings are bimonthly and are devoted alternately to the conduct of business and to the review of technical subjects.

*Civil Engineering Club*—Its function is to promote closer relationship between the American Society of Civil Engineers and students. Membership is open to all students in the School of Civil Engineering. Meetings, which are in the form of lecture and discussion, are held monthly.

*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.

*The Home Economics Club*—Known as the Sarah L. Lewis Club, this club consists of all students taking any Home Economics subjects and the faculty of the School of Home Economics.

*Fraternities and Sororities*—The following fraternities and sororities have chapters, the figures in parentheses giving the dates chapters were established in this University: national fraternities—Sigma Nu (1914), Sigma Alpha Epsilon (1917), Phi Sigma Kappa (1917), Alpha Tau Omega (1921), Sigma Phi Sigma (1922), Beta Kappa (1925), Lambda Chi Alpha (1929); local fraternity—Sigma Rho Delta (1942); national sororities—Delta Delta Delta (1913), Pi Beta Phi (1915), Gamma Phi Beta (1921), Kappa Alpha Theta (1922).

*Manzanita Hall Association*—Residents of this hall are organized into a body under the name of Manzanita Hall Association, with president, vice president, secretary and treasurer elected for one year. The chairmen of standing committees, which include the phases of dormitory life (Red Cross work, laundry, room inspection, bell duty, quiet, and fire drill), are appointed by the president of the association. Meetings are held monthly.

*Independents*—A social organization of unaffiliated men and women students, organized for social purposes, for securing representation in student government, and to further the interests of the University. Meetings are held each Monday evening.

*Y. W. C. A.*—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 Singers, the Reno Civic Chorus and 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 classics 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.

*Alpha Epsilon Delta*—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. The club was originally named Omega Mu Iota.

*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.

*Wesley Foundation*—A national organization of Methodist college students, formed on the Nevada campus in 1940. Its purpose is to bring together Methodist students, and others who are interested, for social and religious development. Meetings, which are open to all students, are held the first and third Sundays of every month.

*The Canterbury Society*—The Nevada group of this nationwide organization was formed in September, 1940, for Episcopal students and their friends. The group sponsors cultural and social programs.

*The University of Nevada Press Club*—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 Pilgrim Fellowship*—A society open to all students, although organized especially for the religious and social culture of students connected with the Presbyterian and Congregational churches. It holds fellowship with like societies in State institutions throughout the United States and Canada. Meetings are held each Sunday evening at the Manse.

*Fine Arts Club*—Originated to promote interest in and appreciation of the arts among students. Exhibits of local and out-of-State artists are on display two weeks each month in the Fine Arts room in the library. Meetings are held monthly.

## 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.

*The Blue Key Directory*—A student body directory published each fall by Blue Key, service fraternity.

## PHYSICAL EDUCATION AND ATHLETICS

### REQUIRED PHYSICAL EDUCATION

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

#### MEN

The purpose of this department is to assist the men of the University to live to the best advantage, and so to aid them in the formation of hygienic habits that during their stay at the University they may make profitable physical preparation for life. There is urgent necessity that each student should have an intelligent appreciation of the means requisite for the preservation of his health, in order that he may be able to formulate wisely his own policy of health control. Credit counting toward the college degree is given. The individual's grade is largely based on attendance, punctuality, earnestness and application, but practical tests are also given.

#### PHYSICAL EXAMINATIONS

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

#### UNIFORM AND FEE

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

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

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

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

#### 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. The activities sponsored by this organization are: Archery, badminton, baseball, basketball, bowling, dancing, equitation, hiking, hockey, rifle, swimming, tennis. The Women's Athletic Association sponsors interclass and interorganization competition in as many activities as possible, with a member of the department acting in an advisory capacity.

Physical education is required of all freshman and sophomore women unless excused therefrom by the Dean of the College concerned. 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 work of the department is adapted to these needs.

A fee of \$2.50 per semester is charged for locker, laundry, and all equipment needed, excepting shoes and socks which are provided by the student.

### ATHLETICS

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

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

#### FACULTY ATHLETIC COMMITTEE

The duties of the Faculty Athletic Committee are as follows:

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.

The eligibility rules are printed in the current issue of *Regulations for the Guidance of Undergraduates*.

## MILITARY SCIENCE AND TACTICS

1. There is maintained at the University an Infantry Unit of the Reserve Officers' Training Corps. The unit was established by Act of Congress approved 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. Incidentally, the course of training also prepares students to a certain degree for the positions of noncommissioned officers in the Enlisted Reserve Corps.

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

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

4. The United States Government furnishes service uniforms and all equipment necessary to carry on the instruction. In addition, those who elect and are selected 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 \$220 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, with the exception of military bandsmen.

6. Every male student who is a candidate for graduation in any of the colleges of the University will be required to complete the prescribed two-year (basic) course of military training unless excused therefrom by proper authority.

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

(a) Those who, upon their initial registration in the University, are over 26 years of age.

(b) Those who have satisfactorily completed parts or all of the equivalent military course prescribed, having acquired the same at an educational institution under the supervision of an officer of the Army regularly detailed as Professor of Military Science and Tactics.

(c) Those who have completed equivalent military training in the regular military and naval services, national guard, or naval militia, and have received honorable discharges therefrom. The credits allowed

for such service shall be determined by the Professor of Military Science and Tactics, and will be based upon the length and character of such service.

(d) Aliens, they being prohibited by law.

(e) Those who are physically unfit for military duty. Physical examinations are required upon original enrollment in the Basic Course (unless a defect is readily apparent), and upon enrollment in the Advanced Course. Subsequent physical examinations may be required of Advanced Course students as necessity therefor arises.

(f) Transfer students who enter this University with junior standing, having completed freshman and sophomore work in an institution which did not then require military training. For definition of "junior standing," see Classification of Students, Index. See, also, Admission by Transfer, Index.

#### 7. Restrictions:

(a) Members of the active personnel of the Army, Navy, or Marine Corps of the United States, commissioned officers of the National Guard or Naval Militia, and reserve officers of the military forces (Army, Navy, and Marine Corps) are ineligible.

(b) No student will be permitted to enroll initially in the basic course after he has attained his 26th birthday, nor will any student be permitted to re-enroll 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.

(c) Students excused from military training receive no credit toward advanced standing in military except in cases coming under Section 6, (b) and (c), foregoing.

(d) 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.

8. 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.

9. Special Regulations for the Department of Military Science and Tactics are published in pamphlet form, a copy of which will be issued to each student registered in military. **Cadets will be held to observance of these Regulations and of such orders and instructions as may be issued from time to time in connection with their military training.**

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

### HONORS AND AWARDS FOR MILITARY EXCELLENCE

*Honor Graduates.* Under existing Army Regulations, the University may designate certain members of the second year Advanced Course as "Honor Graduates," who may be permitted to compete for commissions in the Regular Army. The number is limited only by the qualifications outlined below. The term "Honor Graduate" applies to graduates of the University (in the current academic year) who are graduates of the Second Year Advanced Military Course in the current academic year or previous academic years, who are citizens of the



United States, who have been selected by the President of the University for scholastic excellence and who have been designated as honor graduates by the Professor of Military Science and Tactics as possessing outstanding qualities of leadership, character, and aptitude for military service. They must be 21 years of age on or before the dates set for their appointments in the Regular Army. Those who are ineligible for appointment in the Regular Army in the year in which they are graduated in honor status because of non-age, will be permitted to compete for appointment with honor graduates in the first year subsequent thereto in which they attain the prescribed age. The designation as an honor graduate does not give the individual any claim or right to an appointment in the Regular Army. (Section 24e, National Defense Act, as amended by section 7, Act of Congress dated April 3, 1939, 53 Stat. 555, Group 3, Honor Graduates.)

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

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

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

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

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

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

*Governor's Medal*—Senate Bill No. 86, section 2 (2), adopted at the 1937 session of the Nevada Legislature, makes provisions for the presentation annually of a medal to be known as the "Governor's Medal," to that graduate of the first- or second-year basic course in the military department of the University of Nevada (R. O. T. C.) whose proficiency in military training, observance of the rules of military courtesy, and intelligent attention to duty, have received the approbation of the Professor of Military Science.

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

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

*Gold Medal for Drill and Discipline*—The basic course cadet most

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

*Other Medals and Prizes*—For particulars as to other awards for which cadets are eligible, see current Regulations for Department of Military Science and Tactics.

## HONORS, PRIZES, AND FOUNDATIONS

### UNIVERSITY SCHOLARSHIP HONORS

The University gives recognition to such students as attain a high grade of scholarship by announcing at commencement time the senior students who have received honorable mention in each of the several colleges, and in their full four-year course. Honorable mention is won by attaining a standing equivalent to 90 percent or better on the average in the full work of the senior year or of the four years. At the end of each semester the Faculty Scholarship Committee issues a scholarship honor roll, which includes the upper five percent of the undergraduate student body who have completed a minimum of fifteen semestral credits.

#### GOLD MEDAL

A gold medal is awarded annually to that member of the graduating class who has attained the highest average grade of scholarship throughout his college course and who has taken to within 8 units of all his required work at the University of Nevada.

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

#### FRENCH MEDAL\*

(ESTABLISHED 1935)

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

#### PHILO SHERMAN BENNETT PRIZE

(ESTABLISHED 1909)

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

#### THE ALBERT SENIOR PUBLIC SERVICE PRIZE

(ESTABLISHED 1924)

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

This prize is awarded annually at commencement to that member of

\*Awarding of this medal temporarily suspended.

the graduating class whose collegiate record shows the most satisfactory combination of good scholarship, good character, and worthy service in behalf of the University or the community, or both.

The winner of this prize shall be chosen by the chairman of the Faculty Committees on Scholarship and on Athletics, the Dean of Women, the Master of Lincoln Hall and the President of the University.

### THE ROBERT LARDIN FULTON LECTURE FOUNDATION\*

(ESTABLISHED 1924)

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

<i>Lecturers</i>	<i>University Year</i>
DR. ROBERT A. MILLIKAN.....	1924-1925
DR. EDWARD T. DEVINE.....	1925-1926
UPTON CLOSE (Josef Washington Hall).....	1926-1927
DR. WILL DURANT.....	1927-1928
COUNT ILYA TOLSTOY.....	1928-1929
DR. FRANK MORTON MCMURRY.....	1929-1930
DR. JAMES H. COUSINS.....	1930-1931
DR. ROBERT A. MILLIKAN.....	1938-1939
MISS MARY A. DINGMAN.....	1940-1941
No Lecture.....	1941-1944

### THE THEODORA STUBBS FULTON MEMORIAL FOUNDATION

In the spring of 1925 a friend of Mrs. Theodora Stubbs Fulton began an annual anonymous gift of \$50 per year in her honor, the gift to be invested in books in biology and in physical education for women.

### THE CLOVIS ALBERTA PRESTON MEMORIAL FOUNDATION

(ESTABLISHED 1929)

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

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

## THE S. FRANK HUNT FOUNDATION

Mr. S. Frank Hunt, the discoverer and developer of the famed Rio Tinto mine near Mountain City, Nevada, gave the Regents of the University for the Mackay School of Mines, a series of gifts of cash, mining stocks, automobiles, and equipment over a period of years from 1935 to his death in January 1940.

The Regents established the Foundation to carry out Mr. Hunt's wish to provide opportunity during the college year for faculty and students to make trips to operating mines and mills and to mining meetings, along with week-end field trips in connection with school courses; and to provide a free course of several weeks during the summer vacation, known as the Hunt trip, for a chosen number of students for geological mapping, prospecting, and study of mines.

## THE ARMANKO PRIZES

## SENIOR LIBRARY PRIZES

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

The winners shall be chosen each year, within the month before commencement, by a special faculty committee appointed by the President of the University. Either residents of Nevada or graduates of Nevada high schools shall be given preference. No student over twenty-six years of age is eligible to compete for these prizes. In selecting the winners the committee shall take into account the quality as well as the number of volumes in each library and shall give weight to the painstaking endeavor of the student in assembling his library and to his judgment and taste in the selection of his books. The donor is willing to accept the affidavits of the Deputy Superintendents of Public Instruction and of high school principals for lists of books owned by seniors who are not resident in the Reno-Sparks district.

## INTERNATIONAL RELATIONS CLUB PRIZE

The Armanko Company also provides an annual prize of a twenty-five dollar merchandise order to the winner of the essay contest sponsored by the International Relations Club.

## GINSBURG JEWELRY COMPANY AWARD

(ESTABLISHED 1939)

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

## A WORD TO DONORS

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

## FORMS OF BEQUESTS

## GENERAL

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

## SPECIFIC

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

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

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

NEVADA LIVESTOCK PRODUCTION CREDIT  
ASSOCIATION AWARD

(ESTABLISHED 1940)

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

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

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

Elimination contests shall be held by and under rules promulgated and administered by the College of Agriculture, to determine the two best papers prepared by qualified contestants. These papers are to be presented by the authors at the annual meeting of stockholders of the association, decision as to the best and second best paper to be reached by the said stockholders. The awards will be made immediately following such decision. The papers so presented are to become the property of the association, with full rights of publication.

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

## SCHOLARSHIPS

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(No award in the form of a scholarship will be made unless the recipient is duly enrolled in the University at the time the award is payable.)

### 1. REGENTS' SCHOLARSHIPS

#### A. (ESTABLISHED 1911)

Five Regents' Scholarships of \$50 each to be awarded annually to regular students of the highest scholarship whose names have appeared on the honor roll both semesters of the year in which the award is made, one to a freshman, two to sophomores, and two to juniors. These scholarships will be announced during the summer and shall be paid to the winners the first of the following October, provided these winners have enrolled for the subsequent year's work in this University, otherwise they shall be paid to alternates satisfying the conditions.

#### B. (ESTABLISHED 1922-1923)

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

(a) Officers and enlisted men in active service of the United States Army and Navy and their children.

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

#### C. (ESTABLISHED 1927)

At the request of the General Federation of Women's Clubs a total of not more than ten students in any one University year will be admissible without the payment of the nonresident tuition fee from Mexico, Central America and South America; provided, that not to exceed three such students from any one nation in this area receive this exemption within the same year; and provided, that each student who receives this privilege is a native-born citizen of the country from which he is admitted. It is understood that such students will be required to pay all other regular University charges.

### 2. ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP

#### (ESTABLISHED 1918)

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

### 3. THE ELLA S. STUBBS MEMORIAL SCHOLARSHIP

#### (ESTABLISHED 1919)

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

## 4. THE ROSE SIGLER MATHEWS SCHOLARSHIPS

(ESTABLISHED 1920)

A scholarship fund was established by Mr. Isaac R. Mathews of Reno, Nevada, in memory of his wife, Rose Sigler Mathews. The trust fund, given by Mr. Mathews for scholarship purposes, amounts to \$6,900, and yields an annual income above \$300. In 1931 Mr. Mathews presented to the University securities with face value of \$3,300 with understanding the income from these shall go to him during his life and afterwards be added to the annual value of his scholarship. By arrangement with the donor during the earlier years of this scholarship, the Board of Regents will grant scholarships from the income of this trust fund upon the recommendation of Mr. Mathews, and such scholarships may be, on Mr. Mathew's further recommendation, continued to his nominees, provided they make good scholarship records.

## 5. THE MARYE WILLIAMS BUTLER SCHOLARSHIP

(ESTABLISHED 1921)

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

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

This scholarship will be payable on October 20 following the award, provided the student winner is then enrolled for the new year's work in the University of Nevada, otherwise the scholarship will be payable to an alternate chosen under similar conditions by the committee and duly enrolled for the new year's work in the University of Nevada.

## 6. THE AZRO E. CHENEY SCHOLARSHIP

(ESTABLISHED 1922)

The Honorable Azro E. Cheney bequeathed to the University of Nevada \$5,000 in trust, to be controlled and invested by the Board of Regents. The income from this trust fund is to be awarded, by the University Committee on Scholarships and Prizes at each annual commencement of the University to that member of the freshman or sophomore class who is a bona fide resident of Nevada and who shall be certified by the head of the Department of English as being justly entitled thereto as the best student in English, during that year, character and improvement both being considered. This scholarship sum shall be payable one-half on the 20th day of October and one-half on the 5th day of March following the award, provided the winner is then enrolled for a further year's work in the University of Nevada, otherwise to an alternate satisfying the conditions.



## 7. THE MRS. CARL OTTO HERZ SCHOLARSHIP

(ESTABLISHED 1926)

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

The income from this fund is to be awarded at the end of each University year by the University Committee on Scholarships and Prizes to one of three electrical engineering students nominated to the committee by the head professor of electrical engineering. The nominees must each be electrical engineering students who are self-supporting in whole or in part, are of good character and of good scholarship, and who have earned senior standing in the University of Nevada. The scholarship sum will be payable to the winner on October 20 following the award, provided the winner is then enrolled in the University of Nevada for his senior year in electrical engineering. Otherwise the sum is to be paid to a chosen alternate satisfying the same conditions.

8. THE CHARLES ELMER CLOUGH SCHOLARSHIPS  
IN ENGINEERING

(ESTABLISHED 1926)

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

These two scholarships both carry an annual value of one-half of the income received from the Charles Elmer Clough Trust Fund during the calendar year from University commencement time to University commencement time, and are to be awarded at the end of each University year, beginning with the award in May 1927. The scholarship winners are to be chosen by the head professors of the Schools of Civil, Electrical, and Mechanical Engineering. The winners each year must be chosen from the students enrolled in civil, electrical, and mechanical engineering and must, in the judgment of the selecting professors, be the best all-round students, who are self-supporting in whole or in part, are of good character and of good scholarship, and who have earned one, senior standing, and the other junior standing, in the University of Nevada.

The scholarship sums will be payable to the respective winners, one-half on October 20 and the other half on April 1, following the award, provided the winners are then enrolled in the Engineering College of the University of Nevada. In case any winner is not so enrolled, the scholarship sum will then be paid to a similarly chosen alternate satisfying the same conditions.

## 9. THE CARRIE BROOKS LAYMAN SCHOLARSHIP

(ESTABLISHED SPRING 1929)

This scholarship, established in memory of Carrie Brooks Layman, provides each year for ten consecutive payments of \$20 each to a worthy, self-dependent sophomore or upperclass man or woman student, who, while in college, is an abstainer from debt, intoxicants and

tobacco. The recipient of this scholarship is to be chosen each spring by the University Committee on Scholarships and Prizes. If a son or grandchild of Mrs. Layman should enter the University of Nevada, then such son or grandchild shall have prior claim to this scholarship. During the earlier years of this scholarship payments were made to the winner by the donor through the Comptroller's office. The initial \$20 payments of each semester shall be made on the winner's registration days in August and January and shall be followed by similar payments on the 5th of each September, October, November, December, February, March, April and May, provided the winner is duly enrolled as a student at the University of Nevada.

#### 10. PREMEDICAL-PRENURSING SCHOLARSHIP

(ESTABLISHED 1931)

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

This scholarship shall be paid October 20 and March 15 following the award, provided the winner is duly enrolled in the sophomore year in this University, otherwise to an alternate satisfying the conditions and duly enrolled.

#### 11. THE GRAND ARMY OF THE REPUBLIC SCHOLARSHIP

(ESTABLISHED 1934-1935)

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

During the past University year the income of this Relief Corps fund supplemented by gifts from the Nevada Relief Corps at Carson City, Reno, and Virginia City provided a \$50 membership.

#### 12. THE WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM

(ESTABLISHED 1935)

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

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

1. A worthy moral character.
2. An unusual talent and future promise in the field of journalism.
3. An average grade no less than the average grade of the University.
4. A student specializing in journalism.

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

This scholarship shall be awarded by the University Committee on Scholarships and Prizes upon the recommendation of the Head of the Department of Journalism. Should the recipient of the scholarship fail, except through circumstances beyond his control, to keep in good standing in his studies, he automatically forfeits the scholarship, which then is awarded to the alternate.

This same committee and the Head of the Department of Journalism shall choose an alternate satisfying the same conditions.

This scholarship shall be paid to the winner, one-half on October 20 and the other half on March 5, following the award, provided the winner is duly enrolled in the University of Nevada; otherwise it shall be paid to the chosen alternate, provided he or she is so enrolled.

### 13. 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 made on October 20 and will be followed by a like payment on the first day of each month, except in the month of January, when the payment will be made on registration day.

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

### 14. 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 at commencement to a man student under the following conditions:

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

The scholarship shall be paid in two installments of \$50 each; the first payable October 20 and the second payable March 5, provided,

that in each instance the candidate is regularly enrolled in the University and has good scholastic standing.

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

#### 15. THE NEVADA STATE PRESS ASSOCIATION SCHOLARSHIP IN JOURNALISM

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

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

The recipient

- (a) Must be a graduate of a Nevada high school.
- (b) Must be registered in the course in journalism or majoring in journalism.
- (c) Must have revealed talent in this field.
- (d) Must have shown proficiency and earnestness in the courses in journalism.
- (e) Must have attained in all university work the average grade required for graduation.
- (f) Must have at least one more year of University work to complete, and normally must have been registered as a student at the University for at least two consecutive years prior to the time of awarding the scholarship.
- (g) Must be at least in part self-supporting and in need of financial assistance in order to continue University work.

The recipient of the scholarship shall be chosen by the head of the Department 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.

Should the recipient of the scholarship fail, except through circumstances beyond his control, to keep in good standing in his studies, he automatically forfeits the scholarship, which then is awarded to the alternate.

An alternate student selected by the head of the Department 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.

#### 16. THE MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS (ESTABLISHED 1938)

In the summer of 1938 Major Max C. Fleischmann gave to the University of Nevada 5,000 shares of Standard Brands, Inc., the dividends from which are to be used to fund five annual scholarships. In September 1940, Major Fleischmann gave an additional 300 shares of Standard Brands, Inc., cumulative preferred stock, the income from which is to be added to this scholarship fund.

The Fleischmann scholars are to be chosen by the Committee on

Scholarships and Prizes. The scholarships are available to students who fulfill the following requirements:

1. Need financial assistance to the amount of the scholarship in order to enter the University, or to continue there as students;
2. Give promise of becoming effective citizens upon graduation and are worthy of such assistance;
3. Show qualities of leadership and a spirit of cooperation by active participation in a student activity or activities.

One-third of the scholarship sum, approximating \$400, will be payable October 20, December 10 and March 10 of each year, provided the winner is then enrolled in the University.

#### 17. THE WOMAN'S CHRISTIAN TEMPERANCE UNION SCHOLARSHIPS

(ESTABLISHED 1938-1940)

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

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

The scholarships are payable one-half on October 20 and one-half on March 5 of each year and the winners are to be chosen by a committee of the Reno Union in consultation with the Chairman of the Committee on Scholarships and Prizes of the University. The first award of these scholarships was made in January 1939.

#### 18. THE NOBLE H. GETCHELL SCHOLARSHIPS

(ESTABLISHED 1938)

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

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

## 19. THE RITA HOPE WINER MEMORIAL SCHOLARSHIP

(ESTABLISHED 1938)

Established in the spring of 1938 by gifts from friends of Rita Hope Winer, this scholarship provides that, from the principal and the income, the sum of fifty dollars shall be annually awarded to the most deserving woman who, completing her junior year, is including in her work all the minimum required courses in the School of Education to entitle her to a high school diploma and who plans to be a public school teacher. The winner is to be chosen by the Dean of Education and the Chairman of the University Committee on Scholarships and Prizes. Beginning with 1939, the winner is to be announced at Commencement. The scholarship shall be paid by the Comptroller in two equal payments; the first, October 20; the second, March 5.

20. THE GRAND LODGE OF THE INDEPENDENT  
ORDER OF ODD FELLOWS SCHOLARSHIP

(ESTABLISHED 1939)

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

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

The scholarships will be payable to the respective winners, one-half on October 20 and one-half on March 5 following the awards, provided the winners are duly enrolled in the University of Nevada and are in good scholastic standing. Alternates shall be chosen to receive these scholarships in the event the accepted candidates do not return to school or are declared ineligible by the committee.

## 21. THE ROTARY CLUB OF RENO SCHOLARSHIP

(ESTABLISHED 1939)

In the summer of 1939 Reno Rotary Club No. 248 established an annual scholarship of \$100 to be awarded early in the second semester of the academic year to either a man or a woman who has completed at least one semester's work in the University and is again enrolled,

who possesses good character, a good scholastic record and is self-supporting in whole or in part, and who, after the grades for the first semester of the academic year are available, has been recommended to the officers of the Rotary Club of Reno by the Chairman of the University Committee on Scholarships and Prizes.

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

## 22. THE DAUGHTERS OF THE AMERICAN REVOLUTION SCHOLARSHIP

(ESTABLISHED 1939)

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

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

2. Beginning with January 1940, twenty-five dollars will be given each semester, provided the winner is then enrolled for the work of the current semester. These awards will be payable March 5 and October 20 of the successive academic years at the Comptroller's office of the University.

## 23. THE CARL RAYMOND GRAY SCHOLARSHIPS IN VOCATIONAL AGRICULTURE

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

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

The scholarship award will be paid as follows:

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

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

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

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

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

#### 25. EPSILON SIGMA PHI 4-H CLUB SCHOLARSHIP

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

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

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

#### 26. NEVADA REBEKAH ASSEMBLY SCHOLARSHIPS

(ESTABLISHED 1939-1940)

The Nevada Rebekah Assembly annually gives two scholarships of forty dollars each, one to a son and one to a daughter of a Rebekah, under the following conditions:

a. At the time of application the recipient's father must be an Odd Fellow and his mother a Rebekah of five years' good standing; or his mother must be a Rebekah of five years' good standing; or his mother, if deceased, must have been in good standing, at the time of her death, in a Rebekah lodge under the jurisdiction of the Rebekah Assembly, I. O. O. F., of the State of Nevada.

b. The recipient must have sophomore or junior standing and be registered in the University when the scholarship is awarded.

c. He must have good scholastic standing; be of good character; and, in his relations with fellow students and members of the faculty, be kind, generous, and thoughtful.

d. He must have participated in a reasonable number of extra-curricular activities and be, at least in part, self-supporting and in need of financial assistance in order to continue work at the University.

A committee consisting of the three trustees, the secretary, and the treasurer of the Rebekah Assembly of Nevada shall choose the recipients of these scholarships each year. This committee may receive recommendations from the University Committee on Scholarships and



Prizes, but need not be bound by these recommendations in its selection.

The scholarships shall be payable to their respective winners, one-half on or about October 20 and one-half on or about March 5 of the academic year following the awards, provided the winners are enrolled in the University on these dates. In the event that any winner does not return to the University or is declared ineligible to receive the scholarship, an alternate shall be chosen by the committee of the Rebekah Assembly.

27. SEARS ROEBUCK AGRICULTURAL FOUNDATION  
SCHOLARSHIPS  
(ESTABLISHED 1941)

The Sears Roebuck Company, in a nation-wide program for the benefit of the agricultural industry as well as for the individual students, established the Sears Roebuck Agricultural Foundation Scholarships. These scholarships, six in number, are awarded to freshmen students and have an annual value of one hundred twenty-five dollars each.

The winners of this award are selected by the Dean of the College of Agriculture on the basis of worthiness and need of financial assistance. The scholarships are payable at the Comptroller's office, one-half in the fall and one-half in the spring, provided the winner is then enrolled.

28. THE HORACE P. BOARDMAN SCHOLARSHIP IN  
CIVIL ENGINEERING  
(ESTABLISHED 1941)

In March 1941, Fred A. and Betty R. Roemer established a \$100 annual scholarship to be known as the Horace P. Boardman Scholarship in Civil Engineering.

The individual selected shall possess good character, good scholarship, and be in need of financial assistance. He shall, also, have earned either junior or senior standing as a duly enrolled student in the University of Nevada.

Selection of the principal and alternate shall be at the discretion of the Civil Engineering faculty.

This scholarship shall be payable one-half on the 20th day of October and one-half on the 5th day of March following the award, provided the winner is then regularly enrolled as a student at the University of Nevada, otherwise the award will be paid to a chosen alternate satisfying the same conditions.

29. 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.

## 30. JEWETT W. ADAMS SCHOLARSHIP FUND

In conformance with the will of Mrs. Emma Lee Adams, wife of the late Honorable Jewett W. Adams, former governor of Nevada, there was established in 1942 a fund of \$40,000 (to date) to be known as the Jewett W. Adams Scholarship Fund. The interest on this money is to be used to assist deserving students.

The income from the fund will be awarded by the Committee on Scholarships and Prizes in accordance with the following provisions:

Financial need, future promise of leadership, proven scholastic ability, and good character.

## 31. ROYAL D. HARTUNG INDUSTRIAL EDUCATION SCHOLARSHIP

Under the terms of the will of the late Otto Hartung, the income from his estate was left to the Independent Order of Odd Fellows to be used to establish and maintain an orphans' home to be known as the "Royal D. Hartung Home for Orphans and Foundlings" with the stipulation that if this provision were not carried out, the entire estate should go to the University of Nevada to establish "The Royal D. Hartung Industrial Education Fund." Inasmuch as there were no orphans or foundlings to be provided with a home, the residue of the estate was conveyed in the summer of 1942 to the University of Nevada to establish "The Royal D. Hartung Industrial Education Fund."

The available income from this fund will be awarded annually to a qualified student or students (preferably orphans) who are seeking an industrial education in the College of Engineering.

## 32. THE FRANK O. BROILI SCHOLARSHIP IN ELECTRICAL ENGINEERING

Mrs. Francis Leonard Broili Bradley, deceased, of Reno, Nevada, bequeathed \$5,000 to the University of Nevada. The income therefrom is to be used to establish The Frank O. Broili Scholarship in Electrical Engineering at the University of Nevada, or to be used for this department in such manner as the President and the Regents of the University may determine.

## 33. JOSEPHINE BEAM SCHOLARSHIPS

By the will of Josephine Beam, a trust fund was established with the Zion Savings Bank and Trust Company of Salt Lake City, to be known as the Josephine Beam Educational Fund. The income is to be shared equally by the University of Utah and the University of Nevada, amounting to approximately \$1,500 a year for the University.

The will specifies its use as follows:

"For deserving and needy students of good moral character attending or about to attend the University of Nevada, and for the payment of incidental costs in connection with such attendance, in no event, however, more than \$500 to be paid to any one student. The selection of students to receive and be the beneficiaries thereof shall be from a list submitted to the trustee of said University of Nevada; selection to be made by a committee composed of the President of the University, a representative of the trustee and the State Superintendent of

Public Instruction of the State of Nevada. The action of a majority of such committee shall be final and binding as to the individuals entitled to receive the same and as to the amount, thereof, not exceeding that specified herein, and said trustee shall not be required to and is not obligated to see to the application of said funds to the express purposes herein set forth, but may in its judgment and discretion pay out said fund at such times and in such manner as will in its judgment effectuate and result in the consummation of the purpose herein expressed. In the selection of recipients, it is my desire that, all things being equal, preference be given to students in the School of Mines or Engineering, although, as to this, I leave it to said committee."

The above-appointed committee proposes to use the university income from this fund for scholarships to students about to enter the university from Nevada high schools, as this type of scholarship gift has been greatly desired for many years past.

The manner of choice of recipient and the amounts of the scholarships will be determined in time for the college year of 1944-1945.

#### 34. 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

\*Indefinitely suspended.

of character and of instincts to lead and to take an interest in his schoolmates; (d) physical vigor as shown by interest in outdoor sports or in other ways.

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

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

- 1907—ARTHUR LEONIDAS ST. CLAIR, Deeth.
- 1908—WILLIAM SCOTT UNSWORTH, Reno.
- 1910—STANLEY MAYHEW WILTON, Goldfield.
- 1911—CEDRIC HARDING BEEBE, Reno.
- 1913—FLOYD SHERMAN BRYANT, Sparks.
- 1914—WALTER CLARENCE JEPSEN, Verdi.
- 1917—THOMAS HENRY EDSALL, Reno.
- 1919—STANLEY M. PARGELLIS, Reno.
- 1921—CHARLES M. CHATFIELD, Reno.
- 1922—LESLIE MALTBY BRUCE, Reno.
- 1923—PAUL A. HARWOOD, Reno.
- 1925—JOHN OCHELTREE, Reno.
- 1926—FRED SIEBERT, Reno.
- 1928—FRED ANDERSON, Carson City.
- 1929—FRANCIS DUBORG, Reno.
- 1932—ALDEN SIBLEY, Reno.
- 1937—RUSSELL W. McDONALD, Reno.

#### LOAN FUNDS

*The Nevada State Federation Scholarship Fund*—The Nevada State Federation of Women's Clubs has established a scholarship fund to be lent to students of the University of Nevada in amounts varying to suit individual needs. The money thus lent is to be returned to the fund at the borrower's convenience without interest. Loans are available first to girls, high school graduates, or girls who have completed one year of normal or university work, the latter to have the preference. Boys are eligible under like conditions, but only when the funds are ample and no applications from girls are on file. Students desiring to take advantage of this offer will apply to Mrs. H. A. Peradis, State Chairman of the Committee on Student Loan Fund, 1419 C Street, Sparks, Nevada.

*The David Russell Loan Fund*—By will, David Russell of Loyalton, California, bequeathed, in 1908, the annual income of his residual estate to the University of Nevada after an annual \$100 payment had been made to another institution. The Board of Regents established the David Russell Fund to receive these annual payments after they became available in 1913. The board has set aside \$6,000 of this fund as a revolving fund for loans to deserving students who satisfy the President of the University of their fitness to receive this aid. The money is lent to students on the basis of 4 percent interest until maturity. In practice, loans are not made to freshmen nor can a loan in excess of \$150 be made to any one student.

*The Olin Ward Bequest*—Two scholarships of \$300 each, bequeathed

by Mr. Olin W. Ward of Reno, Nevada. Under the terms of the will the beneficiaries of such scholarships must be earnest, industrious boys, of good moral character, financially unable to attend or continue their attendance at the University without the aid of such scholarships, and shall be chosen by the President of the University. Each beneficiary so chosen must, as a condition of his receiving such scholarship and before said sum or any part thereof is paid to him, enter into a written agreement with the Board of Regents that he will, within seven years after receiving such scholarship, pay or cause to be paid to the Board of Regents the sum of \$300 for the purpose of providing a scholarship in the University for some boy having like qualifications and chosen as above specified.

*The Charles Haseman Memorial Loan Fund*—A student loan fund to be known as the Charles Haseman Memorial Loan Fund, the principal sum of which is \$500, was established in 1940 by Emily Ross of Reno, under the following conditions:

The loans are to be made only to students who have finished calculus and who have attained an average scholastic grade of at least "C" or its equivalent.

No loan shall be made except to one who, in the opinion of the head of the Department of Mathematics, needs the loan, and it shall not in any event exceed the sum of \$100.

No individual loan for more than \$100 shall be made from said fund in any academic year. However, to any needy student a second loan of not to exceed this amount may be made during his fourth academic year.

Each student to whom a loan shall be made shall give a personal note, payable on or before the end of four years from date, with interest payable at the rate of one and one-half percent per annum, and each note shall have a co-signer.

The interest and payments which are returned by borrowers shall become a part of this fund and, so far as may be feasible, the unexpended portion of the fund shall be kept invested as are other endowments of the University of Nevada.

Loans under this fund shall be made only on the recommendation of the head of the Department of Mathematics of the University of Nevada.

#### 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 R. C. Thompson, 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 Expenses of Students, Index.

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.

## EXPENSES OF STUDENTS

## TUITION

The Board of Regents is empowered to charge tuition to students who come from outside of Nevada. The Board of Regents set this *tuition charge, payable by students from outside Nevada, at \$75 per semester, beginning with August, 1925. A two-thirds rebate is allowed on this nonresident tuition charge if the student formally withdraws within the first three weeks of any semester and a one-half rebate is allowed if the student withdraws between the end of the third week and the end of the eighth week. No rebate is allowed if the student withdraws after the end of the eighth week.*

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

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

## I

Any applicant or student whose parents live in Nevada.

## II

Those applicants who have themselves been bona fide residents of Nevada at least six months prior to the opening date of the semester in which they matriculate in the University of Nevada.

## III

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

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

## CASE I

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

## CASE II

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

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

## LATE REGISTRATION FEES

A fee of \$3 is charged for registration later than the regular enrolling days of each semester. This fee is increased to \$5 for those registering later than the end of the week including enrollment days. *No exception is made to the rule.*

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

## MATRICULATION FEE

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

## REGISTRATION AND INCIDENTAL FEES

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

## UNIFORMS

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

Students in foods will be expected to wear suitable colored wash dresses. Those majoring in dietetics are expected to have three white uniforms.

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.



Unless women students have applied for residence in excess of the number that can be accommodated in the women's dormitories, all unmarried women students who are not residents of Reno or Sparks are required to live in one of the women's dormitories during their entire freshman year. The only exceptions to this rule may be made by the Dean of Women: (1) When written request has been filed in advance with the Dean of Women by parents requesting that their daughter be permitted to live with relatives whose home is in Reno or Sparks; (2) when parents have filed in advance a request that a freshman student be permitted to live with a student sister who has reached the age of 25 years. Residence privilege in this hall will not be granted to married women unless they were formerly students of the University. Women students not living in a dormitory are required to select accommodations approved by the Dean of Women. A list of approved places is on file in the office of the Dean of Women.

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

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

Checks\* for room rent should be made payable to the Board of Regents. Such sum will be returned in full to the one making the reservation if due notification is sent of desire to cancel reservation, on or before the end of the first enrollment day of the term, to the Dean of Women. 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

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\*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.

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.

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

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

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

Room with roommate.....	\$40
Single room.....	50

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

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

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

All residents of Lincoln Hall are required:

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

(2) To provide themselves with the following articles: One bed-spread; 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.

\*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.

## 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 \$32.50 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 in advance, or no rebate will be allowed.

PREFERENCES IN DINING HALL AND DORMITORIES GIVEN  
TO NEVADA STUDENTS

The Board of Regents adopted the following rule:

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

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

*N. B. Such preferences for Nevada students in the dormitories are open to all who apply not later than two weeks before the opening of any given semester. Nevadans making application later than such time will be accommodated if places are still open, but 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.
4. Graduates of this or of any other four-year University course.
5. Students who are adult, bona fide Nevadans, registering for five or less semestral University credits.

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

## UNIVERSITY FEES

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

TABLE OF TUITION CHARGES, FEES AND DEPOSITS  
PER SEMESTER

	<i>Fees</i>
Agronomy 61 .....	\$9.00
Animal Husbandry 3, 56, 61-62.....	3.00
Animal Husbandry 59.....	1.50
Art 1-2, 5-6, 53-54.....	1.00
Art 3 .....	1.50
Art 4 .....	1.50
Associated Students Fee.....	12.50
Bacteriology 51 .....	5.00
Botany 1, 2, 3, 55.....	3.00
Botany 21, 64, 75, 76.....	4.00
Botany 22, .....	1.00
Botany 53, 54, 56, 68.....	2.00
Botany 70 .....	2.00 per credit
Change of registration per course (see page 107).....	1.00
Chemistry 3, 4, 7, 8, 24, 30, 32, 51, 53, 56, 64, 71, 72, 74, 85, 86, 99, 100 .....	8.00
Chemistry 15 .....	12.00

TABLE OF TUITION CHARGES, ETC.—*Continued* Fees

Chemistry 88, 84 .....	\$4.00
Chemistry 200 (fee per credit hour).....	4.00
Civil Engineering 53, 54, 65.....	3.00
Civil Engineering 58, 88.....	5.00
<sup>1</sup> Civil Engineering 58 (Transportation).....	15.00
Civil Engineering 74 .....	2.50
Civil Engineering 92 .....	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 (Basic course students, excepting military bandsmen).....	10.00
Advanced students take course at own expense (to be arranged).....	
<sup>2</sup> Diploma (Degree or certificate).....	5.00
Drawing Outfits.....	20 to 30.00
Education 3 .....	1.50
Education 28-29, 41, 43-44, 73-74, 75-76.....	1.00
Electrical Engineering 61, 62, 63, 64, 67, 68, 75.....	2.50
Electrical Engineering 76, 77, 85, 86.....	2.50 per credit
Farm Mechanics 11, 20, 32, 41, 53.....	3.00
For 5 or less hours.....	2.00 per credit
Geology 11, 51, 52, 55.....	2.00
Geology 12.....	3.00
Health Service .....	6.00
Home Economics 55 .....	10.00
Home Economics 31, 32, 57, 94.....	5.00
Home Economics 15, 16, 18, 45, 66, 67, 95, 96.....	4.00
Home Economics 42, 54, 88.....	2.00
Home Economics 45, 50, 92.....	2.50
Home Economics 87 .....	3.00
Library .....	.50
Matriculation (new students only).....	5.00
Mechanic Arts 3, 5.....	5.00 per credit
Mechanic Arts 6, 11, 50.....	5.00
Mechanic Arts 7.....	(To be arranged)
Mechanical Engineering 33g, 64, 65, 80.....	5.00
Mechanical Engineering 73g .....	10.00
Metallurgy 51.....	15.00
Metallurgy 56.....	2.50
Metallurgy 68, 71.....	5.00
Metallurgy 79, 80 (Fee according to work).....	
Physical Education (laundry and locker).....	1.00
Physics 1b, 2b, 19, 20, 57, 58, 63, 77, 78.....	3.00
Physics 5, 6, 55, 56, 103, 104.....	1.00 per credit
Physics 75, 76.....	6.00
Poultry 2, 8.....	2.00
Reexamination Fee .....	1.50
Special Examinations for Entrance or Advanced Standing, each .....	3.00
Sports (depending upon activity) .....	1.00 to 12.00
Teacher Appointment Service.....	2.50, 1.50
Transcript Evaluation.....	2.00
*Transcript of student record.....	1.00

<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.

\*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.

TABLE OF TUITION CHARGES, ETC.—Continued Fees

Tuition to non-Nevadans.....	\$75.00
Visitors .....	1.00 per hour
Zoology 2 .....	4.00
Zoology 5, 2, 62.....	2.00
Zoology 52 .....	3.00
Zoology 11, 57, 58.....	2.50
Zoology 64.....	2.00
Zoology 91-94, 201 (fee determined by type of work).	
Zoology 9.....	5.00
Zoology 59, 60.....	3.00

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

## REBATES

A rebate of two-thirds of all *laboratory fees, room rent, and non-resident tuition* will be made if a student withdraws before the end of the third week in a semester; a rebate of one-half of these charges will be made if the withdrawal occurs between the end of the third week and the end of the eighth week, but no rebate will be allowed if withdrawal follows the end of the eighth week.

There will be full rebate of all charges *other than those specified in the foregoing paragraph* if a student withdraws before the end of the third week in a semester, but no rebate will be allowed after the third week.

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.....	\$276.25	\$300.00	\$325.00
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, health service, etc.)...	40.50	45.00	55.00
Fees (registration and incidental).....	15.00	15.00	15.00
<sup>5</sup> Totals.....	\$476.75	\$520.00	\$615.00

<sup>1</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>2</sup>Students from outside the State of Nevada must add a tuition of \$75 each semester.

<sup>3</sup>This item may be greatly reduced by residents of the dormitories who choose to take advantage of the house-laundry facilities.

<sup>4</sup>All engineering students will require complete drawing outfits. These cost from \$20 to \$30. Students having this equipment should bring it with them.

<sup>5</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.

## REGULATIONS OF THE UNIVERSITY

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### ADMISSION OF CANDIDATES FOR DEGREES

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

### METHODS OF ADMISSION

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

- (1) Examination in prescribed subjects.
- (2) Certificate of graduation from an accredited high school or other secondary school.
- (3) Transfer from any university or college of recognized standing.

### ADMISSION BY EXAMINATION

Examinations for admission are held at the University immediately preceding the opening of the fall semester. Application for examination should be in the hands of the Committee on Admission and Advanced Standing at least one week in advance. These examinations cover all subjects required or accepted for admission, but cannot be taken for the purpose of raising grades obtained in preparatory schools. A fee of \$3 per each subject for which such special examinations are given must be paid to the University Comptroller in advance of the examinations.

### ADMISSION BY CERTIFICATE FROM AN ACCREDITED PREPARATORY SCHOOL

On application to the Registrar blank certificates may be obtained by students who wish to enter the University by this method. Students should obtain blanks early and should have them filled out and sent to the Registrar for approval as soon as possible after the closing of the high school year in June.

All high school and other certificates which are to be presented for admission should be on file with the Registrar at least two weeks before the opening of the semester in which the student expects to enroll.

## ADMISSION BY TRANSFER

A fee of \$2 will be charged for evaluation of transcripts of record from other institutions; this fee must accompany all requests for such evaluation. In the event that the applicant later enrolls in this University, the \$2 will be applied on his registration fees. The advanced standing granted on transcripts of record is valid only if the applicant enrolls within one year following the date on which the record was submitted for evaluation.

Admission is granted by transfer from any university or college of recognized standing on presentation of the proper credentials.

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

A student who has been disqualified at another institution because of scholarship deficiency will be admitted only on probation and on recommendation of the Scholarship Committee.

Students transferring from other colleges must present certificates of honorable dismissal unless one or more full semesters have elapsed since they left their other college.

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

Applicants for advanced standing from universities and colleges of recognized standing 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.

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

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

Students transferring from a recognized university, college, junior college, or normal school with junior standing may be excused by proper authority from 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.

An applicant from a junior college or other institution of collegiate standing must submit evidence that he has fulfilled our entrance requirements for regular freshman standing, or that he has either: (a) at least 60 semester credits with a grade average of C or better, and acceptable for advanced standing in the college or school to which



admission is sought; or (b) not less than 15 semester credits with a grade average of B or better, and acceptable for advanced standing in the college or school to which admission is sought.

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

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

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

b. *Credentials.* Except upon the specific recommendation of the principals of their high schools, students who in the previous semester were in high schools will not be admitted to special standing. All applicants must present certificates of good character from reliable persons, credentials covering such academic work as they may have done, or other evidence of their ability and disposition to do satisfactory work in the University. Persons who have shown no serious purposes either in school or in employment will be refused admission.

c. *Registration.* Special students will usually be expected to register in not fewer than ten hours in courses of elementary character which may be counted for admission. They will be permitted to register in advanced courses only upon the approval of their Dean and the head of the department concerned. Special students are subject to all the rules relating to registration and scholarship.

d. *Obtaining Regular Status.* Special students may obtain regular status by removing entrance deficiencies. See Removing Entrance Deficiencies, Index.

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

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

2. **VISITORS.** With the consent of the President and the instructors concerned, regular visitors may be enrolled as such during the regular registration period. They shall be governed by the regular University rules and are due to pay a visitor's fee, or if nonresident, to pay all regular fees and tuition. Under no circumstances will visitors be allowed to do laboratory work, engage in class discussion, take the time of the instructor from regular classwork, or receive credit toward a degree. Nevada residents may visit in not to exceed two University courses.

#### REQUIREMENTS FOR ADMISSION TO REGULAR STANDING

1. **FIFTEEN HIGH SCHOOL UNITS.** Applicants for admission to regular standing in the University of Nevada must present satisfactory evidence of high school graduation and of having completed fifteen

units of acceptable high school or preparatory work. A "unit" represents a year's study in any subject in a secondary school, constituting approximately one-quarter of a full year's work. Two periods of laboratory work, or shop work, count as the equivalent of one recitation.

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

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

c. *Special Students.* Students who cannot present 13 acceptable high school units may register as special students if they can meet the other requirements for special students. See Special Students, Index.

2. ACCEPTABLE UNITS. Subjects acceptable for admission include the subjects numbered 1-32 (see Subjects Accredited for Admission, Index), but not to exceed the number of units there specified for each subject.

a. *Ten Academic Units.* Of the fifteen units required for admission at least ten must include subjects numbered from 1-20, inclusive, (see Subjects Accredited for Admission, Index).

### 3. QUALITY UNITS—

a. *For Applicants from Nevada High Schools.* Of the acceptable units presented by applicants for admission to first-year standing who come from Nevada high schools, six units must carry grades of 80 percent or better, and 5 of the 6 must be in subjects 1-20 inclusive (see Subjects Accredited for Admission, Index).

b. *For All Other Applicants.* Of the acceptable units presented by applicants for admission to first-year standing from States other than Nevada, ten units must carry grades of 80 percent or better, and 6 of the 10 must be in subjects 1-20 inclusive (see Subjects Accredited for Admission, Index).

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

#### *The College of Arts and Science*

English, 3 units

Mathematics, 2 units

#### *The College of Engineering<sup>1</sup>*

English, 3 units

History, 1 unit

Plane geometry, 1 unit

Algebra, 1½ units

Solid geometry or trigonometry, ½ unit

Chemistry or physics, 1 unit

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

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

*The College of Agriculture*

English, 3 units

Social Science, 1 or 2 units

Mathematics, 2 units

Natural Science, 1 or 2 units

## 5. REMOVING ENTRANCE DEFICIENCIES—

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

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

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

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

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

<i>Subject</i>	SUBJECTS ACCREDITED FOR ADMISSION	<i>Units<sup>2</sup></i>
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

<sup>2</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.

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

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

#### REGULATIONS FOR REGISTRATION

1. REGISTRATION PROCEDURE. In accordance with such specific regulations governing the procedure of registration as the Registration Committee may prescribe, the student must (a) secure his registration coupons from the Registrar, (b) secure the approval of the department or the professor for each course in which he wishes to enroll, (c) if a male student, adjust his classification for military training with the Professor of Military Science and Tactics, (d) secure the approval of the adviser and the dean of his college, (e) in the case of women, the signature of the Dean of Women, (f) make out his class cards, (g) present the registration card to the Registrar for computation of fees to be paid, and (h) present the card to the Comptroller and pay the fees. The Comptroller will retain the card and file it with the Registrar.

## 2. THE REGISTRATION PERIOD—

a. *Registration Days.* Preceding the beginning of instruction at the opening of each semester, a registration period is announced. For this time see the University calendar.

b. *Completing Registration.* Each student shall complete his registration by 4 p. m. of the third day after his registration card is issued.

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

## 3. FEES FOR DELAYS IN REGISTRATION—

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

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

## 4. CHANGES IN REGISTRATION—

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

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

b. *Withdrawal from a Course.* After the registration card has been filed with the Registrar, a student may withdraw from a course provided the withdrawal meets with the approval of the instructor concerned and of the dean of the college. If he withdraws during the first six weeks of the semester, W will be recorded; if he withdraws after the first six weeks, W will be recorded when the student is passing, WF when the student is not passing.

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 recommendation. He will then report to the dean of his college, who may grant a withdrawal from the class. The withdrawal slip must be filed by the student with the Registrar, who shall notify the instructors concerned. The student is not officially withdrawn from the class until the instructor has received notice from the Registrar. The date of withdrawal shall be the date on which the slip is filed with the Registrar.

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

d. *Withdrawal from the University.* Any student wishing to withdraw from the University during the first six weeks of the semester

may do so, with the withdrawal to be recorded as W. After the sixth week of the semester a student who desires to withdraw from the University will report to each instructor for his grade. If the instructor reports the student as passing, a record of W will be recorded. If the instructor reports the student as not passing, a record of WF will be recorded. The record of WF shall not be used in computing grade points for graduation. In case the student receives records of WF in more than one third of his work, he will be subject to probation or suspension.

5. FEES FOR CHANGES IN REGISTRATION. After the registration coupon has been filed with the Registrar, a student who adds a subject must pay a fee of \$1 for each course added. The fee will be omitted only when the change is caused by faculty action or at the request of the Registration Committee.

6. REBATES. A rebate of two-thirds of all *laboratory fees, room rent, and nonresident tuition* will be made if a student withdraws before the end of the third week in a semester; a rebate of one-half of these charges will be made if the withdrawal occurs between the end of the third week and the end of the eighth week, but no rebate will be allowed if withdrawal follows the end of the eighth week.

There will be full rebate of all charges *other than those specified in the foregoing paragraph* if a student withdraws before the end of the third week in a semester, but no rebate will be allowed after the third week.

#### 7. PRECEDENCE OF CERTAIN COURSES—

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

b. *Entrance Deficiencies.* All but special students are required to remove entrance deficiencies before their second year of residence or they will be placed on probation. A freshman who fails to remove his entrance deficiencies may register on probation as a sophomore provided he includes in his schedule courses which will serve to cancel the deficiencies. The schedule of a student enrolled in courses for a second time in order to remove entrance deficiencies shall not exceed a total of 15 hours.

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

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

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

b. *Physical Education.* Every student who is a candidate for graduation from the University will be required to complete the prescribed two-year (basic) course of physical education unless excused

therefrom by proper authority. This basic course is scheduled for both semesters of the freshman and sophomore years.

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

d. *Political Science 79-80.* The State law of Nevada provides that no student shall receive a diploma of graduation or a teacher's certificate without previously having passed a satisfactory examination upon the Constitutions of the United States and of Nevada. Under this provision it is necessary for students to take at an appropriate time Political Science 79 and 80.

e. *Philosophy 5—War Issues.* In accordance with faculty action of March 5, 1942, all beginning freshmen will be required to register for Philosophy 5—War Issues. The course is open to all students.

#### 9. NUMBER OF HOURS TO BE REGISTERED—

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

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

#### 10. REGISTERING FOR A REDUCED NUMBER OF HOURS—

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

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

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

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

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

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

#### 11. EXTRA HOURS—

a. In case a student during his previous semester received no condition or failure and received an average of 3 grade points for each hour for which he was registered, excepting cases of W, he may be

permitted, at the discretion of the dean, to enroll in a maximum of three hours above that specified for his course.

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

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

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

13. REGISTRATION FOR NEW STUDENTS—

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

b. All new students must be photographed and must take the physical examinations and mental tests scheduled during the first week.

14. CLASSIFICATION OF STUDENTS. Two classes of students seeking college credit are recognized—regular and special:

a. A *Regular Student* is one who has satisfied the requirements for admission to a college and is pursuing a curriculum leading to a diploma or degree. He will be expected to register for the required courses in military science.

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

(2) *Sophomores, Juniors, Seniors.* A regular student is classified by his dean as a sophomore, junior, or senior, when he has completed within 3 hours of all the required credits and specific subjects in his course.

b. A *Special Student* is one who, though unable to satisfy the requirements for admission to the college in which he wishes to study, is permitted to register in courses for which he has satisfactory preparation.

15. INTRAMURAL TRANSFERS—

At the beginning of any semester, with the approval of the deans concerned, a student may change his registration from one college to another. In so transferring, the student shall satisfy the admission requirements of the college to which he transfers, effective at the time he is admitted to the University, and he shall satisfy the course of study of the college to which he transfers, effective at the time the transfer is made, the details of the transfer to be handled by the Registration Committee.

16. HONORABLE DISMISSAL FROM THE UNIVERSITY. Upon the request of a student in good standing, the Registrar will issue a letter of honorable dismissal. If the student desires to enter another university, a copy of his or her university credentials, including entrance, and stating thereon whether or not this University recommends such transferee, will accompany the letter. A fee of \$1 must be paid for each transcript of record furnished to students by the University Registrar.



## REGULATIONS FOR SCHOLARSHIP

## 1. THE GRADING SYSTEM—

a. *Marks Used.* The grading system shall consist of four passing grades, of condition, and of failure. The passing grades shall be designated in descending order of excellence as A, B, C, and D; a condition shall be marked E, and a failure F. W indicates withdrawal without failure; WF indicates withdrawal with failure.

b. *Definition of Marks.* A means *excellent*; B, *good*; C, *fair*; D, *passing*. E for *condition* is a temporary mark and is to be used when the quality of the work is doubtful and further opportunity is desired for the student to demonstrate satisfactory achievement. E is also used when a student has for acceptable reasons been unable to complete the required work by the close of the semester. For the value of W and WF, see "Withdrawal from a Course," and "Withdrawal from the University," under "Regulations for Registration."

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

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

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

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

## 5. SCHOLARSHIP AVERAGE—

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

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

## 6. CHANGING A PASSING GRADE—

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

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

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

## 7. REMOVING A CONDITION—

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

b. *Procedure.* A condition may be removed by satisfying the requirements of the department. A student who desires to remove a term condition must present to the instructor by whom the examination is to be given, or under whom the deficient work is to be completed, a statement from the Registrar saying that he is eligible and that the fee of \$1.50 has been paid.

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

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

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

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

## 8. REMOVING A FAILURE—

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

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

## 9. PROBATION—

a. *Conditions Resulting in Probation—*

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

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

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

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

(5) Whenever a student shall fail for two consecutive semesters to earn a minimum semester average of 2.0 grade points, he may be placed on probation.

b. *Penalties for Probation—*

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

(2) While on probation a student may not take part in any

University exhibition or public contest (*i. e.*, intercollegiate athletic contests, debates, dramatics, etc.) or serve on the staff of any student publication, or become a candidate for any student office. It is the duty of the Faculty Committee on Student Affairs to enforce this rule.

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

#### 10. SUSPENSION—

##### a. *Conditions Resulting in Suspension—*

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

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

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

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

#### 12. REQUIREMENTS FOR GRADUATION—

##### a. *Scholarship Requirements—*

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

(2) Students entering in the fall of 1940 and thereafter: In order to graduate, every student entering the University of Nevada in the fall of 1940 and thereafter, shall have an average of 2 grade points for each hour for which he has been registered, except cases of W.

##### b. *Credit-Hour Requirements—*

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

In the College of Agriculture, 126 credits are required for graduation.

In the College of Engineering, 144 credits are required for graduation in the Schools of Mechanical and Electrical Engineering; 148 credits in the Schools of Mining and Civil Engineering.

The value of a *credit is defined* as three hours of work per week for one semester.

c. *Subject Requirements.* In addition to specific subject requirements imposed by each college for its several courses, certain subjects are required by the University of all candidates for a degree.

These courses as listed under Required Courses (see Index), are English 1 and 2; the two-year basic course in military science for men, and in physical education for both men and women, Political Science 79 and 80, and Philosophy 5.

13. **MID-SEMESTER REPORTS.** Instructors will report students at mid-semester whose grades are D, E, and F, with a statement in each case of the reason for the low mark. When because of their mid-semester record students are subject to probation or suspension, they will be required to meet with the Scholarship Committee.

14. **ADVANCED CREDITS.** Students who have attained knowledge in a given field by experience or by study, other than in a recognized institution of learning from which transfer credits are available, may take an examination for advanced credit.

To take an examination for advanced credit the student must present to the instructor by whom the examination is to be given a statement from the Registrar certifying that he is eligible to enter the examination and that the necessary fee of \$3 for the examination has been paid.

Application for such advanced credit must bear the recommendation of the head of the department concerned and be accompanied by the written examination on which the recommendation is based. The amount of credit to be granted on the basis of special examination, supplemented by such laboratory work as may be required, will be determined by the Committee on Advanced Standing but will not exceed the regular work of one semester in the college in which the student is registered.

15. **SUSPENSION FROM CLASS.** A student may be dropped from class at any time for negligence or misconduct upon recommendation by the instructor and with the approval of the dean and of the committee concerned.

### DEGREES\*

The College of Arts and Science confers upon its graduates the degree of Bachelor of Arts. Any student, however, who pursues a course in which the natural sciences or mathematics have received particular emphasis may, upon petition to the faculty of the College of Arts and Science, be granted the degree of Bachelor of Science.

Upon graduates of the College of Engineering are conferred degrees as follows: Graduates of the Mackay School of Mines receive the degree of Bachelor of Science in Mining Engineering, Metallurgical Engineering or Geological Engineering. Graduates of the Schools of Mechanical Engineering, of Electrical Engineering, or of Civil Engineering receive, respectively, the degree of Bachelor of Science in Mechanical Engineering, Bachelor of Science in Electrical Engineering, and Bachelor of Science in Civil Engineering.

Graduates of the College of Agriculture receive the degree of Bachelor of Science in Agriculture. Graduates of the School of Home Economics receive the degree of Bachelor of Science in Home Economics.

Combination curricula leading to the bachelor's degree in each of

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\*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.

two schools or colleges in the University may be arranged. The minimum requirements shall be one extra year in residence and 30 credit hours of extra work. More work may be necessary if the specific requirements of the department in which the degree is sought have not been met.

A charge of \$5 is made for all baccalaureate diplomas. If two diplomas are granted in any one year, the charge will be \$5 for the first, and \$4 for the second. The charge for a teacher's diploma, if received in addition to a baccalaureate diploma, is \$1.

## DIPLOMAS

For information concerning teachers' diplomas, see The School of Education.

### RESIDENCE REQUIREMENT

Students spending less than three years at the University must be in residence the last year to be eligible for graduation; students who have spent three years or more here may be allowed to complete a maximum of eight units *in absentia* after their last registration here. *Premedical, prelegal, and prenursing students are not included in this rule.*

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 the bachelor's degree unless he has completed, in residence, credit equivalent to the requirements for one full year's work in the college in which he expects to receive the degree. Attendance at the Summer Session is construed as resident study, three summer sessions at the University of Nevada being considered the equivalent of one semester's residence.

### 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 under Thesis Requirements and Form (see Index).

## GRADUATE WORK AT THE UNIVERSITY OF NEVADA

*Admission*—Qualified graduates of the University of Nevada or of

other accredited institutions may register as graduate students. Registration as a graduate does not mean that a student will become a candidate for an advanced degree.

*Registration*—Students wishing to register for graduate study should present their credentials to the Committee on Admission and Advanced Standing, and if approved a card of admission will be issued to the applicant. When the student has decided in what department he desires to do his major work, he will confer with the head of that department, who, in consultation with the student, will outline the work to be done. The student will then submit the major and minor courses chosen to the Graduate Committee for approval.

*Fees*—Graduate students pay the same fees as the undergraduates in the various departments of the University, except that they are exempt from payment of the A. S. U. N. semestral fee of \$12.50 and the Health Service fee of \$6 unless they choose to pay them.

*Degrees*—The University of Nevada offers the following advanced degrees for work done in residence: Master of Arts and Master of Science.

*Requirements for the Master's Degree*—A total of 24 credits in course units will be required. Of these, not less than 12 must be offered in the major field and not less than 6 in a minor subject. In addition to the above, a thesis, having a minimum value of 6 credits will be required in the major department.

*Application for Admission to Candidacy*—The applicant for admission to candidacy shall obtain a blank from the Graduate Committee and present his application to this committee not later than the end of the third week of the semester preceding that in which the degree is to be conferred. The application must contain the following information and it must have the signed approval of the major and minor professors:

1. The name of the school and of the department from which the student received the bachelor's degree; the title and date of the degree.
2. The major and minor subjects in which the advanced degree is sought.
3. The completed work for which the student has received graduate credit.
4. The work the student proposes to offer in order to satisfy the requirements.

*Undergraduate Prerequisites*—A student must have completed such undergraduate work as the department concerned, with the approval of the Graduate Committee, may require. The prerequisite for a graduate major normally amounts to an undergraduate major or its equivalent, and in no case may this prerequisite be less than the requirements for an undergraduate minor or its equivalent, in the department. If a student is deficient in undergraduate prerequisites he must make up such deficiencies.

*Residence Requirement*—

(a) For graduates of the University of Nevada: At least 12 semester hours of course work must be done in residence at the University of Nevada.

(b) For graduates of other accredited institutions: At least 16

semester hours of course work must be done in residence at the University of Nevada.

*Advancement to Candidacy*—After a student has completed at least 12 course units, acceptable for graduate credit at the University of Nevada, the Graduate Committee, on the written recommendation of his major and minor professors, may advance him to candidacy. Before such advancement, however, the applicant must submit to the committee the subject of his thesis and a brief outline of its probable content.

*Courses*—Courses numbered 50 to 100 may be offered for graduate credit, when they have been recommended by the head of the department concerned and approved by the Graduate Committee, and when they have not been offered previously for undergraduate credit. With respect to such courses, the graduate student must usually do more work than that which is required of an undergraduate registered in the same courses.

All courses numbered above 100 are essentially graduate courses.

*Grades*—Graduate credit will not be given when the grade falls below B.

*Thesis*—Each candidate for the master's degree will be required to prepare a thesis that will show scholarly attainment and ability to do independent work. The credit for the thesis shall be determined, upon recommendation of the major professor, by the special committee on final examination.

The title of the thesis shall conform to the following:

*The Origin of the English Guilds*

A THESIS SUBMITTED TO THE UNIVERSITY OF NEVADA FACULTY IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF ARTS (OR SCIENCE)

By

JOHN EDWARDS SMITH  
RENO, NEVADA

1944

At least two weeks before the date on which the degree is to be awarded, three copies of the thesis must be submitted to the Graduate Committee. It must be in final typewritten form on paper of approved quality and ready for binding when approved by the committee.

The University Library will attend to the binding of the thesis. A small fee will be charged for this service. The charges for binding must be paid before the committee will pass judgment on the thesis. In case the thesis should not be approved, any sums advanced for binding will be returned to the student. If approved, two copies of the thesis will be deposited by the committee in the University Library and one copy will be retained by the major department.

*Examinations*—

(a) Course examinations. There will be such course examinations as the individual instructors may require.

(b) Final examination. Not later than one week before the date of conferring the master's degree, the candidate will be given a general examination which may be oral, written, or both. It will cover

his major work, his thesis, and his other courses. It will be conducted by a committee of five members of the faculty, one of whom shall be Director of Thesis, appointed by the Graduate Committee. The head of the department in which the major work is taken will be chairman of the committee. The date of the examination will be announced publicly. The examination will be open to members of the University staff and to guests invited by the major professor.

*General Regulations—*

1. Candidates for the master's degree may not at the same time be candidates for any other degree.

2. Correspondence and extension courses will not be accepted for credit towards the master's degree.

3. Members of the University staff who are employed on full-time salary may not register for more than 6 credits during one semester.

4. No graduate student may register for more than 16 credits (including thesis) during one semester.

5. All the requirements for the master's degree must be satisfied within a period of five calendar years preceding the granting of the degree.

6. The head of the major or minor departments may require a reading knowledge of a foreign language (usually French or German).

7. Undergraduates who lack less than 15 semester credits to complete the requirements for the bachelor's degree may enroll in approved courses for graduate credit, provided such credit is requested by the student and approved by the professor at the time of enrollment.

### ENGINEERING DEGREES

The engineering degrees—Engineer of Mines (E.M.), Metallurgical Engineer (Met.E.), Mechanical Engineer (M.E.), Civil Engineer (C.E.), and Electrical Engineer (E.E.)—may be conferred upon graduates who have taken corresponding courses in the College of Engineering of the University of Nevada, or upon graduates of other institutions who have obtained the Master of Science degree in engineering from the University of Nevada; who have been engaged in honorable and successful engineering work in positions of responsibility for a period of at least five years in the case of holders of the B.S. degree, or four years in that of holders of the M.S. degree; and who submit theses showing ability to conduct advanced engineering work. Theses will not be considered when they are merely investigations in literature, compilations of routine laboratory tests, or presentations of the work of others.

The engineering degrees may also be conferred upon graduates of the College of Engineering of the University of Nevada and upon graduates of other engineering colleges of equal standing, who, after graduation, have been engaged for a period of at least one year in honorable and successful engineering work in a position of responsibility, and who subsequently complete successfully one year of graduate work in engineering, including thesis, at the University of Nevada. Graduates of other institutions must include in their graduate work any subjects in the corresponding undergraduate curricula which are required by the College of Engineering of the University



of Nevada, but whose equivalents were lacking in their undergraduate courses.

Formal application for an engineering degree must be filed with the Registrar not later than the beginning of the second semester of the year in which the degree is sought, and approved in turn by the Engineering Faculty and the Graduate Committee. The application must be accompanied by detailed and satisfactory evidence as to the extent and character of the applicant's professional work. The thesis shall have the general form prescribed for the bachelor's thesis, or shall be a reprint of an article appearing in a reputable magazine. In the case of a nonresident applicant, it shall be presented to the Engineering Faculty and to the Graduate Committee at least eight weeks before the date set for conferring the degree. The diploma fee for an engineering degree is \$5.

## 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.

## THE COLLEGE OF ARTS AND SCIENCE

## FACULTY

- JOHN O. MOSELEY, M.A., LL.D., President of the University.  
 CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.  
 FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science; Professor of Mathematics.  
 REUBEN CYRIL THOMPSON, A.M., LL.D., Professor of Philosophy.  
 JAMES REED YOUNG, Ph.D., Professor of Psychology.  
 BENJAMIN F. CHAPPELLE, Ph.D., Professor of Foreign Languages.  
 GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.  
 FRED W. TRANER, Ph.D., Dean and Professor of Education.  
 PHILIP A. LEHENBAUER, Ph.D., Professor of Biology.  
 FRANCIS CLARK MURGOTTEN, Ph.D., Professor of Foreign Languages.  
 THEODORE H. POST, M.A., Professor of Music.  
 JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education for Men.  
 ELSA SAMETH, M.S., Professor of Physical Education for Women.  
 ALFRED LESLIE HIGGINBOTHAM, A.M., Professor of Journalism.  
 CHARLES ROGER HICKS, Ph.D., Professor of History and Political Science.  
 SIGMUND W. LEIFSON, Ph.D., Professor of Physics.  
 VINCENT P. GIANELLA, Ph.D., Professor of Geology.  
 HAROLD N. BROWN, Ed.D., Professor of Education.  
 ERNEST L. INWOOD,<sup>1</sup> Ph.D., Professor of Economics, Business, and Sociology.  
 MILDRED SWIFT, M.S., Professor of Home Economics.  
 JOHN C. HOWARD, A.B., Major, U. S. Army, Professor of Military Science and Tactics.  
 MILAN J. WEBSTER, Ph.D., Professor of Economics, Business, and Sociology.  
 ROBERT STUART GRIFFIN, Ph.D., Professor of English.  
 RALPH A. IRWIN, Ph.D., Professor of Psychology.  
 GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and Astronomy.  
 EDWARD G. SUTHERLAND, A.B., Associate Professor of Economics, Business, and Sociology.  
 JESSIE P. POPE, M.A., Associate Professor of Home Economics.  
 JOHN R. GOTTARDI, M.A., Associate Professor of Foreign Languages.  
 PAUL A. HARWOOD,<sup>1</sup> M.A., Associate Professor of English.  
 MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.  
 CLAUDE CARSON SMITH, M.A., Associate Professor of History and Political Science.  
 EDITH M. RUEBSAM, M.A., Associate Professor of Education.  
 CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education for Men.  
 JAMES W. COLEMAN,<sup>1</sup> M.A., Associate Professor of Physical Education for Men.  
 ANATOLE G. MAZOUR, Ph.D., Associate Professor of History and Political Science.  
 HARRY E. WHEELER,<sup>1</sup> Ph.D., Associate Professor of Geology.  
 SAMUEL B. BATDORF,<sup>1</sup> Ph.D., Associate Professor of Physics.  
 AUSTIN E. HUTCHESON, Ph.D., Associate Professor of History and Political Science.  
 W. DWIGHT BILLINGS, Ph.D., Associate Professor of Botany.  
 EDWARD W. LOWRANCE, Ph.D., Associate Professor of Biology.  
 CHARLTON G. LAIRD, Ph.D., Associate Professor of English.  
 PHILLIP G. AUCHAMPAUGH, Ph.D., Associate Professor of History and Political Science.  
 LORING R. WILLIAMS, Ph.D., Associate Professor of Chemistry.  
 E. MAURICE BEESLEY, Ph.D., Associate Professor of Mathematics.  
 ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business, and Sociology.  
 LAWTON B. KLINE,<sup>1</sup> M.A., Assistant Professor of Foreign Languages.

<sup>1</sup>Absent on leave; war service.

- WILLIAM C. MILLER, M.A., Assistant Professor of English.  
 JOHN P. PUFFINBARGER,<sup>1</sup> Ed.M., Assistant Professor of Education.  
 ALICE B. MARSH, M.S., Assistant Professor of Home Economics.  
 LEONARD E. CHADWICK, B.S., Assistant Professor of Economics, Business, and Sociology.  
 CHRISTIAN W. F. MELZ, Ph.D., Assistant Professor of Foreign Languages.  
 ALBERT G. WIEDERHOLD, Ph.D., Assistant Professor of Philosophy and Psychology.  
 WILLIAM O. HOLMES, B.A., Assistant Professor of English.  
 FRANK RICHARDSON, Ph.D., Assistant Professor of Biology.  
 HUGH O. McMILLEN, B.S., Lieutenant, U. S. Army, Assistant Professor of Military Science and Tactics.  
 JOANNA CHAPMAN, M.S., Assistant Professor of Education.  
 MICHAEL J. McCORMICK, Sergeant, U. S. Army, Instructor in Military Science and Tactics.  
 HELEN JOSLIN, Instructor in Art.  
 RUTH IRENE RUSSELL,<sup>1</sup> M.S., Instructor in Physical Education for Women.  
 J. RAYMOND BUTTERWORTH,<sup>1</sup> M.A., Instructor in English.  
 CHARLES T. DUNCAN,<sup>1</sup> B.A., Instructor in Journalism.  
 ETHEL M. DIXON, B.P.E., Instructor in Physical Education for Women.  
 WINFIELD C. HIGGINS, B.S., Teacher Trainer, Vocational Agriculture Education.  
 RUTH MILLER FERRIS, B.A., Assistant in English.  
 GLADYS BISHOP, 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 Requirements, Index.

### REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ARTS AND SCIENCE

In order to be recommended for the degree of Bachelor of Arts<sup>2</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 courses numbered 50 or above. These units are to be distributed as follows:

- I. From two to six units in military and physical education as required by the University, and political science 79-80 as required by the State law.
- 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>3</sup> in each of the three groups named below shall be required of freshmen and sophomores:

<sup>1</sup>Absent on leave; war service.

<sup>2</sup>Students who have majored in mathematics or science may, on petition to the faculty, be granted the degree of Bachelor of Science.

<sup>3</sup>Subject to provisions stated under English Language and Literature, see Index.

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

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

With three entrance units the requirements are three college credits in the same language or course 1-2 in another language.

With two entrance units: Course 3-4 in the same language or course 1-2 in another language.

With one entrance unit: Courses 2 and 3-4 in the same language.

With no entrance credit: Courses 1-2 and 3-4 in any one foreign language.

GROUP 2. History, political science, economics, sociology, philosophy, psychology, and for normal school graduates, education.

Each unit of high school history or social science, except commercial geography or commercial law, may be used to decrease the requirement in this group by four units, provided such decrease shall not exceed eight units.

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

Each unit of high school science except general science and each year of high school mathematics, except first year algebra and plane geometry may be used to decrease the requirement of this group by 4 units.

IV. At least one major and one minor as described under Junior and Senior Requirements, see Index.

The specific group requirements under III, above, have been made not only to insure for each student an acquaintance with the different fields of knowledge but to form what is believed to be a sounder basis for a somewhat greater specialization during the junior and senior years. For this reason, these requirements should be completed during the freshman and sophomore years.

<i>Freshman Year</i>			
<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Military and P. E.....	½ to 1½	Military and P. E.....	½ to 1½
English 1.....	3	English 2.....	3
Philosophy 5.....	1	Foreign language....	} .....12 or 11
Foreign language.....	} ..... 11 or 10	Social science.....	
Social science.....		Natural science	
Natural science		or mathematics....	
or mathematics.....			Elective.....
Elective.....			
	<hr/> 15½		<hr/> 15½

\*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.

## Sophomore Year

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Military and P. E.....	½ to 1½	Military and P. E.....	½ to 1½
Foreign language.....	} .....15 or 14	Foreign language.....	} .....15 or 14
Social science.....		Social science.....	
Natural science or mathematics.....		Natural science or mathematics.....	
Elective.....		Elective.....	
	----- 15½		----- 15½

Courses open to freshmen and sophomores which may be used to fulfill the above requirements in the social science and natural science groups are listed below. In general, odd numbers are used for first-semester and even numbers for second-semester courses:

## GROUP 2—Social Science—

Economics 7, 10  
History 1-2  
Philosophy 1, 7, 8  
Political Science 1-2  
Psychology 2

Subjects requiring a prerequisite or not open

Business Adm. 41, 43, 44, 47  
Economics 1, 2  
History 5-6  
Philosophy 21, 22.  
Psychology 5, 6, 16, 14, 40  
Sociology 1, 2, 20

## GROUP 3—Natural Science or Mathematics—

Botany 1, 2, 3  
Chemistry 1-2, 7-8  
Mathematics 5, 7, 11, 13  
Physics 1a-2a, 1b-2b, 7, 9-10  
Zoology 1, 2, 57, 58

to freshmen:

Botany 22, 25  
Chemistry 9-10  
Geology 1, 2, 10, 11, 12, 14  
Mathematics 14, 15-16, 18, 20  
22, 23-24  
Physics 3-4, 5-6  
Zoology 9, 57, 58

Students who, upon their initial registration in the University, are 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

<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 2½ more than the 126 hours required for graduation from arts and science and agriculture, respectively, for each semester they have been enrolled in engineering.

provide for a broad cultural education, to prepare secondary school teachers and to prepare specialists. To accomplish these purposes, candidates for the baccalaureate degree must select courses totaling not less than forty hours' work in courses numbered 50 or above. These courses must be selected from a group of departments so as to include at least a major and a minor.

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

For a major not more than 27 credits may be required within a department of which at least 12 credits must be in courses numbered 50 or above.

For a minor not more than 18 credits may be required within a department of which in arts at least 6 credits and in science at least 4 credits must be in courses numbered 50 or above.

The specific requirements for majors and minors in the different departments will be found in the description of courses of study under their respective heads in the courses of instruction.

It is advisable that students should plan their work for the junior and senior years as early as the sophomore year, in order that the studies then elected may fit in with their later work. At the beginning of the junior year, each student must give the Dean written notice of his selection of major and minor departments; such selection shall bear the approval of the instructors concerned.

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

The remaining units necessary to make a total of 126 may be freely elected from any department, or, subject to the limit of twenty units named above, from the other colleges of the University.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY

The following course of study is designed for students looking toward the field of chemistry as a profession. It is intended to fit students to enter directly into industrial work or to prepare them for more advanced study. Certain electives are provided in order to fill the needs of students interested in the different branches of chemistry. These electives, therefore, are subject to the approval of the head of the department, and should be chosen in consultation with him:

*Freshman Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Chemistry 7 .....	4	Chemistry 8 .....	4
English 1 .....	3	English 2* .....	3
Mathematics 15 .....	5	Mathematics 16 .....	5
Military 1 .....	1	Military 2 .....	1
Philosophy 5 .....	1	Social science .....	3
Elective .....	2		
	<hr/>		<hr/>
	16		16

*Sophomore Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Chemistry 15 .....	5	Chemistry 30 .....	5
Mathematics 23 .....	3	Mathematics 24 .....	3
Physics 1a .....	3	Physics 2a .....	3
Physics 1b .....	1	Physics 2b .....	1
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*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Chemistry 51 .....	4	Chemistry 72 .....	3
Chemistry 71 .....	3	Chemistry 84 .....	4
Chemistry 83 .....	4	Chemistry 96 .....	$\frac{1}{2}$
Chemistry 95 .....	$\frac{1}{2}$	German 2 .....	5
German 1 .....	5	Elective .....	4
	<hr/>		<hr/>
	16 $\frac{1}{2}$		16 $\frac{1}{2}$

*Senior Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Chemistry 75 .....	2	Chemistry 76 .....	2
Chemistry 95 .....	$\frac{1}{2}$	Chemistry 92 .....	2
Chemistry 99 .....	2	Chemistry 96 .....	$\frac{1}{2}$
German 9 .....	3	Chemistry 100 .....	2
Political Science 79 .....	1	German 10 .....	3
Elective .....	7	Political Science 80 .....	1
	<hr/>	Elective .....	5
	15 $\frac{1}{2}$		15 $\frac{1}{2}$

In addition to the above course of study, students will be required to fulfill the regular University requirements in physical education.

## THE COURSE IN JOURNALISM

In its four-year professional Course in Journalism, the University of Nevada offers approved preparation for the journalistic vocations.

Based on the principle that a well-rounded education coupled with training in journalism is the best foundation for the profession, the Course in Journalism provides study in language, literature, the natural sciences, the social sciences, and the aesthetics, as well as in journalism.

While designed to prepare for general newspaper and magazine work, the Course in Journalism is arranged to enable the student to fit himself, in addition, for special journalistic activities, such as advertising, freelance writing, public relations work, and so forth.

\*Subject to provisions stated under English Language and Literature, see Index.



To complete the Course in Journalism, the student must present among the 126 units required for graduation:

1. Twenty-seven 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); journalism 72, the law of the press (1 credit); and journalism 81-82, newspaper internship (2 credits).

In their sophomore, junior, and senior years students specializing in journalism are advised to include Journalism 31, 32, 61, 62, 91, 92, in their schedules whenever possible in order to build up a background of the news of each year.

2. Twelve credit hours in English literature.

3. Twenty-five credit hours in the social sciences (history, political science, economics, business, sociology, psychology, and philosophy), selected so that they represent at least five of these subjects.

4. Five credit hours in the aesthetics.

5. The freshman and sophomore requirements of the College of Arts and Science.

University credits acquired in meeting the freshman and sophomore arts and science requirement in the social sciences may be counted toward this group requirement in the Course in Journalism.

In choosing subjects to meet the group requirements of the Course in Journalism, the student will be guided by the professor of journalism.

In each group, the following courses will be found best to furnish the student with a comprehensive background. *Those starred are especially valuable:*

*Journalism*—1-2, 54\*, 56\*, 65\*, 67, 68, 79.

*English Literature*—23-24, 68-69, 70\*-71\*, 71A\*, 72-73, 74, 75\*-76\*, 77\*, 78, 79, 80, 85, 87-88, 95.

*Social Science:*

*Business*—41, 43-44, 47, 85.

*Economics*—1\*, 2\*, 3, 7, 10, 17, 51, 61\*, 64\*, 73, 91, 92.

*History*—1\*-2\*, 5\*-6\*, 56, 57\*-58\*, 59\*-60\*, 63\*-64\*, 65\*-66\*, 69\*, 77-78, 81-82\*, 85, 94\*, 97\*-98\*.

*Philosophy*—1\*, 51, 52, 53\*-54\*, 61, 82.

*Political science*—1\*-2\*, 55, 56\*, 59, 68\*, 79-80, 83\*-84\*.

*Psychology*—5\*, 10, 11, 51\*, 52, 55\*, 57\*, 65\*, 70.

*Sociology*—1\*, 2\*, 50, 57, 71\*, 79\*, 80\*, 81, 83\*, 84, 90\*.

*The Aesthetics:*

*Art*—1-2.

*English*—11-12, 21-22, 53-54, 81-82.

*Music*—10, 57.

*Philosophy*—55.

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.....	2-3	Journalism 2.....	2-3
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
Philosophy 5.....	1	Military and physical education.....	1-1½
Military and physical education.....	1-1½	Electives.....	.....
Electives.....	.....		
	<hr/> 15½		<hr/> 15½

*Sophomore Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Journalism 21.....	3	Journalism 22.....	3
Journalism 31.....	1-2	Journalism 32.....	1-2
Group 1 elective (if desired).....	3	Group 1 elective (if needed).....	3
Groups 2 and 3 electives (as required).....	7-8	Groups 2 and 3 electives (as required).....	7-8
Elective or English literature.....	2-3	Elective or English literature.....	2-3
Electives.....	.....	Electives.....	.....
	<hr/> 16		<hr/> 16

*Junior Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Journalism 53 and/or 65.....	3-6	Journalism 56 and/or 54.....	3-6
Journalism 51 and/or 67.....	2-4	Journalism 52 and/or 79.....	2-5
English literature.....	2-3	English literature.....	2-3
Social sciences.....	5	Social sciences.....	5
Political science 79.....	1	Political science 80.....	1
Electives.....	.....	Electives.....	.....
	<hr/> 16		<hr/> 16

*Senior Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Journalism 81.....	2	Journalism 82.....	2
Journalism 65 and/or 53.....	3-6	Journalism 54 and/or 56.....	3
Journalism 67 and/or 51.....	2-4	Journalism 72, 52 and/or 79.....	2-6
English literature.....	2-3	English literature.....	2-3
Social sciences.....	4	Social sciences.....	4
Electives.....	.....	Electives.....	.....
	<hr/> 16		<hr/> 16

In addition to the journalism laboratory facilities on the campus, students in journalism at the University of Nevada enjoy the use of the offices and plants of the Reno newspapers, the national press association bureaus, and commercial printing and engraving plants in the city.

Members of the staffs of the Reno Evening Gazette, the Nevada State Journal, the Reno bureaus of the United Press and the Associated Press, the Wilson Advertising Agency, the Nevada Engraving Company, the Reno Printing Company, A. Carlisle and Company of Nevada, and the Silver State Press generously cooperate with the Course in Journalism, not only in making their facilities available but in the instruction itself.

Subjects in journalism, credit hours, semesters offered, requirements for the major and minor, and the faculty in journalism are listed under the Department of Journalism.

### PRELEGAL COURSE

Students who intend to study law will find it advantageous to plan their college work in such a way as to permit the inclusion of essential prelegal subjects and to satisfy the University requirements for the B.A. degree.

The requirements of the leading law schools usually embrace: (1) social sciences, history, political science, economics, business and sociology; (2) foundation courses in English, including debate and public speaking; (3) logic; (4) psychology; and (5) Latin, French, or German.

For advice relative to the organization of his work, the student is referred to Professors Inwood, Griffin and Mazour, who are designated advisers of the prelegal students.

The leading law schools prefer that their students shall have completed four years of college work before entrance. Some, however, admit students upon the completion of three years of college work. The University will confer the degree of Bachelor of Arts upon any student of high rank who, after completing three years of approved work in this University, shall enter a law school of approved standing and shall complete worthily one year's work in such law school. (A student of high rank is one who stands above the average of his class.) In order to receive the degree in this way the student must, at the end of his first year in the law school, present a signed testimonial from the Dean of the Law School to the Dean of the College of Arts and Science, such testimonial to include a statement of courses taken, grades achieved, and a recommendation that the degree be granted.

### PREMEDICAL COURSES

The requirements for admission to Class A medical colleges vary from a minimum of two years of standard college work to the possession of a bachelor's degree. Students contemplating studying medicine should communicate early in their undergraduate course with the Dean of the particular medical college they may wish to enter in order to learn the exact entrance requirements at the time they expect to enter. Practically all medical colleges prescribe the same minimum of subject matter which includes general zoology, vertebrate anatomy, embryology, general inorganic chemistry, qualitative analysis, organic chemistry, general physics, and a reading knowledge of French or German. Quantitative analyses is also required by some and advised by others. Plane trigonometry and college algebra are required by a few schools and strongly advised to insure an adequate foundation for bio-physical and bio-chemical studies in the medical school.

During the war certain premedical courses will be shortened or omitted following a plan outlined by the Council on Medical Education of the American Medical Association. This accelerated program of premedical training will qualify a student for application to medical school after two years, but will not qualify him for a B. A. degree from the University of Nevada. All students will consult premedical advisers with regard to this accelerated program.

### 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:

<i>Freshman Year</i>			
<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
English 1 .....	3	English 2 .....	3
Philosophy 5 .....	1	General chemistry .....	4
General chemistry .....	4	Mathematics 22 .....	4
Botany 3 .....	3	Zoology 2 .....	4
Military and physical education.....	$\frac{1}{2}$ - $\frac{1}{2}$	Military and physical education .....	$\frac{1}{2}$ - $\frac{1}{2}$
Electives .....	.....	Electives .....	.....
	15 $\frac{1}{2}$		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.

<i>Sophomore Year</i>			
<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
German 1 .....	5	German 2 .....	5
Chemistry 9 .....	4	Chemistry 10 .....	4
Zoology 9 .....	5	Mathematics 22 .....	4
Military and physical education .....	1 $\frac{1}{2}$	Military and physical education .....	1 $\frac{1}{2}$
Electives .....	.....	Electives .....	.....
	15 $\frac{1}{2}$		15 $\frac{1}{2}$

<i>Junior Year</i>			
<i>First Semester</i>	<i>Units</i>	<i>Second Semester</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
Political science 79.....	1	Political science 80.....	1
	16		16

#### *Senior Year*

Elective or approved credential from professional school.

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

For further advice relative to premedical work, the student is referred to the premedical advisers.

## RECOMMENDED THREE-YEAR PRENURSING COURSE

*First Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Botany 3 .....	3	Zoology 2 .....	4
English 1 .....	3	English 2 .....	3
Chemistry 7 .....	4	Chemistry 8 .....	4
History 1 .....	3	History 2 .....	3
Physical education .....	1	Physical education .....	1
Elective .....	1½	Elective .....	½
	<hr/> 15½		<hr/> 15½

*Second Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Zoology 11 (Human Anatomy) .....	4	Hygiene 2 .....	2
Foreign language .....	5	Foreign language .....	5
Sociology 1 .....	3	Sociology 2 .....	3
Psychology 5 .....	3	Physical education .....	½
Physical education .....	½	Elective .....	5
	<hr/> 15½		<hr/> 15½

*Third Year*

<i>First semester</i>	<i>Units</i>	<i>Second semester</i>	<i>Units</i>
Zoology 57 (Physiology) .....	3	Zoology 58 (Physiology) .....	3
Bacteriology 51 .....	4	Home Economics 50 .....	3
English or foreign language .....	3	English or a foreign language .....	3
Elective (Courses 50 or above) .....	5	Elective (Courses 50 or above) .....	6
Political science 79 .....	1	Political science 80 .....	1
	<hr/> 16		<hr/> 16

A student completing the three-year prenursing course may be granted a Bachelor of Arts or a Bachelor of Science degree from the University of Nevada when she has, in addition, completed 32 units of acceptable academic work in a recognized school of nursing.

## TEACHERS' DIPLOMAS

For the requirements for a teacher's diploma, see School of Education, Index.

## RECOMMENDED COURSE FOR SOCIAL WORKERS

Students who plan to engage in social work will find it advantageous to pursue an undergraduate course designed for this particular purpose. Some branches of the services provided for under the terms of the Social Security Act require that workers shall have had training in a recognized school of social work; others do not. This makes it desirable that the undergraduate work be planned to meet the entrance requirements of schools of social work. The following suggested undergraduate curriculum meets these requirements:

*First Year*

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Military and P. E. ....	½-1½	Military and P. E. ....	½-1½
Chemistry 1 .....	4	Chemistry 2 .....	4
Philosophy 5 .....	1	Hygiene 2 .....	2
English 1 .....	3	English 2 .....	3
Foreign Languages .....	5	Foreign Languages .....	5
Electives .....	....	Electives .....	....
	<hr/> 15½		<hr/> 15½

*Second Year*

<i>First Semester</i>		<i>Units</i>	<i>Second Semester</i>		<i>Units</i>
Military and P. E.....		½-1½	Military and P. E.....		½-1½
Foreign Languages.....		3	Foreign Languages.....		3
Economics 1.....		3	Economics 2.....		3
Psychology 5.....		3	Psychology 40.....		3
Sociology 1.....		3	Psychology 14.....		2
Electives.....		.....	Sociology 2.....		3
			Electives.....		.....
		<hr/>			<hr/>
		15½			15½

*Third Year*

<i>First Semester</i>		<i>Units</i>	<i>Second Semester</i>		<i>Units</i>
Psychology 51.....		3	Psychology 10.....		2
Political Science 55.....		3	Political Science 56.....		3
Sociology 79.....		2	Sociology 50.....		2
Sociology 81 (or 83).....		2*	Sociology 84 (or 86).....		2*
Zoology 57.....		3	Zoology 58.....		3
Electives.....		3	Electives.....		2
		<hr/>			<hr/>
		16			16

*Fourth Year*

<i>First Semester</i>		<i>Units</i>	<i>Second Semester</i>		<i>Units</i>
Psychology 55.....		3	Psychology 62.....		3
Political Science 83.....		2	Political Science 84.....		2
Political Science 79.....		1	Political Science 80.....		1
Sociology 83 (or 81).....		2*	Political Science 76.....		2
Sociology 71.....		3	Sociology 86 (or 84).....		2*
Electives.....		5	Sociology 90.....		3
		<hr/>	Electives.....		3
		16			16

The following electives are recommended: Econ. 64, History 1-2, English 11-12, Philosophy 7-8-22, Math. 20, Home Ec. 50, Psychology 59-65.

This program provides a Major in Sociology and a Minor in Psychology; this is preferred by many graduate schools of social work and is acceptable to all.

It is assumed here that no part of the foreign language requirement has been met before entering the University. Those students who have met some part or all of this requirement will have a correspondingly larger number of electives.

M. J. Webster has been named as advisor for students wishing to prepare for social work.

\*Sociology 81 and 84 offered in odd numbered years. Sociology 83 and 86 offered in even numbered years.

## THE SCHOOL OF EDUCATION

## FACULTY

- JOHN O. MOSELEY, M.A., LL.D., President of the University.  
 CHARLES H. GORMAN, HONORARY M.S., Vice President and Comptroller.  
 FRED W. TRAINER, Ph.D., Dean of the School of Education; Professor of Education.  
 THEODORE H. POST, M.A., Professor of Music.  
 JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education for Men.  
 ELSA SAMETH, M.S., Professor of Physical Education for Women.  
 FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science; Professor of Mathematics.  
 HAROLD N. BROWN, Ed.D., Director of Summer Sessions; Professor of Education.  
 RALPH A. IRWIN, Ph.D., Professor of Psychology.  
 EDITH M. RUEBSAM, M.A., Associate Professor of Education.  
 LOUIS TITUS, M.S., Associate Professor of Agronomy.  
 JOHN P. PUFFINBARGER,<sup>1</sup> M.Ed., Assistant Professor of Education.  
 ALBERT WIEDERHOLD, Ph.D., Assistant Professor of Philosophy and Psychology.  
 JOANNA CHAPMAN, M.S., Assistant Professor of Education.  
 HELEN JOSLIN, Instructor in Art.  
 WINFIELD C. HIGGINS, B.S., Teacher Trainer, Vocational Agriculture Education.  
 MILDRED KLAUS, B.A., Lecturer in Education.

## COOPERATING TEACHERS

*In the Reno High School—*

- BLYTHE BULMER, B.A., English.  
 MARGARET GARAVENTA, B.A., Commercial.  
 MURIEL GOODWIN, B.A., Art.  
 ROBERT E. GREINIG, Capt., R. O. T. C.  
 MARGUERITE HUGHES, B.S., Home Economics.  
 FRANCES HUMPHREY, B.A., English.  
 MILDRED KLAUS, B.A., Commercial.  
 EFFIE MACK, Ph.D., History.  
 GLADYS McDONNELL, B.A., English.  
 BEULAH SINGLETON, B.A., History.  
 HELENE STARK, B.A., English.

*In the Sparks High School—*

- MILDRED RIGGLE, B.S., Home Economics.

*In the Northside Junior High School—*

- ELEANOR BATEMAN, B.S., Homemaking.  
 CHAUNCEY KING, B.A., English, History.  
 BETTY NELSON, B.A., English, Arithmetic.  
 WINIFRED THOMAS, B.S., General Science.

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

- GLADYS CAFFERATA, B.A., English, French.  
 RUTH EVERETT, B.S., Home Economics.  
 INEZ JOHNSON, B.S., Art.  
 HAZEL DURHAM MCCOMAS, B.A., Art.  
 MARION TRABERT, B.S., General Science.

*In the Reno Elementary Schools—*

- ESTHER L. BENNETT, First Grade.  
 JUANITA ELCANO, First Grade.  
 ELIZABETH MCCORMACK, First Grade.  
 AILENE DANIELS, Second Grade.  
 KATHRYN MARTIN, Second Grade.  
 CELIA DALEY, Third Grade.

ALPHONSINE LIOTARD, Third Grade.  
 ELEANOR MILLER, Third Grade.  
 KATHRYN CLARK, Fourth Grade.  
 HELEN M. HANLEY, Fourth Grade.  
 EMILIE YPARRAGUIRRE, Fourth Grade.  
 GLADYS EDLIND, Fifth Grade.  
 MARGARET PATRICK, Fifth Grade.  
 OLIVIA TREANOR, Fifth Grade.  
 RITA A. CANNAN, Sixth Grade.  
 ELSIE JOHNSON, Sixth Grade.  
 GRACE WARNER, Sixth Grade.

#### TEACHER APPOINTMENT SERVICE

FRED W. TRANER, Director.  
 MURIEL WESTERGARD, Secretary.

#### AIM

The School of Education aims principally to provide for undergraduate students, on the foundation of the broad and liberal education furnished them by the College of Arts and Science, a professional course of studies to equip them for successful teaching in the public schools of the State. To a limited extent it seeks also to offer advanced training for teachers in service who desire either to increase their efficiency in their present positions or to prepare for new and larger positions of responsibility.

For the welfare of the State it aims to provide well-trained teachers for the schools and to stimulate in the teaching personnel and the public a deeper interest in the promotion of good teaching practices and sound educational policies.

#### TYPES OF TRAINING PROVIDED

1. **ELEMENTARY SCHOOL TEACHING.** Because the teaching positions in Nevada are predominantly in the elementary schools, the most urgent responsibility of the School of Education is the preparation of teachers for rural and town elementary schools. It meets this responsibility by offering a broad training in the principles of elementary education and in teaching methods that equip the student for either the diverse tasks of the one-room school or the more specialized work of a single-grade room. Supervised teaching which constitutes the heart of all the teacher-training work is possible in the primary, intermediate, or junior high school grades.

2. **HIGH SCHOOL TEACHING.** For students who desire to qualify for high school teaching, the School of Education provides in the junior and senior years courses in the principles and methods of secondary education and in supervised teaching in the important academic subjects in the high school. Such students must also present a major and a minor in high school subjects.

3. **ADVANCED PROFESSIONAL TRAINING.** Advanced courses are offered in the evening and during Summer Sessions for the benefit of teachers in service who desire to renew certificates, to qualify for a higher grade of certificate, or to work for a Master of Arts degree.

Applicants for the Master's degree proposing to submit Education as a major or a minor should confer with the Dean of the School of Education before enrolling for graduate credit in any course. Failure



to do so may mean enrollment in a course not approved for the Master's degree.

## HISTORY AND ORGANIZATION

Training of teachers as a function of the University is almost as old as the University itself. In the first year of the University's life at Reno there were no courses for teachers, but before the year was over the Legislature passed an Act, approved February 7, 1887, providing for the establishment in the University of "a school for the instruction of teachers," and specifying that those worthily completing the course or a prescribed part of it should be granted teachers' certificates by the State Board of Education. In accordance with this Act the University established a normal course with the opening of the fall term in 1887.

The policy inaugurated by the Act of 1887 of granting certificates on the completion of the courses set up by the University has been consistently followed to the present time. There are now two distinct courses in operation, one for high school teachers and one for elementary teachers.

## COURSES FOR HIGH SCHOOL TEACHERS' CERTIFICATES

It is possible to qualify for the high school teachers' certificate by either of two methods:

### I. *The University High School Teachers' Diploma*

Students who meet the requirements for this diploma will be granted by the State Board of Education a certificate to teach in the high school any subject approved by the local school board, except the vocational subjects subsidized by the State and National government. For these vocational subjects special certificates are required as indicated below.

To qualify for the University High School Teachers' Diploma, the student must meet the requirements for the B.A. or the B.S. degree and must complete 18 hours of professional work in education. For students who are not candidates for the vocational certificate, these 18 hours consist of the following courses: psychology 5 and 6, and education 24, preferably in the sophomore year; education 60 and 2 units in education 64, 65, or 66, preferably in the junior year; education 71, 75, 76, and 82, all of which must be taken in the senior year. One semester of practice teaching in the elementary school may be substituted for education 75 or for education 76.

*Vocational Certificates.* Students who have taken the required courses in agriculture or home economics and receive their degrees in those subjects may qualify for both the University High School Teachers' Diploma and for a vocational certificate.

For the home economics certificate the students are required to take the following courses: psychology 5 and 6, education 24, 60, 75, 76, 82, 88, and 89, and, following graduation, to do two weeks of cadet teaching under the direction of the State Department in one of the high schools of the State.

For the agriculture certificate the students are required to take the following courses: psychology 5 and 6, education 24, 60, 75, 76, 82, 86, and 87.

*Certificate in Business Education.* Students desiring to qualify as teachers of commercial subjects in high school should elect the major in business education offered by the Department of Economics, Business, and Sociology, and should complete the following courses in education: 6, 24, 60, 66F, 66G, 71, 75, and 76.

## II. *State Board Requirements*

Under the regulations of the State Board of Education a high school certificate may be granted to any applicant who holds a B.A. or a B.S. degree from the University, and who has completed 18 semester hours in the field of professional education, including four semester hours of practice teaching. The majority of the hours in professional training must be in the secondary field.

Courses in the secondary field include psychology 6 and all courses listed under "Secondary Education" in the "Courses of Instruction" in this catalogue.

### COURSES FOR ELEMENTARY TEACHERS' CERTIFICATE

The most satisfactory course for elementary teaching will require four years and entitle the student to a bachelor's degree. Students entering the University with definite intent to remain four years and to take up teaching upon graduation should recognize that the opportunities in teaching are much more numerous in the elementary than in the secondary field. They should plan, therefore, from the first to follow a curriculum through the four years that will thoroughly equip them for an elementary position. Early consultation with the Dean of the School of Education is urgently recommended to such students.

There are three types of elementary teachers' certificates issued.

#### I. *Based on Four Years of Study*

A first grade elementary certificate valid for three years is issued to graduates of the University if they have completed 18 hours of professional courses in education. These 18 hours must include four hours of methods of teaching the elementary school subjects, four hours of practice teaching in the elementary school, and a course in school law.

#### II. *Based on Two Years of Study: The Normal School Diploma*

A first grade elementary certificate valid for five years is issued to students who qualify for the normal school diploma. This diploma is granted by the University of Nevada to students who have earned 62 hours of credit in the College of Arts and Science, of which 30 must be professional courses in education. Usually these professional courses should include education 1, 34, 46, and two semesters of practice teaching: education 28, 29, 43, 44, 73, and 74.

For students entering the University with the expectation of qualifying for the normal school diploma in two years, the following program is suggested:

## Freshman Year

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Education 1 .....	2	Education 34 .....	3
English 1 .....	3	English 2 .....	3
Philosophy 5.....	1	Physical education (women)....	1
Physical education (women).....	1	Physical education (men).....	½
Physical education (men).....	½	Military (for men).....	1
Military (for men).....	1	Education electives .....	5-6
Education electives .....	5-6	Other electives.....	..
Other electives.....	..		16
	16		

## Sophomore Year

<i>First Semester</i>	<i>Units</i>	<i>Second Semester</i>	<i>Units</i>
Practice teaching .....	5	Practice teaching .....	5
Education 24 .....	2	Education 46 .....	2
Physical education .....	½	Physical education .....	½
Military .....	1	Military .....	1
Political science 79.....	1	Political science 80.....	1
Education electives .....	1-2	Education electives .....	1-2
Other electives.....	..	Other electives.....	..
	16		16

## III. Based on One Year of Study

A second grade certificate, valid for three years but not renewable, is issued to students who have earned 31 hours of credit at the University of Nevada, of which 15 hours must be professional courses in education. Students planning to qualify for this certificate will take the courses specified in the first year of the course for the Normal School Diploma, as above, but must take also education 24 and political science 79-80.

## THE KINDERGARTEN-PRIMARY CERTIFICATE

This certificate will be issued to any applicant who holds a B.A. or a B.S. degree from the University and who has completed the prescribed professional work in education and in related subjects as follows:

Education: 16, 17, 18, 19, 24, 25A, 28, 29, 34, 41, and 53, or approved substitutes, totaling 29 hours.

Music: 1-2 or equivalent to prove ability to sing songs of kindergarten-primary level. The applicant must also pass tests to demonstrate ability to play on the piano music of kindergarten-primary difficulty.

Art: 3 or 4.

Physical education for women: 1, 2, 3, 4, and 9.

Graduates of the University who complete the above courses will also be entitled to the Normal School Diploma, described above.

## SUPERVISED TEACHING

All supervised teaching facilities are provided in the public schools of Reno and Sparks through the courtesy of the school authorities in these two cities. By this arrangement students meet typical school problems and secure training for teaching under the most favorable conditions. In every instance the student is assigned to one of the regular teachers in the school system, designated as a cooperating teacher, who assigns to the student the material for teaching, checks

his lesson plans, observes his teaching, and gives suggestions for improvement.

Each staff member of the Department of Education is likewise responsible for the supervision of a group of student teachers, making regular visits to observe the student's teaching, and holding conferences with the student and his cooperating teacher concerning the teaching. There is always a close cooperation between the department and the cooperating teacher.

#### PREREQUISITES FOR SUPERVISED TEACHING

To protect the interests of the public school children, great care is exercised in according the privileges of supervised teaching to students. Only those students who have shown by their previous record a satisfactory ability in scholarship, dependability and earnestness, and a real interest in the problems of education, are accepted for teaching. Any failure on the part of the student teacher to meet any requirement imposed may result in the immediate forfeiture of his teaching privilege. No person can be granted an opportunity for practice teaching until he has spent at least one semester in courses in the School of Education.

#### THE TEACHER APPOINTMENT SERVICE

For the purpose of bringing school authorities who are looking for competent teachers into touch with promising candidates, the School of Education has maintained a teacher appointment service since 1923.

Only those candidates are accepted for enrollment with the appointment service whose ability and character are well known to the Department of Education. For those enrolled the appointment office secures all data possible, both personal and academic, and recommendations from persons in official positions competent to speak of the character or teaching ability of the candidate. This material is kept on file, and on request is sent to interested school authorities.

The only fees charged for the service rendered will be paid by the candidates at the time of enrollment to cover the necessary costs of postage, printing, and stenographic help. For the first set of five papers prepared a charge of \$2.50, and for each succeeding set a charge of \$1.50 will be made.

## THE COLLEGE OF ENGINEERING

1. THE MACKAY SCHOOL OF MINES.
2. THE SCHOOL OF CIVIL ENGINEERING.
3. THE SCHOOL OF ELECTRICAL ENGINEERING.
4. THE SCHOOL OF MECHANICAL ENGINEERING.

## FACULTY

- JOHN O. MOSELEY, M.A., LL.D., President of the University.  
 CHARLES H. GORMAN, HONORARY M.S., Vice President and Comptroller.  
 STANLEY G. PALMER, M.E., Dean of the College of Engineering; Professor of Electrical Engineering.  
 REUBEN CYRIL THOMPSON, M.A., LL.D., Professor of Philosophy.  
 WALTER S. PALMER, E.M., Professor of Metallurgy.  
 GEORGE WALLACE SEARS, Ph.D., Professor of Chemistry.  
 FREDERICK L. BIXBY, C.E., Professor of Civil Engineering.  
 JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education for Men.  
 JAY A. CARPENTER, E.M., Director of the Mackay School of Mines; Professor of Mining.  
 ALFRED LESLIE HIGGINBOTHAM, A.M., Professor of Journalism.  
 CHARLES ROGER HICKS, Ph.D., Professor of History and Political Science.  
 FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science; Professor of Mathematics.  
 VINCENT P. GIANELLA, Ph.D., Professor of Geology.  
 SIGMUND W. LEIFSON, Ph.D., Professor of Physics.  
 JOHN C. HOWARD, A.B., U. S. Army, Professor of Military Science and Tactics.  
 IRVING J. SANDORF,<sup>1</sup> M.S., Professor of Electrical Engineering.  
 MILAN J. WEBSTER, Ph.D., Professor of Economics, Business, and Sociology.  
 JAMES R. VAN DYKE, M.E., Professor of Mechanical Engineering.  
 ROBERT STUART GRIFFIN, Ph.D., Professor of English.  
 RALPH A. IRWIN, Ph.D., Professor of Psychology.  
 GILBERT BRUCE BLAIR, M.A., Associate Professor of Physics and Astronomy.  
 PAUL A. HARWOOD,<sup>1</sup> M.A., Associate Professor of English.  
 MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.  
 WILLIAM J. SMYTH, E.M., Associate Professor of Metallurgy and Mining.  
 CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education for Men.  
 JAMES W. COLEMAN,<sup>1</sup> M.A., Associate Professor of Physical Education for Men.  
 HARRY E. WHEELER,<sup>1</sup> Ph.D., Associate Professor of Geology.  
 SAMUEL B. BATDORF,<sup>1</sup> Ph.D., Associate Professor of Physics.  
 CHARLTON G. LAIRD, Ph.D., Associate Professor of English.  
 ELDON C. GRAFTON,<sup>1</sup> M.S., Associate Professor of Structural Engineering.  
 LORING R. WILLIAMS, Ph.D., Associate Professor of Chemistry.  
 EVERETT W. HARRIS,<sup>1</sup> Ph.D., Associate Professor of Mechanical Engineering.  
 WARREN O. WAGNER,<sup>1</sup> M.S., Associate Professor of Civil Engineering.  
 E. MAURICE BEESLEY, Ph.D., Associate Professor of Mathematics.  
 ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business, and Sociology.  
 WILLIAM C. MILLER, M.A., Assistant Professor of English.  
 ROBERT M. O'IVER,<sup>1</sup> M.S., Assistant Professor of Mechanical Engineering.  
 WILLIAM O. HOLMES, B.A., Assistant Professor of English.  
 HUGH O. McMILLEN, B.S., Lieutenant, U. S. Army, Assistant Professor of Military Science and Tactics.  
 BERTRAND F. COUCH,<sup>1</sup> Instructor in Mine Accounting.  
 JOHN TORNEY RYAN, Instructor in Shop Practice.

<sup>1</sup>Absent on leave; war service.

MICHAEL J. MCCORMICK, Sergeant, U. S. Army, Instructor in Military Science and Tactics.

J. RAYMOND BUTTERWORTH,<sup>1</sup> M.S., Instructor in English.

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

DOROTHY DOYLE, Secretary to the Dean.

### AIM

The aim of the College of Engineering is to give young men a knowledge of those subjects which form the basis of the mining, mechanical, electrical, and civil engineering professions. The technical courses of study are arranged and directed with the purpose of preparing students not only for immediate usefulness but also for future professional growth. The work is in the form of both lectures and recitations, supplemented by exercises in the drafting room, field, laboratory, and shop.

### EQUIPMENT

For the general description of the equipment of the College of Engineering, see Mackay School of Mines, Mechanical Building, Electrical Building, New Engineering Building, Chemistry Building, Laboratories for Geology and Mineralogy, Laboratories of the Mining Department, Mining and Geological Museum, and the Chemical Laboratories, in the earlier part of this catalog.

### ADMISSION REQUIREMENTS

An applicant who is deficient in more than two of the required entrance units will not be permitted to enter the Engineering College.

For admission requirements, entrance subjects, and the number of credits belonging to each, see Requirements for Admission, Index.

### REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ENGINEERING

The degree of Bachelor of Science in (a) Mining Engineering, (b) Metallurgical Engineering, (c) Geological Engineering, (d) Mechanical Engineering, (e) Electrical Engineering, and (f) 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 148 semester units in (a), (c) and (f); 144 in (b), (d) and (e).

Combination curricula leading to the bachelor's degree in more than one school in the University may be arranged. The minimum requirements shall be one extra year in residence and 30 credit hours of extra work. More work may be necessary if the specific requirements of the department in which the degree is sought have not been met.

For students taking advanced military work, where sufficient elective credits (10) are not provided, arrangement will be made by substitution or other adjustment.

The State law of Nevada requires that all candidates for a degree must study, during one University year, the Constitutions of the United States and of the State of Nevada.

A student entering the College of Engineering who has passed the

<sup>1</sup>Absent on leave; war service.

age of 26 years upon his initial registration in the University, is automatically excused from military training, physical education, orientation, and hygiene.

COLLEGE OF ENGINEERING  
MACKAY SCHOOL OF MINES

GENERAL MINING COURSE

*Freshman Year—First Semester*

		LAB.	LEC.
English 1.....	Composition and Rhetoric.....	..	3
Chemistry 7.....	General Inorganic Chemistry.....	2	2
Mathematics 15.....	Mathematical Analysis.....	..	5
General Engineering 5.....	Elementary Mechanical Drawing.....	2	..
*General Engineering 2.....	Freehand Drawing.....	1	..
Philosophy 5.....	War Issues.....	..	1
Military 1.....	Basic Course.....	1	..
Physical Education 1.....	Developmental Exercises.....	$\frac{1}{2}$	..
			17 $\frac{1}{2}$

*Freshman Year—Second Semester*

English 2.....	Composition and Rhetoric.....	..	3
Chemistry 8.....	General Inorganic Chemistry.....	2	2
Mathematics 16.....	Mathematical Analysis.....	..	5
General Engineering 6.....	Descriptive Geometry.....	2	..
Geology 10.....	Engineering Geology.....	..	3
*Hygiene 2.....	Personal Hygiene.....	..	1
Military 2.....	Basic Course.....	1	..
Physical Education 2.....	Developmental Exercises.....	$\frac{1}{2}$	..
			19 $\frac{1}{2}$

*Summer Work*

Mining 5.....	Practical Mine Work.....	Four Weeks	
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*Sophomore Year—First Semester*

		LAB.	LEC.
Mathematics 25.....	Differential Calculus.....	..	3
Physics 3.....	Engineering Physics.....	..	5
Geology 11.....	Determinative Mineralogy.....	2	..
Chemistry 15.....	Quantitative Analytical Chemistry.....	2	3
Geology 2.....	Historical Geology.....	..	3
Military 3.....	Basic Course.....	..	1
Physical Education 3.....	Advanced Exercises.....	$\frac{1}{2}$	..
			19 $\frac{1}{2}$

*Sophomore Year—Second Semester*

Mathematics 26.....	Integral Calculus.....	..	3
Physics 4.....	General Physics for Engineers.....	..	5
Metallurgy 4.....	Engineering Metallurgy.....	..	2
Geology 12.....	Blowpipe Analysis.....	2	..
Geology 14.....	Descriptive Mineralogy.....	..	2
Military 4.....	Basic Course.....	..	1
Physical Education 4.....	Advanced Exercises.....	$\frac{1}{2}$	..
Elective.....	.....	..	3
			18 $\frac{1}{2}$

*Junior Year—First Semester*

Mining 51.....	Excavation.....	..	3
Metallurgy 51.....	Assaying.....	3	1
Mathematics 55.....	Analytic Mechanics.....	..	3
Civil Engineering 51 and 53.....	Surveying.....	2	2
Geology 51.....	Petrology.....	1	1
Elective.....	.....	..	2
			18

\*Courses marked with an asterisk may be substituted by other courses when approved by the Head of the School and the Dean of the College. Such substituted courses, however, must form part of a systematic course of training.

<i>Junior Year—Second Semester</i>		LAB.	LEC.
Mining 52.....	Mine Plant .....	..	3
Metallurgy 66.....	Ore Dressing .....	..	2
Metallurgy 68.....	Ore Dressing .....	2	..
Geology 60.....	Economics Geology Nonmetallic .....	..	3
Civil Engineering 52 and 54.....	Surveying .....	2	2
Geology 52 (or Metallurgy 56).....	Petrography (Metallography) .....	2	1
		17	

<i>Summer Course</i>		
Civil Engineering 58.....	Summer Surveying.....	Four Credits

<i>Senior Year—First Semester</i>		LAB.	LEC.
Geology 61.....	Economic Geology of Metals.....	..	3
Mining 61.....	Mining Methods .....	..	3
Metallurgy 71.....	Hydro-Metallurgy .....	1	2
Metallurgy 61.....	Pyro-Metallurgy, nonferrous metals .....	..	3
Political Science 79.....	Constitutions of U. S. and Nevada.....	..	1
Project in Mining 79, Metallurgy 79 or Geology 79.....		2	..
Civil Engineering 91.....	Fluid Mechanics .....	..	3
		18	

<i>Senior Year—Second Semester</i>		LAB.	LEC.
Mining 72.....	Mine Administration .....	..	3
Mining 74.....	Mineral Industry Economics.....	..	3
Electrical Engineering 75.....	Electricity in Mining .....	..	3
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
Project in Mining 80, Metallurgy 80 or Geology 80.....		2	..
Civil Engineering 72.....	Strength of Materials .....	..	3
Civil Engineering 74.....	Testing Materials .....	1	..
		19	

**MACKAY SCHOOL OF MINES**

**METALLURGY COURSE**

<i>Freshman Year—First Semester</i>		LAB.	LEC.
English 1.....	Composition and Rhetoric .....	..	3
Chemistry 7.....	General Inorganic Chemistry.....	2	2
Mathematics 15.....	Mathematical Analysis .....	..	5
Philosophy 5.....	War Issues .....	..	1
General Engineering 5.....	Elementary Mechanical Drawing.....	2	..
*General Engineering 2.....	Freehand Drawing .....	1	..
Military 1.....	Basic Course .....	1	..
Physical Education 1.....	Developmental Exercises .....	½	..
		17½	

<i>Freshman Year—Second Semester</i>		LAB.	LEC.
English 2.....	Composition and Rhetoric.....	..	3
Chemistry 8.....	General Inorganic Chemistry .....	2	2
Mathematics 16.....	Mathematical Analysis .....	..	5
General Engineering 6.....	Descriptive Geometry .....	2	..
Geology 10.....	Engineering Geology .....	..	3
*Hygiene 2.....	Personal Hygiene .....	..	1
Military 2.....	Basic Course .....	1	..
Physical Education 2.....	Developmental Exercises .....	½	..
		19½	

<i>Summer Work</i>		
Mining 5.....	Practical Metallurgical Work .....	Four Weeks

<i>Sophomore Year—First Semester</i>		LAB.	LEC.
Mathematics 25.....	Differential Calculus .....	..	3
Physics 3.....	Engineering Physics .....	..	5
Physics 5.....	Physical Measurements .....	2	..
Geology 11.....	Determinative Mineralogy .....	2	..
Chemistry 15.....	Quantitative Analytical Chemistry.....	3	2
Military 3.....	Basic Course .....	..	1
Physical Education 3.....	Advanced Exercises .....	½	..
		18½	

\*See footnote, p. 141.



*Sophomore Year—Second Semester*

		LAB.	LEC.
Mathematics 26.....	Integral Calculus .....	..	3
Physics 4.....	General Physics for Engineers .....	..	5
Physics 6.....	Physical Measurements .....	2	..
Metallurgy 4.....	Engineering Metallurgy .....	..	2
Geology 12.....	Blowpipe Analysis .....	2	..
Military 4.....	Basic Course .....	..	1
Physical Education 4.....	Advanced Exercises .....	$\frac{1}{2}$	..
Elective.....	.....	..	3

18 $\frac{1}{2}$ *Junior Year—First Semester*

Metallurgy 51.....	Fire Assaying .....	3	1
Mathematics 55.....	Analytic Mechanics .....	..	3
Metallurgy 58.....	Ferrous Metallurgy .....	..	2
Chemistry 83.....	Physical Chemistry .....	1	3
Political Science 79.....	Constitutions of U. S. and Nevada.....	..	1
Elective.....	.....	..	4

18

*Junior Year—Second Semester*

Geology 14.....	Descriptive Mineralogy .....	..	2
Metallurgy 56.....	Metallography .....	2	1
Metallurgy 66.....	Ore Dressing .....	..	2
Metallurgy 68.....	Ore Dressing Laboratory .....	2	..
Chemistry 84.....	Physical Chemistry .....	1	3
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
Elective.....	.....	..	5

19

*Senior Year—First Semester*

Metallurgy 61.....	Pyro-Metallurgy .....	..	3
Metallurgy 71.....	Hydro-Metallurgy .....	1	2
Metallurgy 79.....	Project .....	2	..
Elective.....	.....	..	10

18

*Senior Year—Second Semester*

Electrical Engineering 75.....	Electricity in Mining .....	..	3
Metallurgy 62.....	Metallurgy of Minor and Rare Metals.....	..	1
Metallurgy 72.....	Electrometallurgy .....	..	2
Metallurgy 76.....	Problems and Seminar .....	2	..
Metallurgy 80.....	Project .....	2	..
Civil Engineering 72.....	Testing Materials .....	1	..
Civil Engineering 74.....	Strength of Materials .....	..	3
Elective.....	.....	..	2

16

NOTE—The electives are not free electives but must be so selected as to form a part of a systematic course of training in metallurgical engineering.

## SCHOOL OF MECHANICAL ENGINEERING

*Freshman Year—First Semester*

		LAB.	LEC.
English 1.....	Composition and Rhetoric .....	..	3
Chemistry 7.....	General Inorganic Chemistry .....	2	2
Mathematics 15.....	Mathematical Analysis .....	..	5
General Engineering 5.....	Elementary Mechanical Drawing .....	2	..
Philosophy 5.....	War Issues .....	..	1
Mechanical Engineering 19.....	Elements of Mechanical Engineering.....	..	1
Military 1.....	Basic Course .....	1	..
Physical Education 1.....	Developmental Exercises .....	$\frac{1}{2}$	..

17 $\frac{1}{2}$

<i>Freshman Year—Second Semester</i>		LAB.	I.E.C.
English 2.....	Composition and Rhetoric .....	..	3
Chemistry 8.....	General Inorganic Chemistry .....	2	2
Mathematics 16.....	Mathematical Analysis .....	..	5
General Engineering 6.....	Descriptive Geometry .....	2	..
*Hygiene 2.....	Personal Hygiene .....	..	1
Military 2.....	Basic Course .....	1	..
Physical Education 2.....	Developmental Exercises .....	$\frac{1}{2}$	..
*Geology 10.....	Engineering Geology .....	..	3

19 $\frac{1}{2}$ 

<i>Sophomore Year—First Semester</i>			
Physics 3.....	General Physics for Engineers.....	..	5
Physics 5.....	Physical Measurements .....	2	..
Mathematics 25.....	Differential Calculus .....	..	3
Civil Engineering 51-53.....	Elementary Surveying .....	2	2
English 11.....	Public Speaking .....	..	2
Mechanic Arts 6.....	Pattern and Foundry Practice .....	1	..
Military 3.....	Basic Course .....	1	..
Physical Education 3.....	Advanced Exercises .....	$\frac{1}{2}$	..

18 $\frac{1}{2}$ 

<i>Sophomore Year—Second Semester</i>			
Physics 4.....	General Physics for Engineers .....	..	5
Physics 6.....	Physical Measurements .....	2	..
Mathematics 26.....	Integral Calculus .....	..	3
*Metallurgy 4.....	Engineering Metallurgy .....	..	2
Mechanic Arts 3.....	Machine Shop .....	2	..
Military 4.....	Basic Course .....	1	..
Physical Education 4.....	Advanced Exercises .....	$\frac{1}{2}$	..
Elective.....	.....	..	3

18 $\frac{1}{2}$ 

<i>Junior Year—First Semester</i>			
Mathematics 55.....	Analytic Mechanics .....	..	3
Electrical Engineering 51.....	Direct Current Machinery .....	..	3
Electrical Engineering 61.....	Electrical Engineering Laboratory .....	1	1
Mechanical Engineering 54.....	Thermodynamics .....	..	3
Mechanical Engineering 51.....	Kinematics .....	2	1
Mathematics 85.....	Differential Equations .....	..	2
Elective.....	.....	2 or 3	..

18 or 19

<i>Junior Year—Second Semester</i>			
Mathematics 56.....	Analytic Mechanics .....	..	2
Civil Engineering 72.....	Strength of Materials .....	..	3
Civil Engineering 74.....	Strength of Materials Laboratory .....	1	..
Electrical Engineering 52.....	Alternating Current Machinery .....	..	3
Electrical Engineering 62.....	Electrical Engineering Laboratory .....	1	1
Mechanical Engineering 55.....	Applied Thermodynamics .....	..	3
Mechanical Engineering 64.....	Mechanical Laboratory .....	3	..

17

<i>Senior Year—First Semester</i>			
Mechanical Engineering 71.....	Heat-Power Engineering .....	..	3
Mechanical Engineering 77.....	Internal Combustion Engines .....	..	3
Mechanical Engineering 65.....	Mechanical Power Laboratory .....	3	..
Mechanical Engineering 57.....	Machine Design .....	2	1
Civil Engineering 93.....	Fluid Mechanics .....	1	3
Political Science 79.....	Constitution of U. S. and Nevada.....	..	1

17

Senior Year—Second Semester

		LAB.	LEC.
Mechanical Engineering 72	Heat-Power Engineering	..	3
Mechanical Engineering 58	Machine Design Problem	1	2
*Business Administration 66	Industrial Management	..	3
Mechanic Arts 50	Engineering Materials and Processes of Manufacturing	2	1
Political Science 80	Constitution of U. S. and Nevada	..	1
Electives		..	6

19

SCHOOL OF ELECTRICAL ENGINEERING

Freshman Year—First Semester

		LAB.	LEC.
English 1	Composition and Rhetoric	..	3
Chemistry 7	General Inorganic Chemistry	2	2
Mathematics 15	Mathematical Analysis	..	5
General Engineering 5	Elementary Mechanical Drawing	2	..
Philosophy 5	War Issues	..	1
Electrical Engineering 21	Introductory Electrical Engineering	..	1
Military 1	Basic Course	1	..
Physical Education 1	Developmental Exercises	½	..

17½

Freshman Year—Second Semester

English 2	Composition and Rhetoric	..	3
Chemistry 8	General Inorganic Chemistry	2	2
Mathematics 16	Mathematical Analysis	..	5
General Engineering 6	Descriptive Geometry	2	..
*Hygiene 1	Personal Hygiene	..	1
Military 2	Basic Course	1	..
Physical Education 2	Developmental Exercises	½	..
Elective		..	2

18½

Sophomore Year—First Semester

Physics 3	General Physics for Engineers	..	5
Physics 5	Physical Measurements	2	..
Mathematics 25	Differential Calculus	..	3
Civil Engineering 51-53	Elementary Surveying and Plotting	2	2
English 11	Public Speaking	..	2
Mechanic Arts 3	Machine Shop	1	..
Military 3	Basic Course, second year	..	1
Physical Education 3	Advanced Exercises	½	..

18½

Sophomore Year—Second Semester

Physics 4	General Physics for Engineers	..	5
Physics 6	Physical Measurements	4	..
Mathematics 26	Integral Calculus	..	3
*Metallurgy 4	Engineering Metallurgy	..	2
Military 4	Basic Course, second year	..	1
Physical Education 4	Advanced Exercises	½	..
Elective		..	2

17½

Junior Year—First Semester

Electrical Engineering 51	Direct Current Machinery	..	3
Electrical Engineering 61	Electrical Engineering Laboratory	1	1
Electrical Engineering 57 or Physics 73	Electricity and Magnetism	..	2
Mechanical Engineering 54	Thermodynamics	..	3
Mathematics 85	Differential Equations	..	2
Mathematics 55	Analytic Mechanics	..	3
Elective		..	3 or 4

18 or 19

\*See footnote, p. 141.

<i>Junior Year—Second Semester</i>		LAB.	LEC.
Electrical Engineering 52.....	Alternating Current Machinery.....	..	3
Electrical Engineering 56.....	Alternating Current Circuits.....	..	2
Electrical Engineering 62.....	Electrical Engineering Laboratory.....	1	1
Mechanical Engineering 64.....	Mechanical Laboratory.....	2	1
Mechanical Engineering 55.....	Applied Thermodynamics.....		
or	or		
Physics 59.....	Heat and Thermodynamics.....	3 or 2	
Civil Engineering 72.....	Strength of Materials.....	..	3
Mathematics 56.....	Analytic Mechanics.....	..	2
		<hr/>	17 or 18

*Senior Year—First Semester*

Electrical Engineering 53.....	Alternating Current Machinery.....	..	3
Electrical Engineering 63.....	Electrical Engineering Laboratory.....	2	2
Electrical Engineering 67.....	Communication Engineering.....	1	2
Civil Engineering 91 or 93.....	Fluid Mechanics.....	..	3 or 4
Mechanical Engineering 57.....	Machine Design.....	1	2
Political Science 79.....	Constitutions of U. S. and Nevada.....	..	1
		<hr/>	17 or 18

*Senior Year—Second Semester*

Electrical Engineering 54.....	Electrical Design.....	..	3
Electrical Engineering 64.....	Electrical Engineering Laboratory.....	2	2
Electrical Engineering 84.....	Seminar.....	..	1
Physics 57.....	Electrical Measurements.....	2	..
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
*Business Administration 41.....	Fundamentals of Business Organization.....	..	3
Elective.....		<hr/>	4 or 5
			18 or 19

SCHOOL OF CIVIL ENGINEERING

*Freshman Year—First Semester*

		LAB.	LEC.
English 1.....	Composition and Rhetoric.....	..	3
Chemistry 7.....	General Inorganic Chemistry.....	2	2
Mathematics 15.....	Mathematical Analysis.....	..	5
General Engineering 5.....	Elementary Mechanical Drawing.....	2	..
Philosophy 5.....	War Issues.....	..	1
Civil Engineering 19.....	Technical Report.....	..	1
Military 1.....	Basic Course.....	1	..
Physical Education 1.....	Developmental Exercises.....	½	..
		<hr/>	17½

*Freshman Year—Second Semester*

English 2.....	Composition and Rhetoric.....	..	3
Chemistry 8.....	General Inorganic Chemistry.....	2	2
Mathematics 16.....	Mathematical Analysis.....	..	5
General Engineering 6.....	Descriptive Geometry.....	2	..
Geology 10.....	Engineering Geology.....	..	3
Hygiene 2.....	Personal Hygiene.....	..	1
Military 2.....	Basic Course.....	1	..
Physical Education 2.....	Developmental Exercises.....	½	..
		<hr/>	19½

*Sophomore Year—First Semester*

Mathematics 25.....	Differential Calculus.....	..	3
Physics 3.....	General Physics for Engineers.....	..	5
English 11.....	Public Speaking.....	..	2
Civil Engineering 51-53.....	Elementary Surveying.....	2	2
Civil Engineering 61.....	Highway Engineering.....	..	2
Physical Education 3.....	Advanced Exercises.....	½	..
Military 3.....	Basic Course.....	1	..
		<hr/>	17½

*Sophomore Year—Second Semester*

		LAB.	LEC.
Mathematics 26.....	Integral Calculus .....	..	3
Physics 4.....	General Physics for Engineers.....	..	5
Civil Engineering 52-54.....	Advanced Surveying .....	2	2
Civil Engineering 62.....	Civil Engineering Drawing.....	2	..
Metallurgy 4.....	Engineering Metallurgy .....	..	2
Military 4.....	Basic Course .....	1	..
Physical Education 4.....	Advanced Exercises .....	$\frac{1}{2}$	..

17 $\frac{1}{2}$ *Summer Work*

Civil Engineering 58.....	Summer Surveying.....	4	..
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*Junior Year—First Semester*

Mathematics 55.....	Analytic Mechanics .....	..	3
Civil Engineering 63-65.....	Railroad Engineering .....	2	3
Mechanical Engineering 54.....	Thermodynamics .....	..	3
Civil Engineering 93.....	Elementary Fluid Mechanics .....	1	3
Political Science 79.....	Constitutions of U. S. and Nevada.....	..	1
Civil Engineering 89.....	Fluid Mechanics Laboratory .....	2	..

18

*Junior Year—Second Semester*

Mathematics 56.....	Analytic Mechanics .....	..	2
Civil Engineering 72.....	Strength of Materials .....	..	3
Civil Engineering 74.....	Strength of Materials Laboratory.....	1	..
Civil Engineering 94.....	Irrigation Engineering .....	..	3
Civil Engineering 76.....	Structural Analysis .....	1	2
Civil Engineering 56.....	Foundations and Sub-Structures.....	..	2
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
Electrical Engineering 24.....	Elementary Electrical Engineering .....	..	2

17

*Senior Year—First Semester*

Civil Engineering 77.....	Advanced Structural Analysis, Design....	2	1
Civil Engineering 85.....	Reinforced Concrete .....	2	2
Civil Engineering 87.....	Contracts and Specifications.....	..	3
Civil Engineering 97.....	Hydrology (A) .....	..	3
Electives.....	.....	..	5

18

*Senior Year—Second Semester*

Civil Engineering 66.....	Engineering Economics .....	..	2
Civil Engineering 78.....	Structural Steel and Concrete Design....	2	1
Civil Engineering 96.....	Sanitary Engineering .....	..	3
Civil Engineering 98.....	Hydrology (B) .....	..	3
Civil Engineering 99.....	Engineering Problems .....	..	..
or	or		
Civil Engineering 100.....	Thesis .....	2	..
Electives.....	.....	..	6

19

## THE COLLEGE OF AGRICULTURE

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

### FACULTY

- JOHN O. MOSELEY, M.A., LL.D., President of the University.  
 CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.  
 FREDERICK WESTON WILSON, M.S., Acting Dean of the College of Agriculture;  
 Professor of Animal Husbandry.  
 REUBEN CYRIL THOMPSON, M.A., LL.D., Professor of Philosophy.  
 STANLEY G. PALMER, M.E., Dean of the College of Engineering; Professor of  
 Electrical Engineering.  
 JAMES REED YOUNG, Ph.D., Professor of Psychology.  
 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.  
 THEODORE H. POST, M.A., Professor of Music.  
 ELSA SAMETH, M.S., Professor of Physical Education for Women.  
 ALFRED LESLIE HIGGINBOTHAM, M.A., Professor of Journalism.  
 SIGMUND W. LEIPSON, Ph.D., Professor of Physics.  
 VINCENT P. GIANELLA, Ph.D., Professor of Geology.  
 ELDON WITTEWER, Ph.D., Professor of Agricultural Economics.  
 MILDRED SWIFT, M.S., Professor of Home Economics.  
 JOHN C. HOWARD, A.B., Major, U. S. Army, Professor of Military Science and  
 Tactics.  
 MILAN J. WEBSTER, Ph.D., Professor of Economics, Business, and Sociology.  
 ROBERT STUART GRIFFIN, Ph.D., Professor of English.  
 RALPH A. IRWIN, Ph.D., Professor of Psychology.  
 GILBERT BRUCE BLAIR, A.M., Associate Professor of Physics and Astronomy.  
 JESSIE P. POPE, M.A., Associate Professor of Home Economics.  
 PAUL A. HARWOOD,<sup>1</sup> M.A., Associate Professor of English.  
 MERYL WILLIAM DEMING, Ph.D., Associate Professor of Chemistry.  
 CLAUDE CARSON SMITH, M.A., Associate Professor of History and Political  
 Science.  
 CHESTER M. SCRANTON, M.A., Associate Professor of Physical Education for Men.  
 LOUIS TITUS, M.S., Associate Professor of Agronomy.  
 JAMES W. COLEMAN,<sup>1</sup> M.A., Associate Professor of Physical Education for Men.  
 ANATOLE G. MAZOUR, Ph.D., Associate Professor of History and Political Science.  
 W. DWIGHT BILLINGS, Ph.D., Associate Professor of Botany.  
 EDWARD W. LOWRANCE, Ph.D., Associate Professor of Biology.  
 CHARLTON G. LAIRD, Ph.D., Associate Professor of English.  
 LORING R. WILLIAMS, Ph.D., Associate Professor of Chemistry.  
 CHARLES W. HODGSON,<sup>1</sup> Ph.D., Associate Professor of Agronomy.  
 E. MAURICE BEESLEY, Ph.D., Associate Professor of Mathematics.  
 ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business, and  
 Sociology.  
 WILLIAM C. MILLER, M.A., Assistant Professor of English.  
 ALICE B. MARSH, M.S., Assistant Professor of Home Economics.  
 LEONARD E. CHADWICK, B.S., Assistant Professor of Economics, Business, and  
 Sociology.  
 WILLIAM O. HOLMES, B.A., Assistant Professor of English.  
 FRANK RICHARDSON, Ph.D., Assistant Professor of Biology.  
 CLARENCE J. THORNTON, B.S., Instructor in Poultry Husbandry.  
 MICHAEL J. MCCORMICK, Sergeant, U. S. Army, Instructor in Military Science  
 and Tactics.  
 HELEN JOSLIN, Instructor in Art.

<sup>1</sup>Absent on leave; war service.

RUTH IRENE RUSSELL,<sup>1</sup> M.S., Instructor in Physical Education for Women.  
J. RAYMOND BUTTERWORTH,<sup>1</sup> M.A., Instructor in English.  
ETHEL M. DIXON, B.P.E., Instructor in Physical Education for Women.

### AIM

The aim of the School of Agriculture is to give such training in scientific and vocational agriculture as will furnish a well-rounded education.

### EQUIPMENT

**AGRICULTURE BUILDING**—For description of Agriculture Building see Buildings, Index.

**UNIVERSITY FARM**—The University Farm, comprising 200 acres is located three miles south of Reno along the Virginia road.

**DAIRY**—The laboratory in the Agriculture Building, equipped with machinery and apparatus, furnishes opportunity for instruction in methods of handling milk and dairy products, as milk testing, butter making, and the marketing of milk.

**SHOPS**—Two shops have been fitted up for carrying on instruction in farm mechanics. One shop, in rear of Lincoln Hall, includes forges and other equipment for farm blacksmithing, tools and equipment for plumbing, soldering, cold metal, machinery, and gas engine repair.

Another shop located above the machine shop in the Mechanical Engineering Building is equipped for farm carpentry, painting, glazing, ropework, and building construction. Actual practice is an outstanding objective in all phases of farm mechanics work.

**GREENHOUSE.** A greenhouse is available to students for laboratory work in courses in botany and horticulture. A large room is devoted to experimental work in plant physiology, ecology, etc., while other rooms in the greenhouse make available materials for laboratory work in the beginning courses.

**THE HERBARIUM.** The Herbarium of the University of Nevada contains at the present time approximately 20,000 sheets, representing, in large part, collections made in Nevada. This herbarium is probably the most complete collection of Nevada plants in existence and additional new plants of the State are being added from year to year. It is located in the Agriculture Building and is administered by the botany staff.

### ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of credits belonging to each, see Index for subjects about which information is desired.

### REQUIREMENTS FOR A BACCALAUREATE DEGREE IN AGRICULTURE

The degree of Bachelor of Science in Agriculture with majors in general agriculture, agricultural economics, preforestry, range management, agronomy-botany, animal husbandry and vocational agriculture will be conferred upon students who satisfactorily complete the full course of study in the selected major field in the School of Agriculture, aggregating 126 semester units.

<sup>1</sup>Absent on leave; war service.

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

Definition of a Major in the College of Agriculture—

To complete a major in the College of Agriculture means that a student has not completed a given number of hours in a specific department, but that he has completed a prescribed curriculum in a given field in the college.

### AGRICULTURAL CURRICULA

UNIFORM FRESHMAN YEAR		<i>1st</i> Sem.	<i>2d</i> Sem.
Philosophy 5.....	War Issues.....	1	..
Military 1-2.....	Basic Course, 1st year.....	1	1
Physical Education 3-4.....	Developmental Exercises.....	$\frac{1}{2}$	$\frac{1}{2}$
Chemistry 1-2.....	General Inorganic .....	4	4
Botany 3.....	General Botany .....	3	..
Animal Husbandry 1.....	Breeds of Livestock.....	3	..
English 1-2.....	Composition and Rhetoric.....	3	3
Agronomy 1-2.....	Soil Conservation and Forage Crops..	2	3
Zoology 2.....	General Zoology .....	..	4
		<hr/>	<hr/>
		17 $\frac{1}{2}$	15 $\frac{1}{2}$

### GENERAL COURSE IN AGRICULTURE

SOPHOMORE YEAR			
Military 3-4 .....	.....	1	1
Physical Education 3-4 .....	.....	$\frac{1}{2}$	$\frac{1}{2}$
Agricultural Economics 1-2 .....	.....	3	3
Geology 1 or 10 .....	.....	3	..
Agronomy 5.....	.....	3	..
Animal Husbandry 3-30.....	.....	4	3
Botany 22 .....	.....	..	4
Dairying 1 .....	.....	..	3
Electives .....	.....	2	2
		<hr/>	<hr/>
		16 $\frac{1}{2}$	16 $\frac{1}{2}$

JUNIOR YEAR			
Dairy Husbandry 53 .....	.....	3	..
Agricultural Electives .....	.....	8	8
Electrical Engineering 47 .....	.....	2	..
Nonagricultural Electives .....	.....	..	5
Open Electives .....	.....	3	3
		<hr/>	<hr/>
		16	16

SENIOR YEAR			
Political Science 79-80 .....	.....	1	1
Agricultural Electives .....	.....	7	7
Nonagricultural Electives .....	.....	3	3
Open Electives .....	.....	4	4
		<hr/>	<hr/>
		15	15

The following course of study is designed for students intending to enter the field of forestry or of range management. It includes the fundamental subjects required in forestry schools and makes it possible, upon completion of the course, to obtain a degree in forestry in a professional school of forestry in from one and one-half to two years:



PREFORESTRY AND RANGE MANAGEMENT

SOPHOMORE YEAR		1st Sem.	2d Sem.
Military 3-4	Basic Course	1	1
Physical Education 3-4	Advanced Exercises	$\frac{1}{2}$	$\frac{1}{2}$
Agricultural Economics 1-2	Principles of Economics	3	3
Botany 21-22	Morphology and Taxonomy	4	4
Geology 1 or 10	Physical or Engineering Geology	3	..
Mathematics 22	General Mathematics	..	4
Botany 53	Dendrology	4	..
English 11	Public Speaking	2	..
Elective	Preforestry	..	3
		17 $\frac{1}{2}$	15 $\frac{1}{2}$

Range management students must register in Animal Husbandry 3 and 30. Botany 21 and 53 are not required of range management students.

JUNIOR YEAR			
Physics 1a-1b	General Physics	4	4
Civil Engineering 51	Surveying	4	..
Zoology 59-60	Entomology and Wildlife Ecology	3	3
Agronomy 7	Soils	3	..
Botany 55	Plant Physiology	..	3
Economics 56	Land Economics	..	2
Botany 54	Agrostology	..	3
Civil Engineering 2	Map Making	..	1
		14	16

SENIOR YEAR			
Political Science 79-80	Constitutions of U. S. and Nevada	1	1
Botany 75-76	Ecology	4	4
Business Administration 43-44	Accounting	3	3
Botany 64 or 56	Plant diseases—Poisonous plants	..	4
Agronomy 60	Pasture Management	3	..
Elective		5	3
		16	15

Range management students must register in Animal Husbandry 58. Business Administration 43-44 is not required of range management students.

AGRONOMY-BOTANY

SOPHOMORE YEAR		1st Sem.	2d Sem.
Military 3-4	Basic Course	1	1
Physical Education 3-4	Advanced Exercises	$\frac{1}{2}$	$\frac{1}{2}$
Chemistry 9-10	Analytical Chemistry	4	4
Agricultural Economics 1-2	Principles of Economics	3	3
Botany 21	Morphology and Development of Plants	4	..
Agronomy 5	Field Crops	3	..
Mathematics 22	General Mathematics	..	4
Botany 22	Taxonomy	..	4
		15 $\frac{1}{2}$	16 $\frac{1}{2}$

JUNIOR YEAR			
Physics 1a-1b	General Physics	4	4
Zoology 59-60	Entomology and Wildlife Ecology	3	3
Agronomy 7	Soils	3	..
Botany 56	Weeds, Poisonous Plants, and Seed Test	..	..
Botany 64	Plant Diseases	..	4
Agricultural Economics 56	Land Economics	..	2
Botany 55	Plant Physiology	..	3
Civil Engineering 51	Surveying	4	..
Elective		1	..
		15	16

		<i>1st</i>	<i>2d</i>
		<i>Sem.</i>	<i>Sem.</i>
SENIOR YEAR			
Chemistry 51-52.....	Organic Chemistry .....	4	4
Geology 1 or 10.....	Physical or Engineering Geology.....	3	..
Agronomy 62.....	Soil Fertility .....	..	3
Political Science 79-80.....	Constitutions of U. S. and Nevada....	1	1
Agronomy 60.....	Pasture Management .....	3	..
Agricultural Economics 52.....	Agricultural Economics .....	..	3
Agronomy 76.....	History of Agriculture .....	..	3
Agronomy 63.....	Land Values .....	3	..
Elective.....	.....	2	2
		16	16

## AGRICULTURAL ECONOMICS

		<i>1st</i>	<i>2d</i>
		<i>Sem.</i>	<i>Sem.</i>
SOPHOMORE YEAR			
Military 3-4.....	Basic Course .....	1	1
Physical Education 3-4.....	Advanced Exercises .....	½	½
Agricultural Economics 1-2.....	Principles of Economics with Appli- cation to Agriculture .....	3	3
Agricultural Economics 45.....	Farm Accounting .....	3	..
Agronomy 7.....	Soil Management .....	3	..
Mathematics 22.....	General Mathematics .....	..	4
Animal Husbandry 3-30.....	Livestock Judging and Feed.....	4	3
Sociology 50.....	Rural Sociology .....	..	2
Mathematics 5.....	Algebra .....	2	..
Elective .....	.....	..	2
		16½	15½

## JUNIOR YEAR

Agricultural Economics 57.....	Marketing of Agricultural Products..	3	..
Agricultural Economics 56.....	Land Economics .....	..	2
Agronomy 76.....	History of Agriculture.....	..	3
Psychology 5.....	General Psychology .....	..	3
Geology 1 or 10.....	Physical or Engineering Geology.....	3	..
Economics 61.....	Statistical Methods.....	3	..
Agricultural Economics 64.....	Cooperative Organizations .....	..	2
Agricultural Economics 65.....	Agricultural Prices .....	3	..
Agricultural Economics 55.....	Rural Finance .....	2	..
English 11-12.....	Public Speaking .....	2	2
Elective .....	.....	..	4
		16	16

## SENIOR YEAR

Political Science 79-80.....	Constitutions of U. S. and Nevada....	1	1
Agricultural Economics 76.....	Farm Management .....	..	3
Agronomy 54.....	Irrigation and Drainage.....	3	..
Economics 52.....	Money and Banking .....	3	..
Agronomy 63.....	Farm Land Values .....	3	..
Agricultural Economics 52.....	Agricultural Economics Policies.....	..	3
Elective .....	.....	5	7
		15	14

## VOCATIONAL AGRICULTURE

		<i>1st</i>	<i>2d</i>
		<i>Sem.</i>	<i>Sem.</i>
SOPHOMORE YEAR			
Military 3-4.....	Basic Course .....	1	1
Physical Education 3-4.....	Advanced Exercises .....	½	½
Agronomy 5.....	Field Crops .....	3	..
Animal Husbandry 3-30.....	Livestock Judging and Feeding.....	3	3
Agricultural Economics 1-2.....	General Economics .....	3	3
Poultry 2.....	Farm Poultry Management.....	3	..
Dairy 1.....	Dairying .....	..	3
Botany 22.....	Taxonomy .....	..	4
Farm Mechanics 1-20.....	Blacksmithing, General Mechanics...	2	2
		15½	16½

		1st Sem.	2d Sem.
<b>JUNIOR YEAR</b>			
Agronomy 7-62.....	Soil Management and Soil Fertility.....	3	3
Psychology 5-6.....	General Psychology .....	3	3
Animal Husbandry 58.....	Range Management .....	3	3
Farm Mechanics 41-32.....	Machinery and Equipment.....	2	2
Poultry 8.....	Turkey Production .....	3	..
Dairy 53-55.....	Dairy Products and Sanitation.....	3	3
Animal Husbandry 66.....	Livestock Management .....	..	3
		14	17
<b>SENIOR YEAR</b>			
Education 60-82.....	Problems of Secondary Education.....	2	2
Education 24.....	School Organization and Law.....	2	..
Education 87-86.....	Prob. and Methods of Voc. Agri.....	3	2
Education 75-76.....	Practice Teaching .....	2	2
Farm Mechanics 85.....	Teaching Farm Mechanics .....	2	..
Political Science 79-80.....	Constitutions of U. S. and Nevada... 1	1	1
Agricultural Economics 45.....	Farm Accounting.....	3	..
Agronomy 54.....	Irrigation and Drainage.....	..	3
Agricultural Economics 76.....	Farm Management .....	..	3
Elective.....	.....	..	1
		15	14

## ANIMAL, DAIRY, AND POULTRY HUSBANDRY

		1st Sem.	2d Sem.
<b>SOPHOMORE YEAR</b>			
Military 3-4.....	Basic Course .....	1	1
Physical Education 3-4.....	Advanced Exercises .....	1	$\frac{1}{2}$
Agricultural Economics 1-2.....	General Economics .....	3	3
Botany 22.....	Taxonomy .....	..	4
Animal Husbandry 3.....	Livestock Judging .....	4	..
Animal Husbandry 30.....	Livestock Feeding .....	..	3
Dairy Husbandry 1.....	Dairying .....	3	..
English 11-12.....	Public Speaking .....	2	2
Animal Husbandry 52.....	Genetics .....	..	3
Poultry 1.....	Farm Poultry Management.....	3	..
		16 $\frac{1}{2}$	16 $\frac{1}{2}$
<b>JUNIOR YEAR</b>			
Agronomy 5.....	Field Crops .....	3	..
Animal Husbandry 58.....	Range Management.....	..	3
Animal Husbandry 53.....	Registration .....	..	1
Civil Engineering 51.....	Surveying .....	4	..
Animal Husbandry 56.....	Advanced Livestock Judging.....	3	..
Agronomy 60.....	Pasture Management .....	..	3
Animal Husbandry 63-64.....	Animal Husbandry Literature.....	2	2
Elective.....	.....	4	6
		16	15
<b>SENIOR YEAR</b>			
Political Science 79-80.....	Constitutions of U. S. and Nevada..... 1	1	1
Animal Husbandry 50.....	Animal Hygiene .....	..	3
Animal Husbandry 55.....	Advanced Livestock Feeding.....	3	..
Animal Husbandry 66.....	Livestock Management .....	..	3
Dairy Husbandry 55.....	Dairy Sanitation .....	3	..
Dairy Husbandry 57.....	Advanced Milk Production.....	..	2
Farm Mechanics 9-20.....	.....	2	2
Elective.....	.....	6	4
		15	15

## QUALIFICATION OF TEACHERS OF VOCATIONAL AGRICULTURE

A graduate of the College of Agriculture who desires to teach vocational agriculture in this State must fulfill the following requirements:

A. *Farm Experience.* The teacher of vocational agriculture must have had actual farm experience. Preference will be given to those graduates who have lived and worked upon a farm until the age of 18 years. In any case, the graduate must have had experience equal to two years after reaching the age of fourteen years.

B. *Education.* All Agricultural College graduates who wish to qualify as teachers of vocational agriculture in Nevada should arrange to complete the courses as outlined for vocational agriculture education given on page 152. It is essential that vocational agriculture teachers have a broad training foundation in animal and plant production courses, agricultural economics, marketing and farm mechanics. The animal production courses include dairy and poultry.

a. All Agricultural College graduates who wish to qualify as teachers of vocational agriculture in Nevada must also have not less than 18 semester hours of credit in educational subjects, including courses in "Special Methods of Teaching Vocational Agriculture" and "Observations and Practice Teaching of Vocational Agriculture" and certain other educational subjects as specified by law for certification of teachers.

## SCHOOL OF HOME ECONOMICS

### REQUIREMENTS FOR A BACCALAUREATE DEGREE IN HOME ECONOMICS

Home Economics is a program of studies based on sound fundamental training in the physical, biological, and social sciences with application of these to living—and this involves living with others.

These are days of challenging responsibilities, of great opportunities, to be better equipped to take ones place in the home and in the community.

Four areas of concentration are offered in order to meet individual needs; namely, teaching major; dietetics major; clothing major and a general homemaking major.

The degree of Bachelor of Science in Home Economics is conferred upon satisfactory completion of 126 semester units. Eighteen units are required for a minor in Home Economics.

### FIELDS OF CONCENTRATION TEACHING MAJOR

#### *Freshman Year—First Semester*

	LAB.	LEC.
English 1.....Composition and Rhetoric .....	..	3
Chemistry 3.....General Chemistry .....	2	2
Physical Education 1.....Freshman Practice .....	1	..
Home Economics 31.....Food .....	2	1
Philosophy 5.....War Issues .....	..	1
Home Economics 15.....Clothing .....	2	1
Elective.....	..	1

*Freshman Year—Second Semester*

		LAB.	LEC.
English 2.....	Composition and Rhetoric ..	..	3
Chemistry 4.....	General Chemistry ..	2	2
Physical Education 2.....	Freshman Practice ..	1	..
Home Economics 32.....	Food ..	2	1
Home Economics 18.....	Clothing ..	2	1
Art 6.....	Art Principles ..	2	..

16

*Sophomore Year—First Semester*

Physics 19.....	Household Physics ..	1	2
Home Economics 33.....	Nutrition in Health ..	..	3
Psychology 5.....	General Psychology ..	..	3
Physical Education 3.....	Sophomore Practice ..	$\frac{1}{2}$	..
English 44.....	Introduction to Literary Study.....	..	3
English 11.....	Public Speaking ..	..	2
Horticulture 1.....	.....	..	3

17 $\frac{1}{2}$ *Sophomore Year—Second Semester*

Physics 20.....	Household Physics ..	1	2
Psychology 6.....	General Psychology ..	..	3
Home Economics 34.....	Nutrition in Disease ..	..	3
Home Economics 45.....	Related Art ..	2	..
Home Economics 16.....	Textiles ..	1	2
Physical Education 4.....	Sophomore Practice ..	$\frac{1}{2}$	..
Home Economics 42.....	Food Economics ..	..	3

17 $\frac{1}{2}$ *Junior Year—First Semester*

Home Economics 54.....	Care of Health and Disease.....	1	2
Home Economics 99.....	Demonstration ..	5	1
Education 60.....	Problems of Secondary ..	..	3
Home Economics 87.....	Home Decoration ..	2	1
English 55.....	Speech ..	..	2

17

*Junior Year—Second Semester*

Psychology 70.....	Marriage and Divorce ..	..	2
Home Economics 86.....	Special Problems in Foods.....	..	3
Home Economics 66.....	Advanced Clothing.....	2	1
Home Economics 88.....	Household Equipment ..	1	1
Education 88.....	Problems in Homemaking Education.....	..	2
Home Economics 80.....	The Family ..	..	2

14

*Senior Year—First Semester*

Education 89.....	Methods in Teaching Vocational Homemaking ..	..	3
Home Economics 75.....	Child Development ..	..	3
Home Economics 55.....	Meal Planning ..	3	1
Education 75.....	Teaching ..	2	..
Education 24.....	School Law ..	..	2
Political Science 79.....	Constitutions of U. S. and Nevada.....	..	1

15

*Senior Year—Second Semester*

Education 76.....	Teaching ..	2	..
Education 82.....	Noninstructional Responsibilities of High School Teacher ..	2	..
Home Economics 98.....	Institutional Management ..	3	..
Home Economics 67.....	Children's Clothing ..	2	1
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
Philosophy 22.....	Applied Ethics ..	..	3

14

## CLOTHING MAJOR

*Freshman Year—First Semester*

		LAB.	LEC.
Horticulture 1.....			3
English 1.....	Composition and Rhetoric ..		3
Home Economics 15.....	Clothing ..	2	1
Physical Education 1.....	Freshman Practice ..	1	..
Science (choice of).....		3	or 4
Art 5.....	Art Structure and Composition ..	2	..
Philosophy 5.....	War Issues ..		1
		16 or 17	

*Freshman Year—Second Semester*

English 2.....	Composition and Rhetoric ..		3
Home Economics 18.....	Clothing ..	2	1
Home Economics 16.....	Textiles ..	1	2
Physical Education 2.....	Freshman Practice ..	1	..
Art 6.....	Art Structure and Composition ..	2	..
Science (choice of).....		3	or 4
		15 or 16	

*Sophomore Year—First Semester*

English 41.....	Appreciation of Literature ..		2
English 11.....	Public Speaking ..		2
Home Economics 33.....	Nutrition ..		3
Psychology 5.....	General Psychology ..		3
Physics 19.....	Household Physics ..	1	2
Physical Education 3.....	Sophomore Practice ..	$\frac{1}{2}$	..
Home Economics 31.....	Food ..	2	1
		16 $\frac{1}{2}$	

*Sophomore Year—Second Semester*

English 42.....	Appreciation of Literature ..		2
English 12.....	Public Speaking ..		2
Home Economics 32.....	Food ..	2	1
Physics 20.....	Household Physics ..	1	2
Home Economics 45.....	Related Art ..	2	..
Physical Education 4.....	Sophomore Practice ..	$\frac{1}{2}$	..
Elective.....			3
		15 $\frac{1}{2}$	

*Junior Year—First Semester*

Art 51.....	Watercolor and Oil Painting.....	3	..
Art 53.....	Advance Freehand Drawing ..	3	..
Agricultural Economics 1.....	Principles of Agricultural Economics ..		3
English 70.....	American Literature ..		3
Home Economics 87.....	Home Decoration ..	2	1
Electives.....			2
		17	

*Junior Year—Second Semester*

Art 52.....	Watercolor and Oil Painting.....	3	..
Art 54.....	Commercial Art ..	3	..
Agricultural Economics 2.....	Principles of Agricultural Economics ..		3
Home Economics 86.....	Home Management ..		3
Philosophy 22.....	Applied Ethics ..		2
Home Economics 66.....	Clothing ..	2	1
		17	

*Senior Year—First Semester*

English 55.....	Technique of Public Discussion.....		2
Home Economics 99.....	Demonstration ..	5	1
Home Economics 75.....	Child Development ..		3
History 69.....	Recent European History ..		2
Psychology 61.....	Business Psychology ..		3
Political Science 79.....	Constitutions of U. S. and Nevada.....	1	1
Journalism 21.....	Reporting ..	2	..
		16	

*Senior Year—Second Semester*

		LAB.	LEC.
Psychology 70.....	Marriage and Divorce .....	..	3
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
Journalism 22.....	Reporting .....	3	..
Home Economics 67.....	Children's Clothing .....	2	1
Home Economics 86.....	Home Management .....	2	1
Literature (elective).....	.....	..	3

16

## DIETETICS MAJOR

*Freshman Year—First Semester*

English 1.....	Composition and Rhetoric .....	..	3
Chemistry 7.....	General Inorganic Chemistry.....	2	3
Physical Education 1.....	Freshman Practice .....	1	..
Home Economics 31.....	General Foods .....	2	1
Home Economics 15.....	Clothing .....	2	1
Philosophy 5.....	War Issues .....	..	1
Elective.....	.....	..	1

17

*Freshman Year—Second Semester*

English 2.....	Composition and Rhetoric .....	..	3
Chemistry 8.....	General Inorganic Chemistry.....	2	3
Home Economics 32.....	General Foods .....	..	3
Home Economics 16.....	Textiles .....	..	3
Home Economics 18.....	Clothing .....	..	3
Physical Education 2.....	Freshman Practice .....	1	..

17

*Sophomore Year—First Semester*

Physics 19.....	Household Physics .....	1	2
Chemistry 15.....	Quantitative Analytical Chemistry.....	3	2
Home Economics 33.....	Nutrition in Health .....	..	3
Psychology 5.....	General Psychology .....	..	3
Physical Education 3.....	Sophomore Practice .....	½	..
Agricultural Economics 1.....	Principles of Economics.....	..	3

17½

*Sophomore Year—Second Semester*

Physics 20.....	Household Physics .....	1	2
Chemistry 32.....	Organic and Physiological Chemistry.....	..	5
Home Economics 34.....	Nutrition in Disease .....	..	3
Physical Education 4.....	Sophomore Practice .....	½	..
Home Economics 42.....	Food Economics.....	..	3
Agricultural Economics 2.....	Principles of Economics.....	..	3

17½

*Junior Year—First Semester*

Zoology 57.....	Physiology .....	1	2
Home Economics 75.....	Child Development .....	..	3
Home Economics 54.....	Care of Health and Disease .....	1	2
Home Economics 55.....	Meal Planning .....	3	1
Sociology 1.....	General Sociology .....	..	3

16

*Junior Year—Second Semester*

Zoology 58.....	Physiology .....	1	2
Home Economics 98.....	Institution Management .....	..	3
English 55.....	Public Discussion .....	..	2
Psychology 40.....	Mental Hygiene .....	..	3
Home Economics 96.....	Quantity Foods .....	3	..

14

*Senior Year—First Semester*

		LAB.	LEC.
Home Economics 102.....	Consumer Education .....		3
Bacteriology 51.....	General Bacteriology .....	2	2
Home Economics 89.....	Section 2 Education .....		3
Home Economics 99.....	Demonstration .....	5	1
Political Science 79.....	Constitutions of U. S. and Nevada .....		1

17

*Senior Year—Second Semester*

Home Economics 94.....	Experimental Foods .....	1	1
Home Economics 85.....	Special Problems .....		3
Political Science 80.....	Constitutions of U. S. and Nevada .....		1
Philosophy 22.....	Applied Ethics .....		3
Electives.....			6

15

## GENERAL HOME ECONOMICS

*Freshman Year—First Semester*

		LAB.	LEC.
English 1.....	Composition and Rhetoric .....		3
Home Economics 15.....	Clothing .....	2	1
Physical Education 1.....	Freshman Practice .....	1	
Music 10.....	Appreciation of Music.....		2
One Year Science			
Zoology	} choice of.....	3	or 4
Botany			
Chemistry			
Mathematics			
Physics 19.....	Household Physics .....	1	2
Philosophy 5.....	War Issues .....		1

16 or 17

*Freshman Year—Second Semester*

English 2.....	Composition and Rhetoric .....		3
Home Economics 18.....	Clothing .....	2	1
Physical Education 2.....	Freshman Practice .....	1	
Home Economics 16.....	Textiles .....	1	2
One Year Science			
Zoology	} choice of.....	3	or 4
Botany			
Chemistry			
Mathematics			
Physics 20.....	Household Physics .....		3

16 or 17

*Sophomore Year—First Semester*

Home Economics 33.....	Nutrition .....		3
English 11 or 41.....	Public Speaking or Appreciation of Literature .....		2
Home Economics 31.....	Foods .....	2	1
Philosophy 1.....	Introduction to Philosophy .....	3	
Psychology 5.....	General Psychology .....		3
Horticulture 1.....	General Horticulture .....		3

17

*Sophomore Year—Second Semester*

Home Economics 34.....	Nutrition .....		3
English 12 or 42.....	Public Speaking or Appreciation of Literature .....		2
Home Economics 32.....	Foods .....	2	1
Home Economics 67.....	Children's Clothing .....	2	1
Home Economics 45.....	Related Art .....	2	
Home Economics 42.....	Food Economics .....		3

16



*Junior Year—First Semester*

		LAB.	LEC.
Art 5.....	Art Structure and Composition.....	2	..
Home Economics 54.....	Care of Health and Disease in the Home and First Aid.....	..	3
Home Economics 75.....	Child Development .....	..	3
Home Economics 87.....	House Decoration .....	2	1
Agricultural Economics 1.....	Principles of Economics.....	..	3
Electives.....	.....	..	3

17

*Junior Year—Second Semester*

Psychology 40.....	Mental Hygiene .....	..	3
Home Economics 66.....	Advanced Clothing .....	2	1
Home Economics 86.....	Home Management .....	..	3
Home Economics 80.....	The Family .....	..	2
Agricultural Economics 2.....	Principles of Economics.....	..	3
Psychology 70.....	Marriage and Divorce.....	..	2

16

*Senior Year—First Semester*

Home Economics 55.....	Meal Planning .....	3	1
History (choice of).....	.....	2	or 4
Home Economics 85.....	Food Problems .....	..	3
Home Economics 95.....	Clothing Problems .....	..	3
Political Science 79.....	Constitutions of U. S. and Nevada.....	..	1
Elective.....	.....	..	3

16 or 18

*Senior Year—Second Semester*

Home Economics 88.....	Household Equipment .....	1	1
Home Economics 102.....	Consumer Education .....	..	3
Home Economics 68.....	Costume .....	2	..
Political Science 80.....	Constitutions of U. S. and Nevada.....	..	1
Home Economics 67.....	Children's Clothing .....	2	1
Philosophy 22.....	Applied Ethics .....	..	3

14

## COURSES OF INSTRUCTION

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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 Agronomy Farm Mechanics Animal Husbandry Art Astronomy (See Physics 7) Athletics (See Physical Education) Biology Bacteriology Botany Horticulture Hygiene Zoology Business (See Economics, Business, Chemistry and Sociology) Civil Engineering Dairy Husbandry (See Animal Hus- bandry) Drawing (See Mechanical Engineer- ing) Economics, Business, and Sociology Education Kindergarten—Primary General Elementary Secondary and Vocational Educational Psychology Vocational Agriculture Electrical Engineering English Language and Literature Literature and Composition Speech	Foreign Languages French German Italian Latin Portuguese Spanish General Engineering Geology History and Political Science Home Economics Journalism Mathematics and Mechanics Mechanic Arts Mechanical Engineering Metallurgy Military Science and Tactics Mineralogy (See Geology) Mining Music Orientation Philosophy Physical Education Men Women Physics Political Science (See History and Political Science) Poultry Husbandry (See Animal Husbandry) Psychology Sociology (See Economics, Business and Sociology)
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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.

## AGRICULTURAL ECONOMICS

PROFESSOR WITTWER, HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR TITUS

1. PRINCIPLES OF ECONOMICS WITH APPLICATIONS TO AGRICULTURE. An introduction to the economics of production, value and exchange, money and credit, business cycles, international trade, distribution of wealth, labor, transportation, agricultural credit, marketing and public finance with special emphasis on their application to agriculture. *Prerequisite:* Sophomore year. *First semester. Three credits.* Wittwer.

2. PRINCIPLES OF ECONOMICS WITH APPLICATIONS TO AGRICULTURE. A continuation of 1. *Second semester. Three credits.* Wittwer.

45. FARM ACCOUNTING. A study of various survey forms and types of record books. Actual farm records will be used and the various factors which make for successful farming criticized and studied. *First semester. Three credits.* Titus.

52. AGRICULTURAL ECONOMIC POLICY. A study of economic policy and practice in connection with such problems as farm tenancy and ownership, taxation, tariff, foreign trade, insurance, farm labor, production, and price control. *Prerequisite:* Agricultural Economics 1 and 2. *Second semester. Three credits.* Wittwer.

55. RURAL FINANCE. Fundamental principles of credit and finance as applied to agriculture. Credit requirements of agriculture, existing agencies for supplying credit and ways and means of utilizing them; strength and weakness of present credit system and proposals for reform. *Junior year. First semester. Two credits.* Wittwer.

56. LAND ECONOMICS. Deals with the underlying principles pertaining to urban, agricultural, mineral, forest, range, and other types of land in their social setting. Attention is focused on land resources, their classification, valuation, and use and related problems of finance, including taxation and rents. *Prerequisite:* Agricultural Economics 1 and 2. *Second semester. Two credits.* Wittwer.

57. MARKETING OF AGRICULTURAL PRODUCTS. A study of the organization, functions and operations of the market structure and of marketing enterprises with special reference to the distribution of agricultural products. *Junior year. First semester. Three credits.* Wittwer.

64. COOPERATIVE ORGANIZATIONS. A study of the development of cooperation in agriculture in the United States and foreign countries. Analysis of principles and problems peculiar in cooperative associations. The organization, financing and management of different types of cooperative marketing and purchasing associations. *Junior year. Second semester. Two credits.* Wittwer.

65. AGRICULTURAL PRICES. A study of prices of farm products in relation to agricultural and industrial conditions. Factors determining prices. Price trends. Adjustment of production to price changes. Price stabilization. Prices and market grades. Price policies. Market quotations. *Senior year. First semester. Three credits.* Wittwer.

71. CURRENT ECONOMIC PROBLEMS. A course designed to acquaint the student with some of the major economic problems of our present

day. *Prerequisite:* Agricultural Economics 1 and 2 or consent of instructor. *First semester. Two credits.* Wittwer. For credit only in the College of Agriculture.

76. FARM MANAGEMENT. The relation of capital and labor to farm management; the general management of implements and equipment; ownership versus rental of land; the choice of a farm; systems of farming; farming compared with other lines of business; marketing problems; the management of fields; crops and manures. *Prerequisite:* Senior standing. *Second semester. Three credits.* Titus.

84. RESEARCH AND EXTENSION ORGANIZATION AND METHODS. A study of extension and research organization and methods, with emphasis on economics and marketing problems. Agriculture's part in the war program, project planning, methods of collecting information, organizing data, preparing and presenting reports will be emphasized. *Prerequisites:* Junior standing or consent of instructor. *Second semester. Three credits.* Wittwer.

199-200. THESIS COURSE IN AGRICULTURAL ECONOMICS. *Either semester. Credit to be arranged.* Wittwer.

### AGRONOMY

ASSOCIATE PROFESSOR HODGSON,<sup>1</sup> ACTING HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR TITUS  
MR. THORNTON

1. SOIL EROSION AND CONSERVATION. A study of soil erosion conditions throughout the United States from an agronomic point of view. A study of the influence of high soil productivity and protective vegetative covering of the soil is emphasized as a means of controlling soil erosion and its conservation. Also stresses the importance of contour strip cropping and terracing on sloping lands. The use of hay and pasture grasses and legumes in controlling soil erosion is emphasized. *First semester. Lectures, two hours. Two credits.* Agriculture building. Hodgson.

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

5. FIELD CROPS. An advanced study of the principal cereal crops—corn, wheat, oats, barley, rye, rice, sorghum, etc. *First semester. Lectures, three hours. Three credits.*

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

46. WEEDS, AN ECONOMIC FACTOR IN AGRONOMY. Deals with the

<sup>1</sup>Absent on leave; war service.

effects of weeds on farm values and crop production. Important weeds in the various crops and in the different sections of the United States. Method of weed eradication and control. Control of poisonous plant losses in livestock and methods of eradicating poisonous plants. A few field trips will be taken to observe weed infestations and control measures. *Two credits, two lectures.* Hodgson.

54. IRRIGATION AND DRAINAGE. A study of the principles of irrigation. Sources of water supply; measurements of water; water requirements of crops; duty of water; losses in use of irrigation water; preparation of land and methods of irrigation; farm ditches and structures; drainage of farm lands and reclamation of alkali lands. *Second semester. Lectures, three hours. Three credits.* Titus.

60. PASTURE MANAGEMENT. Grazing management of tame and native pastures, poisonous plants, and methods of eliminating losses. *Both semesters. Three credits.* Hodgson.

61. SOIL ANALYSIS. A laboratory course involving a study of the chemical analyses of soils. Determination of humus, organic matter, nitrogen, phosphorus, potassium, etc. A study is also made of the so-called quick tests for determining the fertilizer requirements of soil. *Prerequisites:* Senior standing, Chemistry 9 and 10. *Second semester. Laboratory course, three periods. Three credits.* Fee \$9.

62. SOIL FERTILITY. Composition and value of fertilizers, barn-yard and green manures; maintenance and improvement of fertility; effect of various crops and different systems of farming on the fertility of the soil. Studies of crop rotation and fertility. Study of productivity and best uses of Nevada soils and their improvement. *Prerequisites:* Agronomy 1 and 7. *Second semester. Lectures, three hours. Three credits.*

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.

65. RANGE PRACTICE. Field work in range management, involving training in making range reconnaissance, estimating palatability and utilization, and conducting of technical range research. Some time also will be devoted to inspecting range improvement and making management plans. *Two lectures, one laboratory period. Three credits. First semester.* Hodgson.

66. ADVANCED SOIL CONSERVATION. History of soil erosion and control in various parts of the United States. Methods of soil conservation and erosion control. The Federal Soil Conservation, A. A. A., and Land Use Planning Programs as they pertain to soil conservation. Influence of varied cultural and grazing practices and type of plant

cover upon soil erosion and conservation. *One laboratory period. Three credits. Second semester. Hodgson.*

67. PRINCIPLES OF RANGE MANAGEMENT. A basic course dealing with problems met in managing native range lands, including a study of grazing regions and problems of each; revegetation of range lands, maintenance of production, utilization of range forage. *Three credits. First semester. Hodgson.*

68. AGRONOMY SEMINAR. Deals with the work of various experiment stations and extension agencies, and also requirements and opportunities for college graduates in different fields of agricultural work. *One credit. Second semester. Hodgson. Fee \$2.*

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.*

92. SOIL SURVEY METHODS. Summer Field Course. Methods of mapping and classifying soils, the preparation of soil reports; field work in soil surveying and field studies of the profile of representative Nevada soils. *Prerequisite: Agronomy 5. Four to six credits.*

94. RANGE SURVEY METHODS. Summer Field Course. Methods of mapping and classifying range areas of range lands, the preparation of range reports, field work in range surveying, and field studies of representative Nevada ranges. *Prerequisite: Junior standing in Range Management. Four to six credits.*

96. AGRONOMIC SURVEY METHODS. Summer Field Course. Methods of mapping and classifying forage, pasture, and field crop areas. Preparation of agronomic reports. Field work in crop surveying and field studies of representative Nevada farm areas. *Prerequisite: Junior standing. Four to six credits.*

157. ADVANCED FARM MANAGEMENT. A course for graduate students consisting of assigned special problems in farm management. *Either semester. Three to five credits.*

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

#### *Farm Mechanics*

11. FARM BLACKSMITHING. Instruction and laboratory practice in the heating, bending, shaping, and welding of mild steel. Forging and tempering of tool steel; general farm blacksmithing. *First semester. Two credits. Titus. Fee \$3.*

20. FARM UTILITIES. General mechanics including rope work, blocks and tackle, belts, pulleys, pipe fitting, farm plumbing, soldering, sheet metalwork, farm pumps, water supply, and sewage disposal. *Second semester. Two credits. Titus. Fee \$3.*

32. FARM MACHINERY AND EQUIPMENT. A study of the construction, operation, care, and repair of farm machinery and equipment. *Second semester. Two credits. Titus. Fee \$3.*

41. FARM CARPENTRY. Elementary drawing, use and care of wood

working tools, general farm carpentry, painting, glazing, farm building construction, blue print reading, cost estimating. *First semester. Two credits.* Titus. Fee \$3.

53. FARM GAS ENGINES AND TRACTORS. The development, principles of operation, care, and repair of farm gas engines and farm tractors. Demonstrations and practice in the operation of farm tractors will be given whenever practicable. *First semester. Two credits.* Titus. Fee \$3.

85. METHODS OF TEACHING FARM MECHANICS. A course designed for students preparing to meet the qualifications of agriculture and farm mechanics instructors in high schools. The organization and administration of a farm mechanics course, including objectives, course content, lesson planning, and teaching methods. *First semester. Two credits.* Titus.

### ANIMAL HUSBANDRY

PROFESSOR WILSON, HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR VAWTER  
MR. THORNTON

#### *Animal Husbandry*

1. BREEDS OF LIVE STOCK. The origin, development, characteristics, and uses of types and breeds of range and ranch animals. For illustration, the animals owned by the department and livestock ranches in the vicinity will be used, also lantern slides of typical animals of the various types and breeds. *First semester. Three credits.* Agriculture Building. Wilson.

3. LIVESTOCK JUDGING. Practice in judging livestock to gain familiarity with the points of excellence in the various breeds and types of range and ranch animals. *Prerequisite:* Animal husbandry 1. *First semester. Lectures, two hours; laboratory, two periods. Four credits.* Wilson. Fee \$3.

30. LIVESTOCK FEEDING. The principles underlying and problems connected with the feeding of range and ranch animals. *Prerequisite:* Animal husbandry 1 and 4. *Second semester. Lectures, three hours. Three credits.* Wilson.

50. ANIMAL HYGIENE. A lecture course covering the principles of livestock sanitation and first aid. *Prerequisite:* Bacteriology 51. *Second semester. Three credits.* Vawter.

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

53. LIVESTOCK REGISTRATION. The details of registering purebred animals, requiring the use of blanks for making application for registry; the use of herd books. A study of the history of the recognized registry associations and the rules governing them; a study of the

value of pedigrees and how to keep the herd records. *Prerequisite:* Animal husbandry 1 and 4. *First semester. One credit.* Wilson.

55. **ADVANCED LIVESTOCK FEEDING.** Continuation of animal husbandry 30. *Prerequisite:* Animal husbandry 30. *First semester. Lectures, three hours. Three credits.* Wilson.

56. **ADVANCED STOCK JUDGING.** Comparative scoring and judging. The judging of animals in classes, as at fairs and stock shows. *Prerequisite:* Animal husbandry 4. *First semester. Three credits.* Wilson. Fee \$3.

58. **RANGE MANAGEMENT.** Lectures covering the following subjects in animal husbandry: Development and proper distribution of stock salting grounds; rotation and proper location of drift fences; estimation of carrying capacity; methods of mapping in range lands; range destroying rodents; grazing administration within the National forests; various systems of handling range lands within the United States and foreign countries; general range problems. *Prerequisite:* Animal husbandry 1, 4, 30; botany 22. *Second semester. Three credits.* Wilson.

59. **PROFESSIONAL JUDGING.** *First semester. Laboratory, one period. One credit.* Given in alternate years. Wilson. Fee \$1.50.

61-62. **ANIMAL HUSBANDRY.** Thesis course. Special problems in animal production and management. Problems relative to the open range under the provisions of the Taylor Grazing Act. *Prerequisite:* Animal husbandry 1, 4, 30, 51, 55, 57, 58. (May take this course with course 58.) *Either semester. Four to six credits.* Wilson. Fee \$3.

63-64. **ANIMAL HUSBANDRY LITERATURE.** (Graduate credit given with the consent of the instructor.) A seminar course designed to help the student become familiar with the various sources of livestock information as well as to afford him practice in presenting such information for discussion. *Prerequisite: Junior standing. Both semesters. Two credits each semester.* The course may be repeated in the senior year for the same credit. Wilson.

66. **LIVESTOCK MANAGEMENT.** A study of the problems confronting the ranch and range; calculating profits under various conditions; systematic keeping of records of livestock operations; selection of animals for the feed yard, show ring, market, and butcher. *Prerequisite:* Animal husbandry 1, 4, 30. *Second semester. Three credits.* Wilson.

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. 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. 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. 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. Fee \$2.*

57. ADVANCED MILK PRODUCTION. Use of dairy herd books; special feeding for high records; interpretation of official tests. *Prerequisite: Dairying 1. First semester. Lectures, two hours. Two credits. Wilson.*

61-62. THESIS COURSE. Special problems in production or sanitation and city milk supply. Laboratory material is available through the dairies furnishing milk for the city of Reno. *Prerequisite: Dairying 1 and 53 or 55. Either semester. Two to six credits. Wilson. Fee \$3.*

### *Poultry Husbandry*

2. FARM POULTRY MANAGEMENT. Raising poultry under farm conditions. This course deals with the housing, raising of poultry, handling of stock for the market, and egg production, killing, dressing, diseases, hatching, and rearing of young chicks. Trips to local poultry farms. It is taught with special reference to farm conditions. *Second semester. Two lectures, one laboratory. Three credits. Thornton. Fee \$2.*

8. TURKEY PRODUCTION AND MANAGEMENT. This course deals with the practical management of turkeys, primarily for meat production. No laboratory period is arranged for, but about two trips are planned each year, one at marketing time and one at hatching and breeding time. *First semester. Two credits. Thornton. Fee \$2.*

## ART

MRS. JOSLIN

Requirements for a minor in art: Art 1 and 2 (4 credits), Art 3 or 4 (2 credits), and 12 additional credits in the department, at least 6 of which must be in courses numbered 50 or above.

1-2. **ELEMENTARY FREEHAND DRAWING.** Principles of drawing, values and perspective taught in freehand drawing of casts in monochrome. Also rapid figure sketching in charcoal, conti and pencil. *Both semesters. Two credits per semester.* Electrical Engineering Building. Joslin. Fee \$1.

3-4. **MODERN TRENDS IN ART EDUCATION.** Techniques of handling art media—finger paint, clay, easel paint, chalk, watercolor, etc. Planned especially for elementary grade teachers who wish to use new methods in art teaching. *Both semesters. Two credits per semester.* Electrical Engineering Building. Joslin. Fee \$1.50.

5-6. **ART STRUCTURE AND COMPOSITION.** Principles which underlie all art. Study of color and design and the application of both to the problems of the home economics student. *Both semesters. Two credits per semester.* Electrical Engineering Building. Joslin. Fee \$1.

51-52. **WATERCOLOR AND OIL PAINTING.** The technique and handling of watercolor and oils in still life and landscape. *Both semesters. Three credits per semester.* This course may be repeated for credit as 51A and 52B. Electrical Engineering Building. Joslin.

53-54. **ADVANCED FREEHAND DRAWING.** Drawing from still life and casts in preparation for later work in portrait and life class; also rapid sketch. *Both semesters. Three credits per semester.* This course may be repeated for credit as 53A and 54B. Electrical Engineering Building. Joslin. Fee \$1.

## BIOLOGY

PROFESSOR LEHENBAUER, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR BILLINGS

ASSOCIATE PROFESSOR LOWRANCE

ASSISTANT PROFESSOR RICHARDSON

The department of biology includes the following divisions: Bacteriology, botany, horticulture, hygiene, and zoology.

Requirements for a minor in biology, 9 credits in botany and 9 credits in zoology. Of these 18 credits, at least 6 must be in courses numbered 50 or above.

Requirements for a major in biology: A total of 27 credits of which not more than 15 may be in either botany or zoology. Of the 27 credits at least 12 must be in courses numbered 50 or above.

Students who intend to teach in secondary school are advised to take the combination minor or major in biology rather than the major or minor in either subject alone.

*Bacteriology*

51. **GENERAL BACTERIOLOGY.** A course of lectures and laboratory exercises on the morphology and life processes of the bacteria, with some references to allied organisms. The relationship of microorganisms to soil fertility, dairy products, water purity, sewage, and the production of disease will be considered. *Prerequisite: Zoology 2, botany 2, or physiology 57-58. First semester. Lectures, two hours;*

*laboratory, two periods. Four credits. 212 Agriculture Building. Lowrance. Fee \$5.*

### Botany

Requirements for a minor in botany: Botany 1 (3 credits), botany 2 (3 credits), botany 21 (4 credits), botany 22 (4 credits), and 4 additional credits in the division of botany in courses numbered 50 or above.

Requirements for a major in botany: Botany 1 or 3 (3 credits), botany 2 (3 credits), botany 21 (4 credits), botany 22 (4 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. INTRODUCTORY BOTANY FOR ARTS AND SCIENCE STUDENTS. The structure and physiology of the flowering plants. *First semester. Two lectures; one laboratory period. Three credits. 109 and 9 Agriculture Building. Billings. Fee \$3.*

2. INTRODUCTORY BOTANY. The evolutionary study of plants as illustrated by representative types from the algae, fungi, mosses, ferns and seed plants. *Second semester. Two lectures; one laboratory period. Three credits. 103 Agriculture Building. Lehenbauer. Fee \$3.*

3. INTRODUCTORY BOTANY FOR AGRICULTURAL AND PREMEDICAL STUDENTS. The fundamentals of plant growth and development of plants in relation to man and animals. *First semester. Two lectures; one laboratory period. Three credits. 9 Agriculture Building. Lehenbauer. Fee \$3.*

21. THE STRUCTURE AND DEVELOPMENT OF THE SEED PLANTS. A detailed study of their morphology and histology in relation to function. *First semester. Two lectures; two laboratory periods. Four credits. 8 Agriculture Building. Lehenbauer. Fee \$4.*

22. TAXONOMY. A systematic and comparative study of the principal families of flowering plants represented in the local flora and the 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.*

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. 7 Agriculture Building. Alternates with botany 53. Billings.*

53. DENDROLOGY. The intensive study of the taxonomy, silvics, and practical identification of the important North American forest trees. *Prerequisite: Botany 22. First semester. Two lectures; two laboratory periods. Four credits. 8 Agriculture Building. Alternates with Botany 27. Billings. Fee \$2.*

54. RANGE AGROSTOLOGY. The study of grasses, and practice in identification. Particular emphasis is given to range grasses. *Prerequisite: Botany 22. Second semester. One lecture; two laboratory periods. Three credits. 8 Agriculture Building. Billings. Fee \$2.*

55. PLANT PHYSIOLOGY. Intensive study of the basic physiological

processes in plants: photosynthesis, digestion, respiration, absorption, transpiration, nitrogen metabolism, mineral deficiencies, growth-promoting and growth-inhibiting substances. *Prerequisite:* Botany 1 or 3 and 1 year of chemistry. *Second semester. Two lectures; one laboratory period. Three credits.* 8 Agriculture Building. Billings. Fee \$3.

56. ECONOMIC PLANTS. The study of weeds and poisonous plants, their identification, growth habits, and their control. Weed seeds and their identification. Seed testing. Pure seed laws and their application. *Prerequisite:* Botany 1 or 3, and botany 22. *Second semester. Two lectures; one laboratory period. Three credits.* 103 Agriculture Building. Lehenbauer. This course alternates with botany 64. Fee \$2.

64. MYCOLOGY AND AN INTRODUCTION TO PLANT PATHOLOGY. The study of fungi and bacteria. Diseases of economic plants, their causes, identification and control. *Prerequisite:* Botany 1 or 3. *Second semester. Two lectures; two laboratory periods. Four credits.* 8 Agriculture Building. Lehenbauer. This course alternates with Botany 56. Fee \$4.

68. WOOD TECHNOLOGY. The structure of economic woods with emphasis upon the identification of these woods by their physical properties and minute anatomy. *Prerequisite:* Botany 21. *Second semester. One lecture; two laboratory periods. Three credits.* 8 Agriculture Building. Lehenbauer. Fee \$2.

70. BIOLOGICAL TECHNIC. The preparation of materials and permanent slides of plants and animal tissues for microscopic study. *Prerequisites:* Junior standing and at least one semester in botany and zoology. *Second semester, one lecture and a minimum of two laboratory periods.* Lehenbauer. Fee \$2 per credit.

75. PLANT ECOLOGY. HABITAT FACTORS. The relationship between native vegetation and environmental factors such as light, water, temperature, biotic, and soil, and the measurement of these factors. *Prerequisite:* Botany 22 and 55. *First semester. Three lectures; one laboratory. Four credits.* 8 Agriculture Building. Billings. Fee \$4.

76. PLANT ECOLOGY. PLANT COMMUNITIES, SUCCESSION, AND INDICATOR PLANTS. The study of plant associations and their changes. The use of indicator plants in recognizing overgrazing, soil conditions, and forest sites. *Prerequisite:* Botany 75. *Second semester. Three lectures; one laboratory. Four credits.* 8 Agriculture Building. Billings. Fee \$4.

91-92. BOTANICAL PROBLEMS. Special problems in some field of botany. Assigned readings and reports. *Prerequisite:* The equivalent of two years of botany. *Either semester. One to four credits each semester.* 8 Agriculture Building. Lehenbauer and Billings.

93-94. BOTANICAL SEMINAR. The presentation by students of reviews and discussion of assigned reports of research in botanical literature. *Prerequisite:* Nine hours of botany and consent of instructors. *Both semesters. One meeting per week. One or two credits.* 7 Agriculture Building. Lehenbauer and Billings.

201-202. Thesis course for graduates.

*Horticulture*

1. HORTICULTURE. Plant propagation and ornamental horticulture. The principles of propagation. The culture and care of plants. The principles of ornamental gardening. *First semester. Three lectures and demonstrations; assigned readings. Three credits.* 9 Agriculture Building. Lehenbauer.

2. HORTICULTURE. Tree fruits, berries and vegetables. Growing fruit trees, berry and vegetable plants in the home orchard and garden. Pruning, grafting and propagation. Selection and identification of varieties. *Prerequisite: Botany 1 or 3. Second semester. Three lectures. Three credits.* 9 Agriculture Building. Lehenbauer.

*Hygiene*

2. GENERAL HYGIENE. *Two lectures per week.* Elective for freshmen. *Second semester. One or two credits.* Men, Lowrance; women,

*Zoology*

Requirements for a minor in zoology: zoology 2 or 5, zoology 9 or 11, zoology 50, and 8 credits in zoology courses above 50.

Requirements for a major in zoology: zoology 2, zoology 9, zoology 50-52, and 15 credits in other zoology courses above 50.

Additional courses advised: Physics 1-2 (or admission credit), general chemistry, qualitative and quantitative analysis and organic chemistry; German 1-2 and 3-4.

2. GENERAL ZOOLOGY. An introductory course dealing with the general principles of animal biology and the evolution of animal structures and functions. The laboratory work consists of the study of the structure, activities, and habits of typical species representing the principal animal groups and chosen as far as possible from local types. *Second semester. Two lecture and two laboratory periods. Four credits.* 110 and 211 Agriculture Building. Richardson. Fee \$4.

5. SURVEY OF ZOOLOGY. A course introducing the fields of zoology and emphasizing their application to human interests and welfare as in the subjects of functioning of the body, disease, medicine, evolution, and heredity. Designed for general students. *First semester. Lecture, two hours; laboratory, one period. Three credits.* Agriculture Building. Richardson. Fee \$2.

9. COMPARATIVE ANATOMY OF VERTEBRATES. Lectures on the progressive development of structures and functions from the lower to the higher vertebrates, leading up to human anatomy. Laboratory dissection of the dog-fish, salamander, and a mammal. *Prerequisite: Zoology 2. First semester. Lectures, three hours; laboratory, two periods. Five credits.* 5 Agriculture Building. Richardson. Fee \$5.

11. HUMAN ANATOMY. A course designed for prenursing and physical education students. Lectures on human anatomy. The laboratory includes demonstrations, a study of human anatomical preparations, and individual dissection of the cat or rabbit. *Prerequisite: Zoology 1 or equivalent. First semester. Three lecture and two laboratory periods. Four credits.* Agriculture Building. Lowrance. Fee \$2.50.

19. AMERICAN RED CROSS NURSES' AID COURSE. Lectures, demonstrations, and supervised practice in fundamental principles of nursing. *Prerequisite or parallel: One general course in college biology,*

botany, or zoology; the 20-hour Standard Red Cross First Aid Course. *Every semester. Two credits.* Cheney Building, 139 North Virginia Street, Reno.

22. PARASITOLOGY. Introductory study of the relation of animals to the causation and transmission of disease. Methods of recognition, prevention, and control of certain diseases will be emphasized. *Second semester. One lecture; one laboratory. Two credits.* Lowrance. Fee \$2. (NOTE—This course will be offered in alternate years only.)

50. GENETICS. A study of the fundamental principles underlying the inheritance of structural and physiological characters in animals and plants. *Prerequisite:* One semester of general botany or general zoology. *Second semester. Two lectures. Two credits.* Lowrance.

52. GENETICS LABORATORY. A laboratory course designed to accompany Zoology 50. *Prerequisite or Parallel:* Zoology 50. *One credit.* Lowrance. Fee \$3.

55. EVOLUTION. Lectures illustrated by lantern slides on the evidence and factors of organic evolution, with a discussion of the bearing of evolutionary principles upon science and life in general. No prerequisite for juniors and seniors. Open to sophomores who have had one year of college biology. *First semester. Two credits.* 110 Agriculture Building. Lowrance.

57-58. PHYSIOLOGY. Principles of animal physiology, with special reference to the human being. Laboratory work and special assignments are arranged to meet separately the needs of (1) general and home economic students, and (2) premedical and prenursing students. Zoology 1, 2, or Biology 1, and Chemistry 1 and 2 should precede this course. A knowledge of general college physics and of analytical and organic chemistry is desirable for the premedical students. The course is designed for third and fourth year students, but it is open to a limited number of competent second year students. *Both semesters. Lecture, two hours; laboratory, one period. Three credits each semester.* 110 and 210 Agriculture Building. Lowrance. Fee \$2.50 each semester.

59. GENERAL ENTOMOLOGY. A course adapted to those interested in insect life histories, their classification, economics and control. Field trips will be taken to collect the insects and to discover their places of hiding, hibernation and transformation. The laboratory work is differentiated to meet the needs of (1) general students and prospective teachers, and (2) range and forestry students, and majors in biology. *Prerequisite:* Zoology 5 and Zoology 2, or a working knowledge of the subject. *First semester. Lectures, two hours; laboratory, one period.* Agriculture Building. Richardson. Fee \$3.

60. VERTEBRATE ZOOLOGY. A course especially designed for field workers, teachers, and naturalists. It includes a study of the classification, variety, habits, and economic importance of reptiles, birds, and mammals. Regular field trips are taken for the careful identification and observation of local forms. *Prerequisite:* Zoology 2 or 5. *Second semester. Lecture, two hours; laboratory, one period. Three credits.* Agriculture Building. Richardson. Fee \$2.

62. GAME MANAGEMENT. Conservation or regulated use as applied

to game birds and mammals. Field trips and laboratory studies on observation and identification of western game species, and on application of management principles. *Prerequisite:* Zoology 60 and Botany 22. *Second semester. Lecture, two hours; laboratory, one period. Three credits.* Agriculture Building. Richardson. Fee \$2.

64. EMBRYOLOGY. Lectures on comparative embryology of vertebrates. The laboratory work consists of the study of preparations of the frog, chick, pig, and human embryos at various stages of development. Some training in the preparation of embryological material will be given. *Prerequisite:* Zoology 2 and 9, or 57-58. *Second semester. Lectures, three hours; laboratory, two periods. Four credits.* 212 Agriculture Building. Lowrance. 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. Lowrance.

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. Lowrance and Richardson. Fee determined by type of work.

201. Thesis course for graduates.

## CHEMISTRY

PROFESSOR SEARS, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR DEMING

ASSOCIATE PROFESSOR WILLIAMS

Requirements for a minor in chemistry: Chemistry 7-8 (8 credits), 15 (5 credits), 30 (5 credits), and 4 additional credits in the department in courses numbered 50 or above.

Requirements for a major in chemistry: Chemistry 7-8 (8 credits), 15 (5 credits), 30 (5 credits), 51 (4 credits), and 95-96 (1 credit), and 7 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 127.

3-4. GENERAL CHEMISTRY. A lecture and laboratory course covering the fundamental principles of chemistry and the properties and uses of the more common elements. Emphasis will be given during the latter part of the course to a study of the compounds of carbon and their uses. Designed for students of home economics, general agriculture and students in the College of Arts and Science desiring a general knowledge of chemistry. *One lecture, two recitations, two laboratory periods, four credits.* Mackay Science Hall. Williams. 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.

15. QUANTITATIVE ANALYTICAL CHEMISTRY. A lecture and laboratory course dealing with the fundamental principles and techniques of accurate volumetric and gravimetric methods. Special emphasis on problems involving the Mass Law and Solubility Product and calculations needed for quantitative determinations. Two lectures and three laboratory periods each week. *Prerequisite:* Chemistry 8. *First semester. Five credits.* Mackay Science Hall. Sears. Fee \$12.

24. FOOD ANALYSIS. A lecture and laboratory course. Standard quantitative analytical procedures involving work on milk and cream, milk products, oils and fats, carbohydrates and vitamins will be used. *Prerequisite:* Chemistry 9. *Second semester. One lecture and two laboratory periods. Three credits.* Mackay Science Hall. Williams. Fee \$8.

30. ORGANIC CHEMISTRY. A lecture and laboratory course dealing with the compounds of carbon. *Prerequisite:* Chemistry 15. *Second semester. Three lectures, two laboratory periods. Five credits.* Mackay Science Hall. Williams. Fee \$8.

32. ORGANIC AND PHYSIOLOGICAL CHEMISTRY. A lecture and laboratory course similar to Chemistry 30 except that in the laboratory special emphasis will be given to biochemical experiments. *Prerequisite:* Chemistry 15. *Three lectures and two laboratory periods. Five credits.* Mackay Science Hall. Williams. Fee \$8.

40. INTRODUCTION TO PHYSICAL CHEMISTRY. A lecture course designed to illustrate the applications of physical methods to chemical problems. This course is planned primarily for engineering and pre-medical students desiring a short introductory course and for chemistry students whose previous work indicates a need of more thorough preparation for Chemistry 83-84. *Prerequisite:* Chemistry 9 or for engineering students who have completed Physics 3 or its equivalent, Chemistry 8. *Second semester. Two lectures. Two credits.* Mackay Science Hall. Deming.

51. ORGANIC CHEMISTRY. A lecture and laboratory course. Elementary work not included in Chemistry 30 will be taken up. Modern theories of organic chemistry will be emphasized in the latter part of the semester. *Prerequisite:* Chemistry 30. *First semester. Two lectures, two laboratory periods. Four credits.* Mackay Science Hall. Williams. Fee \$8.

53. QUALITATIVE ORGANIC ANALYSIS. (Graduate credit given with consent of instructor.) A lecture and laboratory course. A study of the methods available for the detection and identification of organic compounds. *Prerequisite:* Chemistry 52. *First semester. Two lectures and two laboratory periods. Four credits.* Mackay Science Hall. Fee \$8.

54. ADVANCED ORGANIC CHEMISTRY. (Graduate credit given with



consent of instructor.) A lecture course of advanced topics in aliphatic organic chemistry. Modern theories will be discussed with particular emphasis placed on the physical aspects of the subject. *Prerequisite:* Chemistry 51-52. *Second semester. Two lectures. Two credits.* Mackay Science Hall. Williams.

56. ADVANCED ORGANIC CHEMISTRY. (Graduate credit will be given with consent of instructor.) A laboratory course designed to give the student training in the methods of quantitative organic analysis. Included in the course will be methods of analysis by combustion; the determination of organic halogen; active hydrogen; molecular weight determinations by the Rast method. Whenever possible, semimicro methods will be used. At the request of a sufficient number of students, biochemical analyses will be included with, or substituted for, the above analytical procedures. *Prerequisite:* Chemistry 52. *Second semester. Two laboratory periods. Two credits.* Mackay Science Hall. Williams. Fee \$8.

64. SPECIAL PROBLEMS. A laboratory course designed to give the student training in various special fields. Water and gas analysis, potentiometric titrations, conductometric titrations, analysis of foods, minerals, etc., may be taken up. To be arranged by consultation with the head of the department. *Any semester. Two credits.* Mackay Science Hall. Sears and Staff. Fee \$8.

71. ADVANCED ANALYTICAL CHEMISTRY. A lecture and laboratory course designed particularly for chemistry and mining students but open to all students desiring a more complete knowledge of analytical methods. *Prerequisite:* Chemistry 10. *First semester. One recitation and two laboratory periods. Three credits.* Mackay Science Hall. Sears. Fee \$8.

72. ADVANCED INORGANIC CHEMISTRY. (Graduate credit given with consent of instructor.) A lecture and laboratory course involving some of the more difficult inorganic reactions and technic. Special emphasis will be given to the chemistry and technology of the more important light metals including lithium, beryllium, magnesium and aluminum. *Prerequisite:* Chemistry 71. *Second semester. One lecture 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 laboratory course designed to give a more intimate knowledge of the elements. Emphasis will be given to their analytical relations and to the preparation and properties of the metals and their more important compounds. *Prerequisite:* Three years of college chemistry. *Second semester. Two laboratory periods. Two credits.* Mackay Science Hall. Sears. Fee \$8.

75-76. 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 periodic law and of the more important periodic tables in the light of recent developments in atomic structure and the known properties

of the elements. Practical use is made of the periodic law to correlate the facts of chemistry. *Prerequisite*: Three years of college chemistry. *Both semesters. Two credits each semester.* Mackay Science Hall. Sears.

83-84. PHYSICAL CHEMISTRY. (Graduate credit given with consent of instructor.) A lecture and laboratory course based on the application of the laws of physics to chemical problems. The aim is to give a rigorous mathematical treatment based on the laws of thermodynamics and the kinetic molecular theory. In general, Chemistry 83 will deal with gases, liquids, solids, solutions and physical equilibria, while Chemistry 84 will take up chemical equilibria, reaction velocity and electrochemistry. *Prerequisite*: Chemistry 15, Physics 2A, Mathematics 24, or for engineering students whose previous work has been above average, Chemistry 8, Physics 4, Mathematics 26. The laboratory work may be omitted if Physics 5-6 or its equivalent has been taken. *Both semesters. Three lectures and one laboratory period. Four credits each semester.* Mackay Science Hall. Deming. Fee \$4.

85. ELECTROCHEMISTRY. (Graduate credit given with consent of instructor.) A lecture and laboratory course designed to follow Chemistry 84 and give a more thorough training in the theory and use of Electrochemical Cells. *Prerequisite*: Chemistry 84. *First semester. One lecture and two laboratory periods. Three credits.* Mackay Science Hall. Deming. Fee \$8.

86. THE PHASE RULE. (Graduate credit given with consent of instructor.) A lecture and laboratory course designed to follow Chemistry 83 and give a more thorough training in the theory and application of Gibb's Phase Rule. *Prerequisite*: Chemistry 83. *Second semester. One lecture and two laboratory periods. Three credits.* Mackay Science Hall. Deming. Fee \$8.

92. HISTORY OF CHEMISTRY. (Graduate credit given with the consent of the instructor.) A lecture course on the history and development of the science of chemistry. *Prerequisite*: Two years of college chemistry. *Second semester. Two credits.* Mackay Science Hall. Deming.

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

99-100. THESIS COURSE FOR UNDERGRADUATES. A laboratory and library course based on a special topic chosen from inorganic, analytical, organic or physical chemistry. Careful quantitative work is stressed. To be arranged by consultation with the instructors. *Prerequisite*: Chemistry 15, 51, and 84, German, and recommendation by the head of the department. *Both semesters. Two credits.* Mackay Science Hall. Sears and Staff. Fee \$8.

101-102. **ADVANCED PHYSICAL CHEMISTRY.** A lecture course dealing with the thermodynamic functions and their partial derivatives. The method employed is essentially that of G. N. Lewis. *Prerequisite:* Chemistry 84. *Both semesters. Two lectures. Two credits.* Mackay Science Hall. Deming.

200. **THESIS COURSE FOR GRADUATE STUDENTS.** Special problems for research chosen in consultation with some member of the department and carried on under his direction. No student will be admitted to this course who has not completed four years of work in chemistry and graduated from an approved college. *Both semesters. Credits to be arranged.* Mackay Science Hall. Sears and Staff. Fee \$4 per credit hour, according to work.

## CIVIL ENGINEERING

PROFESSOR BIXBY, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR WAGNER<sup>1</sup>

ASSOCIATE PROFESSOR GRAFTON<sup>1</sup>

2. **MAP DRAWING.** The work in this course consists of plotting engineering and topographic maps from field survey notes. *Second 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.* Engineering Building.

19. **TECHNICAL REPORT.** A systematic write-up of an approved technical subject in civil engineering. This course is designed primarily for civil engineering students, and those registering in same will be required to obtain their assignments not later than one week after registration. Outlines and bibliography, together with a reasonable showing of progress, must be presented for approval within six weeks after registration. *Prerequisite:* English 1-2. *Either semester. One credit.* Engineering Building. Bixby.

51. **ELEMENTARY SURVEYING.** A study of the elements of plane surveying, including study of the construction and use of instruments, applications in differential and profile leveling; transit traverse surveys and computation of areas; stadia surveying and mapping; and public land surveys. *Prerequisite:* Mathematics 15. *First semester. Two credits.* Engineering Building. Bixby.

52. **HIGHER SURVEYING.** A continuation of C. E. 51. A study of field astronomy for engineers; care and adjustment of surveying instruments; triangulation and precise level control nets for large-scale mapping projects; plane table mapping, and mine surveying. *Two lecture periods. Second semester. Prerequisite:* C. E. 51. *Two credits.* Engineering Building. Bixby.

53. **ELEMENTARY FIELD SURVEYING.** Field practice in the use of surveying instruments, including the use of tapes; survey of traverse, stadia traverse, differential, and profile leveling with plotting of profile; plotting of all data taken during field surveying operations; plotting of stadia notes and drawing in contours on map. *Prerequisite:* Civil Engineering 51 concurrently. *Two laboratory periods. Two credits. First semester.* Engineering Building. Bixby. Fee \$3.

<sup>1</sup>Absent on leave; war service.

54. HIGHER FIELD SURVEYING. A continuation of C. E. 52. Adjustment of surveying instruments; survey of triangulation network; baseline measurement with standardized tape, with application of temperature and sag correction; topographic survey of portion of campus with stadia board and transit or plane table; mapping of stadia survey. *Prerequisite:* C. E. 51-53. *Second semester. Two credits.* Engineering Building. Bixby. Fee \$3.

56. FOUNDATIONS AND SUBSTRUCTURES. A study of the principles and practices of design and construction of bridge, dam, and building foundations, reservoir sites, etc., and relation of geology to various structures. *Two lectures. Two credits. Second semester.* Engineering Building. Bixby.

58. SUMMER SURVEYING. This course starts the first day after Commencement in May. The work consists of topographic surveying, involving careful base-line measurement and triangulation for control, followed by topographic surveying by plane table method. Mine surveying including both surface and underground workings as surveyed by each student. Most of the computations of field surveys are made during the evening following each day's work. *Prerequisite:* C. E. 51, 52, 53, and 54. *Four weeks. Four credits.* Fee \$20, including automobile transportation costs. Bixby.

61. HIGHWAY ENGINEERING. A detailed study is made of location, construction, and maintenance of highways. *First semester. Two lectures. Two credits.* Engineering Building. Bixby.

62. CIVIL ENGINEERING DRAWING. This course is designed to train students to plat field notes of topographic surveys, surveys of towns and rural areas. Also the platting from dimensional notes such structures as bridges, buildings, retaining walls, dams, etc. *First semester. Two laboratory periods. Two credits.* Engineering Building.

63-65. ROUTE SURVEYING. Lectures, recitations, and field work on the location and construction of railroads and highways. Also a study of tractive power and train resistance and their effects on the economic location and operation of railroads. *Prerequisite:* C. E. 51, 52, 53, and 54. *First semester. Lectures, three credits; field laboratory, two credits.* Engineering Building. Bixby. Fee \$3.

66. ENGINEERING ECONOMICS. The principles of cost comparison and technique of estimating costs, including economic selection, depreciation, salvage value, sinking funds, etc., illustrated by typical everyday problems selected from all fields of engineering. *Prerequisite:* Junior standing. *Two lectures. Two credits.* Engineering Building.

68. GRAPHICAL ANALYSIS. A course which covers the principles of Graphic Statics, and their applications to the analysis of stresses in statically determinate structures for various conditions of loadings. *Second semester. Lecture—one credit; laboratory—one credit.* Engineering Building. Bixby.

72. STRENGTH OF MATERIALS. A study of the physical properties of engineering materials in relation to behavior under stress. Applications of the principles of mechanics to engineering design, including axial stresses and deformations; flexure in homogeneous and composite beams; shearing stresses and deformations; design of steel tanks;

riveted and welded joints; compression members; combined bending and direct stress; stresses in hooks and curved beams; torsional stresses and deformations and design of shafts; resilience and impact stresses; deflection in beams; stresses in continuous and restrained flexural members; applications of photo-elasticity to study of stress concentrations; and theories of failure of materials. *Second semester. Three lecture periods. Three credits. Prerequisite:* Physics 3 and 4; Math. 25, 26, and 55. Engineering Building.

74. TESTING MATERIALS LABORATORY. The experiments are as follows: Study of various testing machines and accessories for testing metals, cement, concrete and wood; tension tests on steel and cements; compression tests of concrete; tests of wood columns; end compression of short wood test specimens; flexure tests of small wood beams; tests of cements; screen tests of sands; specific gravity tests of cements, sand, and aggregates. A carefully prepared report, clearly stated, with required computations, must follow each test. *Prerequisite:* C. E. 74 must be taken as a prerequisite or concurrently with C. E. 72. *Second semester. Laboratory, one period. One credit.* Testing Laboratory. Engineering Building. Bixby. Fee \$2.50.

76. STRUCTURAL ANALYSIS. A study of basic principles of stress analysis applied to various types of statically determinate structures, including the analysis of frames, girders, and various types of trusses by algebraic methods; principles of graphical analysis and applications to problems in equilibrium and analysis of trussed structures; analysis of live load stresses in highway and railroad bridges by the use of influence diagrams and by conventional algebraic methods; and discussion of various common types of bridge and building trusses. *Two lectures and one laboratory period. Second semester. Three credits. Prerequisite:* C. E. 72. Engineering Building.

77. ADVANCED STRUCTURAL ANALYSIS AND DESIGN. A study of the principles of stress analysis as applied to structures of statically indeterminate types, including deformations and deflections in structures by graphical and analytical methods; methods of analysis of arches, rigid frames and other closed-ringed structures by analytical methods. Solution of continuous and multiple girders and frames by methods of successive approximation. Study of structural members, details and connections; computations for design and preparation of design drawings for steel framing for a building and plate girder bridge. *One lecture; two laboratory periods. First semester. Three credits. Prerequisite:* C. E. 76. Engineering Building.

78. STRUCTURAL STEEL AND CONCRETE DESIGN. Complete analysis, design and preparation of design drawings for a railway or highway steel truss bridge, reinforced concrete structures, reinforced concrete arch bridge, and a continuous girder viaduct. *One lecture; two laboratory periods. Second semester. Three credits. Prerequisite:* C. E. 77 and C. E. 85. Engineering Building.

85. REINFORCED CONCRETE DESIGN. A study of the theory and practice of reinforced concrete design and applications to typical design problems, including design and stress analysis of various types of structural members; the design of details in reinforced concrete; computation of design notes and preparation of design drawings for

beam, girder, and flat types of floor framing; and design of columns; preparation of schedules for reinforced concrete building construction. *Two lecture and two laboratory periods. Four credits. First semester. Prerequisite: C. E. 76. Engineering Building.*

87. ENGINEERING CONTRACTS AND SPECIFICATIONS. The fundamental law of contracts as it applies to engineering, together with the essentials of correct specifications and the interpretation of the technical terms commonly found therein. A great part of the material covered is presented especially for engineering students in the form of interesting, representative cases. A short period is devoted to employment, ethics and other engineering relations. *Prerequisite: Junior standing. First semester. Three credits.*

89. FLUID MECHANICS LABORATORY. Laboratory practice and technique to enable the student to visualize the fundamental principles of the mechanics of fluids and their application to practical engineering problems. Consultation periods with a person skilled in the correct use of English and the correct form of reports will be arranged. *Prerequisites: Completion of, or enrollment in, C. E. 91 or C. E. 93. One or two laboratory periods. One or two credits. First semester. Engineering Building.*

91. ELEMENTARY FLUID MECHANICS. The fundamental principles of the mechanics of fluids and their application to practical engineering problems. The study includes: physical properties, fluid statics, kinematics and dynamics of fluid flow, friction, flow through pipes, flow in open channels, hydraulic turbines, centrifugal pumps, etc. *Prerequisite: Mathematics 55. Three lectures. Three credits. First semester. Engineering Building.*

93. ELEMENTARY FLUID MECHANICS. This course covers the same material as C. E. 90, but has in addition one computing period per week which is devoted to the solution of supplementary problems to augment the student's skill in practical applications. *Prerequisite: Mathematics 55. Three lectures and one computing period. First semester. Four credits. Engineering Building.*

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. 93. Three lectures. Three credits. Second semester. Engineering Building. Bixby.*

96. 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. 93. Three lectures. Three credits. Second semester. Electrical Building. Bixby.*

97. HYDROLOGY (A). The fundamental principles of hydrology and its related problems of climatology, stream flow, and run-off, underground water, water rights, etc., from the standpoint of western conditions. Practical field and office problems. *Prerequisite: Junior standing. Three lectures. Three credits. First semester. Engineering Building.*

98. HYDROLOGY (B). Conduit distribution systems, pumps, water

supply, and purification, storage reservoirs, snow surveying, flood control, etc. Practical field and office problems. *Prerequisite:* Junior standing. C. E. 97 is not a prerequisite to this course. *Three lectures. Three credits. Second semester. Engineering Building.*

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. Engineering Building.*

100. THESIS. Thesis on an approved subject in which the student is especially interested. *Second semester. Two credits. Engineering Building.*

110. HYDRAULICS OF OPEN CHANNELS. The hydraulics of uniform and nonuniform flow, together with applications of latest available research to open channel problems. Such topics are treated as sub- and super-critical flow, hydraulic jump, surges and wave phenomena, back-water and dropdown curves, delivery of canals, etc. *Prerequisite:* Elementary fluid mechanics, C. E. 93. *Second semester. Two or three credits. Engineering Building.*

111. ADVANCED HYDRAULICS. Dimensional analysis, model similitude, water hammer, cavitation, wave and surge motion, use of flow net, turbulence, resistance of submerged bodies, etc., depending upon the trend of interests of those enrolled. *Prerequisite:* C. E. 90. *First semester. Two or three credits. Engineering Building.*

112. HYDRAULIC MACHINERY. The theory, construction, installation, operation, and characteristics of hydraulic turbines, centrifugal pumps, and other hydraulic machinery. Special emphasis is placed upon their proper selection to meet specified conditions. Actual field tests will usually be made. *Prerequisite:* C. E. 93. *Two or three credits. Second semester. Engineering Building.*

113-114. ADVANCED WORK IN HYDRAULIC ENGINEERING. Special problems in hydraulics or related fields will be arranged to meet the needs of students wishing to do advanced work in this field. *Prerequisite:* C. E. 93. *Either semester. Credits to be arranged. Engineering Building.*

121. ADVANCED STRUCTURAL DESIGN. A study of theory and practice of design and stress analysis in advanced types of structures, in both concrete and structural steel, including a study of current methods of analysis of statically indeterminate structures. The following are among the subjects considered: Two-hinged rigid frames, subways and large culverts, continuous beams and continuous girder viaducts, a study of influence diagrams as applied to statically indeterminate structures, effect of variable section in structural members, effect of foundation conditions and abutment rotations and displacements, and a discussion of classical methods of statically indeterminate structural analysis. *Prerequisite:* C. E. 78 and 85. *Two or three credits. First semester. Engineering Building.*

122. **ADVANCED STRUCTURAL DESIGN.** A continuation of C. E. 121. The following additional subjects are considered: Multiple rectangular frames, including wind stresses in tall buildings, secondary stresses in bridge trusses, continuous arches on elastic piers, continuous and long span bridges, movable bridges, and suspension bridges, a study of rigidity of various bridge types. *Two or three lecture periods. Second semester. Prerequisite: C. E. 121. Two or three credits.* Engineering Building.

199-200. **GRADUATE RESEARCH OR THESIS.** Original theoretical and experimental investigation, designed to give training in methods of research, to serve as theses, and to yield contributions to scientific knowledge. Open only to properly qualified graduate students with the approval of the staff member concerned. *Both semesters. Credits to be arranged.* Engineering Building.

## ECONOMICS, BUSINESS, AND SOCIOLOGY

PROFESSOR INWOOD,<sup>1</sup> HEAD OF DEPARTMENT  
 PROFESSOR WEBSTER  
 ASSOCIATE PROFESSOR SUTHERLAND  
 ASSISTANT PROFESSOR PLUMLEY  
 ASSISTANT PROFESSOR CHADWICK

Requirements for a minor in economics: Economics 1-2 (6 credits); 12 additional credits in the department, not less than 6 of which shall be in courses numbered 50 or above.

Requirements for a major in economics: Economics 1-2 (6 credits), economics 91-92 (6 credits), business administration 43-44 (6 credits), and 9 additional credits in the department, which shall be in courses number 50 or above.

Requirements for a major in sociology: Economics 1-2 (6 credits), sociology 1 (3 credits), sociology 71 and 90 (6 credits) and 12 additional credits which shall be in sociology courses numbered 50 or above.

The following courses are recommended but not required for minors and majors in economics: Philosophy 7-8, psychology 5, 51, 61, 64, mathematics 18-20, French and German.

Requirements for a major in commercial education (for students qualifying for the high school teachers certificate in commercial subjects): Economics 1-2 (6 credits), business administration 43-44 (6 credits), business administration 47 (3 credits), business administration 51 (3 credits), business administration 53 (2 credits), and at least seven additional credits selected from the following: Economics 53, 58, and business administration 55-56, 68.

### *Economics*

1. **PRINCIPLES OF ECONOMICS.** An introduction to economic theory. Emphasis will also be given to the economic causes of war and to the financial, labor and industrial problems arising therefrom. *Prerequisite: Sophomore standing. Either semester. Three credits.* Education Building. The Staff.

2. **PRINCIPLES OF ECONOMICS.** A continuation of 1. *Either semester. Three credits.* Education Building. The Staff.

7. **ECONOMIC GEOGRAPHY.** Resources and industries of the world with special reference to their bearing on geographic specialization and

<sup>1</sup>Absent on leave; war service.



international trade. *First semester. Two credits.* Open to freshmen. Education Building. Inwood.

10. **ECONOMIC HISTORY OF THE UNITED STATES.** Introductory historical treatment of the economic development of America. *Second semester. Two credits.* Open to freshmen. Education Building. Inwood.

17. **CONSUMPTION ECONOMICS.** A study of the consumer from the standpoint of marketing and income distribution. *Prerequisite: Economics 1. Second semester. Two credits.* Education Building. Plumley.

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

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

54. **PUBLIC UTILITIES.** The development, organization, characteristics and legal status of public service enterprises. *Prerequisite: Economics 1-2. Second semester. Three credits.* Education Building. Sutherland.

56. **INSURANCE.** *Prerequisite: Economics 1-2, Business 41. Second semester. Two credits.* Education Building. Plumley. (Offered in even-numbered years.)

58. **INTERNATIONAL TRADE.** Theory of international trade. Tariffs and tariff history. *Prerequisite: Economics 1-2. Second semester. Two credits.* Education Building. Plumley.

61. **STATISTICAL METHODS.** Elementary statistical methods as used in business and in the social sciences. *First semester. Two lectures and one laboratory period per week. Three credits.* Education Building. Plumley.

62. **TRANSPORTATION.** The growth and development of transportation in the United States with emphasis on bases of rate structures and regulation. *Prerequisite: Economics 1-2, Business 41. Second semester. Two credits.* Education Building. Plumley. (Offered in odd-numbered years.)

63. **ECONOMIC HISTORY OF EUROPE.** The economic background of national and international development during ancient, medieval and modern times. *First semester. Two credits.* Education Building. Inwood.

64. **LABOR ECONOMICS.** A study of the wage earner, his compensation and problems of insecurity together with industrial and governmental solutions. *Prerequisite: Economics 1-2. Second semester. Three credits.* Education Building. Plumley.

73. **BUSINESS CYCLES.** *Prerequisite: Economics 1-2. First semester. Three credits.* Education Building. Plumley.

91. **HISTORY OF ECONOMIC THEORY.** *Prerequisite: Economics 1-2. First semester. Three credits.* Education Building. Sutherland.

92. **ADVANCED ECONOMIC THEORY.** *Prerequisite: Economics 1-2. Second semester. Three credits.* Education Building. Sutherland.

*Business*

41. FUNDAMENTALS OF BUSINESS ORGANIZATION. An introductory survey of problems and methods of business administration. *Prerequisite:* Sophomore standing. *First semester. Three credits.* Education Building. Inwood.

43-44. ELEMENTARY ACCOUNTING. Accounting theory and practice. Problems and practice sets. *Prerequisite:* Sophomore standing. *Two lectures and one laboratory period per week. Both semesters. Three credits each semester.* Education Building. Chadwick.

47. BUSINESS LAW. A comprehensive study of the forms and procedure with respect to law of contracts, negotiable instruments and general commercial practice. *Second semester. Three credits.* Education Building. Plumley.

51. ADMINISTRATION OF BUSINESS. Various types of business organization and the handling of administrative problems arising therein. *For commercial education majors only. First semester. Three credits.* Education Building. Inwood.

53. OFFICE PRACTICE. A study of general clerical and office practice, includes a study of filing, general business forms, procedures governing the handling of mail, duplicating machines, general business machines. *First semester. Two credits.* Education Building. Inwood. (Offered in even-numbered years.)

55-56. ADVANCED ACCOUNTING. Advanced theory of accounts and its application. Selected problems and readings. *Prerequisite:* Business 43-44. *Both semesters. Three credits each semester.* Education Building. Chadwick.

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

66. INDUSTRIAL MANAGEMENT. Internal organization and control of different forms of business enterprise. *Prerequisite:* Business 41. *Second semester. Three credits.* Education Building. Inwood.

68. MARKETING. A study of distribution methods and costs together with advertising and sales promotion methods. *Prerequisite:* Economics 1-2. *Second semester. Three credits.* Education Building. Inwood.

74. ADVANCED BUSINESS LAW. An advanced course in business law for those who are specializing in a preparation for business. *Prerequisite:* Business 47. *Second semester. Three credits.* Education Building.

85. COST ACCOUNTING. A comprehensive study of all elements of manufacturing cost accounting. *Prerequisite:* Business 43-44. *First semester. Three credits.* Education Building. Chadwick.

86. FEDERAL TAX ACCOUNTING. Study of the history of the Federal income tax; Federal revenue Acts and their interpretation. Actual preparation of individual, partnership and corporation income tax returns, important Treasury Department decisions on income tax problems. *Prerequisite:* Business 43-44. *Second semester. Two credits.* Education Building. Chadwick.

92. AUDITING. The principles and practice of auditing. Practice problems. *Prerequisite:* Business 43-44. *Second semester. Three credits.* Education Building. Chadwick.

### *Sociology*

1. PRINCIPLES OF SOCIOLOGY. The fundamentals of social processes and evolution. *Prerequisite:* Sophomore standing. *First semester. Three credits.* Education Building. Webster.

2. SOCIAL PROBLEMS. The major problems of modern social life and their remedies. *Prerequisite:* Sophomore standing. *Second semester. Three credits.* Education Building. Webster.

50. RURAL SOCIOLOGY. Rural life and problems with special reference to Nevada conditions. *Second semester. Two credits.* Education Building. Webster.

57. CULTURAL ANTHROPOLOGY. Primitive cultures as a basis for modern social organization. *First semester. Two credits.* Education Building. Webster.

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

79. RACE PROBLEMS. The social significance of race and racial minorities. *First semester. Two credits.* Education Building. Webster.

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

81. POVERTY AND DEPENDENCY. Causes of economic inefficiency. Methods used in relief. *Prerequisite:* Economics 1-2. *First semester. Two credits.* Education Building. Webster. (Offered in odd-numbered years.)

83. POPULATION. The social and economic significance of numbers and quality of population. Migration. *First semester. Two credits.* Education Building. Webster. (Offered in even-numbered years.)

84. SOCIAL SECURITY. Theory and development of modern provisions for economic security. Emphasis upon old age and unemployment in the United States. *Prerequisite:* Economics 1-2. *Second semester. Two credits.* Education Building. Webster. (Offered in odd-numbered years.)

86. METHODS IN SOCIAL WORK. Principles and methods in applied sociology. *Prerequisite:* Sociology 1 and 2. *Second semester. Two credits.* Education Building. Webster. (Offered in even-numbered years.)

90. ADVANCED SOCIAL THEORY. Emphasis upon modern schools of social thought. *Prerequisite:* Sociology 1. *Second semester. Three credits.* Education Building. Webster.

## EDUCATION

PROFESSOR TRANER, HEAD OF DEPARTMENT

PROFESSOR BROWN

ASSOCIATE PROFESSOR RUEBSAM

ASSISTANT PROFESSOR PUFFINBARGER<sup>1</sup>

ASSISTANT PROFESSOR CHAPMAN

MR. HIGGINS

MISS KLAUS

It is recommended that students present a major and a minor in departments other than Education to meet the Arts and Science requirements; students may submit Education as a second major or minor. Only in special cases should Education be used as the only major or minor.

Requirements for a minor in Education: 18 credits in Education, of which at least 6 credits must be in courses numbered 50 or above.

Requirements for a major in Education: 27 credits in Education, approved by the Dean, of which at least 12 must be in courses numbered 50 or above.

*Kindergarten-Primary Education*

9. GAMES FOR THE PRE-SCHOOL CHILD AND FOR THE FIRST THREE GRADES. Recommended for those interested in kindergarten and primary grades. *Either semester. One credit. Sameth.*

17. KINDERGARTEN - PRIMARY EDUCATION. This course deals with kindergarten-primary education as a unified experience, emphasizing the history, theory and curriculum of the kindergarten and primary grades. *First semester. Two credits. Ruebsam.*

18. THE KINDERGARTEN-PRIMARY CURRICULUM. This course includes emphasis upon the various phases of the kindergarten-primary course of study (art, music, games, dances, rhythms, nature study, etc.). *Second semester. Two credits. Ruebsam.*

19. LITERATURE IN THE KINDERGARTEN-PRIMARY GRADES. Children's stories as a background to literature will be considered in the course, with practical guidance in selection and teaching. The relation of literature to the activities program will be shown through built-up reading lessons, dramatizations, and simple puppetry. The artistic presentation of poetry as a joyous experience will be included. (Given in alternate years beginning 1941.) *First semester. Two credits. Ruebsam.*

25A. OBSERVATION OF TEACHING. Observation and discussion of specific classroom work in the kindergarten-primary grades as a preparation for practice teaching. *First semester. One credit. Ruebsam.*

28-29. SUPERVISED TEACHING IN KINDERGARTEN-PRIMARY GRADES. Opportunity for teaching open to normal school students and to four-year students desiring to qualify for the elementary teaching certificate. Students enrolled must have had or be taking education 34. Students teach two subjects, one hour daily. *Either semester. Five credits. Ruebsam. Fee \$1.*

34. THE TEACHING OF READING AND ENGLISH. Principles underlying the selection and presentation of subject matter for the primary grades. This includes beginning reading, activities, seat work, and

<sup>1</sup>Absent on leave; war service.

tests in reading. Picture studies, stories, dramatization, sentence structure, compositions, and poetry comprise the work in language. *Second semester. Three credits.* Ruebsam.

41. CONSTRUCTIVE ACTIVITIES FOR KINDERGARTEN-PRIMARY GRADES. This course is devoted to a consideration of the materials by means of which the child organizes and expresses his ideas and establishes desirable attitudes and habits. (Offered in even-numbered years.) *First semester. Two credits.* Ruebsam. Fee \$1.

53. EARLY GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD. A study of the factors affecting the physical, motor, intellectual, social, and emotional development of the child through the primary grades of school. (Offered in even-numbered years.) *First semester. Two credits.* Ruebsam.

54. AUXILIARY SUBJECTS IN THE KINDERGARTEN-PRIMARY CURRICULUM. An intensive study of the contribution of such subjects as arts and crafts, music, games and rhythms, to the education of the kindergarten and primary child. If taken for graduate credit an individual problem pertaining to the philosophy of kindergarten-primary education will be assigned. (Offered in even-numbered years.) *Second semester. Two credits.* Ruebsam.

55. CONTENT MATERIAL IN KINDERGARTEN-PRIMARY GRADES. This course is an advanced study of recent theory and practice covering objectives, methods, and desirable experiences to be afforded children in the kindergarten-primary grades in the fields of arithmetic and social science. (Offered in odd-numbered years.) *Second semester. Two credits.* Ruebsam.

### *General Elementary*

1. TEACHING IN THE ELEMENTARY SCHOOL. An introduction to teaching as a profession, what it requires of the teacher, what it has to offer, and what problems of classroom teaching and management it presents. *First semester. Two credits.* Ruebsam.

3. MODERN TRENDS IN ART EDUCATION. Techniques of handling art media—finger paint, clay, easel paint, chalk, water color, etc. Planned especially for elementary school teachers who wish to use new methods in art teaching. *Either semester. Two credits.* Joslin. Fee \$1.50.

21. TEACHING OF MUSIC. The aims and principles of music teaching in the kindergarten, elementary and upper grades. Group technique, song leading, interpretation, rhythmic activities. Care of the voice through various periods of development. Remedial exercises for improving pitch defects and tone quality. Music materials, rote songs, unison and descant songs, part songs, records, radio, and methods of approach for the listening period. *First semester. Two credits.* Post.

24. STATE SCHOOL ORGANIZATION AND SCHOOL LAW. The principles of good State school organization and how Nevada conforms to those principles as revealed by a careful study of the school code of the State. This course is designed to meet *all* certification requirements for school law. *First semester. Two credits.* Brown.

25B. OBSERVATION OF TEACHING. Observation and discussion of specific classroom work in the intermediate grades, as a preparation for practice teaching. *First semester. One credit.* Puffinbarger.

30. TEACHING OF THE SOCIAL STUDIES. A study of means by which child participation in the learning of the social studies may be attained. Emphasis will be placed upon such topics as directed study, the problem-discussion method, the unit and project method, and source material. The teaching of the course is based upon the study of fourteen problems. *Second semester. Two credits.* Brown.

31. THE TEACHING OF ARITHMETIC. Particular emphasis will be given to diagnostic and remedial treatment of pupil difficulties. Considerable time will be devoted to studies pertaining to content, pupil readiness to learn arithmetic and the principal objectives of the study. *First semester. Two credits.* Brown.

35. THE TEACHING OF ENGLISH. A study of the principles, materials, and methods involved in the teaching of the language subjects in the intermediate grades, with attention to remedial procedures in reading. *Second semester. Two credits.* Traner.

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. *First semester. Three credits.* Traner.

43-44. SUPERVISED TEACHING IN THE INTERMEDIATE GRADES. Opportunity for teaching, open to normal school students and to four-year students desiring to qualify for the elementary teaching certificate. Students enrolled must have had or be taking methods courses. Students teach two subjects, one hour daily. *Either semester. Five credits.* Traner. Fee \$1.

46. THE MANAGEMENT AND ORGANIZATION OF RURAL SCHOOLS. A study of the classroom problems of the rural school; organization, course of study, daily program, use of projects, classification, equipment, and discipline. *Second semester. Two credits.* Brown.

57. HISTORY OF ELEMENTARY EDUCATION. This course will consider the evolution of elementary school practice and theory from the time of the early Greeks and Romans to the present. Its principal objectives will be (1) to give the teacher in service functional knowledge of educational trends, (2) to enlarge the perspective of the teacher, and (3) to aid the teacher to evaluate her status in everyday life. (Given in alternate years beginning 1941.) *First semester. Two credits.* Brown.

68. EDUCATION TESTS AND MEASUREMENTS. This course will consider the most serviceable tests and scales for measuring the elementary subjects. It is designed to assist teachers in judging and improving their instruction. The course will involve giving the tests, scoring, and interpreting the results. (Given in alternate years beginning 1940.) *First semester. Two credits.* Brown.

*Secondary Education*

56A. GROUP LEADERSHIP FOR WOMEN. A study of the development, purposes, and organization of Girl Scout, Girl Reserve and the Camp Fire groups. Whenever possible, national leaders from each group will contribute to the leadership training. Program planning, activities, crafts, etc., adaptable to the three programs are included. Each student will assist as a group leader. *Second semester. Two credits. One lecture, one laboratory.*

56B. SCOUTCRAFT FOR MEN. This course will deal with the theory and practice of scoutcraft as presented by Boy Scouts of America. The course includes not only a study of the nature of the boy and a review of aims and methods of education and their application to the program of scouting, but gives a complete picture of types of leisure-time programs being offered boys in America today. *Second semester. One credit.*

58. HISTORY OF SECONDARY EDUCATION. This course will involve a study of educational trends from the time of the early Greeks and Romans to the present. The principal objective of the work will be to throw light on present day secondary school problems by showing the evolution of secondary school curricula, methods of instruction, and objectives. (Given in alternate years beginning 1941.) *Second semester. Two credits. Brown.*

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. *First semester. Two credits. Traner.*

64. ADMINISTRATION AND ORGANIZATION OF HIGH SCHOOL ATHLETICS. A course covering high school competition in general, methods of organizing athletic associations and administration of same. *Second semester. Three periods per week. Two credits. Martie.*

65. HIGH SCHOOL MUSIC. Conducting. Instrumental technique. Practical consideration of instrumentation, transposing instruments, and teaching material of all grades. Choral technique. Voice ranges of boys and girls, the changing voice, remedial exercises. Materials for part singing, girls' and boys' glee clubs, and mixed chorus. High school music curricula. Technical and appreciatory objectives. Active participation in orchestra, glee club or band required and applicant must be a junior or senior with a minor in music or its equivalent. *Second semester. Two credits. Post.*

66. SUBJECT MATTER AND METHODS. A study of the most suitable subject matter for the different high school courses and of the methods of teaching specific subjects. General class discussion and special study and reports and observation.

Section A, foreign languages. *First semester. One credit. Traner.*

Section B, English. *First semester.*

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

Section D, science. (Offered in odd-numbered years.) *First semester. Two credits.* Brown.

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

Section F. *The Teaching of Secretarial Subjects.* This course presents a study of the curriculum, methods of teaching, objectives, standards, grading, etc., in the subjects of typewriting, shorthand, and office practice. *Prerequisites:* A knowledge of the theory of shorthand and typewriting. Students will be given an 80-words-per-minute transcription test in shorthand, and a test in typewriting to determine speed and accuracy. (Offered in odd-numbered years.) *Two credits. First semester.*

Section G. *The Teaching of Bookkeeping, General Business Training, and Allied Subjects.* This course presents a study of the curriculum, methods of teaching, objectives, standards, grading, etc., in the teaching of bookkeeping, general clerical practice, consumer education, etc. (Offered in even-numbered years.) *Two credits. First semester.*

71. GENERAL METHODS OF HIGH SCHOOL INSTRUCTION. A course dealing with the various methods of presenting subject matter and such topics as the assignments, school discipline, reviews, motor skills, testing the results of teaching, and the teacher's personality will be given detailed consideration. To be taken in the senior year. *First semester. Three credits.* Brown.

73-74. SUPERVISED TEACHING IN SEVENTH AND EIGHTH GRADES. This course provides opportunity for teaching specific subjects in the seventh and eighth grades of the junior high school. Credits obtained in this course may be applied toward elementary and junior high school teaching certificates. Students enrolled will teach two different classes on Tuesday and on Thursday. *Prerequisite:* Method courses in the subjects to be taught. *Either semester. Four credits.* Brown. Fee \$1.

75-76. SUPERVISED TEACHING IN THE HIGH SCHOOL. Teaching in grades nine to twelve in major or minor subject of the student. Required of all candidates for the high school teachers diploma. Students enrolled must reserve ample time either in the forenoon or afternoon to make assignments possible. *Prerequisite:* Method courses in subject to be taught. Students teach one class on Tuesday and Thursday. *Either semester. Two credits.* Traner and Brown for academic subjects, Chapman for home economics, Higgins for agriculture. Fee \$1.

82. NONINSTRUCTIONAL RESPONSIBILITIES OF THE HIGH SCHOOL TEACHER. A study of those responsibilities and requirements which the high school teacher must meet outside of class instruction. The course includes a consideration of the teacher's relations to the profession, to the school authorities and to the State and community. For seniors only. *Second semester. Two credits.* Traner.

85. METHODS OF TEACHING FARM MECHANICS. A course designed for students preparing to meet the qualifications of agriculture and farm mechanics instructors in high schools. The organization and administration of a farm mechanics course, including objectives, course



content, lesson planning, and teaching methods. *First semester. Two credits.* Titus.

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

87. METHODS IN TEACHING VOCATIONAL AGRICULTURE. This course involves principles and techniques in course construction for all-day, young farmer and adult farmer classes in vocational agriculture; preparation of teaching plans and job analysis; methods of conducting supervised farm training, including selection of the long-time program, aims and objectives, budgeting, preparation of job plans, keeping farm records and accounts, enterprise analysis and teachers responsibility in supervision. Open to seniors who are preparing to meet the requirements for a high school vocational teaching certificate. *First semester. Three credits.* Higgins.

88. PROBLEMS IN HOMEMAKING EDUCATION. A study of the curricula, methods of teaching, and making home contacts; use of texts, references and selection of equipment, and determination of aims and goals to be reached in public school home-making courses. Discussion of courses of study to meet various needs. Open to juniors and seniors in the School of Home Economics to meet in part the requirements for the vocational home economics certificate. *Second semester. Two credits.* Chapman.

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.* Chapman.

90. METHODS OF HOMEMAKING EDUCATION FOR ADULTS. Designed for the homemaking teacher as a help in methods of organizing, selecting content, and promoting work in adult groups as a part of the teacher's community activities; observation and assisting with adult classes. Methods of working with adults in specially organized classes will also be considered. *Either semester. Three credits.* Chapman.

95. SUPERVISION AND INSTRUCTION IN JUNIOR HIGH SCHOOL GRADES. This course will consider the development, present status, and influence of the junior high school on educational perspectives and educational practices in the junior high school and in the corresponding grades of the traditional elementary school. The structural, social, civic, and economic-vocational foundations of the junior high school will be

studied briefly. Attention will be given to the psychological foundation of the junior high school and its implications for supervision, for the instructional program, and for the guidance and socialization of pupils in upper elementary and junior high school grades. A major part of the course time will be given to the study of the instructional program of junior high school grades. (Given in alternate years beginning in 1940.) *Second semester. Two credits.* Brown.

108. SUPERVISION OF STUDENT TEACHERS IN HOME ECONOMICS. Intended for supervisors of student teaching in home economics. Analysis of objectives, techniques, and experiences which promote student teacher growth. Study of methods of teaching; establishing a philosophy of supervision; recognizing responsibilities of the teacher and the student teacher; understanding the inter-relationships of various people and departments concerned; evaluation of student teacher and her prospective success. *Second semester. Three credits.* Chapman.

### *Educational Psychology*

6. ELEMENTARY EDUCATIONAL PSYCHOLOGY. A consideration of the applications of psychology to educational problems. *Prerequisite:* Psychology 5. *Second semester. Three credits.* Irwin or Wiederhold.

67. PSYCHOLOGY OF THE ELEMENTARY SCHOOL SUBJECTS. This course sets forth and interprets the scientific experiments and investigations that have been made relating to learning and teaching of the elementary branches. Emphasis is placed on the psychological problems of immediate concern to the teacher in the classroom. *Second semester. Two credits.* Puffinbarger.

69. THE EDUCATION OF RETARDED CHILDREN. Describes the characteristics and capacities of slow-learning children, their place in the school and community, and the procedures basic to planning and carrying out an adequate program of learning experience that satisfies the needs and capacities of such children at each stage of their development. *First semester. Two credits.* Puffinbarger.

70. THE EDUCATION OF SUPERIOR CHILDREN. Designed to acquaint public school teachers with the problems and methods involved in the adjustment and training of superior children, and with educational provisions for the mentally alert, but emotionally unstable, gifted child. *Second semester. Two credits.* Puffinbarger.

72. ADVANCED EDUCATIONAL PSYCHOLOGY. The nature and needs of the child, emphasizing mental and emotional development, nature of learning, conditions affecting learning, problems of transfer, problems of adjustment. *First semester. Two credits.* Puffinbarger.

### *Graduate Courses*

201-202. GRADUATE THESIS. Preparation of the thesis for the Master's degree. Open only to candidates for the M. A. degree in Education. *Credits to be arranged.* Members of the staff.

## ELECTRICAL ENGINEERING

PROFESSOR S. G. PALMER, HEAD OF SCHOOL

PROFESSOR SANDORF<sup>1</sup>ASSOCIATE PROFESSOR HARRIS<sup>1</sup>

21. **INTRODUCTORY ELECTRICAL ENGINEERING.** An introduction to the study of electrical engineering which will include lectures, laboratory demonstrations, and class discussions concerning the applications of electricity in modern living. An elective course offered for engineering and nonengineering students. *First semester. One credit.* Electrical Building. Palmer.

24. **ELEMENTS OF ELECTRICAL ENGINEERING.** A beginning course in electrical engineering. 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. Course adapted to needs of civil engineers and other nonelectricals. *Second semester. Two credits.* Electrical Building. Palmer.

47. **RURAL ELECTRIFICATION.** A course intended particularly for students in the College of Agriculture, combining a study of the elementary principles of electrical circuits and machines with the application of these principles in the use of power and light on the farm. The course includes lectures, discussions, and laboratory demonstrations. *First semester. Two credits.* Electrical Building. Palmer.

51. **DIRECT CURRENT MACHINERY.** The fundamental principles, theory, characteristics, construction and operation of direct current machines and circuits, supplemented by electrical problems. *Prerequisites:* Physics 4, mathematics 25 and 26. *First semester. Three credits.* Palmer.

52. **ALTERNATING CURRENT MACHINERY.** A study of alternating current motors, generators, transformers, converters, transmission lines, and auxiliary apparatus. The time is largely taken up with mathematical problems involved in the design and operation of such equipment. *Prerequisite:* E. E. 51. *Second semester. Three credits.* Palmer.

53. **ALTERNATING CURRENT MACHINERY. ADVANCED COURSE.** A continuation of the preceding course, taking up more advanced problems in the theory and characteristics of electrical circuits and machinery. *Prerequisite:* E. E. 52. *First semester. Three credits.*

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.*

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.*

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

<sup>1</sup>Absent on leave; war service.

accompany E. E. 51, with the same prerequisites as for that course. *First semester. Two credits.*

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. 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 per semester.*

65. ELECTRICAL ILLUMINATION. A study of the principles of electric lighting and illumination and the practical application of these principles in modern lighting. An elective course for both engineering and nonengineering students. *First semester. Two credits. Palmer.*

66. ELECTRIC POWER EQUIPMENT. A study of generating equipment, switchboards and switching equipment, transformers, relays, and other protective devices as applied to modern generating and substations. Elective for juniors and seniors. *Second semester. Two credits. Palmer.*

67. COMMUNICATION ENGINEERING. A study of fundamental principles in the field of communication including the mathematical theory and application of telephone transmitters and receivers, coupled circuits, transmission lines, and vacuum tube circuits. *Prerequisites:* Electrical engineering 52, mathematics 25 and 26, physics 3 and 4. *First semester. Three credits. Two lecture periods and one laboratory. Fee \$2.50.*

68. COMMUNICATION ENGINEERING. A continuation of electrical engineering 67, including a study of rectifying systems, filters, radio and carrier systems of modulation and detection, antennas, and wave propagation. *Second semester. Three credits. Fee \$2.50.*

75. ELECTRICITY IN MINING. A study of the theory and application of electrical machinery commonly used in mining and associated fields. *Prerequisite:* Senior standing. *Two lecture periods and one laboratory. Three credits. Second semester. Palmer. Fee \$2.50.*

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. A laboratory fee of \$2.50 per credit may be required, depending upon the work undertaken.*

78-79. **ELECTRICAL LABORATORY APPARATUS.** In this course the student undertakes the design and construction of one or more pieces of permanent laboratory equipment. Satisfactory evidence must be presented of ability to undertake the work agreed upon. *One or two credits each semester.* Palmer.

80. **THESIS.** Original design or investigation covering a project to be selected with the approval of the instructor. An elective course for seniors whose records indicate ability to successfully complete such a project. *Second semester. One to three credits.* Palmer.

83-84. **SEMINAR.** Limited to students who have attained junior standing. Presentation of abstracts and discussion of technical articles of interest appearing in current electrical engineering journals. *One credit each semester.* Electrical Building. Palmer.

85-86. **COMMUNICATIONS LABORATORY.** The course consists of assembling and testing circuits and apparatus used in electrical communications. Prerequisites required will depend upon the student's ability and practical experience. *One to two credits each semester.* Fee \$2.50 per credit.

## ENGLISH LANGUAGE AND LITERATURE

PROFESSOR HILL, HEAD OF DEPARTMENT

PROFESSOR GRIFFIN

ASSOCIATE PROFESSOR HARWOOD<sup>1</sup>

ASSOCIATE PROFESSOR LAIRD

ASSISTANT PROFESSOR MILLER

ASSISTANT PROFESSOR HOLMES

MR. BUTTERWORTH<sup>1</sup>

MRS. FERRIS

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, Language, and Composition*

1-2. **COMPOSITION AND RHETORIC.** The study of English as a means of self-expression, with special attention to the writing of exposition, description, and narration. *Both semesters. Three credits each semester.* Staff.

**NOTE**—Students who receive a grade of A in English 1 may substitute for English 2 one of the courses in the department numbered to 50 of a credit value of not less than two units. In no case may a course be used to meet both first-year and second-year requirements.

Any student who receives a failure in a course which he has substituted for English 2 will be required to register for English 2 the following semester.

A student who is habitually delinquent in the use of English in connection with any course in the University curriculum may be remanded to the Department of English to take without credit such further work in composition as the head of the department thinks advisable.

3-4. **ADVANCED COMPOSITION.** Extensive practice in various types of writing based upon the reading and discussion of contemporary

<sup>1</sup>Absent on leave; war service.

prose. *Both semesters. Two credits each semester.* Hall of English. Holmes.

41-42. APPRECIATION OF LITERATURE. A study of the more important types of contemporary literature. *Both semesters. Two credits each semester.* Staff.

44-45. INTRODUCTION TO LITERARY STUDY. A course in the critical examination of creative work, with a view to suggesting the types and forms of expression and the basic methods of literary study. It is required of majors and minors, but a more advanced course may be substituted at the discretion of the head of the department. *Both semesters. Three credits each semester.* Hall of English. Laird.

NOTE—English 44-45 are prerequisite for all courses in literature numbered 50 or above.

51. CURRENT ENGLISH. A study of modern American speech with a view to elucidating the nature of language and the principles of its change and growth. *Two credits. First semester.* Hall of English. Laird.

52. HISTORY OF THE LANGUAGE. A survey of the origins of the English language and of its growth to modern times. *Two credits. Second semester.* Hall of English. Laird.

NOTE—English 44-45, prerequisite for courses in literature, are not prerequisite for English 51-52.

59-60. NARRATIVE TECHNIQUE. Special practice in the writing of artistic narrative, including the short story. For advanced students only. *Both semesters. Two credits each semester.* Hall of English. Holmes.

67. DESCRIPTIVE GRAMMAR. A description of Modern English. This course is planned to furnish a foundation in present English sentence structure and is designed primarily for prospective teachers. *One semester. Three credits.* Hall of English. Holmes.

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.* Hall of English.

70-71. AMERICAN LITERATURE. The development of American literature, exclusive of the drama, from the beginnings to 1900. *Both semesters. Three credits each semester.* Hall of English.

71A. RECENT AMERICAN LITERATURE. American literature, exclusive of the drama, since 1900. *Second semester. Three credits.* Hall of English.

72-73. MODERN DRAMA. Representative English and American dramatists, since 1890. *Both semesters. Two credits each semester.* Hall of English. Miller.

74. AMERICAN NOVEL. A consideration of the American novel with the stress on the contemporary. Some of the novelists studied will be Hawthorne, Cooper, Melville, Lewis, Wolfe, Cather, Dos Passos, Steinbeck, Hemingway. *Second semester. Three credits.* Hall of English.

75-76. SHAKESPEARE. The reading of Shakespeare's plays and a closer interpretation of his more characteristic dramas. *Both semesters. Three credits each semester.* Hall of English. Laird.

77. 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.* Hall of English.

78. MILTON. Minor poems, dramas, and Paradise Lost. *Second semester. Three credits.* Hall of English.

79-79A. THE ROMANTIC MOVEMENT. The rise of romanticism in the eighteenth century and its flowering in the nineteenth, with especial emphasis on the English Romantics. Both semesters. *Three credits each semester.* Hall of English. Laird.

80-80A. THE VICTORIAN AGE. The social and artistic movements of the nineteenth century as exemplified in English poetry and prose. *Both semesters. Three credits each semester.* Hall of English. Laird.

85. ENGLISH DRAMA. A comprehensive survey of English drama from its beginnings to the end of the nineteenth century. *First semester. Three credits.* Hall of English.

87-88. EIGHTEENTH CENTURY PROSE. Representative prose of the eighteenth century with emphasis on the work of Defoe, Swift, Steele, Addison, Johnson, Boswell, and the novelists. *Both semesters. Two credits each semester.* Hall of English.

94. CHAUCER. The principal works of Chaucer, read in the original for their merit as literature and their reflection of the middle ages. *One semester. Three credits.* Hall of English. Laird.

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.* Hall of English.

97-98, 99-100. INDEPENDENT STUDY. Open to juniors and seniors majoring or minoring in English upon consultation with the head of the department. Hours to be arranged with individual students. *One credit a semester.* Staff.

101-102. SEMINAR. Open only to graduate students. *Both semesters.* Hours to be arranged with individual students. *One to three credits each semester.* Staff.

200. THESIS COURSE. Open only to candidates for a master's degree. *Six credits.* Staff.

### *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.

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 and 17A. 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.* Hall of English. Miller.

23-24. THE DRAMA OF TODAY. An interpretation of the trend and social significance of modern plays. Primarily for freshmen and sophomores not majors or minors in English. *Both semesters. Two credits each semester.* Miller.

53-54. ADVANCED INTERPRETATION. The course aims to develop skill in analysis and an understanding of the various types of literature. A study of the finer techniques of oral expression to develop the imagination, the emotional power, reading skill, and platform deportment in all its phases. *Prerequisite:* English 21-22, or the consent of the instructor. *Both semesters. Two credits each semester.* Hall of English. Miller.

55-56. PRINCIPLES AND TECHNIQUES OF PUBLIC DISCUSSION. Study of the principles and techniques involved in the various forms of group discussion: symposium, panel, lecture forum, forensic progression, etc. Duties and problems of the discussion leader. Classroom practice in solving public problems. The course stresses scholarly inquiry on a cooperative basis. *Prerequisite:* English 11-12 or 16-17. Hall of English. Griffin.

57-58. ADVANCED ARGUMENTATION AND PERSUASION. Study of the intellectual and emotional behavior of the audience. Analysis of complex public problems and the briefing of cases for the advocate. *Prerequisite:* English 16-17. The course may be repeated for credit. Maximum of eight credits may be earned. *Both semesters. Two credits each semester.* 107 Hall of English. Griffin.

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. *Both semesters. Two credits each semester.* Hall of English. Griffin.

63-64. HISTORY OF ORATORY. Examination of backgrounds, methods, and ideals of modern oratory. Particular attention to the outstanding figures of each period, with study of historical settings and significance of each orator. British oratory is studied the first semester and American oratory the second. *Prerequisite:* English 11-12 or 16-17. *Both semesters. Two credits each semester.* 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 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. *Two credits.* 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. *Two credits.* Hall of English. Griffin.

## FOREIGN LANGUAGES

PROFESSOR CHAPPELLE, HEAD OF DEPARTMENT

PROFESSOR MURGOTTEN

ASSOCIATE PROFESSOR GOTTARDI

ASSISTANT PROFESSOR KLINE<sup>1</sup>

ASSISTANT PROFESSOR MELZ

Requirements for a minor in French, German, Italian, Latin, and Spanish: With no admission units, courses 1-2 (10 credits), 3-4 (6 credits)\*, and 2 additional credits in courses numbered 50 or above; with 2 admission units, courses 3-4 (6 credits), and 6 additional credits in courses numbered 50 or above; with 4 admission units, 6 credits in courses numbered 50 or above.

Requirements for a major in French, German, Italian, Latin, and Spanish: With no admission units, courses 1-2 (10 credits), 3-4 (6 credits)\*, and 10 additional credits in courses numbered 50 or above; with 2 admission units, courses 3-4 (6 credits), and 14 additional credits in courses numbered 50 or above; with 4 admission credits, 16 credits in courses numbered 50 or above.

Students intending later to teach foreign languages are urged not to restrict their courses to the minimum requirements for a major or a minor in the particular subjects. All such candidates are to confer with the head of the department.

Courses numbered above 50 and announced as offered in any year may not be given in that year unless there are at least seven candidates for the class. Some courses numbered above 50 are given only in alternate years. Consult the printed schedule of classes for the definite offerings any given semester.

In certain instances and by special permission of the head of the department, a given course numbered above 50 may be repeated for credit, provided that the entire content of the course differs from the one given previously under the same number. In such cases the course will be recorded with the catalogue number *plus A* (e. g. French 59-A).

For all foreign-languages courses numbered "4" the prerequisite is three years of high school work or courses 1, 2 and 3 in the same language.

### *Foreign Languages*

200. FOREIGN LANGUAGE THESIS COURSE. Open only to candidates for the masters degree. *Six credits.* Chappelle.

### *French*

1. FIRST YEAR FRENCH. Drill in the essentials of grammar. Elementary composition and conversation. *First semester. Five credits.* Stewart Hall.

2. FIRST YEAR FRENCH (Continued). Grammar, composition and conversation. Translation of simple prose texts. *Prerequisite:* French 1 or one year of high school French. *Second semester. Five credits.* Stewart Hall.

<sup>1</sup>Absent on leave; war service.

\*German 9-10 may be offered in lieu of German 3-4.

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 Gottardi.

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.* Chappelle.

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.* Gottardi.

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. CONTEMPORARY FRENCH DRAMA. A study of French plays of the twentieth century. *Prerequisite:* French 3-4. *First semester. Two credits.* Murgotten.

72. 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. *Second semester. Two credits.* Murgotten.

73-74. ADVANCED FRENCH COMPOSITION AND CONVERSATION. Includes a study of French epistolary style and commercial correspondence. This course should be taken simultaneously with the second year of junior-senior reading courses in French. *Prerequisite:* French 3-4. *Both semesters. One credit each semester.*

81-82. THE EIGHTEENTH CENTURY IN FRENCH LITERATURE. A study of the works of Montesquieu, Voltaire, Rousseau, etc. *Prerequisite:* French 3-4. *Both semesters. Two credits each semester.* Chappelle.

89-90. FRENCH PHONETICS. A study of pronunciation on the basis of practical phonetics. This course is especially arranged for prospective teachers of French. *Prerequisite:* French 3-4. *Both semesters. Two credits each semester.* Gottardi.

*German*

1. FIRST YEAR GERMAN. A systematic study of grammar, elementary composition and conversation. *First semester. Five credits.* Stewart Hall. Melz.

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.* Melz.

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.

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.* Melz.

57-58. GENERAL SURVEY OF GERMAN LITERATURE. The history of German literature with detailed study of special periods. Assigned readings and reports on the works read. *Prerequisite:* German 3-4. *Both semesters. Two credits each semester.* Chappelle.

59-60. SCIENTIFIC GERMAN. Readings from German scientific works, with special emphasis on chemistry and physics. This course is particularly recommended to premedical students and to those who intend to specialize in any one of the scientific fields. *Prerequisite:* German 3-4 or 9-10. *Both semesters. Two credits each semester.* Chappelle.

69-70. GERMAN CLASSICS. Reading and technical study of representative works of Lessing, Schiller, and Goethe. *Prerequisite:* German 3-4. *Both semesters. Two credits each semester.* Chappelle.

71-72. THE MODERN GERMAN DRAMA. A study of the German drama from about 1850 to the present time. Special references to Hauptmann, Schnitzler, Wedekind, etc. *Prerequisite:* German 3-4 or the equivalent. *Both semesters. Two credits each semester.* Melz.

79-80. ADVANCED COMPOSITION. A study of German epistolary style, business correspondence, free composition. This course should be taken simultaneously with the junior-senior reading courses. *Prerequisite:* German 3-4 or 9-10. *Both semesters. One credit each semester.* Chappelle.

*Italian*

1. FIRST-YEAR ITALIAN. Elementary grammar, composition, and conversation. Reading of modern Italian prose. *First semester. Five credits.* Stewart Hall. Gottardi.

2. FIRST-YEAR ITALIAN (Continued). Grammar, composition, and conversation. Translation of modern Italian prose and poetry. *Prerequisite:* Italian 1 or one year of high school Italian. *Second semester. Five credits.* Gottardi.

3-4. INTERMEDIATE ITALIAN. Grammar review. Reading of prose and poetry. Exercises in conversation and composition. *Prerequisite:* Italian 1-2, or two years of high-school Italian. *Both semesters. Three credits each semester.* Gottardi.

51-52. THE ITALIAN NOVEL. Rapid reading of masterpieces of modern Italian fiction: Manzoni, Fogazzaro, Verga, etc. *Prerequisite:* Italian 3-4. *Both semesters. Two credits each semester.* Gottardi.

53-54. ITALIAN LITERATURE OF THE EIGHTEENTH AND NINETEENTH CENTURIES. Reading of important works of prose and poetry of the period, with a study of literary movements. *Prerequisite:* Italian 3-4. *Both semesters. Two credits each semester.*

55-56. INTERMEDIATE COMPOSITION. *Prerequisite:* Italian 3-4. *Both semesters. One credit each semester.*

### *Latin*

1. FIRST-YEAR LATIN. Drill in the essentials of Latin grammar. Word study and composition. Roman life and customs. *First semester. Five credits.*

2. FIRST-YEAR LATIN (Continued). Translation of easy Latin prose. Composition. Roman antiquities. *Prerequisite:* Latin 1 or one year of high school Latin. *Second semester. Five credits.*

3. CICERO. Orations. Study of Roman law and government. *Prerequisite:* Latin 2 or two years of high school Latin. *First semester. Three credits.*

4. VERGIL. First six books of the *Æneid*. Study of classic myths. *Prerequisite:* Latin 3 or three years of high school Latin. *Second semester. Three credits.*

51-52. ADVANCED LATIN. Selected readings of Latin prose. History of Latin literature. Composition. *Prerequisite:* Latin 4 or four years of high school Latin. *Both semesters. Two credits each semester.*

53-54. LATIN LYRIC POETRY. Horace and Catullus. *Prerequisite:* Latin 4 or four years of high school Latin. *Both semesters. Two credits each semester.*

### *Spanish*

1. FIRST-YEAR SPANISH. Drill in the essentials of grammar. Elementary composition and conversation. *First semester. Five credits.* Stewart Hall.

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.*

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.* Murgotten.

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.*

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. Two credits each semester.*

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. Gottardi.*

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.*

71-72. SPANISH-AMERICAN LITERATURE. Prose and poetry. *Prerequisite*: Spanish 3-4. *Both semesters. Two credits each semester. Melz.*

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. Two credits each semester.*

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.*

### *Portuguese*

61-62. PORTUGUESE. An intensive rapid reading course in Portuguese based on the language as spoken in Brazil. Grammar, composition, and conversation. Offered only as a free elective and may not be counted towards a major or a minor or towards meeting the language requirement. *Prerequisite*: Course 3-4 in any romance language or Latin or the equivalent. *Both semesters. Three credits each semester. Chappelle.*

71-72. PORTUGUESE-AMERICAN LITERATURE. This course is based on a study of literary works by Brazilian writers. Discussions of the general cultural, social, and economic phases of Brazilian life are included. *Prerequisite*: Portuguese 61-62 or the equivalent. *Both semesters. Two credits each semester. Chappelle.*

### GENERAL ENGINEERING

1. ENGINEERING ORIENTATION. See Orientation, Index, for description of this course.

2. FREEHAND DRAWING. The application and technique of freehand

drawing demonstrated by classroom exercises and practical problems. *First semester. One credit.* Joslin.

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 and lecture. Two credits.*

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:* General Engineering 5. *Second semester. Laboratory and lecture. Two credits.* Oliver.

## GEOLOGY

PROFESSOR GIANELLA, HEAD OF DEPARTMENT  
ASSOCIATE PROFESSOR WHEELER<sup>1</sup>

Requirements for a minor in geology: Geology 1, 2, 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 1, 2, 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. **PHYSICAL GEOLOGY.** An elementary 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.

2. **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 1 or 10. *Either semester. Three credits.* Mackay School of Mines. Wheeler.

10. **ENGINEERING GEOLOGY.** (Engineering and Agricultural students only.) 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. Wheeler.

11. **DETERMINATIVE MINERALOGY.** The first few weeks are devoted to an elementary course in crystallography, followed by the determination of the more common minerals, chiefly by means of their physical properties, using such simple tests as are of easy application in the field. *Prerequisite:* Chemistry 7 and 8, or the equivalent. *First semester. Two credits.* Mackay School of Mines. Gianella. Fee \$2.

12. **BLOWPIPE ANALYSIS.** The determination of minerals by blowpipe analysis. *Prerequisite:* Chemistry 7 and 8, or the equivalent, and Geology 11. *Second semester. Two credits.* Mackay School of Mines. Wheeler. Fee \$3.

<sup>1</sup>Absent on leave; war service.

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-2 or 3-4, Geology 1 or 10, 2, 11 and 12. *First semester. Two credits.* Mackay School of Mines. Wheeler. Fee \$2.

52. **PETROGRAPHY.** Lectures on the genesis of rocks, and the study of rock-forming minerals and rocks under the microscope. *Prerequisite:* Geology 11 and 12 and 51. *Second semester. Three credits.* Mackay School of Mines. Gianella. Fee \$2.

53. **STRATIGRAPHIC PALEONTOLOGY.** A laboratory study of the hard parts of the major invertebrate groups, the faunal assemblages of the geologic past, and the application of paleontologic methods to stratigraphic geology. *Prerequisite:* Geology 1 or 10, and 2 (Zoology 2 recommended). *First semester. Two credits.* Mackay School of Mines. Wheeler.

55-56. **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 1 or 10, 2, 11, 12, and 14. *Second semester. Three credits.* Mackay School of Mines. Wheeler.

61. **ECONOMIC GEOLOGY OF THE METALS.** The geology of ore deposits, treating of their distribution, origin, mode of occurrence, and alteration; with special reference to the more important mining districts of North America. *Prerequisite:* Geology 11, 12, 14 and 51 (geology 52 recommended). *First semester. Three credits.* Mackay School of Mines. Gianella.

70. **FIELD GEOLOGY.** Instruction in field methods and the investigation of the principal geologic features of several areas in the Reno region. Transportation and other expenses are covered by the S. Frank Hunt Foundation. *Prerequisite:* Geology 11, 12, 14 and 51. *Second semester. One credit.* Mackay School of Mines. Gianella.

71. **SUMMER FIELD GEOLOGY.** Eight weeks of study in critical Nevada areas where both surface and subsurface geology may be investigated and mapped. Reports, well-kept field notes and finished maps will be required. All living and traveling expenses for instructors and students will be paid from the S. Frank Hunt Foundation funds. *Prerequisite:* Geology 51 and 60 or 61 (and preferably geology 52 and 82). *Four credits.* Gianella and Wheeler.

**NOTE**—Geology 71 may be substituted for civil engineering 58 (summer surveying).

79. GEOLOGIC INVESTIGATION. Original investigation of a geologic problem. *Prerequisite:* Geology 51, 52 and 60 or equivalent training. *First semester. One or two credits to be arranged.* Mackay School of Mines. Gianella and Wheeler.

80. GEOLOGIC INVESTIGATION. A continuation of geology 79. *Second semester. Credits to be arranged.* Mackay School of Mines. Gianella and Wheeler.

82. STRUCTURAL GEOLOGY. A brief course treating of the deformation of the earth's crust. *Prerequisite:* Geology 14 and 51. *Second semester. Two credits.* Mackay School of Mines. Gianella.

179-180. ADVANCED GEOLOGIC INVESTIGATION. Credits and fee to be arranged according to work undertaken. Mackay School of Mines. Gianella and Wheeler.

199-200. THESIS. Six to ten credits total. Fee to be arranged according to work undertaken. Gianella and Wheeler.

## HISTORY AND POLITICAL SCIENCE

PROFESSOR HICKS, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR SMITH

ASSOCIATE PROFESSOR MAZOUR

ASSOCIATE PROFESSOR HUTCHESON

ASSOCIATE PROFESSOR AUCHAMPAUGH

Requirements for a minor in History: History 1-2 (6 credits), History 5-6 (6 credits), and six additional credits in History.

Requirements for a major in History: History 1-2 (6 credits), History 5-6 (6 credits), and fifteen additional credits in History.

Requirements for a minor in Political Science: History 1-2 (6 credits), Political Science 1-2 (4 credits), and eight additional credits in Political Science. History 87-88 and 89a-90a may be used to satisfy this requirement of eight additional hours.

Requirements for a major in Political Science: History 1-2 (6 credits), Political Science 1-2 (4 credits), and seventeen additional credits in Political Science. History 87-88 and 89a-90a may be used to satisfy part of these requirements.

Political Science 55 satisfies the legal requirements for Political Science 79; and Political Science 56 satisfies the legal requirements for Political Science 80.

Any course in History and Political Science numbered 50 or above is open to juniors and seniors, subject only to the consent of the instructor concerned.

### *History*

1-2. UNITED STATES. Colonial times to the present: Social, political, and diplomatic. *Both semesters. Three credits each semester.* Stewart Hall. Hicks, Smith, Hutcheson, Auchampaugh.

5-6. EUROPEAN CIVILIZATION. The development of civilization in Europe from the Roman Empire to the present. Designed to furnish perspective for the understanding of the present-day world. *Both semesters. Three credits each semester.* Stewart Hall. Mazour.

56. THE WESTWARD MOVEMENT IN THE UNITED STATES. The westward movement of peoples from the Atlantic Coast, and the influence of this movement upon United States history. *Second semester. Two credits.* Stewart Hall. Auchampaugh.

58. WESTERN NORTH AMERICA. The Far West: The Rocky Mountain and West Coast States; activities of the Spanish, Russians,



- British, and Americans on the Pacific Coast. *Second semester. Three credits.* Stewart Hall. Hutcheson.
- 59-60. LATIN AMERICA. History of Spanish and Portuguese America from the age of discovery to the present: domestic and international. *Both semesters. Two credits each semester.* Stewart Hall. Hicks.
- 63-64. ENGLAND AND THE BRITISH EMPIRE. History of England and its empire: social, economic, and political. *Both semesters. Two credits each semester.* Stewart Hall. Hutcheson.
- 65-66. NEVADA HISTORY. Lectures and reports. *Both semesters. Credits arranged.* Stewart Hall. Hutcheson.
67. UNITED STATES; COLONIAL PERIOD. History of the English colonies, 1607-1776; with some attention to the influence of Spain and France. *First semester. Two credits.* Stewart Hall. Auchampaugh.
69. RECENT EUROPEAN HISTORY, 1870-1914. Background of the World War: nationalism, colonial expansion, problems of peace, and the collapse of world order. *First semester. Two credits.* Stewart Hall. Mazour.
70. EUROPE BETWEEN THE FIRST AND SECOND WORLD WARS, 1914-1939. A detailed analysis of a turbulent era. *Second semester. Two credits.* Stewart Hall. Mazour.
- 71-72. ANCIENT CIVILIZATION. Origins of Western civilization in the Near East, Greece, and Rome: art, culture, society, and politics. *Both semesters. Two credits each semester.* Stewart Hall. Hutcheson.
76. MEDIEVAL HISTORY, 400-1500. Civilization of medieval Europe: culture, the Church, and law. Background of modern nations. *Second semester. Three credits.* Stewart Hall.
- 77-78. NINETEENTH CENTURY EUROPE. Emphasis upon social, political, and economic forces brought about by the French and Industrial revolutions. *Both semesters. Two credits each semester.* Stewart Hall. Mazour.
- 79-80. THE FRENCH REVOLUTION AND NAPOLEON. An intensive study of the great epoch extending from 1789 to 1815. *Both semesters. Two credits each semester.* Stewart Hall. Mazour.
- 81-82. THE FAR EAST. Domestic and international relations of China and Japan from the earliest times to the present. *Both semesters. Two credits each semester.* Stewart Hall. Hicks.
- 83-84. HISTORY OF RUSSIA. Foundations of the Russian state and society. The imperial and revolutionary eras. *Both semesters. Two credits each semester.* Stewart Hall. Mazour.
85. UNITED STATES, 1776-1865. The Revolution; constitution-making; problems of peace; War of 1812; domestic problems; slavery and State rights; the Oregon question; Texas; the Mexican War; the Civil War. *First semester. Three credits.* Stewart Hall. Auchampaugh.
87. ENGLISH CONSTITUTIONAL HISTORY. The rise and development of institutions—such as free, representative government, the jury system, and English law—which were transmitted to Colonial America

to become the basis of government in the United States. *First semester. Three credits.* Stewart Hall. Hutcheson.

89A-90A. AMERICAN CONSTITUTIONAL HISTORY. A narrative and interpretative study of the origin and growth of the institutional forms and principles which have crystalized into the American constitutional system. *Both semesters. Two credits each semester.* Stewart Hall. Auchampaugh.

94. UNITED STATES SINCE 1865. Reconstruction; economic and diplomatic affairs; the Far West; the tariff; war with Spain; the World War and its aftermath. *Second semester. Three credits.* Stewart Hall. Auchampaugh.

97-98. MODERN GERMANY. The problem and achievement of unification; Germany as a world factor. *Both semesters. Two credits each semester.* Stewart Hall. Mazour.

99-100. SEMINAR. *Both semesters. Credits arranged.* Stewart Hall. Staff.

199-200. GRADUATE THESIS. *Both semesters. Credits arranged.* Staff.

#### *Political Science*

1-2. COMPARATIVE GOVERNMENT. A study of the frameworks, functions, and motivating ideals of various representative democratic and totalitarian governments. *Both semesters. Two credits each semester.* Stewart Hall. Hicks, Smith, Hutcheson.

55. GOVERNMENT OF THE UNITED STATES. A basic course dealing with the organization and working principles of the United States Government, with its structural problems and functional processes. *First semester. Two or three credits.* Morrill Hall. Smith.

56. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES. The executive, legislative, judicial and administrative organization of the States and of local areas of government; inter-State and Federal-State relations; recent trends in administration and constitution-making. Special reference to Nevada. *Second semester. Two or three credits.* Morrill Hall. Smith.

57. ELEMENTS OF POLITICAL SCIENCE. An introduction to certain concepts, distinctions and terminology necessary for an intelligent approach to a study of the science of politics; theories as to the origin, nature, and functions of the State. *First semester. Three credits.* Morrill Hall. Smith.

59. HISTORY OF POLITICAL THOUGHT. A survey course designed to portray the historical development of political thinking from the classical period to the present. A discussion of types of inquiry, or methods of approach. *First semester. Two credits.* Morrill Hall. Smith.

64. INTERNATIONAL LAW AND ORGANIZATION. The elements of International Law, and a study of organizational forms as they relate to international law and procedure. *Second semester. Two credits.* Morrill Hall. Smith.

68. POLITICAL PARTIES. The party system in the United States; the history, composition, and functions of parties—their organization and methods. *Second semester. Three credits.* Morrill Hall. Smith.

76. PUBLIC PERSONNEL ADMINISTRATION. A study of methods of recruiting, examining, training, and of other techniques utilized in the management of employees in Government service. *Second semester. Two credits.* Morrill Hall. Smith.

77. AMERICAN DIPLOMACY. Foreign relations of the United States; principles, policies, and methods. Monroe Doctrine; arbitration; Open Door policy; freedom of the seas; disarmament; cooperation. *First semester. Two credits.* Morrill Hall. Smith.

79-80. CONSTITUTIONS OF THE UNITED STATES AND NEVADA. Origins, history, and essentials of these constitutions—with emphasis upon devotion to American institutions and ideals. United States Constitution the first semester; Nevada Constitution the second semester. *Both semesters. One credit each semester.* Hicks, Smith, Auchampaugh.

83-84. PRINCIPLES OF PUBLIC ADMINISTRATION. Principles and problems of public administration; the budget; forms of administrative action; types of control; administrative law. *Both semesters. Two credits each semester.* Morrill Hall. Smith.

99-100. SEMINAR. *Both semesters. Credits arranged.* Morrill Hall. Staff.

199-200. GRADUATE THESIS. *Both semesters. Credits arranged.* Smith.

## HOME ECONOMICS

PROFESSOR SWIFT, HEAD OF THE DEPARTMENT

ASSOCIATE PROFESSOR POPE

ASSISTANT PROFESSOR MARSH

A Home Economics minor in Clothing and Textiles is offered to students in the College of Arts and Science.

Requirements for a Home Economics minor in Clothing and Textiles; Home Economics 15-18, 16, 45, and 7 additional credits in the department in courses numbered 50 or above.

Requirements for a Home Economics minor in Home Management: Home Economics 16, 31-32, 42, 88, and 5 additional credits in the department in courses numbered 50 or above.

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. Pope. (Not offered in 1944-1945.)

15-18. CLOTHING. Emphasis on good grooming, selection, care and construction. Use of commercial patterns. Equipment, and making of clothing budget. *Lecture, one hour. Workshop, two hours. Three credits. Both semesters.* Fee \$4. Pope.

16. TEXTILES. Textile fibers and fabric construction; label study and consumer demand. *Lecture, two hours. Laboratory, one hour. Three credits. Second semester.* Fee \$4. Pope.

31-32. GENERAL FOODS. A study of food selection-costs and preparation. Emphasis placed on food substitution and ration foods. *Lecture, one hour. Laboratory, two hours. Three credits. Both semesters.* Fee \$5.

33. NUTRITION IN HEALTH. A scientific study of nutrition involving digestive and metabolic processes and products. Emphasis on community nutritional problems. *Lecture, three hours. Three credits. First semester.*

34. NUTRITION IN DISEASE. Dietary adjustments for abnormal conditions. *Lecture, one hour. Laboratory, two hours. Three credits. Second semester.*

42. FOOD ECONOMICS. How to select and purchase food for home and institution with regard to rationing and income. Laws and agencies affecting foodstuffs. *Lecture, three hours. Three credits. Second semester. Fee \$2.*

45. RELATED ART. Practical application of color and design to home needs. *Laboratory, two hours. Two credits. First semester. Fee \$4. Pope.*

50. FOODS AND NUTRITION. Elementary nutrition and food preparation. Open to pre-nursing and arts students. *Lecture, two hours. Laboratory, one hour. Three credits. Fee \$5. Swift.*

54. CARE OF HEALTH AND DISEASE. How to maintain health and care for illness in the home; community health and first aid. Red Cross certificate included. *Lecture, two hours. Laboratory, one hour. Three credits. Fee \$2.*

55. MEAL PLANNING. Actual purchase of food, preparation and service by each individual student. Time and fuel studies included. *Lecture, one hour. Laboratory, six hours. Four credits. First semester. Fee \$10. Pope.*

56. FOOD MANAGEMENT FOR LAY GROUPS. Practical budgeting, planning, and buying of foods. *Lecture, two hours. Two credits. Marsh. (Not offered in 1944-1945.)*

57. CAMP COOKERY FOR MEN. Practical food selection and preparation. *Lecture, one hour. Laboratory, camp, or both. Three credits. Fee \$5. (Not offered in 1944-1945.)*

66. ADVANCED CLOTHING. A study of the human figure, stressing silhouette. History of period-costume; planning and construction of complete costume; workshop include tailoring. *Lecture, one hour. Workshop, two hours. Three credits. Second semester. Fee \$4. Pope.*

67. CLOTHING. Children's clothing. Construction of layette, self-help "toddlers," and "runabout" clothing. Workshop includes outer garment construction. *Lecture, one hour. Workshop, two hours. Three credits. Second semester. Fee \$4. Pope.*

68. COSTUMING. Application of color and design to creative costuming. Especially helpful for the elementary and grade teacher. *Laboratory, two hours. Two credits. Second semester. Pope.*

75-76. CHILD DEVELOPMENT. Growth and development of the normal pre-school child. Each student makes consistent observations of child in a home situation. *Lecture, three hours. Three credits. Both semesters. Swift.*

85-86. SPECIAL PROBLEMS IN FOODS. Field work for seniors or

graduates. *Lecture, three hours. Three credits. Both semesters.* Swift.

87. HOME DECORATION. Practical application of art principles to planning and furnishing a home. Emphasis on reconditioning the old; and economy of the new. *Lecture, one hour. Laboratory, two hours. Three credits. Fee \$3. First semester.* Swift.

88. HOUSEHOLD EQUIPMENT. Evaluation of costs, time, and labor-saving equipment; how to operate, care for, and repair it. *Lecture one hour. Laboratory, one hour. Two credits. Second semester.* Fee \$2. Pope.

94. EXPERIMENTAL COOKERY. Development of experimental methods; their application to investigations in cookery and skills involved. *Lecture, one hour. Laboratory, one hour. Two credits. Fee \$5. Second semester.* Swift.

95. SPECIAL PROBLEMS IN CLOTHING. On request. Field work for senior or graduates. *Lecture, three hours. Three credits. Second semester.* Pope.

96. QUANTITY COOKERY. Planning, selecting, preparing, and serving of foods in quantity for large groups. Special emphasis given to school lunch and emergency feeding. *Two, three hour laboratories. Three credits. Fee \$4.*

98. INSTITUTION MANAGEMENT. Organization, management of food, and cost control, equipment, floor plans, personnel problems, and labor laws of various institutions. *Lecture, three hours. Three credits.*

99. DEMONSTRATION. Principles and techniques involved in food-demonstrations with practical experience. Each student gives one five minute, ten minute, fifteen minute, thirty minute, and one hour demonstration. *Five hours laboratory. One hour lecture. Three credits.* Swift.

102. CONSUMER EDUCATION. Consumer interest problems that concern the home and community at the present time. *Lecture, three hours. Three credits.*

## JOURNALISM

PROFESSOR HIGGINBOTHAM, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR LAIRD

MR. DUNCAN<sup>1</sup>

COOPERATING NEWSPAPERMEN

Requirements for a minor in journalism: Journalism 1-2 (4 credits), journalism 21-22 (6 credits), journalism 51-52 (4 credits), and 4 additional credits in journalism courses numbered 50 or above.

Requirements for a major in journalism: Journalism 1-2 (4 credits), journalism 21-22 (6 credits), journalism 51-52 (4 credits), journalism 53 (3 credits), journalism 72 (1 credit), journalism 81-82 (2 credits), and 7 additional credits in journalism in courses numbered 50 or above.

In their sophomore, junior, and senior years, students specializing in journalism are advised to include Journalism 31-32, 61-62, etc., in their schedules whenever possible in order to build up a background of the news of each year.

Courses in the social sciences and in literature should supplement those in journalism.

For an explanation of the four-year professional Course in Journalism, see page 126.

<sup>1</sup>Absent on leave; war service.

1-2. INTERPRETING THE DAY'S NEWS IN WAR TIME. Study of the news of the day, particularly news of the war and its effect, and the function of the newspaper in American life. *Both semesters. Two or three credits each semester.* 102 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. Laird.

31-32, 61-62, 91-92. ADVANCED INTERPRETATION OF THE DAY'S NEWS. Study and interpretation, upon an advanced level, of the news of the day. *Prerequisite:* Journalism 1-2. *Both semesters. One or two credits each semester.* 102 Hall of English. Higginbotham.

51-52. NEWS EDITING. Work in copy reading, rewriting, headline writing, news evaluation, the mechanics of publishing, and make-up accompanied by study of the principles which govern these and similar duties of the newspaper copy editor. *Prerequisite:* Journalism 21-22 and the consent of the instructor. *Both semesters. Two credits each semester.* 105 Hall of English. Laird. (Not offered in 1944-1945.)

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 1944-1945.)

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 1944-1945.)

56-57. 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. *Both semesters. Two credits each semester.* 105 Hall of English. Duncan.

65-66. 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. *Both semesters. Two credits each semester.* 105 Hall of English. Duncan.

67. EDITORIAL WRITING. The study of the interpretation of contemporary events through the newspaper and magazine editorial, coupled with extensive practice in writing. Emphasis will be put upon war-time subjects. *Prerequisite:* Journalism 21-22 or the consent of the instructor. *Second semester. Two or three credits.* 105 Hall of English. Higginbotham.

68. THE FEATURE ARTICLE. The study, writing, and marketing of

the special feature article for magazines and newspapers. *Prerequisite*: Journalism 21-22, or the consent of the instructor. *Second semester. Two credits.* 105 Hall of English. Duncan. (Not offered in 1944-1945.)

72. THE LAW OF THE PRESS. Study of state and federal laws affecting the reporting of news, the expression of opinion, advertising, and the publication of newspapers and magazines. *Prerequisite*: Journalism 21-22. *Either semester. One or two credits.* 105 Hall of English. Higginbotham.

75. NEWS PHOTOGRAPHY. Study of the principles of reporting news through photography and the application of them in practice work for various publications. Discussion and laboratory. *Prerequisite*: Journalism 21-22. *Either semester. Two credits.* 105 Hall of English. Duncan. (Not offered in 1944-1945.)

79. SOCIAL PROBLEMS IN JOURNALISM. Sociological aspects of journalism, especially those arising out of the war, including public opinion, newspaper leadership and responsibility, censorship, propaganda, the world's press, and other war-time problems. *Prerequisite*: Journalism 21-22 or the consent of the instructor. *First semester. Two or three credits.* 105 Hall of English. Higginbotham.

81-82. JOURNALISM INTERNESHIP. Reporting and copy reading as members of the staffs of the Nevada State Journal, the Reno Evening Gazette, the United Press Association, the Associated Press, or advertising work with Wilson Advertising Agency. *Prerequisite*: Open only to seniors in the course in journalism and senior majors in journalism. *Both semesters. One, two, or three credits each semester.* 105 Hall of English. Higginbotham and cooperators in journalism.

86. JOURNALISM ON THE AIR. The principles and practice of writing journalistic types—the news story, the column features, advertising—so that they are adapted to broadcasting. Special emphasis is given to news processing. *Prerequisite*: Journalism 21-22. *Either semester. Two credits.* 105 Hall of English. Higginbotham. (Not offered in 1944-1945.)

93-94, 95-96. INDEPENDENT STUDY. Open only to juniors and seniors in the course in journalism or majoring in journalism who have attained an average grade of B in all their work. Hours to be arranged with individual students. *One credit each semester.* Higginbotham.

## MATHEMATICS AND MECHANICS

PROFESSOR WOOD, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR BEESLEY, ACTING HEAD OF DEPARTMENT

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 13 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 course is given three times per week for one

semester, carries no university credit but may be used to remove entrance deficiencies. *First semester.* Mackay Science Hall.

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. The Staff.

8. SOLID GEOMETRY. The geometry of the plane, the cone, the prism, the pyramid, and the sphere, with practical applications. *Second semester. Two credits.* Mackay Science Hall.

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. The Staff.

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

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

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 Staff.

18. MATHEMATICS OF FINANCE. A mathematical study of interest, annuities, sinking funds, depreciation, amortization and other topics relating to business problems, including an introduction to the mathematics of life insurance. *Prerequisite:* Mathematics 11. *Second semester. Three credits.* Mackay Science Hall. Alternates with mathematics 20.

20. MATHEMATICAL STATISTICS. A mathematical study of frequency distributions, averages, dispersion, probable error, correlation, graphical methods and other related topics, with application to problems in the social and natural sciences. *Prerequisite:* Mathematics 11. *Second semester. Three credits.* Mackay Science Hall. Alternates with mathematics 18.

22. MATHEMATICS FOR STUDENTS OF AGRICULTURE AND BIOLOGICAL SCIENCES. A study of the essentials of algebra, trigonometry, elementary mechanics, statistics, graphical methods, logarithmic paper, and other topics with applications. This course is designed to meet the needs of students in the College of Agriculture, premedical students,



preforestry students, and other students in the biological sciences. Students planning to continue their mathematical work should take Mathematics 14 upon completion of this course. *Second semester. Four credits.* Mackay Science Hall.

23-24. DIFFERENTIAL AND INTEGRAL CALCULUS. The elements of the calculus with applications. Designed for students in the College of Arts and Science. *Prerequisite:* Mathematics 11, 13, 14, or Mathematics 15, 16. *Both semesters. Three credits each semester.* Mackay Science Hall.

25-26. CALCULUS. A unified course in differential and integral calculus, with special emphasis upon the applications. Required of all engineering students. *Prerequisite:* Mathematics 15, 16. *Both semesters. Three credits each semester.* Mackay Science Hall. The Staff.

34. MATHEMATICS OF AIR NAVIGATION. Maps and charts, piloting, dead reckoning and radio. Celestial methods may be discussed briefly but emphasis is upon problems whose solutions do not require the methods of spherical trigonometry. *Prerequisite:* Mathematics 13. *Either semester. Two credits.* Mackay Science Hall.

35. SPHERICAL TRIGONOMETRY. A study of the spherical triangle with applications in astronomy and navigation. This course will furnish a desirable background for study of modern methods in celestial navigation. *Either semester. Two credits.* Mackay Science Hall.

51. HISTORY OF MATHEMATICS. Lectures and assigned readings on the history of the mathematical science. Recommended for students preparing to teach mathematics in high school. *First semester. Two credits.* Mackay Science Hall. Cannot be used for graduate credit.

55-56. ANALYTIC MECHANICS FOR ENGINEERS. Work in the resolution of forces, moments of inertia, laws of motion, friction, dynamics of machinery, work and energy, and impulse. Special emphasis is given to practical problems. *Prerequisite:* Mathematics 25, 26; Physics 3. *First semester, three credits. Second semester, two credits.* Engineering Building.

57. 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.

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.

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.

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.

85-86. DIFFERENTIAL EQUATIONS. A study of ordinary and partial differential equations of the first and second orders with special attention to geometrical and physical applications. *Both semesters. Two credits each semester.* Mackay Science Hall.

87. ADVANCED CALCULUS. A more rigorous study of the differential and integral calculus, with extensive applications to geometrical and physical problems. *Second semester. Three credits.* Mackay Science Hall.

105-106. THEORY OF FUNCTIONS OF THE REAL AND COMPLEX VARIABLE. The first semester deals with real numbers, point sets in metric space, real functions, and properties of continuity, semicontinuity, discontinuity, differentiability and integrability of functions. The second deals with complex numbers, integral theorems, power series, singularities, Riemann Surfaces and conformal mapping. *Both semesters. Three credits each semester.* Mackay Science Hall.

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.

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. Given in alternate years.

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

199-200. THESIS COURSE FOR GRADUATE STUDENTS. *Six credits.* Mackay Science Hall. The Staff.

## MECHANIC ARTS

PROFESSOR VAN DYKE, ACTING HEAD OF THE SCHOOL  
SUPERINTENDENT RYAN

3. MACHINE SHOP. A basic course in machine work following a definite plan throughout the semester, includes instruction in bench work, lathe, shaper, drill and milling machine. *Both semesters. Two credits.* Mechanical Building. Ryan. Fee \$5 per credit.

5. MACHINE SHOP. An advanced course in gear cutting, face plate work, elementary die making and construction and use of special tools, jigs, and fixtures. *Prerequisite:* M. A. 3 or equivalent. *Either semester. One or two credits.* Mechanical Building. Ryan. \$5 per credit.

6. PATTERN AND FOUNDRY PRACTICE. Study of the products and methods of the foundry. Practical instruction is given in pattern making and molding. *First semester. One credit.* Mechanical Building. Ryan. Fee \$5.

7. MACHINE SHOP. An advanced course in general machine work for students wishing to develop projects in connection with thesis or special work. *Prerequisite:* Mechanic arts 3. Also for students

desiring to fill in a program in which case the work will consist of problems arising in the repair and maintenance of laboratory and shop equipment. *One or two credits, either semester.* Mechanical Building. Ryan. Fee to be arranged in accordance with the work undertaken.

11. MACHINE SHOP. An elementary shop course in machine work includes instruction in bench work and in the use of drill, lathe, and milling machines. *Both semesters. One credit.* Mechanical Building. Ryan. Fee \$5.

50. ENGINEERING MATERIALS AND PROCESSES. The study of engineering materials and the methods and tools used in forming them. Laboratory work consists of practical heat treating, testing of machine and cutting tools under various conditions and power requirements. *Prerequisite:* M. A. 3 or equivalent. *Either semester. One lecture, two laboratory periods. Three credits.* Mechanical Building. Ryan. Fee \$5.

### MECHANICAL ENGINEERING

PROFESSOR VAN DYKE, ACTING HEAD OF SCHOOL

ASSOCIATE PROFESSOR HARRIS<sup>1</sup>

ASSISTANT PROFESSOR OLIVER<sup>1</sup>

19. ELEMENTS OF MECHANICAL ENGINEERING. A course designed to acquaint the student with the various types of equipment and machinery usually encountered in mechanical engineering practice. *No prerequisite.* Required of all mechanical engineering students. *First semester. One credit.* Oliver.

30. INTRODUCTORY AERODYNAMICS. A course in elementary aerodynamics covering theory of flight, engines, instruments and other accessories. *Prerequisites:* Mathematics 15-16. *Either semester. Two credits.*

41-42. ADVANCED MACHINE DRAWING. An exacting drill in projections, intersections, accurate and neat instrumental drawing, including layout, and methods of reproducing drawings. *Prerequisite:* G. E. 5 and 6. *Either semester. Three credits per semester.*

51. KINEMATICS. The study of the laws of motion as they affect the design of machine elements. Forms for gear teeth and cams. Analysis of the motion of machine parts. *Prerequisite:* Physics 3 and 4, Mathematics 25 and 26. *First semester. Three credits.* Oliver.

54. THERMODYNAMICS. Principles of engineering thermodynamics; properties of gases; thermodynamic processes of gases; gas cycles; internal combustion engines; air compressors and elements of different types of power plants. *Prerequisites:* Physics 3 and 4. *First semester. Three credits.* Van Dyke.

55. APPLIED THERMODYNAMICS. Additional work in thermodynamics; properties of vapors; thermodynamic processes of vapors; vapor cycles; steam engines; steam turbines. *Prerequisite:* M. E. 54. *Second semester. Three credits.* Van Dyke.

57. MACHINE DESIGN. The study of the application of the laws of velocity, force, and strength of materials to the design of machinery. Tooth and belt gearing, shafts, journals, bearings, cylinders, springs.

<sup>1</sup>Absent on leave; war service.

bolts, keys, etc. *Prerequisite:* C. E. 72. *First semester. Three credits.* Harris.

58. MACHINE DESIGN PROBLEM. A design problem in the field of engines, machinery, or heat power, that is approved by the teacher, is to be analyzed. Each student is to choose his own problem. *Prerequisite:* M. E. 57. *Second semester. Three credits.*

64. MECHANICAL LABORATORY. Calibration of measuring instruments, gages, scales, thermocouples, thermometers, tachometers, etc. Errors in instruments. Colorimetry, heat transfer, fluid metering. Technical report writing. *Prerequisite:* M. E. 54. *Second semester. Three credits.* Oliver. Fee \$5.

65. MECHANICAL POWER LABORATORY. Study of construction, operation and characteristics of steam power plant, steam and internal combustion engines, fans and pumps. Technical report writing and fundamentals of research methods. *Prerequisite:* M. E. 64, M. E. 54 (thermodynamics completed or taken concurrently). *First semester. Three credits.* Oliver. Fee \$5.

71. HEAT-POWER ENGINEERING. Power plants, fuels, combustion, steam generators, turbines, heat transmission, and steam generator accessories. *Prerequisite:* M. E. 55. *First semester. Three credits.* Van Dyke.

72. HEAT-POWER ENGINEERING. Condensers, feed water heaters, water softening, mixtures of air and water vapor, flow of compressible fluids, heating and ventilating, refrigeration. *Prerequisite:* M. E. 71. *Second semester. Three credits.*

76. ADVANCED DYNAMICS OF MACHINERY. Theory of vibrations with applications to problems involving bending and torsion, dynamic balancing, vibration damping, the dynamical vibration absorber, elastic mounting of machines, critical speeds of rotating shafts, etc. Lectures, laboratory demonstrations and experiments and problems. *Prerequisites:* Mathematics 85 and M. E. 57. *Second semester. Three credits.*

77. INTERNAL COMBUSTION ENGINES. A study of modern internal combustion engines of the stationary, automotive and aeronautic types, including spark ignition and compression ignition. Thermodynamics for engine analysis, fuels, mixture requirements, combustion, detonation and its effects, efficiencies, engine performance, etc., are included. *Prerequisite:* M. E. 54 and 55. *First semester. Three credits.* Van Dyke.

78. AERODYNAMICS. A more advanced course than M. E. 30. The theory of flight, air flow, and principles of design of aircraft structures are covered. The requirements of the aircraft power plant are studied, and data covering modern engines presented. *Prerequisite:* C. E. 93. *First or second semester. Three credits.*

79. HEAT TRANSFER. Review of fundamentals of the transfer of thermal energy and radiant energy. Design problems in heat transfer, and applications of technical design data to specific problems. *Prerequisite:* M. E. 55. *Second semester. Three credits.*

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. One to three credits.* Staff. Laboratory fee of \$2.50 per credit may be required.

## METALLURGY

PROFESSOR W. S. 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 8 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 15. *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. *First semester. Two credits.* Mackay School of Mines. Smyth.

61. **PYRO-METALLURGY NONFERROUS METALS.** Lectures and recitations on the smelting or fire methods of extracting the common metals from their ores and refining processes for these metals by fire methods. The principal metals covered will be copper, lead, zinc, mercury and nickel. *Prerequisite:* Geology 11 and Metallurgy 4 and 51. *First semester. Three credits.* Mackay School of Mines. Palmer.

62. **METALLURGY OF THE MINOR AND RARE METALS.** Lectures and recitations on the metallurgy of minor and rare metals including the following: Antimony, arsenic, aluminum, bismuth, molybdenum, platinum, tin, and tungsten. *Prerequisite:* Metallurgy 61 and 71. *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, Geology 12 and 14. Course to be taken only with Metallurgy 68. *Second semester. Lectures, two hours. Two credits.* Mackay School of Mines. Palmer.

68. ORE DRESSING LABORATORY. A laboratory course to be taken only with Metallurgy 66. This course covers general practice in the use of the various machines used in ore dressing. *Prerequisite:* Chemistry 15, 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 15. *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 or Smyth.

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 HOWARD, MAJOR, INFANTRY, U. S. ARMY

ASSISTANT PROFESSOR MCMILLAN, LIEUTENANT, U. S. ARMY

INSTRUCTOR MCCORMICK, DEML (ROTC), SERGEANT, U. S. ARMY

Requirements for a minor in military science: Military 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.

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 U. S. citizenship; military history and policy of the U. S.; military discipline, courtesy, and customs of the service; military sanitation and first-aid; military organization: army in general; infantry arm; map reading; leadership, principles of, and drill and command; weapons: the rifle and rifle marksmanship. Required of all first-year men students. *Four hours per week. Both semesters. One credit each semester.*

MILITARY 3-4. Basic course, second year. Practical and theoretical. Leadership: Infantry Drill Regulations; drill and command; infantry weapons, characteristics of: combat principles and training; musketry and the technique of rifle fire; scouting and patrolling; the small infantry units in security, offensive and defensive combat. Required of all second-year men students. *Four hours per week. Both semesters. One credit each semester.*

MILITARY 51-52. Advanced course. First year (elective). Practical and theoretical. Military fundamentals: aerial photography and its restitution and reading; care and operation of motor vehicles; administration, records, reports, finance, supply and mess management; leadership: principles, instructional methods, drill and command, manuals of the various arms and pieces, and ceremonies; weapons: review of rifle marksmanship; heavy and anti-tank weapons; the automatic pistol; combat principles and training: general, in the estimate of the situation, combat orders, solution of map problems; marches, security, development for combat, offensive and defensive combat, and organization of the ground; training of small infantry units: the heavy weapons sections and platoons, the anti-tank squad and section, the rifle platoon, in security, offensive and defensive combat; field fortification and obstacles; defense against chemical warfare. *Prerequisite:* Military 3-4, or its equivalent at this University or in some other institution having a senior unit. *Five hours per week. Both semesters. Three credits each semester.* (Not offered for the duration of the war.)

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. Only under very exceptional circumstances will the Commanding General, Ninth Corps Area, grant deferments of this camp training until the end of the fourth year. Students attending the advanced camp receive pay at the rate of \$30 per month from the United States Government. (Not offered for the duration of the war.)

MILITARY 53-54. Advanced course. Second year (elective). Practical and theoretical. Military fundamentals: military history and policy of the U. S.; military law (of offenses only); property, emergency procurement, and funds; Officers' Reserve Corps Regulations; leadership, principles of; instructional methods; drill and command: manuals of the various arms and pieces; ceremonies; weapons: tanks and mechanization; combat principles and training: review of offensive and defensive combat, security, organization of the ground, field fortification and obstacles, and the solution of map problems; training of infantry units, the anti-tank platoon, heavy weapons and rifle platoons and companies in offensive and defensive combat, security; anti-tank and anti-aircraft defense; combat intelligence; infantry signal

communications. *Five hours per week. Both semesters. Three credits each semester.* (Not offered for the duration of the war.)

**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 rehearsals and one of drill per week, and will attend with the band when required for parades, reviews, and other military ceremonies. (Not offered for the duration of the war.)

## MINING

PROFESSOR CARPENTER, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR SMYTH

MR. COUCH<sup>1</sup>

5. **PRACTICAL MINING.** Practical work in mining or metallurgy during the summer vacation. Such work must extend over a period of at least one month, and a satisfactory report must be prepared upon it. *Freshman, sophomore, or junior vacation. Required for graduation. No credit.*

51. **EXCAVATION.** Lectures and recitations on the principles and practice of excavation, including earth excavation, rock drills and drilling practice, explosives and blasting practice, quarrying, tunneling, shaft sinking and boring. Stress is placed upon the underlying principles of physics and chemistry. *Prerequisite:* Physics 3 and 4; Chemistry 7 and 8. *Junior year. First semester. Three credits.* Carpenter.

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 55. *Junior year. Second semester. Three credits.* 101 Mackay School of Mines. Carpenter.

61. **MINING METHODS.** Lectures and recitations on the prospecting, development, and exploitation of mineral deposits, including underground metal mining methods in detail, with quarrying, coal mining, and placer mining methods in brief. *Prerequisite:* Mining 51 and 52. *Senior year. First semester. Three credits.* Carpenter.

72. **MINE ADMINISTRATION.** Lectures and recitation on the business, sociology, and laws of mining, including mine examination, organization of staff, problems concerning power, labor and supplies, compensation and accident insurance, welfare work, accidents and their prevention, Federal and State mining laws with mine maps and models. *Prerequisite:* Mining 61. *Senior year. Second semester. Three credits.* Smyth.

74. **MINERAL INDUSTRY ECONOMICS.** Lectures and recitations on economic problems of mining and metallurgy and mine accounting, including incorporations and securities, depreciation, depletion, amortization, taxes, assessments and dividends, and laws governing the same, the costs of mining, milling, and marketing, and cost accounting methods. *Prerequisite:* Mining 61. *Senior year. Second semester. Three credits.* Carpenter and Couch.

<sup>1</sup>Absent on leave; war service.



79-80. MINING PROJECT. Two laboratory periods weekly devoted to individual problems in mining, progressing from those of small properties to specific problems concerning shaft sinking, tunneling, or the like on a large scale, and finally to working of mines based upon those in actual operation in important mining camps. Stress is placed upon amplifying the subject matter of previous mining courses and in the methods of searching for, correlating, and presenting the data gathered and worked out. *Prerequisite:* Mining 51-52. *Both semesters.* Two credits each semester. Carpenter. A charge based on equipment and material used.

## MUSIC

### PROFESSOR POST, HEAD OF DEPARTMENT

Requirements for a minor in music: 1-2 (2 credits), 5 or 65 (2 credits), 10 (2 credits), 11-12, or 15-16, or 17-18 (2 credits), 50-51 (6 credits), 54-55, or 59-60, or 63-64 (2 credits), 57 (2 credits).

1-2. MUSIC READING AND EAR TRAINING (for elementary teachers and students preparing for harmony). Learning to read by "sol-fa" system of simple unison and two-part folk songs in all keys and common rhythms. Notation, terminology, intervals, scales, and a listening experience with selected music literature contained in the library of phonograph records. *Both semesters.* One credit each semester. 204 Education Building. Post.

5. TEACHING OF MUSIC. (Same as Education 21.) The aims and principles of music teaching in the kindergarten, elementary, and upper grades. Group technique, song leading, interpretation, rhythmic activities. Care of the voice through various periods of development. Remedial exercises for improving pitch defects and tone quality. Music materials, rote songs, unison and descant songs, part songs, records, radio, and methods of approach for the listening period. *First semester.* Two credits. Education Building. Post.

10. APPRECIATION OF MUSIC (open to all University students. Non-enrolled listeners invited but visitor cards must be obtained. No previous training necessary). Content of music as found in representative literature from the Greek period to Debussy and the Impressionists, with many examples of the Classic and Romantic music literature of the Eighteenth and Nineteenth Centuries. 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 AND UNIVERSITY SINGERS. 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 Reno

Civic Chorus. *Two semesters. One credit each semester.* 204 Education Building and New Gymnasium. Post.

15-16. RENO CIVIC ORCHESTRA. Open to all men and women students who play orchestral instruments, subject to examination and approval of the director. The orchestra assists the Reno Civic Chorus 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.* New Gymnasium. Post.

17-18. BAND. (See under military for a description of the requirements and credits for men assigned to the band as a substitute for military.) University students, both men and women are eligible for membership in the University band. The schedule calls for appearances at civic and university parades, athletic contests, rallies, and an annual spring concert. One out-of-town trip with the football team is usually made each year. *Two semesters. One credit each semester.* New Gymnasium. Post.

50-51. HARMONY (open to all students who have had Music 1 and 2 or the equivalent). Study of scales, intervals, fundamental triads, seventh chords, in the major and minor modes. Ear training, keyboard drill, simple analysis, harmonization of melodies. Some original work. *Two semesters. Three credits each.* 204 Education Building. Post.

52-53. ADVANCED HARMONY. Study of secondary sevenths, ninth chords, altered chords, modulation, suspension and passing tones, analysis, original work. Continued ear training. Open to all students who have had music 50-51, or the equivalent. *Two semesters. Three credits each.* 204 Education Building. Post.

54-55. CAMPUS CHORAL CLUB AND UNIVERSITY SINGERS. *For* description, see music 11 and 12. *Prerequisite:* Music 11-12. *Two semesters. One credit each semester.* 204 Education Building and New Gymnasium. Post.

57. HISTORY OF MUSIC (open to all students; nonenrolled listeners invited but visitor cards must be obtained; no technical knowledge required). The general history of music with emphasis upon the music of Wagner and the late Romanticists. Debussy and the French Impressionists, the Russian School, Sibelius, Schonberg and a liberal amount of contemporary music of American and European composers. Lecture course with collateral reading. Illustrations from representative works in the record library. A logical continuation of Music 10. *Second semester. Two credits.* 204 Education Building. Post.

59-60. RENO CIVIC ORCHESTRA. *For* description see music 15-16. *Prerequisite:* Music 15-16. *Two semesters. One-half credit each.* New Gymnasium. Post.

63-64. BAND. *For* general description, see music 17-18. *Prerequisite:* Music 17-18. New Gymnasium. Post.

65. HIGH SCHOOL MUSIC. (Same as Education 65.) Conducting. Instrumental technique. Practical consideration of instrumentation, transposing instruments, and teaching material of all grades. Choral technique. Voice ranges of boys and girls, the changing voice, remedial

exercises. Materials for part singing, girls' and boys' glee clubs, and mixed chorus. High school music curricula. Technical and appreciatory objectives. Active participation in orchestra, glee club, or band required and applicant must be a junior or senior with a minor in music or its equivalent. *Second semester. Two credits.* Education Building. Post.

## ORIENTATION

1. ENGINEERING ORIENTATION. This course is discontinued for the present, and Philosophy 5 is required in its place.

## PHILOSOPHY

PROFESSOR THOMPSON, HEAD OF DEPARTMENT

ASSISTANT PROFESSOR WIEDERHOLD

Requirements for a minor in philosophy: Psychology 5 (3 credits), philosophy 7 or 8 (3 credits), and 21 (3 credits), and 9 credits in the department in courses numbered 50 or above.

Requirements for a major in philosophy: Psychology 5 (3 credits), philosophy 7 or 8 (3 credits), and 21 (3 credits), and 15 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. Three credits.* 202 Morrill Hall. Wiederhold.

5. WAR ISSUES. The historical and economic background of the present war; the conflict of ideas and purposes involved. *Required of all freshmen and open to others. First semester. One credit.* Thompson and others.

7. DEDUCTIVE LOGIC. Terms, definition, division, syllogism and fallacies. Text, lectures and exercises. *Open to freshmen. First semester. Three credits.* 202 Morrill Hall. Thompson.

8. INDUCTIVE LOGIC. The assumptions of induction methods of scientific investigation, fallacies, the tests of truth. Text, lectures and exercises. *Open to freshmen. Second semester. Three credits.* 202 Morrill Hall. Thompson.

21. ETHICAL THEORIES. A study of the leading theories of moral principles and ideals. Among the topics discussed will be the concept of the good, duty, egoism, altruism, freedom, responsibility, and the doctrine of virtues. *Open to sophomores. First semester. Three credits.* 202 Morrill Hall. Thompson.

22. APPLIED ETHICS. The application of ethical theory to typical problems of institutional life, property, and the family. *Open to sophomores. Second semester. Three credits.* 202 Morrill Hall. Thompson.

51. HISTORY OF ANCIENT PHILOSOPHY. A study of Greek and Roman philosophy, and of Medieval philosophy to the decline of

scholasticism. *Prerequisite*: One course in philosophy. *First semester. Two or three credits according to the work done.* 202 Morrill Hall. Wiederhold. (Not offered in 1944-1945.)

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. Wiederhold. (Not offered in 1944-1945.)

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.

55. AESTHETICS. A philosophic analysis and appraisal of the aesthetic experience to determine the meanings of beauty and of ugliness. Special consideration will be given to the origin and nature of art; its significance for religion, morality, and social life. Contemporary theories of aesthetics will be analyzed and their standards of criticism evaluated. *Prerequisite*: Junior standing. *First semester. Two credits.* 202 Morrill Hall. Wiederhold.

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.

82. PHILOSOPHY OF POLITICAL PROBLEMS. The metaphysical basis of the state, the state and its citizens, the state and other states, sovereignty, freedom, democracy, fascism and communism, are among the problems discussed. *Prerequisite*: Junior standing and one course in philosophy. *Second semester. Two credits.* 202 Morrill Hall. Thompson.

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. *Second semester. Three credits.* 202 Morrill Hall. Wiederhold.

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 and Wiederhold.

## PHYSICAL EDUCATION

*Men*

PROFESSOR MARTIE, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR SCRANTON

ASSOCIATE PROFESSOR COLEMAN<sup>1</sup>

Requirements for a minor in physical education: Courses 1-2 (1 credit), 3-4 (1 credit), or equivalent, 9-10 (2 credits), and 10 credits in the department in courses numbered 50 or above.

Requirements for a major in physical education: Courses 1-2 (1 credit), 3-4 (1 credit), 9-10 (2 credits), 53 (2 credits), 58 (2 credits), 60 (2 credits), 63 (2 credits), 64 (2 credits), and 8 additional credits in the department in courses numbered 50 or above. Zoology 57 and 58, and a year of chemistry is strongly recommended. Participation in at least one major sport is required of both majors and minors.

1. DEVELOPMENTAL EXERCISES. Physical examinations are required at the beginning of the semester. Strength tests are given at beginning and again at end of semester. Practical work consists in mass athletics; games selected with a view of developing alertness, coordination, muscular control, vigor and rhythm. *Freshman year.* (Required.) *First semester. Two hours per week. One-half credit.* Scranton.

2. DEVELOPMENTAL EXERCISES. Continuation of course 1 with addition of calisthenics and light apparatus. *Second semester. One-half credit.*

3. ADVANCED EXERCISES. Strength tests will be continued as in freshman year. Practical work consists in mat work, tumbling, heavy apparatus using long and short horse and buck. *Sophomore year.* (Required.) *First semester. Two hours per week. One-half credit.*

4. ADVANCED EXERCISES. Continuation of course 3. Heavy apparatus consisting of work with parallel bar, low and high horizontal bars, ladder and stall bar. *Second semester. One-half credit.* Scranton.

By obtaining consent of the head of the department a student may elect any of the following sports as a substitute for the practical work in courses 1, 2, 3, and 4: Football, basketball, track, tennis, cross country, wrestling and tumbling.

5-8. SPECIAL CORRECTIVE EXERCISES. This course is designed for all freshman and sophomores whose physical examinations show they are unfitted to take courses 1, 2, 3, and 4. *One-half credit for each semester's work up to and including four semesters.* Martie.

9. ADVANCED WORK (paralleling courses 3 and 4). *Aim:* To develop squad leaders and to assist men to qualify for a State certificate to teach physical education in high schools. *First semester. Three hours per week. One hour credit.* Scranton.

10. CONTINUATION OF COURSE 9. *Second semester. Three hours per week. One hour credit.* Scranton.

51. FOOTBALL IN THEORY AND PRACTICE. A course of lectures and practical demonstrations for those who may wish to coach, or for players who are out for the varsity or for those who are interested in and wish a more intimate knowledge of America's greatest game. Open only to juniors or seniors who have had two or more years' college

<sup>1</sup>Absent on leave; war service.

experience in this sport. *First semester. One lecture per week and one hour laboratory. Two credits.* Not given unless eight or more are enrolled.

52. BASKET BALL IN THEORY AND PRACTICE. A course of lectures and practical demonstrations in America's leading winter indoor sport. *Second semester. One lecture and one hour laboratory work per week. Two credits.* The same conditions for enrollment must be met as in course 51. Martie.

53. TREATMENT OF ATHLETIC INJURIES. This is a course in first aid with special emphasis on common athletic injuries. It will include the various uses of tape, bandages, splints, etc. Time will be given to the study of the prevention of injuries such as sprains, charley horse, tackle shoulder, blood poison, blisters, etc., as well as treatment for same. *Three periods per week. Two credits. First semester.* Martie.

54. TRACK AND FIELD ATHLETICS. Lectures and demonstrations on each track and field event. *Second semester. One lecture and one hour laboratory per week. Two credits.* The same conditions for enrollment must be met as in course 51.

55. PLAYGROUND. *Prerequisite:* Physical education 53. A study of playground methods, apparatus, and organization. Special attention is given to group games for all ages. Also to the "gang" problem as related to playground. *Three periods per week. Two credits. First semester.*

56. ANTHROPOMETRY. This is a course in physical measurements and methods of detecting physical defects. It will include practical use of charts in connection with physical development. *Three periods per week. Two credits. Second semester.*

57. OFFICIATING MAJOR SPORTS. A careful study of the rules of football, basket ball, and track, with interpretations, methods of officiating, and characteristics of officials. *Three periods per week. Two credits. First semester.*

58. See Education 64. Martie.

59. CORRECTIVE GYMNASTICS. The work will consist of lectures covering the biological, sociological, and physiological aspect of the causes of functional and structural defects. Practical work will include the use of apparatus and the adaption of various forms of exercises to the needs of the individual.

(a) Improving functional organic capacity.

(b) Correction of physical defects.

(c) Measurements of motor ability.

*Three periods per week. Two credits. First semester.* Martie.

60. INTRODUCTION TO PHYSICAL EDUCATION AND HEALTH. This course will consider the aims and objectives of physical education and health; the principles underlying the curriculum, standards for selection of activities and criteria for judging the work. Application will be made to the capacities and needs of different age groups. *Three periods per week. Two credits. Second semester.*

61. PHYSICAL DIAGNOSIS AND HEALTH EXAMINATION. The purpose of this course is to enable the teacher to perform a physical examination and detect gross defects in structural and organic development

and function. Infectious diseases are studied and common diseases of the vital organs briefly covered. Laboratory includes practice in diagnosis. *Three periods per week. Two credits. First semester.* Martie.

62. **PSYCHOLOGY OF COACHING.** Emphasizes the application of practical psychology in all forms of athletic activities. Of special interest to prospective leaders and coaches. Illustrations of applied psychology are collected and analyzed as to values in the relations to specific forms of athletics. *Three periods per week. Two credits. Second semester.* Martie.

63. **PHYSIOLOGY OF EXERCISE.** This course acquaints students with physiological changes in human organisms due to physical exercise. It furnishes a physiological basis for planning a program of physical education for schools and training programs for the athletic teams. Laboratory experiments deal with simple observations of respiration, circulatory, nervous and metabolic adjustments to physical exercise. *Three periods per week. Two credits. First semester.* Martie.

64. **CHARACTER EDUCATION THROUGH PHYSICAL EDUCATION.** An application of the principles of leadership to the particular problems in the program of character education in general, but with special references to the character training situations that arise in physical education activities. *Three periods per week. Two credits. Second semester.* Martie.

65. **RECREATION LEADERSHIP.** A study of community recreation with special emphasis upon its relation to physical education. Designed to aid in preparation for community service. *Three periods per week. Two credits. First semester.* Martie.

## PHYSICAL EDUCATION

### Women

PROFESSOR SAMETH, HEAD OF DEPARTMENT

MISS RUSSELL<sup>1</sup>

MISS DIXON

All P. E. Minors—1, 2, 3, 4, 9 or 10, 23, 31, 55, 56, 57.

Dance Minors—11, 32, 101.

Sports Minors—59 or 60, and 61.

Recommendations—(Sports) Chemistry, Home Economics 33, Education 56.

(Dance) Art Survey, Classics, Dramatics, History of Various Civilizations, Music Appreciation.

1, 2, 3, 4. **FRESHMAN AND SOPHOMORE PRACTICE.** Required for graduation. Courses numbered in the order in which they are taken, regardless of the activity. Courses include types of activity offered in the department. The student receives one unit of credit each for Physical Education 1 and 2 (three periods), and one-half unit each for Physical Education 3 and 4 (two periods). When restricted work seems necessary, the student receives individual attention for four shorter periods per week. Fee \$1 to \$12.

9. **GAMES FOR THE PRE-SCHOOL CHILD AND FOR THE FIRST THREE GRADES.** Recommended for those who like to work with young children. Required of all Physical Education minors who do not take Physical Education 10. *One credit.*

<sup>1</sup>Absent on leave; war service.

10. FOLK DANCING FOR ELEMENTARY GRADES AND HIGH SCHOOL. The object of this course is to give those who intend to teach, folk dances suitable for use in the four upper grades. It stresses dance, terminology, the fundamental steps of many countries, calls, etc., and includes short and not very difficult dances. Required for Physical Education minors who do not take Physical Education 9. *Prerequisite*: Physical Education 1-2 or the equivalent. *Two periods. One semester. One credit.* Gymnasium.

11. CONTINUATION OF PHYSICAL EDUCATION 10. With special attention to material suitable for junior and senior high school. This class will meet twice a week for one month. The remainder of the semester will be devoted to one period of teaching, preferably of recreation groups, and one of class discussion. Required for Physical Education minors in the dance. *One semester. One credit.*

23. FIRST AID AND HEALTH IN THE HOME, SCHOOL, AND COMMUNITY.

A—*First Aid.* A Red Cross certificate may be had if the grade is C or better. *Six weeks.*

B—*Health in the Home.* Not required of students who are taking Home Economics 54. *Six weeks.*

C—*Health in the School and Community.* This course may be elected for 1, 2, or 3 units. Required for Physical Education minors. *Six weeks.*

*One semester. Three credits.*

25, 26, 27, 28. ACTIVITIES. For those who have completed requirements for graduation and who wish to improve their skills in any activity offered. *Each semester. One-half credit.*

31-32. CONTEMPORARY DANCE. Open to all who have had the equivalent of Physical Education 1-2. *Three periods. Each semester. One credit.* Gymnasium.

53-54. HISTORY AND DEVELOPMENT OF THE DANCE. This course will deal with a historical development of the dance, a study of dance forms, their relationship to one another and to the contemporary dance. It will include social dancing as well as the dance as an art form. Material suitable for use in elementary and high school will be studied. *Prerequisite*: Physical Education 31 or its equivalent. Required for Physical Education minors in the Dance. *First semester. One lecture; two laboratory periods. Three credits.* (Not offered in 1944-1945.)

55. APPLIED ANATOMY AND PHYSIOLOGY OF THE NEUROMUSCULAR SYSTEM. This course will familiarize the student with the mechanism and function of the neuromuscular system. The student will be prepared to study intelligently cases of round shoulders, spinal curvature, flat feet, and the effects of fatigue. *Prerequisite*: Physical Education 1 and 2; Zoology 57-58 or Zoology 11. *First semester. Three credits.* Gymnasium.

56. RECONSTRUCTIVE PHYSICAL EDUCATION. Application of Physical Education 55 to the needs of the child, his growth, development, and physical activity. Required for Physical Education minors. *Laboratory, two periods. Two credits.*

57. HISTORY, ADMINISTRATION, AND ADAPTATION OF PHYSICAL EDUCATION AND RECREATIONAL ACTIVITIES. The course studies elementary,



junior high and senior high school physical education programs, after-school programs, and extra-curricular activities. There will be opportunity to direct after-school activities, either in athletic associations or on playgrounds. *First semester. Three credits.*

59-60. THEORY AND PRACTICE OF DIRECTING TEAM GAMES. This course includes a study of the rules, techniques, and game forms leading up to games for elementary, junior high, and senior high schools. Opportunity will be given for practice in teaching and officiating. *Prerequisite:* Physical Education 57 and at least two years participation, including at least one group activity. *Two lectures; one practice period per week. Both semesters. Two credits.*

61. THEORY AND PRACTICE OF DIRECTING INDIVIDUAL AND DUAL SPORTS. *Two lectures; one practice period per week. Two credits.*

101-102. PROBLEMS IN HEALTH AND PHYSICAL EDUCATION. Not open to freshmen or sophomores except by special arrangement. 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 may receive instruction and participate in all activities sponsored by the Women's Athletic Association. (See page 67.) In addition, *all* activity classes are open to any who wish to attend *without* University credit. The only requirements are physical fitness and regular attendance.

## PHYSICS

PROFESSOR LEIFSON, HEAD OF DEPARTMENT

ASSOCIATE PROFESSOR BLAIR

ASSOCIATE PROFESSOR BATDORF<sup>1</sup>

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 natural phenomena. To accompany physics 1a-2a. Experimental work, largely quantitative in character and designed to illustrate fundamental physical principles and to develop skill and accuracy in the methods of physical measurement. No credit for either semester will be given unless accompanied by the corresponding course in physics 1a-2a. *Prerequisite:* Plane geometry. A knowledge of trigonometry is desirable. *Both semesters. One credit each semester.* Mackay Science Hall. Blair. Fee \$3.

<sup>1</sup>Absent on leave; war service.

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. Leifson and Batdorf.

5-6. PHYSICAL MEASUREMENTS. Experimental work of distinctly quantitative character is done in mechanics and heat, sound and light, and electricity and magnetism. The methods selected involve fundamental physical principles, and illustrate their most important applications. *Prerequisite:* Plane, solid, and analytic geometry and trigonometry. *Both semesters. Credits to be arranged, with a maximum of six credits for the course.* Mackay Science Hall. Leifson and Batdorf. Fee \$1 per credit hour.

7. *Descriptive Astronomy.* A brief course in astronomy designed to acquaint the student with the more important facts relating to the heavenly bodies. Descriptive rather than mathematical in character. During the war emergency, this course will emphasize those facts of astronomy which afford a foundation for the later study of navigation, either nautical or aeronautical. By special arrangement, interested members of the class may become familiar with the use of the sextant and with the underlying principles involved in the determination of the location of the observer upon the surface of the earth. *Either semester. Three credits. Two scheduled periods and one evening hour to be arranged.* Mackay Science Hall. Blair.

9-10. INTRODUCTORY PHYSICS. A nonmathematical course dealing with the fundamental principles of physics. Practical applications will be emphasized, and lectures will be illustrated by numerous experiments and lantern slides. *No prerequisite. Two credits each semester.* Mackay Science Hall. Leifson.

15-16. *Elementary Radio.* The characteristics of electron tubes and their applications. The principles underlying radio receivers and transmitters. Liberally illustrated by laboratory demonstrations. *Prerequisite:* Two years of high school mathematics. *Both semesters. Three credits per semester.*

17-18. *Meteorology.* A brief presentation of the fundamental principles of weather observation, mapping and forecasting. This course will be found most helpful to men planning to enter any branch of aviation. Not only will the student be able to use more intelligently the information supplied to him by the meteorologist but to a considerable extent he will become his own forecaster, utilizing his knowledge of the probable consequences of local weather phenomena. This is especially important under war conditions when the flier is often unable to obtain weather reports by radio. The content of the course also affords a solid foundation for more advanced work in meteorology. The complex mathematical theory underlying modern meteorology is left for later consideration. *Either semester. Two credits.*

19-20. HOUSEHOLD PHYSICS. A course in general physics for students in home economics. The practical applications of physics in the home will be emphasized. *Prerequisite:* A thorough knowledge of elementary algebra and plane geometry. *Both semesters. Lecture,*

*recitation and quiz, two hours; laboratory, one period. Three credits each semester.* Mackay Science Hall. Blair. Fee \$3.

51-52. PRACTICAL CALCULATION. Graphical methods of determining the relationship between physical quantities. The adjustment of graphs to increase the accuracy of computed results. Practice in the arrangement of logarithmic calculation so that the minimum amount of labor is involved in the solution of complicated equations. Differential correction of results. Interpolation and the use of interpolation formula. Computation of probable error, and estimation of accuracy of data and results. *Prerequisite:* Differential calculus. *Either semester. One credit. One three-hour computing period per week.* Mackay Science Hall. Blair.

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. Leifson. Fee \$3.

59-60. HEAT AND THERMODYNAMICS. Lectures and recitations accompanied by experimental work of a quantitative character. This course, together with physics 61-62, is introductory to mathematical physics. Many of the more difficult subjects merely touched upon in general physics will be fully treated. *Prerequisite:* General physics, differential and integral calculus. *Both semesters. Two credits each semester.* Mackay Science Hall. Batdorf.

61-62. LIGHT AND PHYSICAL OPTICS. Lectures: Experimental illustration of selected topics in light, including discussion of the corpuscular and wave theories of light, the restricted theory of relativity, lenses, mirrors and prisms, prism spectra, Doppler's principle and its applications, diffraction, interference, the theory of the grating, double refraction and polarization. *Prerequisite:* General physics, differential and integral calculus. *Both semesters. Two credits each semester.* Mackay Science Hall. Blair.

63. PHYSICAL OPTICS. Laboratory exercises in connection with course 61-62. *First semester. Two credits.* Mackay Science Hall. Blair and 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.

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. (Not offered in 1944-1945.)

71-72. INTRODUCTION TO MODERN PHYSICS. Lectures and experimental illustrations. Discussion of important topics in the fields of radiation and the structure of atoms and molecules. Introduction to quantum mechanics. *Prerequisite:* General physics. *Two credits each semester.* Mackay Science Hall. Leifson.

73-74. **ELECTRICITY AND MAGNETISM.** Introduction to the mathematical theory of electricity and magnetism. Solution of problems by exact reasoning from fundamental principles. *Prerequisite:* General physics, differential and integral calculus. *Either semester. Two credits per semester.* Mackay Science Hall. Batdorf.

75-76. **GLASSBLOWING.** A laboratory course of instruction in methods of making simple glass apparatus. *Either semester. One credit.* Mackay Science Hall. Leifson. Fee \$6.

77-78. **THERMIONIC VACUUM TUBES.** A laboratory course of selected problems involving the determination of constants of vacuum tubes and vacuum tube circuits. One hour each week will be devoted to discussion and reports. *Prerequisite:* Physics 3-4-5-6 (or the equivalent), differential and integral calculus. *Either semester. Two credits per semester.* Mackay Science Hall. Leifson. Fee \$3.

101-102. **THEORETICAL PHYSICS.** An introduction to the more advanced mathematical analysis as applied to general physical problems. *Prerequisite:* Physics 53-54, 55-56, 57-58, and 59-60, differential and integral calculus and differential equations. *Both semesters. Two credits each semester.* Mackay Science Hall. Batdorf.

103-104. **THESIS WORK,** and all special laboratory work not in the courses announced above. *Both semesters. Credits to be arranged.* Mackay Science Hall. Staff.

## PSYCHOLOGY

PROFESSOR YOUNG, HEAD OF DEPARTMENT

PROFESSOR IRWIN

ASSISTANT PROFESSOR WIEDERHOLD

**Requirements for a minor in psychology:** Psychology 5 (3 credits), 10 (2 credits), 51 (3 credits), 62 (3 credits), and 7 additional credits in the department.

**Requirements for a major in psychology:** Philosophy 1 (3 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. Either semester. Two credits.* Irwin, Wiederhold.

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 and psychology 11. Either semester. Three credits.* Young, Irwin, Wiederhold.

6. **ELEMENTARY EDUCATIONAL PSYCHOLOGY.** A consideration of the applications of psychology to educational problems. *Prerequisite:* Psychology 5. *Second semester. Three credits.* Irwin, Wiederhold.

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.* Young.

11. **PSYCHOLOGY OF SOCIAL MOVEMENTS.** A psychological analysis of basic beliefs and concepts in social movements. Topics included are the lynching mob, the Kingdom of Father Divine, the Oxford Group, the Townsend Plan, Japanese Nationalism, Fascism, Communism and Nazism. *No prerequisite. First semester. Two credits.* Wiederhold.

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 1942-1943. Two credits.* Irwin.

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.* Young.

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.* Irwin.

52. **PSYCHOLOGY OF PROPAGANDA AND PUBLIC OPINION.** This is a socio-psychological study of (1) the psychological bases of public opinion, (2) the techniques of leadership, (3) the forces which mould public opinion and the channels through which it is expressed, and (4) quantitative techniques in the measurement of attitudes and the effects of publicity campaigns. Current war propaganda will be analyzed. *Prerequisite:* Psychology 5. *Second semester. Two credits.* Irwin.

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.* Young.

57. **PSYCHOLOGY OF ADVERTISING.** An intensive study of the psychological principles basic to effective advertising. Emphasis will be placed on techniques of experimental investigation useful to advertisers in solving problems on the job for which psychology does not provide ready-made answers. *Prerequisite:* Psychology 5. *First semester. Alternate years, starting 1942-1943. Two credits.* Irwin.

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, starting 1942-1943.* Irwin.

60. **COMPARATIVE PSYCHOLOGY.** The genetic history of consciousness in animals, savages and civilized human beings. *Prerequisite:* Psychology 5. *Second semester. Two credits.* Wiederhold.

61. BUSINESS PSYCHOLOGY. Discussions, readings, and practical assignments on the mental laws basic to effective buying, selling, advertising, and management of men. Salesmanship will be emphasized. *Prerequisite:* Psychology 5. *First semester, alternate years, starting 1943-1944. Two credits.* Irwin.

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.* Young.

63. ADVANCED PSYCHOLOGY. An intensive study of selected problems. Lectures, readings and a term paper. *Prerequisite:* Psychology 5. *First semester. Two credits.* Young.

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 1943-1944. Two credits.* Irwin.

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 1943-1944. Two credits.* Irwin.

67. PSYCHOLOGY OF WAR. A consideration of the psychological causes of war, the development of the war mood, panic, the maintenance of morale, and post-war adjustments. *First semester. Two credits.* Young.

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.* Young.

101-102. 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.* Young.

# SUMMER SESSIONS OF THE UNIVERSITY OF NEVADA

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## INTERSESSION

June 5 through July 14, 1944

## SUMMER SESSION

July 17 through August 25, 1944

### *Officers of Administration*

JOHN O. MOSELEY, M.A., LL.D., President of the University.

CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.

HAROLD N. BROWN, Ed.D., Director of Summer Sessions.

JEANETTE C. RHODES, B.A., Registrar.

THEA C. THOMPSON, Librarian.

### OPPORTUNITY AND PURPOSE

The Summer Sessions are an integral part of the University of Nevada organization. The same high standards prevail as in the regular session; equivalent work carries equivalent credit and the same high quality of teaching personnel is maintained.

One of the primary purposes of the Summer Sessions is to meet the needs of teachers who wish to spend a part of the summer vacation in serious study or investigation. The Summer Sessions afford unusual opportunity to increase teaching skill, to improve teaching personality, to obtain help with individual classroom problems, to acquire new cultural and recreational interests, and to become better informed concerning current and social problems.

Of almost equal importance is the opportunity given by the Summer Sessions to students desiring to accelerate their programs. Moreover, some students find it advantageous to attend summer school to gain a desired classification or to study a particular subject not offered in the regular sessions.

Specific courses are designed for high school teachers, elementary teachers, and teachers of departmental work. All courses offered in either of the Summer Sessions may be applied for advancement toward a normal school diploma, a bachelor's or master's degree, and toward certification by the Nevada State Board of Education. A bulletin describing the faculty, the curriculum, and the facilities available during the summer may be obtained by addressing the Director of Summer Sessions.

### ADMISSION AND CREDITS

Anyone with ability to do scholastic work on the University level may be admitted to the Summer Sessions. However, credit toward any University degree or diploma will be granted only after the student has met all requirements for admission to the University.

As a special war-emergency concession the Committee of Admission, Entrance Examinations, and Advanced Standing has ruled that any student with the recommendation of his high school principal may be

admitted to the Summer Sessions of the University with fourteen high school units.

A maximum of six hours credit may be gained in either of the Six-Week Sessions. The number of credits allowed for each course is determined on the basis that fifteen University lecture periods of fifty minutes each, together with two hours of out-of-class preparation for each class, earn one hour of credit.

A maximum of fifteen credits may be earned by attendance in the Summer Sessions. Any student desiring to take advantage of this accelerated program must enroll on June 5 for the entire twelve-week period of summer school. Also, such additional hours must have the approval of the Director of Summer Sessions.

#### OUT-OF-STATE TEACHERS

Teachers from other States may fulfill requirements to validate certificates to teach in Nevada schools by attending either or both the Summer Sessions. Out-of-State teachers are required to pass State examinations in, or to receive University credit for, School Law and Organization and the Constitutions of the United States and of Nevada. Teachers from other States must meet the requirement in Nevada Constitution should they already have credit in United States Constitution. All of these courses are offered in the Summer Sessions.

#### TEACHER REPLACEMENT

Teachers are eligible for teacher placement service after twelve weeks of summer school attendance at the University of Nevada.

The policy of the appointment director has always been to consider the welfare of the children of the State paramount to the interests of prospective teachers. Consequently, recommendations for teaching positions are confined largely to those whose achievement, ability, and character are known. The appointment office will, however, be instrumental in bringing competent teachers and school officers into contact.

The fee for enrollment in the appointment service is \$2.50. For this fee, five sets of credentials are prepared, to be sent to school authorities. If additional credentials are required, a fee of \$1.50 will be charged for each set of five. No commission is charged on the appointee's salary.

#### SUMMER SESSION FEES

The fee for each of the six-week sessions is \$20. However, a student enrolling for the twelve weeks of school work on June 5 will be charged a fee of \$35. In addition the ordinary laboratory fee will be charged those students enrolling for courses requiring laboratory classes.

A deposit of \$10 will be assessed to each student who enrolls for work having laboratory classes, or who stays in living accommodations provided by the University. Students falling in both categories, however, will be assessed but one deposit.



# THE NEVADA AGRICULTURAL EXPERIMENT STATION

## *Staff*

JOHN O. MOSELEY, M.A., LL.D., President of the University.  
 CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.  
 SAMUEL B. DOTEN, M.A., Director of Agricultural Experiment Station.  
 AGNES L. SCHMITH, Administrative Secretary and Librarian.  
 GLORIA GHIGLIERI, Assistant Librarian.  
 CHARLES E. FLEMING, B.S.A., In Charge of Range Management.  
 MARK A. SHIPLEY, B.S., Associate in Range Management.  
 WALTER NEILSON, Assistant in Range Management.  
 FRED B. HARRIS, B.S., Assistant in Range Management.  
 CHESTER A. BRENNEN, B.A., Economist in Range Management.  
 GRANT H. SMITH, JR.,<sup>1</sup> B.S., Assistant Economist in Range Management.  
 EDWARD RECORDS, V.M.D., In Charge of Veterinary Science.  
 LYMAN R. VAWTER, D.V.M., M.S., Associate in Veterinary Science.  
 ALBERTA JACOBSEN, Clerk in Veterinary Science.  
 M. R. MILLER, M.S., Chemist.  
 V. E. SPENCER, M.S., Associate in Soils Research.  
 GEORGE HARDMAN, M.S., Chief in Irrigation and Agronomy.  
 HOWARD G. MASON, B.S., Assistant in Estimating and Land Use Planning.  
 F. B. HEADLEY, Chief in Farm Development.  
 MABEL HARTLEY, B.A., Statistician in Farm Development.  
 ZETA CAPRIOTTI, Clerk in Farm Development.  
 J. E. CHURCH, Ph.D., Chief in Station Meteorology.  
 CARL ELGES, JR.,<sup>1</sup> M.S., Assistant in Meteorology.  
 WINIFRED MOORE, Clerk 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 1940-1941 it received \$2,460.64 from the Federal Bankhead-Jones Fund. The total of these Federal appropriations for the current fiscal year will be \$92,460.64. None of these funds can be applied to teaching or to the work of agricultural extension, because the object of all these funds is the investigation by scientific methods of problems in the agricultural industry.

The Nevada Experiment Station has chosen problems for study in five fields:

I. The problems of the most effective use of a limited water supply in crop production.

II. The problems of animal disease in the livestock industry of the State.

III. The problems arising from the depleted condition of Nevada ranges for sheep and cattle.

IV. The problems of small farm development in Nevada.

V. Economic problems in the Nevada cattle industry.

For 1943-1944 the active project list of the Station is as follows:

<sup>1</sup>Absent on leave; war service.

## 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 Walter Neilson. In cooperation with U. S. Grazing Service.
- Project 24—Hatch Fund. *Methods of Producing More and Better Lambs in Nevada Range Flocks*. 1919—Continuous. Project Leader, C. E. Fleming, assisted by Walter Neilson. In cooperation with Bureau of Animal Industry, U. S. D. A., and the U. S. Sheep Experiment Station and Western Sheep Breeding Laboratory.
- Project 26—Hatch Fund. *Feeding and Finishing Range Ewes and Lambs*. 1920—Continuous. Project Leader, C. E. Fleming, assisted by Walter Neilson. In cooperation with Bureau of Plant Industry, U. S. D. A., Newlands Field Station, Fallon, Nevada.
- Project 31—Purnell Fund. *Studies of the Economics of Cattle and Sheep Production Under Nevada Ranch and Range Conditions*. 1939—Continuous. Project Leader, C. A. Brennen, assisted by C. E. Fleming and Grant H. Smith. In cooperation with Bureau of Agricultural Economics and other Bureaus of U. S. D. A., and U. S. Grazing Service.
- 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. In cooperation with U. S. Forest Service and U. S. Grazing Service.
- Range Plant Inventory and Range Forage Improvement Studies*. 1937—Continuous. Project Leader, C. E. Fleming, assisted by C. A. Brennen and Grant H. Smith. In cooperation with the U. S. Forest Service.
- Project 55—Station Sales Fund. *Weed Control by Plant Competition*. 1937—Continuous. Project Leader, C. E. Fleming, assisted by C. A. Brennen. In cooperation with the Nevada Agricultural Extension Service and the Bureau of Plant Industry, U. S. D. A., Newlands Field Station, Fallon, Nevada.
- Project 60—Purnell Fund. *Forage Acre Allowances*. 1940—Continuous. Project Leader, C. E. Fleming, assisted by Mark A. Shipley, C. A. Brennen, and M. R. Miller. In cooperation with U. S. Grazing Service.

## METEOROLOGY—

- Project 57—Purnell Fund. *Snow Surveying and Runoff Forecasting, Development and Applications*. 1940—Continuous. Project Leader, J. E. Church, assisted by Carl Elges. In cooperation with Soil Conservation Service, U. S. D. A.

## CHEMISTRY—

- Project 58—Purnell Fund. *Quality of Irrigation Waters of Nevada*. 1940—Continuous. Project Leader, M. R. Miller. In cooperation with Bureau of Plant Industry, U. S. D. A., and Rubidoux Laboratory, Riverside, California.
- Project 59—Adams Fund. *Chemical Composition of Nevada Range Plants and Forage Crops*. 1940—Continuous. Project Leader, M. R. Miller, assisted by Departments of Range Management, Farm Development, and Veterinary Science. In cooperation with the U. S. Grazing Service.

## IRRIGATION—

- 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, assisted by H. G. Mason. In cooperation with Soil Conservation Service and Bureau of Agricultural Economics, U. S. D. A.

## FARM DEVELOPMENT—

- Project 30—Purnell Fund. *Farm Accounts and Land Utilization.* 1941—Continuous. Project Leader, F. B. Headley. In cooperation with the Nevada Agricultural Extension Service.
- 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. In cooperation with Bureau of Plant Industry, U. S. D. A., Newlands Field Station, Fallon, Nevada.
- Project 41—Hatch Fund. *Hog Feeding Experiments.* 1930—Continuous. Project Leader, F. B. Headley. In cooperation with Bureau of Plant Industry, U. S. D. A., Newlands Field Station, Fallon, Nevada.
- Project 42—Purnell Fund. *Turkey Feeding Experiments.* 1933—Continuous. Project Leader, F. B. Headley. In cooperation with Bureau of Plant Industry, U. S. D. A., Newlands Field Station, Fallon, Nevada.
- Project 61—Purnell Fund. *Corn Silage with Alfalfa and Barley for Fattening Beef Cattle.* 1942—Continuous. Project Leader, F. B. Headley, assisted by F. M. Willhite. In cooperation with Division of Western Irrigation Agriculture, U. S. D. A., Newlands Field Station, Fallon, Nevada.

## VETERINARY SCIENCE—

- Project 16—Purnell Fund. *Hemorrhagic Disease Among Cattle.* 1940—Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.
- Project 39—Purnell Fund. *A Study of Types of Malnutrition, Diminished Reproductive Activity, and Lowered Resistance to Disease in Cattle which Appear To Be Due to Deficiencies in the Content of Certain Forms of Mineral Matter in Soil, Water, and Forage.* 1939—Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter, M. R. Miller, and V. E. Spencer.
- Project 40—Purnell Fund. *Encephalomyelitis in Equines.* 1930—Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.
- Project 56—Adams Fund. *Equine Influenza.* 1940—Continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.

## SOIL FERTILITY—

- Project 48—Adams 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.* 1939—Continuous. Project Leader, V. E. Spencer, assisted by F. E. Fink. In cooperation with the U. S. D. A. Experimental Farm at Beltsville, Maryland; New Jersey Experiment Station at Brunswick, New Jersey; Ohio Experiment Station at Wooster, Ohio; Illinois Experiment Station at Des Plaines, Illinois; and University of Illinois at Urbana, Illinois.

## ESTIMATING AND PLANNING—

- Project 62—Purnell Fund. *Estimating and Planning of Agricultural Production in Nevada.* 1943—Continuous. Project Leader, H. G. Mason, assisted by F. M. Willhite, F. B. Headley, F. B. Harris, and E. W. Knight. In cooperation with U. S. Bureau of Agricultural Economics and U. S. D. A.

## 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*

- JOHN O. MOSELEY, M.A., LL.D., President of the University.  
CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.  
CECIL W. CREEL, Agr. D., Director of Agricultural Extension.  
THOMAS E. BUCKMAN, M.S., Assistant Director for Agriculture.  
MARIE WATKINS, Chief Clerk.  
L. E. CLINE, M.S., Extension Agricultural Economist.  
VERNER E. SCOTT, M.S., Extension Agricultural Economist.  
OTTO R. SCHULZ, B.S., Soil Conservationist and Supervisor Emergency Farm Labor.  
THOMAS B. GLAZEBROOK,<sup>1</sup> M.S., Extension Forester.  
A. L. HIGGINBOTHAM, A.M., Extension Editor, University of Nevada.  
JOHN P. AHERN, B.S., District Extension Agent, Clark and Nye Counties.  
ARCHIE R. ALBRIGHT, B.S., County Extension Agent, Washoe County.  
ROYAL D. CROOK, M.S., County Extension Agent, Churchill County.  
LOUIE A. GARDELLA, B.S., County Extension Agent, Lyon County.  
H. LEE HANSEN, B.S., District Extension Agent, Douglas and Ormsby Counties.  
LENA HAUKE, B.S., County Extension Agent, Churchill County.  
M. GERTRUDE HAYES, B.S., County Extension Agent, Washoe County.  
MILDRED HUBER,<sup>1</sup> B.S., District Extension Agent, Lyon and Douglas Counties.  
C. W. HODGSON, Ph.D., District Extension Agent, South Eureka and White Pine Counties.  
STEVE JAMES, B.S., County Extension Agent, Lincoln County.  
PAUL L. MALONEY, B.S., District Extension Agent, Humboldt and North Lander Counties.  
MARK W. MENKE, B.S., County Extension Agent, Elko County.  
A. J. REED, B.S., County Extension Agent, Pershing County.  
E. C. REED,<sup>2</sup> M.S., County Extension Agent, Washoe County.  
DANTE SOLARI, B.S., Assistant District Extension Agent, Churchill and South Lander Counties.  
HELEN S. TREMEWAN, B.S., County Extension Agent, Elko County.  
J. W. WILSON, B.S., District Extension Agent, Elko and North Eureka Counties.  
J. H. WITTEWER, County Extension Agent, Clark County.

Cooperative extension work in agriculture and home economics is conducted in Nevada under the provisions of the following Acts of Congress: The Smith-Lever Act, approved May 8, 1914; the Capper-Ketcham Act, approved May 22, 1928; the Bankhead-Jones Act, approved June 29, 1935.

The Agricultural Extension Division as established under the Memorandum of Understanding with the United States Department of Agriculture dated September 8, 1914, is a "definite and distinct administrative division" of the University of Nevada, coordinate in rank and

<sup>1</sup>Absent on leave; war service.

<sup>2</sup>Absent on leave; Executive Assistant, Agricultural Conservation Program, University of Nevada, Reno, Nevada.

affiliation 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 together find a solution for many of their problems by cooperating with Agricultural Extension Service.

Extension work is outlined in written projects and budgets entered into by the cooperating parties. Major projects are range livestock, dairying, poultry, crops, home improvement, human nutrition, and rural organization.

The organization for extension work in Nevada comprises an administrative and specialist staff, resident at the University, and eighteen county and district agents. Twelve Nevada counties have organized farm bureaus pursuant to Acts of the Legislature, approved April 1, 1919, and March 4, 1921.

All extension work in these counties is conducted in cooperation with the County Farm Bureaus.

## STATE PUBLIC SERVICE DEPARTMENTS

1. THE STATE ANALYTICAL LABORATORY.
2. THE STATE BUREAU OF MINES.
3. THE PURE FOOD AND DRUGS CONTROL, WEIGHTS AND MEASURES, AND PETROLEUM PRODUCTS INSPECTION.
4. THE STATE VETERINARY CONTROL SERVICE.

### THE STATE ANALYTICAL LABORATORY

#### *Staff*

JOHN O. MOSELEY, M.A., LL.D., President of the University.

CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.

WALTER S. PALMER, E.M., Director.

WILLIAM I. SMYTH, E.M., Chemist.

VINCENT P. GIANELLA, 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*

JOHN O. MOSELEY, M.A., LL.D., President of the University.

CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.

JAY A. CARPENTER, E.M., Director.

WALTER S. PALMER, E.M., Metallurgist.

VINCENT P. GIANELLA, Ph.D., Geologist.

WILLIAM I. SMYTH, E.M., Analyst.

HARRY E. WHEELER,<sup>1</sup> Ph.D., Stratigrapher.

B. F. COUCH,<sup>1</sup> 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

<sup>1</sup>Absent on leave; war service.

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 PURE FOOD AND DRUGS LABORATORY, WEIGHTS  
AND MEASURES, AND PETROLEUM PRODUCTS  
INSPECTION

(Sierra and Fifth Streets)

*Staff*

JOHN O. MOSELEY, M.A., LL.D., President of the University.

CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.

WAYNE B. ADAMS, B.S., Acting Commissioner.

EDWARD L. RANDALL, M.S., Chemist.

VICTOR COKEFAIR, Inspector.

J. M. MCLEOD,<sup>2</sup> B.A., Inspector.

A. J. RAFAEL, Inspector.

JUANITA L. HOLMES, Clerk.

The 1939 session of the State Legislature enacted a new food and drug law, which also embraces cosmetics, to replace the old law which has been on the statute books for thirty-three years. The present law is modeled closely after the Federal Act and provides that all rules, regulations, definitions and decisions proclaimed by the Secretary of the United States Department of Agriculture for the enforcement of the National law shall be adopted by this department in the enforcement of the State law.

With such provisions Nevada receives valuable aid through the Federal regulations, and avoids conflict with neighboring States having laws also modeled closely after the national Act. Uniformity in State and national laws, and cooperation among officials is much to be desired, and more can be accomplished under such conditions than by working under laws that are dissimilar or antagonistic to established regulations that have been in vogue in States maintaining food laws for a number of years.

The laws of this State, being similar to the national law, obviate the necessity of manufacturers providing special labels to meet any special requirements that otherwise might exist in this State. Often labels are submitted to this department for approval or correction so that they will comply with the Nevada food law.

An Act concerning and fixing standard weights and measures, and

<sup>2</sup>Absent on leave; war service.

to regulate the sale of commodities or articles of merchandise according to such standards, was passed by the 1911 session of the Nevada Legislature and became effective January 1, 1912.

The standard weights and measures adopted by the Government of the United States has been adopted as the legal standard of weights and measures throughout the State of Nevada. With this adoption Nevada receives aid through the Federal regulations and promotes uniformity in State and national standards.

The 1931 session of the State Legislature passed what is known as the Petroleum Products Inspection Act and the enforcement of this statute was delegated to the State Department of Weights and Measures.

## THE STATE VETERINARY CONTROL SERVICE

### *Staff*

JOHN O. MOSELEY, M.A., LL.D., President of the University.

CHARLES H. GORMAN, Honorary M.S., Vice President and Comptroller.

EDWARD RECORDS, V.M.D., Director.

AGNES HILDEN, B.S., Technician.

ALBERTA JACOBSEN, Secretary.

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 to aid in the field work conducted by the State Department of Agriculture, the State Board of Sheep Commissioners, and the United States 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*

ANDREW C. RICE, Ph.D., Acting Supervising Engineer.  
 RALPH V. THURSTON, E.Met., Metallurgist.  
 EDWARD S. SHEDD, M.S., Assistant Metallurgist.  
 DEAN R. MYERS, Principal Chemical Analyst.  
 FRED J. ALLEN, Principal Chemical Analyst.  
 CLYDE E. ABBINGTON, M.S., Associate Analyst.  
 FRANCES R. CATOIR, Ch.E., Assistant Chemist.  
 LELAND W. HILL, M.S., Assistant Chemist.  
 MERYL W. DEMING, Ph.D., Assistant Chemist (W.A.E.)  
 JOHN M. BOYLAN, M.S., Senior Chemical Analyst.  
 GEORGE W. BREGAR, Principal Chemical Analyst.  
 NARBUT S. BARSKI, Senior Chemical Analyst.  
 CARLETON G. COFFIN, B.S. (M.E.), Principal Chemical Analyst.  
 HAROLD J. HEINEN, B.S., Principal Chemical Analyst.  
 J. HAWORTH JONTE, M.S., Principal Chemical Analyst.  
 WALTER R. VREELAND, Principal Chemical Analyst.  
 JONELLE P. HAMLET, Assistant Scientific Aide.  
 GLADYS R. MACKENZIE, B.S., Assistant Scientific Aide.  
 MILDRED G. ELLIOTT, B.S., Assistant Scientific Aide.  
 ADA COLQUHOUN, B.S., Assistant Scientific Aide.  
 HELEN GUNG, Laborer.  
 JOHN M. FOX, JR., Laborer.  
 ELLEN D. JENSEN, Laborer.  
 HARRY F. MCCRAY, Principal Clerk.  
 SHEILA P. RAST, Assistant Clerk Stenographer.  
 KATHLEEN M. JENSEN, Junior Clerk Typist.  
 WILLIAM A. CONLEY, Assistant Laboratory Mechanic.  
 GEORGE S. BANKS, Laborer.  
 CHARLES A. MEUNK, Laborer.  
 ADA K. HARTMAN, Janitress.  
 JOHN M. BROAN, Explosives Investigator, Explosives Control Division.  
 FOREST J. SUR, Mineral Production Security Division.

### BUREAU OF MINES, GEOPHYSICAL SECTION

EDGAR L. STEPHENSON, M.S., Associate Geophysicist.  
 K. L. COOK, Ph.D., Assistant Geophysicist.  
 R. E. THURMOND, B.S., Junior Geophysicist.  
 HAROLD GLENN RAUCH, Chief Geophysical Instrument Maker.

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 this Station's work is now entirely based on aid for our war requirements and embraces investigation for beneficiation of war minerals and the analysis of large numbers of ore samples to enable field engineers to locate strategic minerals, of which the United States lacks an adequate supply.

In addition to the Rare and Precious Metals Experiment Station the Bureau of Mines maintains on the University campus representatives of the Division of Geophysical Exploration and of the Mine Safety Station, Berkeley, California. The District Office of the Bureau of Mines, which is located in the downtown business section of Reno, conducts surveys of the mineral resources of the State of Nevada.

## RECIPIENTS OF SCHOLARSHIPS AND HONORS

1942-1943

The REGENTS' SCHOLARSHIPS of \$50 each for excellence in scholarship, awarded to

John A. Jensen

Addison Millard

Patricia Traner

The ASSOCIATED WOMEN STUDENT'S SCHOLARSHIP of \$25 given to the woman student attaining the highest average grade for the year and who receives no other scholarship, awarded to

Mary Ancho

The ELLA S. STUBBS MEMORIAL SCHOLARSHIP OF THE WOMEN'S FACULTY CLUB of \$100 for a student of high scholarship, awarded to

Dorothy Jones

The ROSE SIGLER MATHEWS SCHOLARSHIPS of \$75 each to worthy students, awarded to

Frances Baumann

Frances Cook

Dennis Maurya Wogan

The MARYE WILLIAMS BUTLER SCHOLARSHIP of \$50 for outstanding work in mathematics, awarded to

Margie McQuerry

The AZRO E. CHENEY SCHOLARSHIP of \$75 for the freshman or sophomore judged as the best student in English, awarded to

Lucille Shea

The MRS. CARL OTTO HERZ SCHOLARSHIP of \$50 for excellence in electrical engineering, awarded to

Carl Jesch

The CARRIE BROOKS LAYMAN MEMORIAL SCHOLARSHIP of approximately \$200, awarded to

Dorothy Reynolds

The PREMEDICAL-PREURSING SCHOLARSHIP of \$100 for excellence in pre-medical work, awarded to

Raylyn Collins

The GRAND ARMY OF THE REPUBLIC SCHOLARSHIP of \$50 for a descendant of a Civil War veteran, awarded to

Jacqueline Prescott

The WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM of \$75 for excellence in journalistic work, awarded to

Nita Reifschneider

The RAYMOND SPENCER SCHOLARSHIP of \$25 per month for excellence in electrical engineering, awarded to

William Richter

The MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS for a combination of worthy traits. Twelve and one-half scholarships of \$400 each, awarded to  
Italo Gazazzi

Divided between

John M. Fox, Jr. Delmar Taylor

Divided between

Melba Whittaker Ada May Bachman

Divided between

Carmen Bergeret Helen Gung

Divided between

Geraldine McFarland Lois Bradshaw

Divided between

Annette Leighton Muriel Westergard

The WOMEN'S CHRISTIAN TEMPERANCE UNION SCHOLARSHIPS of \$50 each, awarded to

Walter Case	Marian Holcomb
Doll Corbett	Harriet McNeil
Betty Jo Hanna	John McIntosh
Georgiana Hicks	Virginia Waltenspiel

The RITA HOPE WINER MEMORIAL SCHOLARSHIP of \$50 for a prospective public school teacher completing her junior year, awarded to

Mary Alice Holmes

The GRAND LODGE OF THE INDEPENDENT ORDER OF ODD FELLOWS SCHOLARSHIPS of \$150 each, awarded to

Ruth Osborne Mario Recanzone

The ROTARY CLUB OF RENO SCHOLARSHIP of \$100 for a deserving student, awarded to

Gordon Mills

The NEVADA SAGEBRUSH CHAPTER OF THE DAUGHTERS OF THE AMERICAN REVOLUTION SCHOLARSHIP of \$50 for a deserving student, awarded to

Shirley Layman

The HORACE P. BOARDMAN SCHOLARSHIP of \$100 for proficiency in civil engineering, awarded to

Jack Layson

The JEWETT W. ADAMS SCHOLARSHIPS of \$75 each for students of outstanding scholarship and ability, awarded to

Robert Baird	D. Arlene Merialdo
Kenneth Bradshaw	John Nicholson
James Devlin	Duane Ramsey
John M. Fox, Jr.	Warren Salmon
Nadine Gibson	Hugo Smith
Marian Hennen	Neil Stewart
Marie Hicks	Patricia Thomas
Marjorie McClurkin	Robert Vaughan

Noel Willis

#### SPECIAL PRIZES AND AWARDS

The ARMANKO SENIOR LIBRARY PRIZES, one of \$60 and the other of \$40 worth

of books to be given to those graduating seniors who have the best private libraries, awarded

First prize to Rose Arenaz

Second prize to Peter Echeverria

The GRIFFIN FORENSIC PLAQUE for excellence in intercollegiate public speaking competition for four years, awarded to

Peter Echeverria

The HENRY ALBERT SENIOR PUBLIC SERVICE PRIZE of \$25 to members of the graduating class for scholarship, character, and worthy service to the University, awarded to

Peter Echeverria

C. Clifton Young

The GOLD MEDAL, gift of R. Herz and Brothers of Reno, for the highest scholarship attained during four years, awarded to

C. Clifton Young

The PHILO SHERMAN BENNETT PRIZE of \$50 for the best essay on "The Principles of Free Government," awarded to

Jane Reading

The GOVERNOR'S MEDAL for proficiency in military training, awarded to

Cadet Corporal John A. McFarlane

The SCABBARD AND BLADE MEDAL for excellence in drill, theory, and discipline, awarded to

Cadet Private Ferdinand G. Simons

The Honor R. O. T. C. Graduates, as judged by the Military Department:

George M. Basta

C. Clifton Young

Fourragere of University colors for outstanding first year advanced Cadet, awarded to

Cadet Sergeant Merton E. Domonoske

Decorative bar of the University colors for excellence in drill, awarded to

William B. Arandt

George P. Pendo

Carl Frandsen, Jr.

Commission as Brevet Second Lieutenant of R. O. T. C., awarded to

Cadet Corporal Holly E. Mertel

Elected to PHI KAPPA PHI, national honor scholarship fraternity:

Graduate Student Charles W. Saalfrank

Senior Students—

Leonard Anker

Harriet Morrison

Peter Echeverria

Patricia Prescott

Eugene Michal

Jo Ann Record

Alfred Mills

Beatrice Thompson

Edwin B. Monsanto

William Van Tassel

C. Clifton Young

HONOR ROLL OF THE SENIOR CLASS—For excellence in scholarship during the two semesters:

Leonard Anker

Eugene Michal

Rose Arenaz

Alfred Mills

Mary Kathryn Carroll

Edwin B. Monsanto

James Forsyth

Patricia Prescott

Virginia Mathews

Duane Ramsey

Waldemar Mayer

Jo Ann Record

William Van Tassel

SENIOR HONOR ROLL FOR THE FOUR-YEAR COURSE for excellence in scholarship during the past eight semesters:

Mrs. Alice Addenbrooke	Eugene Michal
Leonard Anker	Edwin B. Monsanto
Rose Arenaz	Harriet Morrison
Peter Echeverria	Patricia Prescott
James Forsyth	Jo Ann Record
C. Clifton Young	

## GRADUATES

Diplomas and Degrees were awarded on Commencement Day, May 24, 1943, as follows:

## MASTER OF ARTS

Lawrence James Osborne Charles Weaks Saalfrank

## MASTER OF SCIENCE

Albin Erick Lindblad Holly E. Mertel

## BACHELOR OF ARTS

Florence E. Alexander	Virginia Mae Mathews*
Rose Arenaz*	Velia Margaret Mazza
Rae Birnbach Bass	Jensen Forrest McQueen
George Michael Basta	Harriet Lucille Morrison
Clair Ellen Butler*	Fritzi Jane Neddenriep
Fay X. Byebee†	Oscar D. Neundorfer
Betty Nash Carlson	Eva June O'Neill†
Mary Kathryn Carroll	Ernest A. Piersall
Dorothy Louise Casey	Patricia Jane Prescott
Catherine Louise Cazier*	Marguerite Patricia Proll
Jean Loftus Chambers	Deane Leslie Quilici
Dorothy Elizabeth Cole	Lois Elizabeth Rabe
William Roy Curtis	Margaret Reading
John Conway Downing	Miriam H. Rebaleati
Sam J. Drakulich	Mario J. Recanzone
Peter Echeverria	Jo Ann Record
William Eugene Etchemendy	Yvonne Rosasco*
James A. Forsyth	Warren Gunn Salmon
Barbara Dewey Francis	Margaret Marie Sears
John E. Gabrielli	Bernard James Smith, Jr.
Mary Louise Griswold*	Valerie Claire Snell
Clark Joseph Guild, Jr.	Vera Viola Sorensen
Lauris Anita Gulling*	Jack B. Streeter
Mildred Missimer Harris	John Gerard Stuijbergen
William Ernest Harris	Estes Beatrice Thompson
Frances Hawkins	Alice Martha Traner
Shirley Gail Heany	Morton Jacob Traub, Jr.
Vida G. Jacobsen	Emilie A. Turano*
James William Kehoe	Rita E. Turano*
James Harrison King	Richard S. Vietta
Harold E. Kling†	James Norman Warriner
Mary E. Kling†	Jean Margaret Werner*
Nicholas Joseph Mastrovich, Jr.	Clarence Clifton Young

Mary Dolores Young

## BACHELOR OF SCIENCE

Mary Chalmers Ferguson	Margaret Elizabeth Records
Helen Juliette Hill*	Merle L. Snider
Harold Harding Keen	Ralph Hobart Sullivan
George Leland Moore	Ruth Wong

## BACHELOR OF SCIENCE IN CHEMISTRY

Alfred Preston Mills

\*Also receives the High School Teacher's Diploma.  
†Work completed August 1942.

## BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Adolph C. Bruhns	James William McCutchan
Chester Lyle Evans†	Ernest William McKenzie
Brisbane Walker Henderson†	Jack William Pierce
Duane Max Ramsey	

## BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Ircel L. Carter	Eugene Carlo Mastroianni
Charles Joe Chun	Waldemar H. Mayer
George Lester Couch	Elwood Brose Moffett
John Arthur Goetz, Jr.	Edwin B. M. Monsanto

## BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Franklin Theodore Peck	Robert Edward Rae
William Vernon Van Tassel	

## BACHELOR OF SCIENCE IN METALLURGICAL ENGINEERING

Eugene Joseph Michal

## BACHELOR OF SCIENCE IN MINING ENGINEERING

Abbott Charles	Moises Ibusca Ponce
Edward Grundel, Jr.	Elliott Eugene Reyer, Jr.
Fred Sneddon Haley	Claude Herbert Reynolds
Gerald Brooke Hartley, Jr.	Charles Henry Tenney
Fred La Salle Humphrey	Bartow W. Van Voorhis, Jr.
George Mar	John Herbert Wells†
Theodore Douglas Overton†	Robert Elmer West
Roy Phillip Peterson	Robert Woodward
Chew Fish Yuen	

## BACHELOR OF SCIENCE IN AGRICULTURE

Leonard Alton Anker	Arthur Judson Palmer, Jr.
George William Frey	Matt Hugh Smith*
Wendell D. Leavitt*	Dante Solari

## BACHELOR OF SCIENCE IN HOME ECONOMICS

Alice Baltzelle Addenbrooke†	Sylvia Marie Du Chane
Ruthe La Verne Cash	Virginia Nevada Hoffman
Marguerite Rule*	

## TWO-YEAR NORMAL DIPLOMA

Patricia E. Edmunds	Ruth Isabel Osborne
Irene Dudley Wankier	

## CERTIFICATE, ADVANCED COURSE, R. O. T. C.

Leonard A. Anker	Eugenio C. Mastroianni
Pablo Arenaz	Nick Mastrovich
Herbert Chiara	Arthur J. Palmer
Sam J. Drakulich	Deane L. Quilici
Joseph L. Earl	Marion G. Recanzone
Peter I. Echeverria	Warren G. Salmon
William W. Etchemendy	William H. Smithwick
Eugene B. Francovich	Theron D. Stewart
James W. Kehoe	Jack Streeter
Wendell D. Leavitt	Clarence C. Young

\*Also receives the High School Teacher's Diploma.

†Work completed August 1942.



ROSTER OF STUDENTS  
 FALL AND SPRING SEMESTERS  
 1943-1944

*Explanation of Abbreviations*

A&S.....	Arts and Science	Fr.....	Freshmen
Ag.....	College of Agriculture	So.....	Sophomore
CE.....	School of Civil Engineering	Jr.....	Junior
EE.....	School of Electrical Engineering	Sr.....	Senior
HE.....	School of Home Economics	Gr.....	Graduate
ME.....	School of Mechanical Engineering	Sp.....	Special
MM.....	Mackay School of Mines		

Name	College	Classification	Home Address
Abel, Dorothy.....	A&S.....	So.....	Los Angeles, Calif.
Aberasturi, John.....	A&S.....	Sr.....	Reno
Ackerman, Leslie.....	A&S.....	Sp.....	New York, N. Y.
Aiken, James Wilson.....	A&S.....	Fr.....	Reno
Aldrich, Marie.....	A&S.....	Jr.....	Fernley
Alles, Arthur.....	MM.....	Fr.....	Fallon
Amodei, Marilyn.....	A&S.....	Fr.....	Reno
Ancho, Mary.....	A&S.....	So.....	Battle Mountain
Anderson, Donna.....	A&S.....	Fr.....	Reno
Anderson, Harriet.....	A&S.....	Fr.....	Reno
Andrews, James Virgil.....	A&S.....	Fr.....	Reno
Apa, Frank.....	EE.....	So.....	Sparks
Armstrong, Blanche.....	A&S.....	Fr.....	Reno
Armstrong, Ruth Mae.....	HE.....	Fr.....	Reno
Atkinson, William Duncan.....	A&S.....	Fr.....	Reno
Atwell, Rosemary.....		Gr.....	Reno
Auchampaugh, Virginia.....	A&S.....	Fr.....	Reno
Bachman, Ada May.....	A&S.....	Sr.....	Reno
Baker, Betty Belle.....	A&S.....	Fr.....	Sparks
Baker, John.....	EE.....	Fr.....	Yerington
Baldini, Amelia Freddie.....	A&S.....	Sr.....	Reno
Barsanti, Al.....	A&S.....	Fr.....	Tonopah
Barski, Norbert.....	MM.....	Sp.....	Reno
Barton, Marilyn Jane.....	A&S.....	Fr.....	Los Angeles, Calif.
Bash, Patricia.....	A&S.....	So.....	Reno
Batchelder, Edith.....	A&S.....	So.....	Elko
Batjer, Helen.....	A&S.....	Sr.....	Smith
Baumann, Frances.....	HE.....	Sr.....	Fallon
Baumann, Phyllis.....	HE.....	Jr.....	Fallon
Bay, Carole Gottschalk.....	A&S.....	So.....	Reno
Beaman, George.....	CE.....	Fr.....	Yerington
Bearss, Maxine.....	A&S.....	Fr.....	Reno
Beatty, John.....	A&S.....	Sr.....	Reno

Name	College	Classification	Home Address
Bellows, Margery Anne		Gr.	Glencoe, Ill.
Bergen, Robert Dean	A&S	Fr.	Chappell, Nebr.
Bernard, Carl	A&S	Fr.	Reno
Berry, Henry Kingsbury	A&S	Fr.	Reno
Bicknell, Jean Evelyn	A&S	Fr.	Reno
Birch, Wilma	A&S	Fr.	Reno
Bishop, Gladys Mae	A&S	Fr.	Reno
Blenio, Charles	A&S	Sp.	San Francisco, Calif.
Blythe, Isabel	A&S	Fr.	Berkeley, Calif.
Blythe, Kathleen	A&S	So.	Berkeley, Calif.
Boardman, Arthur Maurice	A&S	Fr.	Reno
Bogard, Julia Lee	A&S	Fr.	Pueblo, Colo.
Boland, Tom	EE	Sp.	Reno
Bony, Beverly Nora	A&S	Fr.	Reno
Bony, Maureen		Gr.	Reno
Bowen, Shirley	A&S	So.	Reno
Boyer, Gordon Norris	CE	Fr.	San Francisco, Calif.
Boylan, John		Gr.	Reno
Boyle, Peggy Jane	A&S	So.	Reno
Bradley, L. Marilyn	A&S	Sr.	Reno
Bradshaw, Kenneth	EE	So.	Reno
Bradshaw, Lois	A&S	Sr.	Reno
Braitto, Constance	A&S	Fr.	Reno
Broili, Julius		Gr.	Reno
Brown, Archibald Robert		Gr.	Reno
Brown, Lois Carol	HE	Fr.	Smith
Brown, Lucile Margaret	A&S	So.	Smith
Brundrett, Robert	A&S	Sp.	Troy, Ohio
Bump, Doris Mae	A&S	Sp.	Reno
Burke, Frances	HE	So.	Wellington
Burkhalter, Betty	A&S	Fr.	Reno
Burrus, Don	MM	Jr.	Reno
Byington, Barbara	A&S	Jr.	Reno
Byrne, John Phillip	EE	Fr.	Virginia City
Caldwell, Elizabeth	A&S	Fr.	Reno
Calkins, James	A&S	Fr.	Elko
Campbell, David	ME	Jr.	Avenal, Calif.
Campbell, Shirley	A&S	Fr.	Fernley
Canady, Alta June	A&S	Fr.	Sparks
Canessa, William	CE	Fr.	Sparks
Cann, Billie Burke		Gr.	Reno
Capurro, Blanche	A&S	Fr.	Reno
Carter, Gerald	ME	Fr.	Beowawe
Case, Clarissa Pansilla	HE	Fr.	Winnemucca
Case, Elsie Genevieve	A&S	Fr.	Paradise Valley
Case, Walter George	A&S	Fr.	Winnemucca
Cashbaugh, Margaret	A&S	Sr.	Bishop, Calif.
Ceccarelli, Raymond	A&S	Fr.	Sparks
Charlton, Thelma	A&S	So.	Reno
Chartier, Jeanne	A&S	So.	Sparks
Cobia, Vivian	A&S	So.	Loyalton, Calif.

Name	College	Classification	Home Address
Coleman, James	A&S	Fr.	Reno
Collins, Raylyn	A&S	Jr.	Reno
Collins, Ruth Marie	A&S	Fr.	Reno
Colon, Richard	ME	So.	Reno
Connelly, Ellenlou	A&S	Sr.	Reno
Conser, June	A&S	Jr.	Reno
Cook, Evelyn	HE	Fr.	Eagleville, Calif.
Cook, Frances	A&S	So.	Lovelock
Corbett, Doll	A&S	Sr.	Winnemucca
Coren, Benedict	A&S	Fr.	Philadelphia, Pa.
Corica, Helen	A&S	Fr.	Reno
Corle, Eleanor Jean	A&S	Fr.	Reno
Crane, Frances Pauline	A&S	So.	Goldfield
Creel, Jayne	HE	Jr.	Reno
Crider, John Franklin	ME	Fr.	Reno
Crocker, Lenley Eugene	A&S	Fr.	Reno
Crosby, Betty Jane	A&S	Fr.	Sparks
Dana, Elisabeth Carley	A&S	Fr.	Reno
Danao, Carlos	EE	Jr.	Red Bluff, Calif.
Davis, Alice	A&S	Fr.	Las Vegas
Davis, Laurel	A&S	So.	Oakland, Calif.
de Longchamps, Galen		Gr.	Reno
de Longchamps, Joanne	A&S	So.	Reno
Detweiler, Esther	A&S	Fr.	Beowawe
Devlin, James	ME	Sr.	Whitney
Dieringer, Andrew Jack	A&S	Fr.	Reno
Diessner, Bertha	HE	Sr.	Reno
Dimock, Shirley	HE	Sr.	Las Vegas
Dockery, Albert Axel	Ag	Sp	Montclair, N. J.
Doerler, Madge Heacock	A&S	Fr.	Reno
Donati, Annette	A&S	Sr.	Reno
Dore, Earl Kenneth	A&S	Sp	Reno
Doyle, Alice Ruth	A&S	Fr.	Reno
Doyle, Dorothy	A&S	Fr.	Reno
Dugan, Jane	A&S	Sr.	Reno
Dugan, Marilyn	A&S	Fr.	Reno
Dukes, Charles Dean	A&S	So.	Reno
Dunn, Carl		Gr.	Reno
Dunnell, Adey May	A&S	Sr.	Vallejo, Calif.
Du Pratt, Ronald	A&S	Fr.	Yerington
Eather, Gloria	A&S	Jr.	Reno
Eather, Margie	A&S	Fr.	Reno
Echevarria, Margaret	A&S	Jr.	Reno
Elder, Madeline	HE	Jr.	Reno
Elkins, Maribeth	A&S	So.	Reno
Escobar, Francis	A&S	Fr.	Austin
Everett, Ruth		Gr.	Reno
Ferguson, Clara P.		Gr.	Reno
Ferguson, Fonita	A&S	Sr.	Reno
Ferguson, Marilou	A&S	Fr.	Reno
Ferguson, Norma	A&S	Jr.	Reno

Name	College	Classification	Home Address
Ferrari, Evelyn	A&S	Fr	Sparks
Ferraris, Lillian	A&S	Fr	Reno
Ferraro, Dominic	Ag	Sp	Gabbs Valley
Ferris, Charlotte	A&S	So	Reno
Fisher, Rebecca Herd	A&S	Fr	Reno
Fitz, Frank	MM	Sr	Reno
Fitzpatrick, June	A&S	Sp	Gallup, N. M.
Fleming, Charles	A&S	So	Reno
Fleming, Hope	A&S	So	Reno
Fleming, John Yale	A&S	Sr	Las Vegas
Flyge, Elizabeth	A&S	Fr	Reno
Ford, Peggy Neal	A&S	Fr	Reno
Forsythe, Jeanne	A&S	Jr	Reno
Foust, Edward	A&S	So	Reno
Fox, John Murray	MM	Jr	Trona, Calif.
Frandsen, Frances	A&S	So	Reno
Fransway, Dorothy Mae	HE	Fr	Winnemucca
Fulton, Jack Ryan	A&S	So	Reno
Funk, Lillian	A&S	Sr	Reno
Funkhouser, Merla Gene	A&S	Fr	Reno
Furchner, Sybil		Gr	Reno
Garamendi, Anna	A&S	Fr	Ely
Gavazzi, Italo	A&S	Jr	Virginia City
Gezelin, Emile		Gr	Reno
Gibson, Nadine Elaine	A&S	Jr	Eureka
Gildone, Adeline	A&S	Fr	Reno
Gildone, Gloria	A&S	Jr	Reno
Gillespie, Birdell	A&S	Fr	Yerington
Glynn, Jack	ME	Fr	Reno
Golick, Esther Mae	A&S	Fr	Reno
Gonzales, Florence	A&S	Fr	Reno
Good, Jack Kenneth	A&S	Jr	Reno
Gould, Margaret D.	A&S	Sr	Reno
Gray, Raymond Guild		Gr	Reno
Gregory, Arthur Royce	EE	Fr	Elko
Grieves, Alice P.		Gr	Reno
Griffith, Eunice	A&S	Sp	Reno
Griswold, Molly Morse	A&S	Sr	Las Vegas
Grotegut, Eugene	A&S	Fr	Sparks
Grundel, Carmen Bergeret	HE	Sr	Reno
Guenther, Marilyn	A&S	Fr	Reno
Guinn, Millie Abbott	A&S	Sp	Sparks
Gung, Helen	A&S	Sr	Reno
Gusewelle, Mary Frances	A&S	Jr	Las Vegas
Haddow, Beulah	A&S	Jr	Carlin
Haley, Clara Beth	A&S	Jr	Litchfield, Calif.
Haley, Gloria	A&S	Fr	Litchfield, Calif.
Hamilton, Sydne	A&S	Fr	Sacramento, Calif.
Hamlet, Jonelle	A&S	Jr	Reno
Hancock, Susan	A&S	Fr	Reno
Hand, Virginia	A&S	Fr	Reno

Name	College	Classification	Home Address
Hanley, Donna Jo.....	A&S.....	Fr.....	Reno
Hanna, Betty Jo.....	A&S.....	Sr.....	Reno
Hanssen, Alice Marie.....	A&S.....	Fr.....	Sparks
Hardy, Royce.....	MM.....	Sr.....	Reno
Harriman, Mary Margaret.....	A&S.....	Fr.....	Lovelock
Hart, Renee.....	A&S.....	Fr.....	Reno
Haslett, Joseph Lee.....	A&S.....	Fr.....	Reno
Heany, Barbara.....	A&S.....	Jr.....	Reno
Heaton, Velma.....	A&S.....	So.....	Reno
Hecker, Eleanor.....	A&S.....	Sr.....	Reno
Hecker, Marian.....	A&S.....	Sr.....	Reno
Heinen, Harold.....	.....	Gr.....	Reno
Hennen, Marian.....	A&S.....	So.....	Reno
Henningsen, Katharine.....	HE.....	Sr.....	Gardnerville
Hermansen, Lloyd.....	Ag.....	Fr.....	Hay Springs, Nebr.
Herz, Nancy.....	HE.....	Jr.....	Reno
Herz, Patricia Martha.....	A&S.....	Jr.....	Reno
Hicks, Estella Marie.....	A&S.....	Fr.....	Reno
Hicks, Georgianna.....	A&S.....	So.....	Sparks
Hill, Bruce Murchison.....	A&S.....	Fr.....	Reno
Hill, Carl A.....	MM.....	Sr.....	Brooklyn, N. Y.
Hill, Leonore.....	A&S.....	Jr.....	Susanville, Calif.
Hilliard, Emily.....	A&S.....	Jr.....	Reno
Hincelot, Anita.....	A&S.....	Fr.....	Mountain View, Calif
Holcomb, Kathryn.....	A&S.....	So.....	Reno
Holcomb, Marian.....	A&S.....	So.....	Reno
Holland, Einna.....	A&S.....	Jr.....	Los Angeles, Calif.
Holmes, Mary Alice.....	A&S.....	Sr.....	Oakland, Calif.
Holt, William Therrel.....	.....	Gr.....	Reno
Hom, Addie Shee.....	A&S.....	Fr.....	New York, N. Y.
Honeywell, Lois.....	A&S.....	Jr.....	Reno
Hovenden, Mary Lou.....	A&S.....	Fr.....	McGill
Howard, Goldie.....	A&S.....	So.....	Reno
Howard, Robert Lee.....	EE.....	Jr.....	Reno
Hug, Proctor.....	.....	Gr.....	Sparks
Hunt, Dorothy.....	A&S.....	Sp.....	Reno
Iler, Lela.....	A&S.....	Sr.....	Sparks
Iriarte, Catherine Ann.....	HE.....	Fr.....	Winnemucca
Jensen, Elinor.....	A&S.....	Fr.....	Gardnerville
Jensen, John M.....	A&S.....	So.....	Reno
Jensen, Mary.....	A&S.....	Sr.....	Sparks
Jeppeson, Dawna.....	HE.....	Jr.....	Reno
Jesch, Carl.....	EE.....	Sr.....	Fallon
Johns, Genevieve.....	A&S.....	Jr.....	Reno
Johnson, Lucille.....	.....	Gr.....	Reno
Johnson, Marshall.....	A&S.....	Fr.....	Reno
Johnson, Ruth Velma.....	HE.....	Jr.....	Lovelock
Johnson, Winferd.....	A&S.....	Fr.....	Reno
Jones, Audrey La Verne.....	A&S.....	Fr.....	Reno
Jones, Olga.....	A&S.....	So.....	Reno
Jones, Robert Jackson.....	EE.....	Fr.....	McGill

Name	College	Classification	Home Address
Jones, Wilma	A&S	Fr.	Reno
Jordan, Elaine Ruth	A&S	Fr.	Reno
Keen, Evelyn	A&S	Fr.	Reno
Keen, Virginia Hilda	A&S	Fr.	Reno
Keller, Vern	A&S	Sr.	Smith
Kelley, Marjorie	A&S	So.	Eureka
Kerr, Eileen	A&S	Fr.	Ely
Kincaid, Grace Alice	A&S	Fr.	Reno
King, William L.	A&S	So.	Reno
Kinneberg, Kathleen	A&S	So.	Battle Mountain
Kinner, Richard Erwin	EE	Fr.	Sparks
Kirkley, Betty Lou	HE	So.	Reno
Knight, Doris Ellen	A&S	Jr.	Reno
Kubota, Morio	A&S	Jr.	Niles, Calif.
Lamb, Roger	A&S	Fr.	Fallon
Lane, William	MM	Sp.	Reno
Larrance, Marcia	A&S	Fr.	Reno
Larson, Bruce Lynn	A&S	Fr.	Manhattan
Larson, Novella	A&S	So.	Palisade
La Tona, Theodore	A&S	Fr.	Sacramento, Calif.
La Voy, Frances Dolores	A&S	Fr.	Sparks
Layman, Shirley	A&S	Sr.	San Francisco, Calif.
Layson, Jack	CE	Sr.	Reno
Lee, Barbara Ann	A&S	Fr.	Quincy, Calif.
Leighton, Annette	A&S	Jr.	Reno
Le May, Charlotte	A&S	Fr.	Reno
Leonard, Lucille	A&S	Jr.	Reno
Leveille, Pauline	A&S	Fr.	Wellington
Levison, David	MM	Fr.	Reno
Little, Kathrine	A&S	Sr.	Reno
Livierato, Voula	A&S	Fr.	Reno
Locke, Dorothy Jean	A&S	Jr.	Reno
MacDonald, Elizabeth	A&S	So.	Sparks
Mack, Robert	A&S	Fr.	Reno
Mackrides, William	ME	Fr.	Philadelphia, Pa.
Maestretti, Madeleine	A&S	Fr.	Austin
Manca, William	EE	Fr.	Elko
Mangum, Earl	A&S	Sp.	Reno
Manson, Joyce	A&S	Fr.	Ely
Mapes, Gloria Millicent	A&S	Fr.	Reno
Marsh, Adele	A&S	Fr.	New York, N. Y.
Masini, Tosca Carolyn	A&S	Fr.	Sparks
Maslon, Frances	HE	Sp.	Reno
Mason, Mary Margaret	A&S	Sr.	Reno
Mayhew, Rose Marie	A&S	Jr.	Caliente
McCleary, Ernestine	A&S	Sp.	Reno
McClellan, Janet	HE	Sr.	Berkeley, Calif.
McClure, Robert	A&S	Fr.	Dardanelle, Ark.
McCubbin, Clint	A&S	Fr.	McGill
McCustion, Jane Marie	A&S	So.	Elko
McFarland, Geraldine	A&S	Sr.	Virginia City

# ROSTER OF STUDENTS

261

Name	College	Classification	Home Address
McFarlane, John Alvin.....	A&S.....	Jr.....	Elko
McGee, Clara Belle.....	A&S.....	Fr.....	Reno
McGuire, Raymond.....	A&S.....	Fr.....	Reno
McIntosh, John W.....	A&S.....	Sp.....	Sparks
McMichael, Junerwanda.....	A&S.....	Fr.....	Reno
McNeil, Harriet.....	A&S.....	Jr.....	Sparks
McNeil, Rachel Ann.....	A&S.....	Fr.....	Sparks
McQuerry, Margie.....	A&S.....	Jr.....	Reno
McQuerry, Marvin Elliott.....	EE.....	Fr.....	Reno
McVicar, Anna Belle.....	HE.....	So.....	Smith
Meaker, Hellen.....	A&S.....	Jr.....	Reno
Means, Arden Vaughn.....	A&S.....	Fr.....	Lincoln, Nebr.
Melarkey, James.....	CE.....	Jr.....	Reno
Menke, Edith.....	HE.....	Sr.....	Reno
Menu, Glenn Eugene.....	A&S.....	Fr.....	Reno
Merialdo, Dolores Arlene.....	A&S.....	Jr.....	Eureka
Midzor, Daisy.....	A&S.....	So.....	Reno
Miller, N. Florene.....	A&S.....	Fr.....	Reno
Miller, Jo Ann Catherine.....	A&S.....	Fr.....	Duluth, Minn.
Mills, Barbara.....	A&S.....	Fr.....	Fallon
Mills, Gordon.....	A&S.....	So.....	Fallon
Minor, Lyle.....	A&S.....	Fr.....	Winnemucca
Molignoni, Betty.....	A&S.....	Jr.....	Reno
Moore, Stephen.....	EE.....	Jr.....	Reno
Morganroth, Golda.....	A&S.....	Sp.....	Reno
Mornston, Margaret C.....	A&S.....	So.....	Reno
Morris, Florence.....		Gr.....	Reno
Mueller, Margaret.....	A&S.....	Fr.....	Reno
Munley, Michael.....	ME.....	Fr.....	Reno
Murden, Raymond Leslie.....	A&S.....	Sp.....	Norfolk, Va.
Mytinger, Robert.....	A&S.....	Fr.....	Reno
Nadeau, Kathryn.....	A&S.....	Fr.....	Reno
Nagle, Theresa Ann.....	A&S.....	Jr.....	Roseville, Calif.
Nannini, Mary Katherine.....	A&S.....	Fr.....	Sparks
Nannini, Rose Marie.....	A&S.....	Fr.....	Sparks
Noble, Ruth Mary.....	HE.....	Sr.....	Reno
Norris, Kathleen.....	A&S.....	So.....	Sparks
Nygren, Maie Anabel.....	HE.....	So.....	Fallon
Nygren, Myrl Adeline.....	HE.....	So.....	Fallon
Ohmert, Hazel May.....	A&S.....	So.....	El Monte, Calif.
O'Leary, Katherine.....	A&S.....	Jr.....	Winnemucca
Oleson, Virginia.....	A&S.....	Fr.....	Lovelock
Oliver, Olga.....	A&S.....	Sp.....	Reno
Oshida, Otto.....	MM.....	Sr.....	Savage, Minn.
Oyarbide, Pela.....	A&S.....	Fr.....	Battle Mountain
Parker, Blanche.....	HE.....	So.....	Goldfield
Parker, James O.....	A&S.....	Fr.....	Hawthorne
Parker, James Redger.....	A&S.....	Sp.....	Russellville, Ark.
Parks, Warren.....	MM.....	So.....	Los Angeles, Calif.
Paterson, Robert Andrew.....	A&S.....	Fr.....	Reno
Payne, Evelyn Aileen.....	A&S.....	Fr.....	Reno

Name	College	Classification	Home Address
Pendo, George.....	A&S.....	Jr.....	Lead, S. D.
Perkins, Jane.....	A&S.....	Fr.....	Tonopah
Perrier, Anne O'Neill.....		Gr.....	Sparks
Petersen, Beth.....	A&S.....	Fr.....	Wells
Pflum, Wilda.....	HE.....	So.....	Fallon
Phillips, Nola.....	A&S.....	Fr.....	Reno
Poe, Bette Marie.....	A&S.....	Jr.....	Sparks
Polyanich, Frances.....	A&S.....	Fr.....	Truckee, Calif.
Preece, Howard.....	MM.....	Fr.....	Reno
Preccott, Jacqueline.....	A&S.....	So.....	Reno
Proctor, Jean Marie.....	A&S.....	Fr.....	Kimberly
Prucha, Gilbert.....	A&S.....	Fr.....	Reno
Pullen, Lloyd.....	A&S.....	So.....	Evanston, Ill.
Quilici, Norma.....	A&S.....	Fr.....	Reno
Raggio, William.....	A&S.....	Fr.....	Reno
Ramelli, Lavinia Mae.....	A&S.....	So.....	Reno
Rankin, Robert.....	A&S.....	Fr.....	Verdi
Reed, Ellen.....	A&S.....	Fr.....	Lovelock
Reid, Jacqueline.....	A&S.....	Sr.....	Reno
Reifschneider, Nita.....	A&S.....	Sr.....	Reno
Reynolds, Dorothy Ellen.....	A&S.....	Sr.....	Reno
Richards, Arthur.....	EE.....	Fr.....	Virginia City
Richter, William.....	EE.....	Sr.....	Reno
Ricketts, Dace.....	HE.....	Fr.....	Yerington
Riley, Ellen Vale.....	A&S.....	Fr.....	Yerington
Rosaschi, Gloria.....	A&S.....	Fr.....	Yerington
Rose, Lorma June.....	A&S.....	Fr.....	Sparks
Rovetti, Patricia Jean.....	A&S.....	Fr.....	Reno
Rowley, Myra.....	A&S.....	So.....	Sparks
Saunders, Nora Lorene.....	A&S.....	Fr.....	Winnemucca
Savage, Dorothy.....	A&S.....	Sr.....	Reno
Sawyer, Edmund.....	MM.....	So.....	San Francisco, Calif.
Scheeline, Valerie.....	A&S.....	So.....	Reno
Schooley, Elva May.....	HE.....	So.....	Reno
Schwartz, Mary Ellen.....	A&S.....	Fr.....	Goodsprings
Scranton, Mary L.....		Gr.....	Reno
Serpentino, Lorraine.....	A&S.....	Fr.....	Reno
Sewell, Dorothy.....	A&S.....	Fr.....	Reno
Shapiro, Bernard.....	A&S.....	Sp.....	Norfolk, Va.
Sharar, Vernon Lafe.....	A&S.....	So.....	Ogden, Utah
Shaw, Erma.....	A&S.....	Fr.....	Reno
Shea, Lucille.....	A&S.....	Jr.....	Reno
Shea, Merlin.....	A&S.....	Fr.....	Sparks
Sheehan, Charles.....	A&S.....	Fr.....	Fernley
Shidler, Mary Wilburta.....	A&S.....	Fr.....	Reno
Shovelin, Margaret.....	A&S.....	So.....	Battle Mountain
Simms, Kenneth.....	A&S.....	Sp.....	Indianapolis, Ind.
Siri, Genevieve.....	A&S.....	So.....	Reno
Siri, George.....	A&S.....	Fr.....	Reno
Sirkegian, Pauline.....	A&S.....	Fr.....	Kimberly
Sloan, Lillian Viola.....	A&S.....	So.....	Sparks



ROSTER OF STUDENTS

Name	College	Classification	Home Address
Smith, Barbara.....	A&S.....	Jr.....	Reno
Smith, Carol.....	HE.....	So.....	Fallon
Smith, Norma.....	A&S.....	Fr.....	Reno
Smith, Wilma.....	A&S.....	Sr.....	Reno
Sowers, Lois Ann.....	A&S.....	Fr.....	Winnemucca
Spanjian, Robert Mark.....	A&S.....	Fr.....	Chicago, Ill.
Spear, Kathryn.....	A&S.....	Fr.....	Lafayette, Calif.
Springer, Gloria.....	A&S.....	Fr.....	Hawthorne
Straughan, Jessie.....	.....	Gr.....	Reno
Streeter, Richard Lee.....	EE.....	Fr.....	Sparks
Streng, Dorothy.....	A&S.....	Fr.....	Reno
Streshley, Geraldine.....	HE.....	Sr.....	Austin
Sullivan, Betty.....	HE.....	Sr.....	Reno
Sutton, Gilbert.....	A&S.....	Jr.....	Reno
Sutton, Jeanne Adrian.....	A&S.....	Fr.....	Reno
Suverkrup, John.....	Ag.....	So.....	Carson City
Sweatt, John.....	ME.....	Fr.....	Reno
Sweeney, Eileen.....	A&S.....	So.....	Boulder City
Swope, Anna.....	A&S.....	Jr.....	Reno
Tarlow, Haskell.....	A&S.....	Fr.....	Reno
Tate, Caroline.....	A&S.....	Sp.....	Las Vegas
Taylor, Delmar.....	A&S.....	Sp.....	Reno
Thomas, Patricia.....	HE.....	Jr.....	Tulelake, Calif.
Thompson, Beverly Ann.....	A&S.....	Fr.....	Reno
Thompson, Christie A.....	A&S.....	Jr.....	Reno
Thompson, Jacqueline.....	A&S.....	Jr.....	Reno
Tibbs, Darden.....	A&S.....	Sr.....	Battle Mountain
Tieslau, Boyd.....	MM.....	Fr.....	Reno
Trail, Elsie.....	A&S.....	Fr.....	Reno
Traner, Patricia.....	A&S.....	So.....	Reno
Trigero, Clayson.....	Ag.....	So.....	Reno
Trigero, Marvin.....	A&S.....	Sr.....	Reno
Trigero, Melba.....	A&S.....	So.....	Reno
Trollope, Harry.....	MM.....	Sp.....	Reno
Turnquist, Ellen.....	A&S.....	Fr.....	East Ely
Tuttle, Laurel Park.....	A&S.....	Fr.....	Reno
Ugarriza, Pilar Rosalie.....	A&S.....	Fr.....	Winnemucca
Uhlig, Edward R.....	ME.....	Fr.....	Manhattan
Ullom, Frances.....	A&S.....	Fr.....	Las Vegas
Ussery, Patricia.....	A&S.....	Fr.....	Reno
Valentine, Julia.....	A&S.....	Sp.....	Sonora, Calif.
Vreeland, Walter.....	MM.....	Sp.....	Reno
Wager, Carol.....	A&S.....	Fr.....	Reno
Walker, Inez.....	.....	Gr.....	Sparks
Waller, Beverly Arthur.....	A&S.....	Fr.....	Toiyabe
Waltenspiel, Virginia.....	A&S.....	Sr.....	Reno
Ward, William.....	EE.....	Fr.....	Ely
Watson, Dorothy Helen.....	A&S.....	So.....	Roseville, Calif.
Watts, Mary Elizabeth.....	A&S.....	So.....	Reno
Waugh, Betty May.....	A&S.....	Fr.....	Ely
Weatherford, Tim.....	A&S.....	Fr.....	Carlinville, Ill.

Name	College	Classification	Home Address
Welden, Lois	A&S	Sr.	Reno
Wells, Virginia Marianne	A&S	Fr.	Battle Mountain
West, Twain Dean	A&S	So.	West Wendover
Westergard, Muriel	A&S	Sr.	Lovelock
Whelan, Robert	Ag.	Jr.	Reno
Whipple, Barbara	HE	Fr.	Logandale
Whipple, Marjorie	HE	Jr.	Logandale
Whittaker, Melba	A&S	Sr.	Reno
Wien, William	CE	Fr.	Avenal, Calif.
Wier, Michael Pearl	A&S	Sp.	Menlo Park, Calif.
Wilcox, Mary	A&S	So.	Reno
Willcox, Jane	A&S	Fr.	Reno
Williams, Beth	A&S	Fr.	Winnemucca
Williams, Doris Evelyn	A&S	Fr.	Reno
Williams, Marguerite Anne	A&S	Jr.	Sparks
Wilson, Janet	A&S	Jr.	Reno
Wilson, Patricia Chism	A&S	Sr.	Hiko
Winchester, Mary Beth	A&S	So.	Susanville, Calif.
Wogan, Maurya	A&S	So.	Reno
Wolfe, Alverda	A&S	So.	Reno
Wood, Fred	A&S	Jr.	Reno
Wood, George		Gr.	Reno
Woodbury, Margaret	A&S	So.	Alhambra, Calif.
Woodbury, Virginia	A&S	Fr.	Reno
Wright, Mary E.	A&S	Fr.	Elko
Wylie, Brownlie	A&S	Jr.	Lake Tahoe
Wylie, Saralee	A&S	Sr.	Reno
Yater, Bonnie	A&S	So.	Paterson, Calif.
Yee, Frances	A&S	Sr.	Reno
Yparraguirre, Paul	A&S	Jr.	Bridgeport, Calif.
Zang, Elizabeth	A&S	Fr.	Reno

ARMY SPECIALIZED TRAINING PROGRAM, R. O. T. C.  
(Former University of Nevada Students)

1943-1944

Bagley, Donald	Sparks	Hoyer, Robert	Oakland, Calif.
Boudwin, Rodney	Reno	Lemberes, Alex	Sparks
Burke, Charles A.	Wellington	Millard, Addison	Carson City
Collins, James R.	Bishop, Calif.	Preece, Robert	Reno
Crowell, Robert	Reno	Reese, Stanford	Reno
Edsall, Floyd	Sparks	Stewart, Neil	Alamo
Gibbons, Paul	Reno	Stuifbergen, John	Shelbyville, Mich.
Hattala, John	Erie, Pa.	Zoradi, Michael	Mina

## SUMMER SESSION, 1943

Ackerman, Elda H.....	Reno	Felts, Rebecca.....	Babbitt
Aiken, James.....	Reno	Ferguson, Marilou.....	Reno
Albright, Mamie.....	Hanford, Calif.	Fettick, Ann.....	Minden
Anderson, Esther.....	Reno	Fong, Emma May Shum.....	Oakland
Anderson, John.....	Winnemucca	Forsyth, Jeanne.....	Reno
Ausich, Michael.....	Mackay, Idaho	Foust, Edward.....	Louisville, Ky.
Austin, Vermena.....	Fallon	Fox, John Murray.....	Trona, Calif.
Beals, Glendora.....	Owyhee	Funk, Lillian.....	Preston
Beaman, George.....	Yerington	Funkhouser, Joyce.....	Reno
Bennett, Virginia.....	Idaho Falls, Idaho	Garlow, Catherine.....	Billings, Mont.
Berman, Kathryn.....	Reno	Gasho, Gladys H.....	Reno
Bernard, Carl.....	Reno	George, Bess Gasho.....	Reno
Biegler, Helen.....	Elko	Gilbert, Jeanne.....	Minden
Birks, Angelina.....	Reno	Gildone, Adeline.....	Reno
Boland, Tom.....	Reno	Golick, Esther.....	Reno
Bony, Beverly.....	Reno	Good, Jack.....	Reno
Bradshaw, Merle.....	Elgin	Gould, Margaret.....	Reno
Brown, Mabel.....	Reno	Guinn, Millie.....	Sparks
Busey, William.....	Reno	Heandiges, Andree.....	New York, N. Y.
Calkins, James.....	Elko	Ham, Doris Rice.....	Sparks
Campbell, E'Lois.....	Reno	Hanna, Betty Jo.....	Reno
Campbell, Shirley.....	Fernley	Hardy, Royce.....	Reno
Cann, Billie Burke.....	Reno	Hargrave, La Veta.....	Tonopah
Cannon, Betty.....	Oakland, Calif.	Harris, Gail (Mr.).....	Durango, Colo.
Cardinal, Bertha D.....	Gardnerville	Hart, Margaret G.....	Sparks
Case, Frances.....	Paradise Valley	Heim, Esther H.....	Reno
Case, Walter.....	Winnemucca	Hermansen, Lloyd.....	Hay Springs, Nebr.
Ceder, Elenor.....	Woodside, N. Y.	Hicks, Marie.....	Eureka
Chacon, Sirilia.....	Alcalde, N. M.	Hilliard, Emily.....	Reno
Colling, Cecilia.....	Silver Peak	Hollingshead, Lorna.....	Pampa, Tex.
Colón, Richard.....	Avenal	Honeywell, Lois.....	Reno
Colvin, Elsie.....	Gerlach	Homer, George.....	Cuba
Connolly, Ellenlou.....	Reno	Howard, La Verne.....	Fallon
Corbett, Doll.....	Winnemucca	Howard, Marie.....	Eureka
Danao, Carlos.....	Red Bluff, Calif.	Isaacs, Libby K.....	Mt. Vernon, N. Y.
Davidson, Ethel M.....	Rochester, N. Y.	Iverson, Christine.....	East Ely
Davis, Dixie.....	Oakland, Calif.	Jacobsen, Constance.....	Cokeville, Wyo.
Dodson, Edwin.....	Carson City	Jesch, Carl.....	Fallon
Dugan, Jane.....	Reno	Johnson, Inez.....	Reno
Dunnell, Adey May.....	Vallejo, Calif.	Jones, Olga.....	Reno
Eather, Gloria.....	Reno	Jones, Rachel May.....	Ely
Eather, Hazel.....	Reno	Jones, Sarah.....	Kenosha, Wisc.
Elcano, Juanita.....	Reno	Kelso, Theodore.....	Winnemucca
Elfson, Winifred.....	Tabor, Iowa	King, Margaret.....	Schurz
English, Lena.....	Whitney	Lawrence, Ann.....	McGill
Erwin, Charline.....	Benicia, Calif.	Layson, Jack.....	Reno

Leonard, Walter.....	Reno	Savage, Alyce.....	Reno
Lowenstein, Howard.....	Winnemucca	Savage, Dorothy.....	Reno
Luce, Jean.....	Las Vegas	Sharp, Mary A.....	Currant
Manca, William.....	Elko	Shea, Merlin.....	Sparks
Mathews, Mary.....	Reno	Shinall, May L.....	Sparks
McCray, Margaret.....	Dayton	Snell, Valerie.....	San Pedro, Calif.
McCuition, Jane.....	Elko	Springer, Gloria.....	Hawthorne
McFarlane, John.....	Elko	Stambaugh, Amy.....	Ely
McGee, Betty.....	Sparks	Streeter, Richard.....	Sparks
McGuire, Ethel.....	Reno	Sullivan, Vern.....	Winnemucca
McIntosh, Helen.....	N. Plainfield, N. J.	Svedin, Della.....	Deeth
McMichael, Junerwanda.....	Reno	Swackhamer, Roma.....	Battle Mountain
McNamara, Anna.....	Sparks	Talcott, LeRoy.....	Unionville
McNeilly, Edith.....	Chesaw, Wash.	Tarlow, Haskell.....	Reno
Missimer, Pearl.....	Reno	Taylor, Delmar.....	Reno
Mueller, Margaret.....	Reno	Taylor, Miriam.....	Moab, Utah
Nelson, Betty.....	Reno	Thompson, Christie.....	Reno
Norris, Louise.....	Dyer	Thompson, Irene.....	Reno
Osborne, Ruth C.....	Pioche	Tognoni, Nye.....	Eureka
Oshida, Otto.....	Savage, Minn.	Trigero, Marvin.....	Reno
Oxborrow, Margaret.....	Lund	Van Dyke, Ruth.....	Reno
Parkinson, Donald.....	Elko	Voight, Helen.....	Lamoille
Pendo, George.....	Lead, S. D.	Wankier, Irene.....	Reno
Perry, Ina.....	Hawthorne	West, Grace.....	Winnemucca
Peterson, Ellis.....	Sebastopol, Calif.	Westergard, Muriel.....	Lovelock
Peterson, Velda.....	Nelson	Whipple, La Verna.....	Las Vegas
Ramelli, Lavina.....	Reno	Whitehead, Gretchen.....	Sparks
Ray, Emmett R.....	Reno	Wines, Hazel.....	Reno
Reynolds, Ethel.....	Hightstown, N. J.	Wogan, Maurya.....	Reno
Riggle, Mildred.....	Sparks	Wood, Fredrick.....	Reno
Riley, Ella.....	Yerington	Wylie, Saralee.....	Reno
Ruedy, Ruby Bliss.....	Sparks		

ENROLLMENT SUMMARY  
1943-1944

Graduate Students.....		25
	COLLEGE OF ARTS AND SCIENCE	
Seniors.....		47
Juniors.....		51
Sophomores.....		67
Freshmen.....		168
Specials.....		22
		<hr/> 355
	COLLEGE OF ENGINEERING	
<i>Mackay School of Mines—</i>		
Seniors.....		4
Juniors.....		2
Sophomores.....		2
Freshmen.....		4
Specials.....		4
		<hr/> 16
<i>School of Civil Engineering—</i>		
Juniors.....		1
Freshmen.....		4
Specials.....		1
		<hr/> 6
<i>School of Electrical Engineering—</i>		
Seniors.....		2
Juniors.....		3
Sophomores.....		2
Freshmen.....		10
Specials.....		1
		<hr/> 18
<i>School of Mechanical Engineering—</i>		
Seniors.....		1
Juniors.....		1
Sophomores.....		3
Freshmen.....		5
		<hr/> 10
	COLLEGE OF AGRICULTURE	
<i>School of Agriculture—</i>		
Juniors.....		1
Sophomores.....		2
Freshmen.....		2
Specials.....		2
		<hr/> 7
<i>School of Home Economics—</i>		
Seniors.....		10
Juniors.....		8
Sophomores.....		10
Freshmen.....		7
		<hr/> 35
Total University.....		<hr/> 472
Enrollment of Men.....	149	
Enrollment of Women.....	322	
Total A. S. T. P. (former University of Nevada Students).....		16
Total Summer School, 1943.....		155
		<hr/> 643
Less names counted twice.....		52
Grand Total Enrollment.....		<hr/> 591

## DIRECTORY

### OFFICERS, FACULTY, PUBLIC SERVICE WORKERS, AND OTHER EMPLOYEES CONNECTED WITH THE UNIVERSITY.

All addresses are Reno, unless otherwise specified. Phone numbers given at end  
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<sup>1</sup>Absent on leave; war service

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LaRue St., 7345.
- Fink, F. E., Technical Assistant, Soils Research, Agricultural Bldg., 8162.  
Home: 466½ E. Ninth St., 6778.
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Taylor St., 7661.
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- Gadda, Charles, Janitor. Home: 412 Laurel St., 21941.
- Gardella, Louis A., County Extension Agent, Yerington.
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Home: R. F. D. No. 1, Box 152; 23903.
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- Griffith, Mrs. E., R.N., Matron, University Infirmary, 5202.
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Terrace, 8221.
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3747.
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Home: 1032 Ralston St., 6033.
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- Hardman, Geraldine,<sup>1</sup> Secretary to the President and Board of Regents. Home:  
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- Harris, Everett W.,<sup>1</sup> Associate Professor of Mechanical Engineering, Mechan-  
ical Bldg., 21052. Home: 661 Ralston St., 5554.
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Experiment Station, Henderson Bank Bldg., Elko.
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Home: 642 St. Lawrence Ave., 3957.
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D St., Sparks.
- Harwood, Paul A.,<sup>1</sup> Associate Professor of English and Master of Lincoln Hall,  
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- Hauke, Lena, County Extension Agent, Fallon.
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<sup>1</sup>Absent on leave; war service



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- Heinen, Harold J., Principal Chemical Analyst, U. S. Bureau of Mines, 5542.  
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Sts., 4202. Home: 1240 Gordon Ave., 21751.
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Home: 1516 Sierra St., 4998.
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Tenth St., 8596.
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91 Bell St., 3591.
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Business and Sociology; Education Bldg., 7803. Home: 640 Walker  
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Ralston St., 8565.
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24616.
- Johnson, Mrs. Daryl, Loan Desk Assistant, Library, 7292. Home: 304 Roberts  
St., 22486.
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Caliente St., 8469.
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<sup>1</sup>Absent on leave; war service

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- MacKenzie, Mrs. Gladys R., Assistant Scientific Aide, U. S. Bureau of Mines, 5542. Home: Belmont Apts., 23856.
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<sup>1</sup>Absent on leave; war service

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# GENERAL INDEX<sup>1</sup>

- Acceptable Units, 104.  
Accounting. *See Economics, Business, and Sociology*, 182.  
Accredited Subjects, 105, 106.  
Adams Act, 25.  
Adding a Course, 107.  
Administration of the University, 32.  
Administrative Officers of the University, 8, 9.  
Admission by Certificate from Accredited Preparatory School, 101.  
Admission by Examination, 101.  
Admission by Transfer, 102.  
Admission Entrance Examinations, and Advanced Standing Committee, 23.  
Admission of Candidates for Degrees, 101, 116.  
Admission of Persons Not Candidates for Degrees, 103.  
Admission Requirements—  
    To College of Agriculture, 105.  
    To College of Arts and Science, 104.  
    To College of Engineering, 104, 140.  
    To Summer Sessions, 237.  
Admission to Graduate Work, 115.  
Admission to the University, 101.  
Admission to Regular Standing, 103.  
Advanced Credits (examinations, fee, application), 114.  
Advanced Professional Training, 134.  
Advanced Standing Committee, 23, 114.  
Advancement to Candidacy, 117.  
Aggie Club, 64.  
Agriculture Building, 35.  
Agricultural Economics, 152, 161.  
Agricultural Experiment Station, 26, 31, 239.  
Agricultural Experiment Station Library, 40.  
Agricultural Extension Building, 36.  
Agricultural Extension Division, 31, 242.  
Agricultural Curriculum, 150.  
Agricultural Equipment, 149.  
Agricultural Laboratories, 50.  
Agriculture, School and College of, 31, 105, 113, 148, 150.  
Agronomy-Botany, Recommended Curriculum, 151.  
Agronomy, 162.  
Aid for Students, 91.  
Albert Senior Public Service Prize, 73, 251.  
Algebra. *See Mathematics*.  
Alpha Epsilon Delta, 62, 65.  
Alpha Tau Omega, 64.  
Alumni Association and Officers, 57.  
American Association of University Professors, 60.  
American Students Health Association, 58.  
Amount required at beginning of year, 92.  
Analytical Laboratory, State, 31, 244.  
Animal, Dairy, and Poultry Husbandry, 153, 165, 166, 167.  
Affiliation for Admission to Candidacy, 116.  
Appointment Service, Teacher, 138.  
Armanko Senior Library Prizes, 75, 250.  
Arts, 160, 168.  
Artemisia, The (Student Annual), 66, 98.  
Artemisia Hall, 36, 94.  
Arts and Science, College of, 30, 104, 114, 121.  
Arts and Science Laboratories, 42.  
Assay Laboratory, 48.  
Assemblies and Lectures Committee, 23.  
Assembly Addresses, 55.  
Assistant Professors, 11.  
Assistants in Instruction, 21.  
Associated Engineers, 63.  
Associated Students Membership Fee, 98.  
Associated Students, 58.  
Associated Women Students, 59, 77.  
Associate Professors, 11.  
Association of American Universities, University on Approved List of, 26.  
Associations. *See Organizations and Publications*.  
Astronomical Society of Nevada, 60.  
Astronomy (Physics), 160, 232.  
A. S. U. N. Card, 58.  
Athletic Conference of American College Women, 63.  
Athletic Events, 98.  
Athletics Committee, 23, 68.  
Athletics and Rules Governing. Men, 67, 68; Women, 67, 68.  
Azro E. Cheney Scholarship, 78, 249.  
Baccalaureate Address, 55.  
Bacteriology, 160, 168.  
Band, The University, 64, 224.

<sup>1</sup>Figures at end of lines refer to pages.

- Bankhead-Jones Act, 28, 31, 240.  
 Beam, Josephine, Scholarships, 88.  
 Bequest Forms, 76.  
 Bequest of Mrs. Luella Garvey, Mrs. Jewett W. Adams, Mrs. Alice Dimmett, Mrs. Josephine Beam, 29.  
 Biology, 160, 168.  
 Biological Laboratory, 42.  
 Biological Museum and Collections, 53.  
 Blanket Deposit, 98.  
 Block N Society, 61.  
 Blue Key Fraternity, 61.  
 Board in University Dining Hall, Rates and Regulations, Preference Given Certain Students, 97.  
 Board of Regents of the University, 8, 34.  
 Borglum, Gutzon, 25.  
 Botany, 160, 169.  
 Broili, The Frank O. Scholarship in Electrical Engineering, 88.  
 Brown, Leroy D., Administration of, 24, 25.  
 Buildings—  
   Agriculture, 35.  
   Agricultural Extension, 36.  
   Artemisia Hall, 36.  
   Dining Hall, 36.  
   Education, 36.  
   Electrical, 36.  
   Engineering Building, 36.  
   Experiment Station Farm, 39.  
   Greenhouse, 37.  
   Gymnasium, 37.  
   Hall of English, 37.  
   Hatch Station, 37.  
   Heating Plant, 37.  
   Infirmary, 37; Addition to, 29.  
   Library, Clark Memorial, 37.  
   Lincoln Hall, 37.  
   Mackay School of Mines, 37.  
   Mackay Science Hall, 38.  
   Manzanita Hall, 38.  
   Mechanical, 38.  
   Mines Experiment Station, 38.  
   Morrill Hall, 38.  
   New Gymnasium, 39.  
   President's House, 39.  
   Stewart Hall, 39.  
   Student Union, 39.  
   Training Quarters, 39.  
   Veterinary Science, 39.  
 Buildings and Grounds, 35.  
 Bulletin Board, 120.  
 Bulletin, The University (Official Quarterly), 66.  
 Bureau of Mines Experiment Station (Federal), 27, 32, 50, 247.  
 Bureau of Mines, State, 32, 247.  
 Business, 160, 182, 184.  
 Cadet Corps, 69.  
   Officers Commissioned by U. S. Government, 70.  
   Regulations Concerning, 70.  
   Uniform Service, Furnished by Government, 69.  
 Calendar, 1944-1945, 6.  
   Calendar of the University, 7.  
 Campus Calendar Committee, 23.  
 Campus and N. Y. A. Employment Committee, 23.  
   Campus Employment for Students, 91.  
 Campus, The University, 35.  
 Canterbury Society, 65.  
 Cap and Scroll, 65.  
 Capehart Phonograph, 27, 43.  
 Caples, Robert, Indian Drawings by, 27.  
 Capper-Ketcham Act, 27.  
 Carl Otto Herz (Mrs.), Memorial Scholarship, 79, 249.  
 Carl Raymond Gray Scholarships in Vocational Agriculture, 85.  
 Carl Raymond Gray Scholarships to 4-H Club Members, 85.  
 Carnegie Corporation Music Set, 27, 43.  
 Carrie Brooks Layman Scholarship, 79, 249.  
 Central American Tuition Exemptions, 77.  
 Certificate in Business Education, 136.  
 Certificates, State Board of Education, 135.  
 Change in Registration, 107.  
 Changing a Passing Grade, 111.  
 Charles Elmer Clough Scholarships in Engineering, 79.  
 Charles Haseman Memorial Loan Fund, 91.  
 Checks, When Accepted by University (footnote), 95, 96.  
 Chemical Laboratory, 42, 48.  
 Chemical Laboratory of the School of Mines, 48.  
 Chemical Specimens, 53.  
 Chemistry Club, 63.  
 Chemistry, 160, 173-177.



- Chemistry, Degree of Bachelor of Science in, 114.  
 Chi Delta Phi Society, 62.  
 Chief Marshal of Formal Assemblies, 23.  
 Christian Associations, 64.  
 Churches of Reno, 35.  
 Civil Engineering, 160, 177-182.  
 Civil Engineering Club, 64.  
 Civil Engineering Laboratory, 45.  
 Civil Engineering, School of, 31, 36, 146.  
 Clark, Walter E., Administration of, 26, 28.  
 Clark, William A. Jr., Gift of Memorial Library, 26, 37.  
 Class Dues, 98.  
 Classification of Students, 110.  
 Clothing Course, 156.  
 Clothing Laboratory, 51.  
 Clovis Alberta Preston Memorial Foundation, 74.  
 Clubs and Associations, 63.  
 Coffin and Keys, 61.  
 Cole, Thomas F., Gift of, 27.  
 Collections, Biological, 53.  
 Collections, Scientific, 52.  
 College Faculties, 34, 121, 133, 139.  
 College Physician, 58, 59.  
 Colleges—  
     College of Agriculture, 24, 30, 31, 105, 113, 148.  
     College of Arts and Science, 30, 31, 104, 114, 121.  
     College of Engineering, 30, 31, 104, 114.  
 Colleges, Schools and Public Service Departments, 30.  
 Commencement Address, 55.  
 Commissions, 70, 251.  
 Commissions, Honors and Awards for Military Excellence, 70, 251.  
 Committee on Advanced Standing, 23, 114.  
 Committee Personnel—  
     Of the Board of Regents, 8.  
     Of the University Faculty, 23.  
 Competitions, Military Honors and, 70, 71, 251.  
 Comptroller, Treasurer and, 33.  
 Compulsory Reduction in Hours, 109.  
 Comstock Lode Material, 27, 41.  
 Conditioned Courses, 112.  
 Courses, Graduate, 117.  
 Courses of Instruction, 160.  
 Courses Numbered 50 and Above, Registration in, 110, 117.  
 Credit, Value of, defined, 113.  
 Credit-Hour Requirements for Graduation, 113.  
 Crucible Club, 63.  
  
 Dairy Husbandry, 153, 160, 165, 166, 167.  
 Dairy Laboratory, 50, 149.  
 Daughters of the American Revolution Scholarship, 85.  
 David Russell Loan Fund, 90.  
 Dean of Men, 33.  
 Dean of Women, 33.  
 Deans of Colleges and Schools, 33.  
 Debate, 197.  
 Deficiencies, Entrance, 105, 108.  
 Definition of Marks Used in Grading, 111.  
 Degrees, 114, 116.  
 Delays in Registration, fees for, 107.  
 Delta Delta Epsilon, 61.  
 Departments, 34.  
 Department of the Interior, United States, 247.  
 Deposits—  
     Military, 69.  
     General "Blanket," 98.  
 Development of the University, History and, 24.  
 Dietitian's Course, 157.  
 Dining Hall, and Regulations Governing, 36, 97.  
 Diploma Charge, 115.  
 Diplomas, Teacher's, 115. *See School of Education.*  
 Directory of Officers and Employees of the University, 268.  
 Dismissal, Honorable, 110.  
 Disqualification of Students Twice Suspended, 113.  
 Donations by Mrs. John W. Mackay and Clarence H. Mackey, 25, 26, 27, 28.  
 Donations of S. Frank Hunt, 28, 75.  
 Donations of William A. Clark, Jr., 26, 27, 37.  
 Donors, A Word to, 76.  
 Dormitories, Women, 94, 95; Men, 96.  
 Drawing Outfits, 99, 100.  
 Drawing. *See Mechanical Engineering.*  
 Drugs Control, Food and, 25, 32, 245.  
  
 Economics, Agricultural, 160, 161.  
 Economics, Business, and Sociology, 160, 182.  
 Education Building, 36.  
 Education, 160, 186.

- Education, General Elementary, 160, 187.
- Education, Kindergarten—Primary, 160, 186.
- Education, Secondary, 160, 189.
- Education, School of, 30, 133, 160, 186.
- Education Psychology, 160, 192.
- Effect of Withdrawal on Scholarship, 107.
- Electrical Building, 36.
- Electrical Engineering, 160, 193.
- Electrical Engineering Club, 63.
- Electrical Engineering, School of, 28, 31, 145.
- Electrical Laboratory, 45.
- Electro-Metallurgical Equipment, 50.
- Elementary School Teaching, 134.
- Elementary Teacher's Certificate, 136.
- Ella S. Stubbs Memorial Scholarship, 77.
- Employees, Directory of Officers and, 268.
- Employment for Students, 91.
- Endowments, Relating to, 76.
- Engineering Building, New, 29.
- Engineering Building, 36.
- Engineering Degrees, 118.
- Engineering Equipment, 140.
- Engineering Experiment Station, 26.
- Engineering, General, 160, 203.
- Engineering Laboratory, 45.
- Engineering Societies, 63.
- Engineering, College of, 30, 104, 114, 140, 141.
- Engineer's Council for Professional Development, 28.
- English, Hall of, 37.
- English Language and Literature, 160, 195-199.
- Enrollment Summary, 267.
- Entrance Deficiencies, 105, 108.
- Epsilon Sigma Phi 4-H Club Scholarship, 86.
- Equipment, 35.
- Examination for—
  - Advanced Credit, 114.
  - Master's Degree, 117.
  - Medical and Physical, 58.
- Exemption from Military Training, 69.
- Exemption from Nonresident Tuition, 93.
- Expenses of Students, 93, 100.
- Expenses, Tabular Estimate of, 100.
- Experiment Station Chemical Laboratory, 50.
- Experiment Station Farm, 25, 39.
- Experiment Station, Agricultural, 31, 239.
- Extension Division, Agricultural, 31, 242.
- Extra Hours, 109.
  
- Faculty Athletic Committee, 23, 68.
- Faculty Club, 59.
- Faculty Club Lectures, 55.
- Faculty, University—
  - Committees of, 23.
  - Duties of, 34.
  - Members of, 10, 34, 121, 133, 139, 148.
  - Meetings of, 34.
- Failed Courses Have Precedence, 108.
- Farm Crops Laboratory, 50.
- Farm Development, 241.
- Farm—
  - Experiment Station, 25, 39.
  - University, 26, 40.
- Farm Mechanics, 149, 164.
- Federal Income Tax Law, 76.
- Federal Public Arts Project, 27.
- Federal Radio Station, 26.
- Federal Relief Administration Work, 27.
- Fees and Deposits, 98, 99, 100.
- Fiftieth Anniversary Commencement, 29.
- Final Examinations, 111.
- Final Grades, Determination of, 111.
- Pine Arts Club, 65.
- Food and Drugs Control, 25, 32, 245.
- Food Laboratory, 51.
- Football Field, 25, 39.
- Foreign Languages—
  - French, 160, 199.
  - German, 160, 201.
  - Italian, 160, 201.
  - Latin, 160, 202.
  - Portuguese, 160, 203.
  - Spanish, 160, 202.
- Forensic Key, 62.
- Forms of Bequest, 76.
- Foundation of the University, 24.
- Fraternalities and Sororities, 64.

- French, 160, 199.  
French Medal, 73.  
Freshmen, 104, 110.  
Freshmen, Limited, 104, 110; Restricted, 104, 110.  
Fulton Lecture Foundation, The Robert Lardin, 74.  
Fulton Memorial Foundation, The Theodora Stubbs, 74.
- Gamma Phi Beta, 64.  
General Assembly, 55.  
General Engineering, 160, 203.  
General Home Economics Course, 158.  
General Library, 40.  
Geological and Mineralogical Laboratories, 43, 48.  
Geology, 160, 204.  
Geometry. *See Mathematics.*  
German, 160, 201.  
Gingsburg Jewelry Company Award, 75.  
Gold Medal for Drill and Discipline, 71.  
Gold Medal, 73, 251.  
Gothic N' Society, 61.  
Governor's Medal, 71, 251.  
Government of the Students, 120.  
Government of the University, 32.  
Grade After Removing a Condition, 112.  
Grade Points, 111, 113.  
Grades, Final (footnote), 111.  
Grading System, 111.  
Graduate Committee, 23, 116, 118, 119.  
Graduate Courses, 117.  
Graduate Work, 115.  
Graduates, Class of, 253.  
Graduation, Requirements for, 113.  
Graduate Students, 253.  
Graduate Thesis, Education, 192.  
Graham, Mrs. Ludovica D., Gift of, 28.  
Grand Army of the Republic Scholarship, 80, 249.  
Grand Lodge I. O. O. F. Scholarship, 84.  
Grandstand and Colonnade, 27.  
Grants. *See Land Grants.*  
Greenhouse, 37, 149.  
Grounds, Buildings, and, 35.  
Group Requirements, 123.  
Gymnasium, 28, 37.  
Gymnasium Uniforms, 67, 68.
- Hall of English, 37.  
Hartman, Leon Wilson, Administration of, 28.  
Hatch Act, 24, 239.  
Hatch Station Building, 37.  
Hartung, Royal D., Industrial Education Scholarship, 88.  
Health Committee, 23.  
Health Service, 58.  
Heating Plant, 28, 37.  
Hendrick, Archer B., Administration of, 26.  
Herbaria, 53, 149.  
Herz, Mrs. Carl Otto, Memorial Scholarship, 79, 249.  
High School Teacher's Certificate and Diploma, 135.  
High School Teaching, 134.  
History, 206.  
History and Development of the University, 24.  
History and Organization of the School of Education, 135.  
History and Political Science, 160, 206.  
Home Economics, 154, 160, 209.  
Home Economics Club, 64.  
Home Economics, Teaching Major, 154.  
Home Economics Laboratories, 51.  
Honorable Dismissal, 110.  
Honorary Board of Visitors, 8.  
Honor Graduates (Military), 70.  
Honor Roll, 70, 251, 252.  
Honors and Awards for Military Excellence, 70, 251.  
Honors, Prizes, and Foundations, 73.  
Honor and Honorary Societies, 61.  
Horticulture, 160, 171.  
Hospitalization, 59.  
Hour Requirements, 113.  
Hours, Compulsory Reduction in, 109.  
Hours for University Library, 40.  
Hours of Registration, 109.  
Hunt, S. Frank, Foundation, 28, 75.  
Hygiene, 160, 171.
- Incidental Fee, 94.  
Independents, 64.  
Indian Drawings by Robert Caples, 27.  
Infirmary, 29, 37.

## Instruction, Courses of—

- Agricultural Economics, 160, 161.
- Agronomy, 160, 162.
- Animal Husbandry, 160, 165.
  - Dairy Husbandry, 166.
  - Poultry Husbandry, 167.
- Art, 160, 168.
- Astronomy (Physics 7), 160.
- Biology, 160, 168.
- Bacteriology, 160, 168.
- Botany, 160, 169.
- Horticulture, 171.
- Hygiene, 160, 171.
- Zoology, 160, 171.
- Chemistry, 160, 173.
- Civil Engineering, 160, 177.
- Dairy Husbandry, 160.
- Drawing. *See Mechanical Engineering*, 143, 160, 217.
- Economics, Business, and Sociology, 160, 182.
  - Business, 160, 184.
  - Economics, 160, 182.
  - Sociology, 160, 185.
- Education, 160, 186.
  - Kindergarten-Primary, 160, 186.
  - General Elementary, 160, 187.
  - Secondary Education, 160, 189.
  - Educational Psychology, 160, 192.
- Electrical Engineering, 160, 193.
- English Language and Literature, 160, 195.
  - Literature and Composition, 160, 195.
  - Speech, 160, 197.
- Farm Mechanics, 160, 164.
- Foreign Languages, 160, 199.
  - French, 160, 199.
  - German, 160, 201.
  - Italian, 160, 201.
  - Latin, 160, 202.
  - Portuguese, 160, 203.
  - Spanish, 160, 202.
- General Engineering, 160, 203.
- Geology, 160, 204.
- History and Political Science, 160, 206.
- Home Economics, 160, 209.
- Journalism, 160, 211.
- Mathematics and Mechanics, 160, 213.
- Mechanic Arts, 160, 217.
- Mechanical Engineering, 160, 217.
- Metallurgy, 160, 219.
- Military Science and Tactics, 160, 220.
- Mineralogy. *See Geology*, 160, 204.
- Mining, 160, 222.
- Music, 160, 223.
- Orientation, 160, 225.
- Philosophy, 160, 225.
- Physical Education, 160, 227.
  - Men, 227.
  - Women, 229.
- Physics, 160, 231.
- Political Science. *See History and Political Science*, 160, 208.
- Poultry Husbandry, 160, 167.
- Psychology, 160, 234.
- Instruction, Officers of, 10, 22.
- Instructors, 10, 22.
- Intelligence (Mental) Tests, 110.
- Irrigation, 241.
- Italian, 160, 201.
- Jones, Stephen A., Administration of, 25.
- Journalism, Course in, 126.
  - Department of, 160, 211-213.
- Junior and Senior Requirements in Arts and Science, 124.
- Junior Classification, 110.
- Kappa Alpha Theta, 64.
- Kappa Tau Alpha, 62.
- Kindergarten-Primary Certificate, 137.
- Laboratories—
  - Agricultural, 50.
  - Analytical (State), 25, 31.
  - Applied Art, 51.
  - Arts and Science, 42.
  - Assay, 48.
  - Biological, 42.
  - Bureau of Mines (U. S.), 26, 32, 50.
  - Chemical, 42, 48.
  - Civil Engineering, 45.

LABORATORIES (*Continued*)—

- Clothing, 51.
- Dairy, 50.
- Electrical, 45.
- Electro-metallurgical, 50.
- Engineering, 45.
- Experiment Station Chemical, 50.
- Farm Crops, 50.
- Federal Mines Experiment Station, 26, 32, 50.
- Food, 51.
- Geological and Mineralogical, 43, 48.
- Home Economics, 51.
- Mechanical, 47.
- Metallographic, 49.
- Metallurgy and Ore Dressing, 49.
- Mineralogical. *See Geological.*
- Mining, 50.
- Mining School, 48.
- Music, 43.
- Petrographic, 49.
- Physics, 44.
- Pure Food and Drugs, 25, 32.
- Seismograph, 49.
- Soils Research, 51.
- Veterinary Science, 51.
- Laboratory Fees and Deposits, 97, 98.
- Lambda Chi Alpha, 64.
- Land Grants—
  - Morrill, 24, 25.
  - 90,000-Acre, 24.
  - Seventy-two Section, 24.
- Late Registration and Fees for, 94, 107.
- Latin, 160, 202.
- Letter of Transmittal, 5.
- Liberal Arts School, 24, 25.
- Libraries—
  - Agricultural Experiment Station, 40.
  - Clark Memorial, 40.
  - Departmental, 42.
  - Federal Mines Experiment Station, 41.
  - General University, 40.
  - Johannes Walther, 41.
  - Law, State, Carson City, 42.
  - Mackay Research, 41.
  - Mining, 40.
  - School Music, 41.
  - State, Carson City, 42.
  - Washoe County, 42.
- Library Building, 37.
- Library Committee, 23.
- Library Hours, 40.
- "Limited" Freshman, 104, 110.
- Lincoln Hall, 37, 96.
- Literature and Composition, English, 160, 195.
- Loan Funds—
  - Charles Haseman Memorial Loan Fund, 91.
  - David Russell, 90.
  - Nevada State Federation of Women's Clubs, 90.
  - Olin Ward, 90.
- Location of the University, 24, 35.
- Locker and Laundry Fee, 67.
- Mackay Athletic Field, 25.
- Mackay, Clarence H., Donations of, 25, 26, 27.
- Mackay Endowment, 25.
- Mackay (John W.) Statue, 25.
- Mackay, Mrs. John W., Donations of, 25.
- Mackay Museum, 52.
- Mackay, Research Library, 41.
- Mackay School of Mines, 30, 37, 141-143.
- Mackay Science Hall, 27, 38.
- Mackay Training Quarters and Stadium, 25, 27, 39.
- Manzanita Hall, 38, 94.
- Manzanita Hall Association, 64.
- Maps, Comstock, 41.
- Marks Used in Grading, 111.
- Marye Williams Butler Scholarship, 78.
- Masque and Dagger, 62.
- Master Degree Courses and Regulations, 115, 118.
- Master's Degree in Arts and Science, 116.
- Mathematics Club, 64.
- Mathematics and Mechanics, 160, 213.
- Matriculation Fee, 94.
- Measures, Weights and, 25, 32, 245.
- Mechanical Building, 38.
- Mechanic Arts, 160, 216.

- Mechanical Engineering, 143, 160, 217.  
 Mechanical Engineering Club, 63.  
 Mechanical Engineering, School of, 25, 28, 143-145.  
 Mechanical Laboratory, 47.  
 Medical Examinations, 58, 67, 68.  
 Meetings of the Faculty, 34.  
 Men's Residence Hall. *See Lincoln Hall.*  
 Mental (Intelligence) Tests, 110.  
 Metallographic Laboratory, 49.  
 Metallurgical and Ore Dressing Laboratory, 49.  
 Metallurgy, 160, 219.  
 Meteorology, 232.  
 Methods of Admission, 101.  
 Mexican Tuition Exemption, 77.  
 Mid-semester Reports, 114.  
 Military Department, Organization of, 69.  
 Military Deposit, 69.  
 Military Honors and Awards, 70, 251.  
 Military Science and Tactics, 69, 106, 109, 160, 220.  
 Mineral Collections, 52.  
 Mineralogical Laboratory. *See Geological.*  
 Mineralogy, Courses in. *See Geology.*  
 Mines Experiment Building, 38.  
 Mining Building. *See Mackay School of Mines.*  
 Mining, 160, 222.  
 Mining Experiment Station Library, 41.  
 Mining Library, 41.  
 Mining School Laboratories, 48.  
 Morrill Hall, 38.  
 Morrill Land Grant, 24, 25.  
 Museums—  
     Biological, 42, 53.  
     Mackay Mining, 52.  
     Pathological, 53.  
 Musical Organizations, 64.  
 Music, 160, 223.  
 Music Equipment, 43.  
 Music (School) Reference Library, 41.  
 Necessary Campus Expenses, 92, 100.  
 Nelson Fund, 25.  
 Nevada Academy of Natural Sciences, 60.  
 Nevada Agricultural Experiment Station, 31, 239.  
 Nevada Agricultural Extension Division, 31, 242.  
 Nevada Applicants, 104.  
 Nevada Historical Building Transferred to University, 27.  
 Nevada Livestock Production Credit Association Prize, 76.  
 Nevada State Federation of Women's Club Scholarship Fund, 90.  
 Newman Club, 65.  
 Non-Nevadans, Quality Units for, 104.  
 Normal School, 24, 25.  
 Northwest Association of Secondary and Higher Schools, University on Approved List of, 28.  
 Notices to Students, Official, 120.  
 Nu Eta Epsilon, 61.  
 Officers of Instruction, 10-22.  
 Officers of the Board of Regents, 8.  
 Officers of the University, 8, 9.  
 Officers and Employees, Directory of, 268.  
 Official Notices to Students, 120.  
 Olin Ward Bequest, 90.  
 Orchestra, 64, 224.  
 Organizations and Publications, 57.  
 Orientation, 110, 160, 225.  
 Passing Grade, When Changed, 111.  
 Penalties for Probation, 112.  
 Permissive Reduction in Hours, 109.  
 Personal Equipment of Dormitory Men, 96, 97.  
 Personal Equipment of Dormitory Women, 95.  
 Petrographic Laboratory, 49.  
 Petroleum Products Inspection Act, 245.  
 Phi Kappa Phi, 55, 61, 251.  
 Philo Sherman Bennett Prize, 73.  
 Philosophy, 160, 225.  
 Phi Sigma Kappa, 64.  
 Physical Education and Athletics, 67.  
 Physical Education—Men, 67, 108, 160, 227. Women, 67, 160, 229.  
 Physical Examinations, 58, 67, 68, 69, 110.  
 Physics, 160, 231.  
 Physics Laboratory, 44.  
 Pi Beta Phi, 64.  
 Pilgrim Fellowship, 65.  
 Political Science, 160, 208.  
 Poultry Husbandry, 160, 167.

- Precedence of Certain Courses, 108.  
 Precious Metals Experiment Station, 26, 32, 247.  
 Preference as to Board and Room for Students, 97.  
 Preforestry and Range Management, 151.  
 Prelegal Course, 129.  
 Premedical Course, 129.  
 Premedical Courses, 129.  
 Premedical-Prenursing Scholarship, 80.  
 Prenursing Course, 131.  
 President of the University, 33.  
 President's House, 39.  
 Press Club, University of Nevada, 65.  
 Preston, Clovis Alberta, Memorial Foundation, 74.  
 Prizes—  
     Albert Senior Public Service, 73, 251.  
     Armanko Senior Library, 75, 250.  
     Griffin Forensic Plaque, 251.  
     Philo Sherman Bennett, 73, 251.  
     Gingsburg Jewelry Company, 75.  
     Herz Bros. Gold Medal, 251.  
     Military, 70-72, 251.  
     Nevada Livestock Production Credit Association, 76.  
     Scabbard and Blade Medal, 251.  
 Probation—  
     Conditions Resulting in, 112.  
     Penalties for, 112.  
     Release from, 113.  
     Students on, to meet Scholarship Committee, 113.  
 Procedure Followed to Remove a Condition, 112.  
 Professors, 10-22.  
 Psychology, 160, 234.  
 Psychology, Educational, 160, 192.  
 Publications of the University, 66.  
 Public Lectures, 55.  
 Public Relations Committee, 23.  
 Public Service Departments, 30, 31.  
 Pure Food and Drugs Laboratory, 25, 32, 245.  
 Purnell Act, 26, 240, 241.  
 Quality Units, 104.  
 Range Management, 151, 240. *See Preforestry and Range Management.*  
 Rare and Precious Metals Station, U. S. Bureau of Mines, 26, 32, 50, 247.  
 Rebates on Tuition and Fees, 100, 108.  
 Regents of the University, 8.  
 Regents' Scholarships, 77, 249.  
 Registration, Changes in, 107, 108.  
 Registration and Scholarship Committee, 23.  
 Registration Days, 107.  
 Registration Fees, Late, 94, 107.  
 Registration for Graduate Work, 116.  
 Registration in Reduced Number of Hours, 109.  
 Registration for New Students, 110.  
 Registration To Be Completed, When, 107.  
 Registration, Hours of, 109.  
 Registration and Incidental Fees, 94.  
 Registration, Late, 107.  
 Registration Period and Procedure, 106.  
 Registration Regulations, 106.  
 "Regular" Students, 103, 109, 110.  
 Regulations, Scholarships, 111.  
 Release from Probation, 113.  
 Relief Administration Work, 27.  
 Removing Entrance Deficiencies, 103, 105.  
 Removing a Condition, 112; Fee for, 112; Grade after, 112.  
 Removing a Failure, 112.  
 Reno, Seat of the University, 35.  
 Reno's Woman's Christian Temperance Union Scholarships, 83, 250.  
 Reports, Mid-September, 114.  
 Required Courses, 108.  
 Required Courses Have Precedence, 108.  
 Requirements—  
     For Admission to Regular Standing, 103.  
     For Baccalaureate Degrees in—  
         Agriculture, 149.  
         Arts and Science, 122.  
         Chemistry, 125.  
         Engineering, 140.  
         Home Economics, 154.  
     For Graduation, 113.  
     For Master's Degree, 116.  
     For Nevadans, 104.  
     For Non-Nevadans, 104.  
     Hour Requirements, 113.  
     Specific Subjects, 104.  
     Subject Requirements, 113.

- Reserve Officers' Association Medal, 71.  
 Reserve Officers' Training Corps, 69.  
 Reserve Officers' Training Corps, Commissions, 70, 251.  
 Residence Requirement, 115.  
 Restricted Freshmen, 104.  
 Rhodes Scholarships, 89.  
   Names of Appointees, 90.  
 Rita Hope Winer Scholarship, 84, 250.  
 Robert Lardin Fulton Lecture Foundation, 26, 74.  
 Rocks and Minerals Study Club, 60.  
 Room Rent in Artemisia Hall, 95.  
 Room Rent in Lincoln Hall, 96.  
 Room Rent in Manzanita Hall, 95.  
 Room Rent Payable in Advance, 96.  
 Rose Sigler Mathews Scholarships, 78, 249.  
 Roster of Students, 255-266.  
 Rotary Club of Reno Scholarship, 84.  
 Rules Governing Registration, 106.  
 Running Track, 39.
- Sagens, 63.  
 Sagers, 62.  
 Sagebrush, The U. of N., 66, 98.  
 Sarah L. Lewis Club, 64.  
 Scabard and Blade, 62.  
 Schedules Committee, 23.  
 Scholarship and Registration Committee, 23.  
 Scholarship Average, 111.  
 Scholarship Honors, 73, 249.  
 Scholarship Regulations, 111.  
 Scholarship Requirements for Graduation, 113.  
 Scholarship Requirements for Nevadans, 104.  
 Scholarship Requirements for Non-Nevadans, 104.  
 Scholarships—  
   1. Regents, 77, 249.  
   2. Associated Women Students, 77, 249.  
   3. Ella S. Stubbs Memorial, 77, 249.  
   4. Rose Sigler Mathews, 78, 249.  
   5. Marye Williams Butler, 78, 249.  
   6. Azro E. Cheney, 78, 249.  
   7. Mrs. Carl Otto Herz Memorial, 79, 249.  
   8. Charles Elmer Clough, 79.  
   9. Carrie Brooks Layman, 79, 249.  
   10. Premedical-Prenursing, 80, 249.  
   11. Grand Army of the Republic, 80, 249.  
   12. William S. Lunsford—in Journalism, 80, 249.  
   13. Raymond Spencer, 81, 249.  
   14. Reno Lodge of Elks Athletic, 81.  
   15. Nevada State Press Association—in Journalism, 82.  
   16. Major Max C. Fleischmann, 82, 250.  
   17. Woman's Christian Temperance Union, 83, 250.  
   18. Noble H. Getchell, 83.  
   19. Rita Hope Winer Memorial, 84, 250.  
   20. Grand Lodge of the Independent Order of Odd Fellows, 84, 250.  
   21. Rotary Club of Reno, 84, 250.  
   22. Daughters of the American Revolution, 85, 250.  
   23. Carl Raymond Gray, Vocational Agriculture, 85.  
   24. Carl Raymond Gray, 4-H Club, 85.  
   25. Epsilon Sigma Phi 4-H Club, 86.  
   26. Nevada Rebekah Assembly, 86.  
   27. Sears Roebuck Agricultural Foundation Scholarships, 87.  
   28. Horace P. Boardman, 87, 250.  
   29. University of San Francisco Resident Tuition in Law, 87.  
   30. Jewett W. Adams Scholarship Fund, 88, 250.  
   31. Royal D. Hartung, Industrial Education, 88.  
   32. The Frank O. Brolli, Electrical Engineering, 88.  
   33. Josephine Beam Scholarships, 88.  
   34. Rhodes, 89.
- Scholarships and Honors, Winners for, 1942-1943, 249.  
 Scholarships and Prizes Committee, 23.  
 School Music Reference Library, 43.  
 Schools, Colleges, and Public Service Departments, 30.  
 Schools—Normal School, 24, 25.  
   School of Agriculture, 24, 25, 148.  
   School of Arts and Science, 24, 25.  
   School of Civil Engineering, 25, 146.  
   School of Education, 26, 30, 133, 186.  
   School of Electrical Engineering, 26, 28, 31, 145.  
   School of Home Economics, 31, 143, 154.  
   School of Mechanical Engineering, 25, 28, 31, 139, 143.  
   School of Mines, Mackay, 24, 25, 28, 30, 142.
- Scientific Collections, 52.  
 Seismograph Laboratory, 49.  
 Semicentennial of the University (May 1924), 26.  
 Senior Classification, 110.  
 Senior Public Service Prize, The Henry Albert, 73, 251.



- Service Uniform, U. S. Army, 94.  
 Sigma Alpha Epsilon, 64.  
 Sigma Gamma Epsilon, 61.  
 Sigma Nu, 64.  
 Sigma Phi Sigma, 64.  
 Sigma Sigma, 61.  
 Sigma Sigma Kappa, 62.  
 Sigma Xi, 62.  
 Silver Jubilee of University, 25.  
 Smith-Lever Act, 26.  
 Social Workers, Recommended Course, 131, 132.  
 Sociology, 160, 185.  
 Soil Fertility, 241.  
 Soils Research Laboratory, 51.  
 Sophomore Classification, 110.  
 Sororities and Fraternities, 64.  
 South American Tuition Exemption, 77.  
 Spanish, 160, 202.  
 Special Students, 103, 104, 105, 110.  
 Specific Subject Requirements, 104.  
 Speech, 197.  
 Standing Committees of the University, 23.  
 State Analytical Laboratory, 25, 31, 244.  
 State Board of Education Requirements, 136.  
 State Bureau of Mines, 27, 32, 244.  
 State Hygienic Laboratory, 25.  
 State Library at Carson City, 42.  
 State Normal School, 24, 25.  
 State Veterinary Control Service, 26, 32, 246.  
 Stewart Hall, 39.  
 Stubbs, Joseph E., Administration of, 25, 26.  
 Student Affairs Committee, 23.  
 Student Publications, 66.  
 Student Union Building, 39.  
 Students, Aid for, 90, 91.  
 Students, Eligible to Have a Condition Removed, When, 112.  
 Students Financially in Arrears (footnote), 111.  
 Students, Government of, 120.  
 Students, Roster of, 255.  
 Study, Courses of. *See Instruction, Courses of*, 160.  
 Subject Requirements for Graduation, 113.  
 Subjects Accredited for Admission to Regular Standing, 104, 105, 106.  
 Summary of Enrollment, 267.  
 Summer Sessions, 32.  
 Summer Session and Courses in, 237.  
     Out-of-State Teachers, 238.  
     Roster of Attendance, 265.  
     Summer Session Fees, 238.  
 Sum Required at Beginning of Year, 92.  
 Sundowners of the Sagebrush, 65.  
 Supervised Teaching, 137.  
 Surveying. *See Civil Engineering*, 177.  
 Suspension, Conditions Resulting in, 113.  
 Suspension from Class, 114.  
  
 Table Board. *See University Dining Hall*, 97.  
 Tabular Estimate of Student Expenses, 100.  
 Teacher Appointment Service, 138, 238.  
 Teachers' Diplomas, 115, 131, 135.  
 Teacher's Elementary Certificate, 136.  
 Teacher's High School Certificate, 135.  
 Theodora Stubbs Fulton Memorial Foundation, 74.  
 Theses—Number and Where Deposited, 117.  
     Requirements and Form, 117.  
 Training Camps, U. S. Army, 26.  
 Training Quarters Building, 39.  
 Transcript of Record, 99 (footnote), 114.  
 Transfer, Admission by, 102.  
 Transfer from One College to Another, 110.  
 Transfers, Intramural, 110.  
 Transmittal, Letter of, 5.  
 Treasurer and Comptroller, 33.  
 Tridecennial Celebration, 25.  
 Tuition Exemptions, 93.  
 Tuition Free to Nevadans, 93.  
 Tuition Payable by Non-Nevadans, 93, 94, 100.  
  
 Undergraduate Prerequisites, 118.  
 Uniforms—  
     Cooking, 94.  
     Gymnasium, 67, 94.  
     Military, 69, 94.  
 "Unit" Defined (footnote), 105.  
 United States Mines Experiment Station, 26, 32, 247.  
 University Calendar, 7.  
 University Dining Hall, 36, 97.

- University Faculty, 10-21, 34.
- University Farm, 26, 40, 149.
- University Fees, 98.
- University Health Service, 58.
- University Officers, 8, 9.
- University of San Francisco Tuition Scholarship in Law, 87.
- University Physician, 59.
- University Professors, American Association of, 60.
- University on Approved List of—
  - Association of American Universities, 26.
  - Northwest Association of Secondary and Higher Schools, 28.
- University Publications, 66.
- University Regulations Governing Registration, 107.
- University Scholarship Honors, 73.
- University Standing Committees, 23.
- University War Council, 23.
- U. of N. Sagebrush (Student Weekly), 66.
- U. S. Army Commission, 71.
- U. S. Bureau of Mines Experiment Station, 26, 32, 38, 247.
- U. S. Bureau of Mines Laboratory, 26, 32, 50.
- U. S. Bureau of Mines Library, 41.
- U. S. Government Training Camp, 26.
  
- Value of a Credit, 113.
- Veterinary Control Service, 26, 246.
- Veterinary Science Building, 39.
- Veterinary Science, 51, 241, 246.
- Vice President of the University, Duties of, 33.
- Virginia City Enterprise, 27.
- Virginia Evening Bulletin, 27.
- Visitors, Enrollment of, and Fees for, 100, 103.
- Visitors, Honorary Board of, 8.
- Vocational Agriculture, 152, 154.
- Vocational Certificates, 135.
- Vocational Guidance Committee, 23.
  
- Walther (Johannes) Library of Desert Geology, 27, 41.
- Weights and Measures Department, 25, 32, 245.
- Wesley Foundation, 65.
- Wingfield, George, Gift of, 27.
- Winners of Scholarships and Honors, 249.
- Withdrawals. As Affecting Scholarship, 107.
- Withdrawal from a Course, 107, 111.
- Withdrawal from University, 107.
- Women's Athletic Association, 63, 67.
- Women's Dormitories. *See Artemisia and Manzanita Halls.*
- Women Students, Associated, 59.
- Word to Donors, A, 76.
- W. P. A. Improvements, 28.
  
- Young Men's Christian Association, 35.
- Young Women's Christian Association, 35, 64.
  
- Zoology, 160, 171.

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