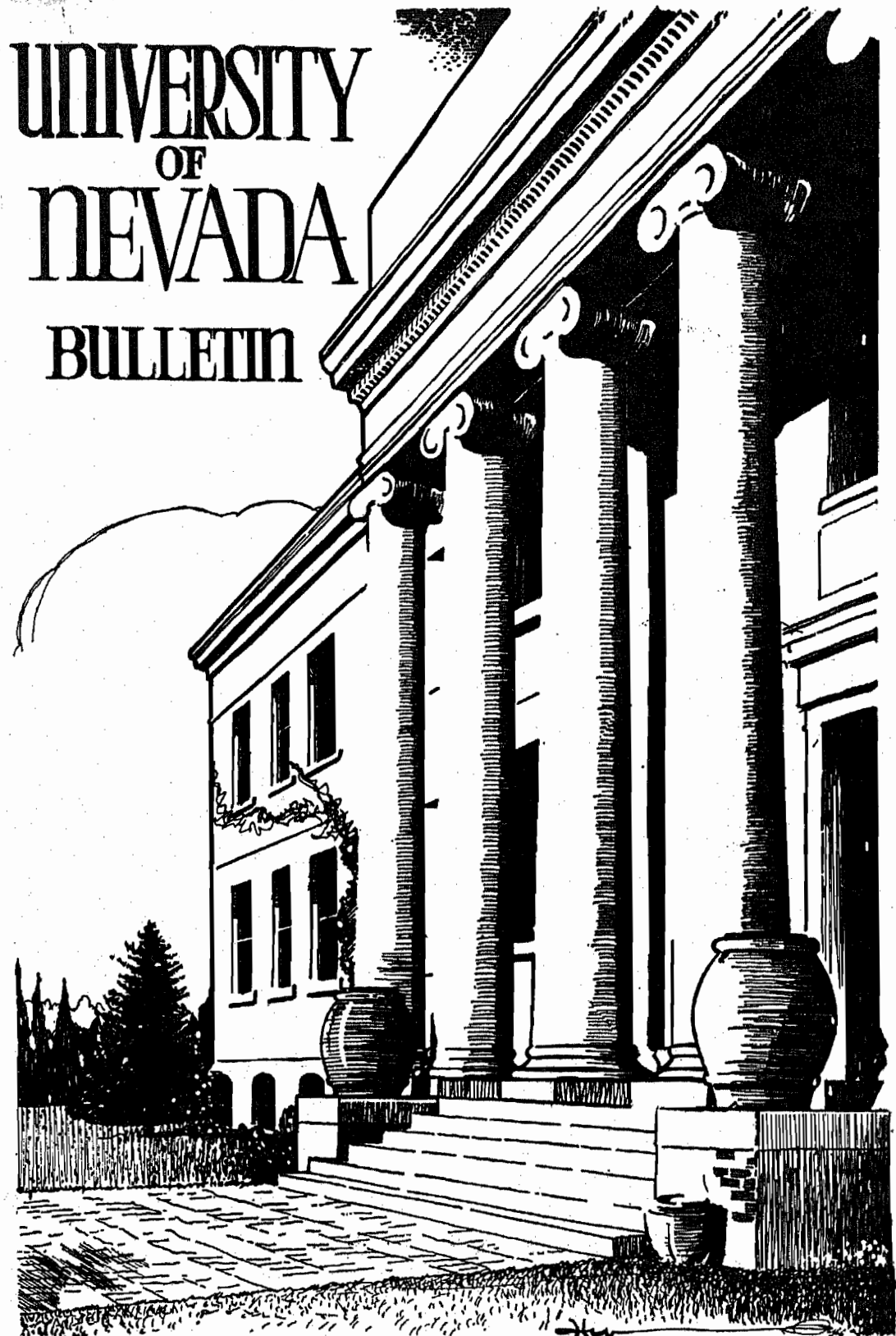
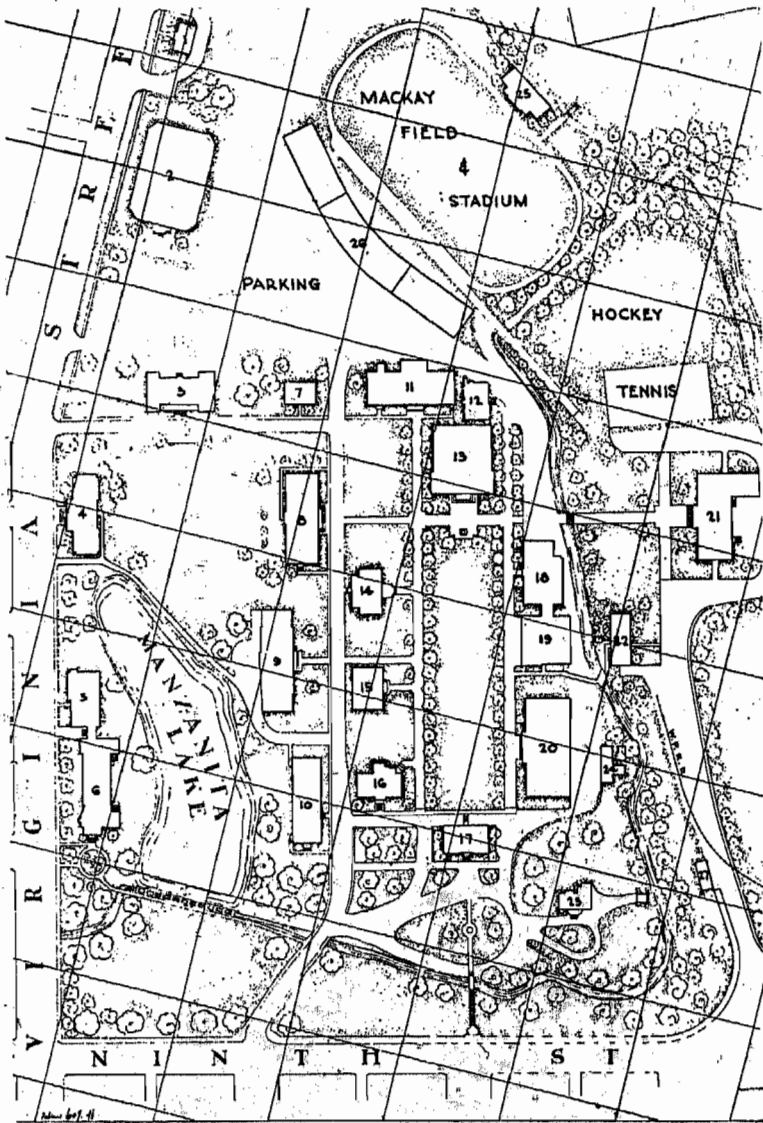


UNIVERSITY OF NEVADA BULLETIN





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|-------------------------------------|---------------------------------|
| 1. Hatch Station | 15. Journalism Building |
| 2. New Gymnasium | 16. Stewart Hall |
| 3. Lincoln Hall | 17. Morrill Hall |
| 4. Artemesia Hall | 18. Electrical Building |
| 5. Dining Hall | 19. Mechanical Building |
| 6. Manzanita Hall | 20. Mackay Science Hall |
| 7. Hospital | 21. Engineering Building |
| 8. Education Building | 22. Veterinary Science Building |
| 9. Agriculture Building | 23. President's Home |
| 10. Library | 24. Greenhouse |
| 11. Old Gymnasium | 25. Training Quarters |
| 12. U. S. Bureau of Mines | 26. Stadium |
| 13. Mackay School of Mines | 27. Garage |
| 14. Agricultural Extension Building | |

University of Nevada Bulletin

CATALOGUE



ANNOUNCEMENTS

FOR

1951-1952

WITH

RECORD FOR 1950-1951

VOLUME XLV

MARCH 1951

No. 1

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CARSON CITY, NEVADA
STATE PRINTING OFFICE - JACK MCCARTHY, SUPERINTENDENT
1951

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OFFICE OF THE
BOARD OF REGENTS, UNIVERSITY OF NEVADA
RENO, NEVADA, June 15, 1951.

To His Excellency, CHARLES RUSSELL, 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 1950-1951, containing the courses of study, general information, the membership of the Faculty, and the enrollment of the students, as required by the Act of the Legislature, approved March 6, 1901.

By the Board of Regents:

SILAS E. ROSS,
Chairman.

ALICE TERRY, *Secretary.*

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1951

JANUARY							FEBRUARY							MARCH							
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21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24	
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8	9	10	11	12	13	14	13	14	15	16	17	18	19	10	11	12	13	14	15	16	
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1952

JANUARY							FEBRUARY							MARCH								
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13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20		
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27		
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OCTOBER							NOVEMBER							DECEMBER								
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26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31					
							30															

UNIVERSITY CALENDAR

First Semester

1951-1952

September 13, 14	Thursday-Friday	Entrance examinations.
September 14	Friday	First meeting of the faculty.
September 14-18	Friday-Tuesday	Orientation of new students.
September 14	Friday	Dormitories open.
September 15	Saturday, 7:45 a. m.	Required tests of college aptitude, proficiency in English, and vocational interest.
September 16	Sunday, 3 p. m.	President's reception and outdoor entertainment for new students.
September 19	Wednesday	Registration.
September 20	Thursday	Instruction begins.
October	Saturday	Homecoming.
October 31	Wednesday	Admission Day.
November 12	Monday, 8-12 a. m.	Armistice Day.
November 17	Saturday	Grade reports due.
November 21-26	Wednesday, 5 p. m.- Monday, 8 a. m.	Thanksgiving recess.
December 22	Saturday, 12 noon	Christmas vacation begins.
December 22	Saturday, 5 p. m.	Dormitories close.
January 6	Sunday	Dormitories open.
January 7	Monday, 8 a. m.	Instruction begins.
Jan. 28-Feb. 1	Monday-Friday	Semester examinations.
February 1	Friday, 5 p. m.	Semester closes.
February 2	Saturday, 3 p. m.	Final grades on file with Registrar.

Second Semester

February 2, 4	Saturday, Monday	Entrance examinations.
February 5	Tuesday, 9 a. m.	College aptitude tests for new students.
February 5	Tuesday, 1 p. m.	Examinations in English for all new students.
February 6	Wednesday	Registration.
February 7	Thursday	Instruction begins.
April 5	Saturday	Grade reports due.
April 9-16	Wednesday, 5 p. m.- Wednesday, 8 a. m.	Easter recess.
May 3	Saturday	Mackay Day.
May 17	Saturday	Engineers' Day.
May 30	Friday	Memorial Day.
June 2-6	Monday-Friday	Semester examinations.
June 6	Friday	Meeting of Honorary Board of Visitors.
June 6	Friday, 5 p. m.	Semester closes.
June 7	Saturday evening	Phi Kappa Phi banquet and address.
June 7	Saturday, 5 p. m.	Dormitories close.
June 8	Sunday	Baccalaureate address.
June 9	Monday	Commencement.
June 11	Wednesday, 9 a. m.	Final grades on file with Registrar.

Summer Session

June 14	Saturday	Registration.
June 16	Monday	First term begins.
July 18	Friday	First term ends.
July 19	Saturday	Registration.
July 21	Monday	Second term begins.
August 22	Friday	Second term ends.

1952-1953

September 17	Wednesday	Registration for fall semester.
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Officers of the University

THE BOARD OF REGENTS

HON. SILAS E. ROSS (1953).....	Reno
HON. SAM S. ARENTZ (1953).....	Pioche
HON. ROY A. HARDY (1955).....	Reno
HON. LOUIS E. LOMBARDI, M.D. (1955).....	Reno
HON. NEWTON H. CRUMLEY (1955).....	Elko

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HON. NEWTON H. CRUMLEY.....	Vice Chairman
HON. SILAS E. ROSS, HON. ROY A. HARDY, and HON. LOUIS E. LOMBARDI.....	Executive Committee
MISS CAROLYN M. BECKWITH.....	Secretary Emeritus
MISS ALICE TERRY.....	Secretary

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MRS. ROSAMOND MCGUFFEY.....	Las Vegas, Clark County
HON. JOE MICHEO.....	Gardnerville, Douglas County
DR. H. M. GALLAGHER.....	Elko, Elko County
HON. PETER BREEN.....	Goldfield, Esmeralda County
HON. ED DELANEY.....	Eureka, Eureka County
HON. RAMON MONTERO.....	Winnemucca, Humboldt County
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MRS. J. H. SEWELL.....	Reno, Washoe County
MRS. N. E. BROADBENT.....	Ely, White Pine County

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 CHARLES H. GORMAN, Honorary M.S., LL.D., Vice President, Comptroller,
 and Treasurer, Emeritus.
 MRS. JEANETTE C. RHODES, B.A., Registrar.
 CLARENCE E. BYRD, M.A., Director of Admissions and Assistant Registrar.
 JAMES J. HILL, M.A., B.S. in L.S., Director of Libraries.
 JOSEPH D. LAYMAN, B.L., Librarian Emeritus.
 WALTER S. PALMER, E.M., Curator of the Mackay Museum.
 J. B. ZADRA, B.S., Met., Supervising Engineer, United States Bureau of
 Mines Experiment Station.
 ROBERT S. GRIFFIN, Ph.D., Dean of Men; Coordinator of Veterans Affairs.
 MISS ELAINE MOBLEY, M.A., Dean of Women.
 LEGRAND WALKER, B.S., Manager, University Farms.
 CARL M. HORN, Superintendent of Buildings and Grounds.
 MRS. BELLE DREW, Hostess of Artemisia Hall.
 MRS. NELLIE C. PALMER, Hostess of Manzanita Hall.
 MRS. NELLIE WALDEN NELSON, Director of Dining Hall.

Colleges and Schools—

- FREDRICK WOOD, Ph.D., Dean of the College of Arts and Science.
 STANLEY G. PALMER, M.E., Sc.D., Dean of the College of Engineer-
 ing.
 FRED W. TRAINER, Ph.D., Dean of the School of Education.
 VERNON E. SCHEID, Ph.D., Dean of the Mackay School of Mines.
 HAROLD N. BROWN, Ed.D., Director of Summer Sessions, Corre-
 spondence and Extension Studies.
 ELDON E. WITTEWER, Ph.D., Director of Resident Teaching in Agr-
 culture.
 JAY A. CARPENTER, E.M., Sc.D., Director of the Mackay School of
 Mines.

Chairmen of Departments—

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 matics.
 W. D. BILLINGS, Ph.D., Chairman of the Department of Biology.
 HOWARD BLAIR BLODGETT, C.E., Chairman of the Department of
 Civil Engineering.
 JAY ARNOLD CARPENTER, E.M., Sc.D., Chairman of the Department
 of Mining Engineering.
 LARAINE E. DUNN, Ph.D., Chairman of the Department of Agron-
 omy.
 EPHRAIM EDWARD ERICKSEN, Ph.D., Chairman of the Department
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 VINCENT P. GIANELLA, Ph.D., Chairman of the Department of
 Geology.
 ROBERT MARK GORRELL, Ph.D., Chairman of the Department of
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 CHRISTIAN W. F. MELZ, Ph.D., Chairman of the Department of
 Foreign Languages.
 CHARLES ROGER HICKS, Ph.D., Chairman of the Department of His-
 tory and Political Science.
 ALFRED LESLIE HIGGINBOTHAM, A.M., Chairman of the Department
 of Journalism.
 RALPH A. IRWIN, Ph.D., Chairman of the Department of Psychol-
 ogy.

- SIGMUND W. LEIFSON, Ph.D., Chairman of the Department of Physics.
- JOHN EDWARD MARTIE, M.P.E., Chairman of the Department of Physical Education.
- JOE EUGENE MOOSE, Ph.D., Chairman of the Department of Chemistry.
- WALTER S. PALMER, E.M., Chairman of the Department of Metallurgy.
- THEODORE H. POST, M.A., Chairman of the Department of Music.
- IRVING JESSE SANDORF, M.S., Chairman of the Department of Electrical Engineering.
- EARL W. SHEETS, D.Agr., Acting Chairman of the Department of Animal Husbandry.
- J. CRAIG SHEPPARD, B.F.A., Chairman of the Department of Art.
- J. C. SMEE, B.S., Lt. Col., U. S. Army, Chairman of the Department of Military Science and Tactics.
- MILDRED SWIFT, M.S., Chairman of the School of Home Economics.
- FRED W. TRANER, Ph.D., Chairman of the Department of Education.
- JAMES R. VAN DYKE, M.E., Chairman of the Department of Mechanical Engineering.
- MILAN J. WEBSTER, Ph.D., Chairman of the Department of Economics, Business and Sociology.
- ELDON WITTEWER, Ph.D., Chairman of the Department of Agricultural Economics.

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., Commissioner of Food and Drugs Control and Weights and Measures.
- C. E. FLEMING, B.S.A., Director of the Agricultural Experiment Station.
- SAMUEL BRADFORD DOTEN, M.A., Director of the Agricultural Experiment Station, Emeritus.
- CECIL W. CREEL, Agr.D., Director of Agricultural Extension.
- JAY A. CARPENTER, E.M., Sc.D., Director of State Bureau of Mines.

Hospital Staff—

- ROBERT LOCKE, M.D., Physician.
- MISS MARY ROTTER, R.N., Head Nurse.
- MISS THEODORA LAMBERSON, R.N., Assistant Nurse.
- MRS. J. B. LYNCH, Assistant.

Library Staff—

- MRS. EDITH J. HOLMES, B.A., Order Librarian.
- MISS CLARE LOUISE JOHNSON, B.A., Cataloguer.
- MRS. JULIA HURLBUT ENCK, B.S., Cataloging Assistant.
- MRS. MARIANNE SPANN, B.A., Loan Librarian.
- MRS. ISLAY STEPHEN, B.A., Reference Librarian.
- MRS. LOUISE ULPH, B.A., Clerical Assistant.

Clerical Staff—

- MISS ALICE TERRY, Secretary to the President.
- MRS. MELBA McFARLAND, Secretary, Dean of Arts and Science.
- MRS. PHOEBE SWETT, Secretary, College of Agriculture.
- MRS. PATRICIA H. BARRETT, Secretary, Dean of Engineering.
- MRS. CLARA FARNSWORTH, Secretary, School of Education.

MISS WANDA WEIR, Secretary to Director of Summer Sessions, Correspondence and Extension Courses.

MISS VERA KOCKA, Secretary, Director of Admissions.

MRS. ADELAIDE STEINER, Secretary, Dean of Men.

MRS. ELAINE HAMMILL, Secretary, Dean of Women.

MRS. WILMA HART, Duplicating Machine Operator.

MRS. PATRICIA DAWLEY, Typist, Duplicating Department.

MRS. DELORES A. GOSSEN, Stenographer, President's Office.

MRS. ESTHER GALLI, Clerk, Comptroller's Office.

MISS MARY MOULTON, Clerk, Comptroller's Office.

MRS. ELAINE NENZEL, Clerk, Comptroller's Office.

MRS. DOROTHY NAYLOR, Clerk, Comptroller's Office.

MISS PEGGY BISHOP, Clerk, Registrar's Office.

MISS JANE CAMMACK, Clerk, Registrar's Office.

MRS. CORINE J. JOHNSON, Clerk, Registrar's Office.

MRS. IDA MARIE ESTES, Clerk, Registrar's Office.

MRS. RAMONA BLACK, Bookkeeper-Stenographer, Dining Hall.

Associated Students—

EUGENE MASTROIANNI, B.S., Graduate Manager.

JAMES McNABNEY, Assistant Graduate Manager.

MISS ERMA CAPURRO, Secretary to the Graduate Manager.

Alumni—

MAX DODGE, B.A., Executive Secretary.

Publicity—

GENE F. EMPEY, M.S., Editor.

Research—

CORWIN M. MOKLER, B.A., Damon Runyon Research Project.

Y. W. C. A.—

MRS. MARJORIE DICKINSON, A.B., Executive Secretary.

MRS. MARIAN BILLINGS, A.B., Business Manager.

THE UNIVERSITY FACULTY*

President

MALCOLM A. LOVE, Ph.D., President.

A.B., Simpson College, 1927; A.M., University of Iowa, 1933; Ph.D., 1937. (1950)

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

B.A., Ohio Wesleyan University, 1896; M.A., 1898; Ph.D., Columbia University, 1903; LL.D., Ohio Wesleyan University, 1918; LL.D., University of Nevada, 1938; Chevalier, Legion d'Honneur, 1937. (1917-1938)

Faculty Emeriti

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

B.S., University of California, 1905; C.E., University of Nevada, 1918. (1919-1947)

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

B.S., University of Wisconsin, 1894; C.E., 1911. (1907-1939)

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

B.A., University of Nevada, 1912; M.A., 1913. (1918-1938)

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

A.B., University of Michigan, 1892; Ph.D., University of Munich, 1901; LL.D., University of Nevada, 1937. (1892-1939)

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

A.B., University of Nevada, 1895; A.B., Harvard University, 1898; A.M., 1899; LL.D., University of Nevada, 1924. (1900-1942)

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

Honorary M.S., University of Nevada, 1939; LL.D., 1944. (1911-1950)

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

A.B., University of Chicago, 1899. (1913-1944)

JOSEPH D. LAYMAN, B.L., Librarian, Emeritus.

B.L., University of California, 1888. (1907-1929)

PHILIP A. LEHENBAUER, Ph.D., Professor of Horticulture, Emeritus.

A.B., Westminster College, 1907; A.M., Millikin University, 1909; Ph.D., University of Illinois, 1914. (1914-1947)

*The date following each description designates the time of original appointment to the faculty of the University. (Dates of resignations and reappointments are not indicated.) A second date indicates the beginning of service in present rank when this differs from the date of original appointment.

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

B.S., Columbia University, 1919; M.A., 1923. (1920-1942)

FRANCIS CLARK MURGOTTEN, Ph.D., Professor of Foreign Languages, Emeritus.

A.B., Stanford University, 1901; A.M., 1908; Ph.D., Columbia University, 1924. (1922-1950)

KATHERINE RIEGELHUTH, A.M., Professor of English, Emeritus.

B.A., University of Nevada, 1897; A.M., Columbia University, 1913. (1905-1943)

ELSA SAMETH, M.S., Professor of Physical Education for Women, Emeritus.

A.B., Cornell University, 1911; B.S., Columbia University, 1911; M.S., University of Wisconsin, 1922. (1913-1948)

VERNER E. SCOTT, M.S., Professor of Dairy and Poultry Husbandry, Emeritus.

B.S., University of Wisconsin, 1911; M.S., University of Nevada, 1933. (1912-1948)

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

B.S., Drury College, 1908; M.S., University of Illinois, 1911; Ph.D., 1914. (1917-1949)

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

B.S., Utah Agricultural College, 1902; Ph.D., University of Illinois, 1909. (1920-1943)

REUBEN CYRIL THOMPSON, M.A., LL.D., Professor of Philosophy, Emeritus.

B.A., McMinnville College, 1899; B.A., Harvard University, 1901; M.A., 1902; LL.D., Linfield College, 1938. (1908-1948)

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

B.L., Berea University, 1907; A.B., Stanford University, 1909; A.M., 1910; Ph.D., University of Chicago, 1916. (1915-1948)

Faculty

CHARLES C. ADAMS, JR., M.S., Assistant Professor of Animal Husbandry.

B.S., University of Pennsylvania, 1938; M.S., 1939; B.S., Pennsylvania State College, 1947; M.S., Oregon State College, 1949. (1949)

GEORGE M. BASTA, B.A., Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

B.A., University of Nevada, 1938. (1950)

- E. MAURICE BEESLEY, Ph.D., Associate Professor of Mathematics.
A.B., Lafayette College, 1936; Sc.M., Brown University, 1938;
Ph.D., 1943. (1940-1944)
- WILLIAM DWIGHT BILLINGS, Ph.D., Associate Professor of Biology.
A.B., Butler University, 1933; M.A., Duke University, 1935; Ph.D.,
1936. (1938-1943)
- HOWARD BLAIR BLODGETT, C.E., Professor of Civil Engineering.
B.S., University of Arizona, 1928; M.S., 1929; C.E., 1933. (1947)
- JOHN A. BONELL, C.E., Assistant Professor of Civil Engineer-
ing.
B.S., South Dakota State College, 1936; M.S., California Institute
of Technology, 1938; C.E., South Dakota State College, 1950.
(1949)
- ROBERT M. BRAMBILA, JR., B.S., 1st Lieutenant, U. S. Army,
Assistant Professor of Military Science and Tactics.
B.S., University of Nevada, 1948. (1950)
- CHARLES REAGAN BREESE, B.S., Instructor in Civil Engineering.
B.S., University of Nevada, 1948. (1948)
- FAYE BRIGGS, B.S., Instructor in Physical Education for Women.
B.S., Utah State Agricultural College, 1949. (1949)
- GEORGE A. BROTEN, Ed.M., Assistant Professor of Physical Edu-
cation for Men.
B.S., Oregon State College, 1940; Ed.M., 1947. (1948-1950)
- HAROLD N. BROWN, Ed.D., Professor of Education and Director
of Summer Sessions.
B.S., Kansas State Teachers College, 1923; A.M., Stanford Univer-
sity, 1927; Ed.D., University of California, 1935. (1930-1940)
- CEASER J. BRUNETTI, Sgt., U. S. Army; Instructor in Military
Science and Tactics.
(1949)
- JOHN RAYMOND BUTTERWORTH,¹ M.A., Instructor in English.
B.A., Syracuse University, 1933; M.A., University of Southern Cal-
ifornia, 1938. (1940)
- CLARENCE E. BYRD, M.A., Director of Admissions and Assistant
Registrar.
B.A., Central Normal College, 1925; M.A., University of Colorado,
1936; B.S., University of Nevada, 1948. (1943-1950)
- JAY ARNOLD CARPENTER, E.M., Sc.D., Director of Mackay School
of Mines; Professor of Mining Engineering.
B.S., University of Nevada, 1907; E.M., 1911; Sc.D., 1949.
(1908-1939)

¹Absent on leave.

- VIRGINIA CARROLL, M.A., Assistant Professor of Home Economics.
B.S., Columbia University, 1927; M.A., 1933. (1943-1950)
- JOHN LESLIE CHAMBERLIN, M.S., Instructor in Mathematics.
B.S., University of Nevada, 1949; M.S., 1950. (1949-1950)
- HAROLD A. CLASSEN, M.S., Instructor in Geography.
B.Ed., Illinois State Normal University, 1942; M.S., 1947. (1949)
- BERTRAND FRANKLIN COUCH, Instructor in Mine Accounting.
(1924)
- A. STUART DALEY, Ph.D., Assistant Professor of English.
A.B., Syracuse University, 1932; Ph.D., Yale University, 1942.
(1949-1950)
- ALEX DANDINI, D.S.L., Assistant Professor of Foreign Languages.
D.S.L., University of Grenoble, 1921; H.E., University of Turin,
1923. (1946-1947)
- E. A. DAVIS, M.A., Assistant Professor of Mathematics.
A.B., University of California, 1940; M.A., 1944. (1947-1948)
- MAURICE ROLLAND DEMERS, M.A., Instructor in Mathematics.
B.S., University of Michigan, 1935; M.A., University of Buffalo,
1937. (1948)
- MERYL WILLIAM DEMING, Ph.D., Professor of Chemistry.
B.A., University of Oregon, 1923; M.A., 1925; Ph.D., University of
Washington, 1928. (1929-1946)
- JAMES R. DICKINSON, B.A.E., Instructor in English.
B.A.E., University of Florida, 1939. (1949)
- ROY H. DRIVER, S.F.C., Instructor in Military Science and
Tactics.
(1950)
- LARAINÉ ERNEST DUNN, Ph.D., Associate Professor of Soils.
B.S., Oregon State College, 1929; M.S., Iowa State College, 1931;
Ph.D., Washington State College, 1942. (1947)
- PAUL RICHARD ELDRIDGE, Ph.D., Professor of English.
B.A., University of Oklahoma, 1919; M.A., Harvard University,
1922; Ph.D., University of Iowa, 1942. (1945-1949)
- JOHN K. ELLIOTT, M/Sgt., U. S. Army; Instructor in Military
Science and Tactics.
(1947)
- RUSSELL R. ELLIOTT, Ph.D., Assistant Professor of History and
Political Science.
B.A., University of Nevada, 1934; M.A., University of Washington,
1938; Ph.D., University of California, 1946. (1949)

THOMAS VERNON FRAZIER, M.A., Instructor in Physics.

B.A., University of California, Los Angeles, 1943; M.A., 1949.
(1950)

✓ VINCENT P. GIANELLA, Ph.D., Professor of Geology.

B.S., Oregon Agricultural College, 1910; B.S., Oregon School of
Mines, 1911; M.S., University of Nevada, 1920; Ph.D., Columbia
University, 1937. (1923-1935)

LEIGH T. GIBBY, M.A., Instructor in English.

B.A., University of Colorado, 1941; M.A., University of Chicago,
1947. (1950)

ARNO FRANCIS GLIMN, M.S., Instructor in Electrical Engineering.

B.S., University of Cincinnati, 1949; M.S., Lehigh University,
1950. (1950)

ROBERT MARK GORRELL, Ph.D., Associate Professor of English.

A.B., Cornell University, 1936; Ph.D., 1939. (1945-1949)

JOHN R. GOTTARDI, M.A., Associate Professor of Foreign Lan-
guages.

B.A., University of Nevada, 1921; M.A., 1926. (1922-1930)

EARL J. GRADY, M/Sgt., U. S. Army; Instructor in Military
Science and Tactics.

(1946)

ROBERT STUART GRIFFIN, Ph.D., Dean of Men; Professor of
English.

B.S., Oregon State College, 1928; M.A., University of Southern
California, 1935; Ph.D., 1941. (1928-1946)

IRA E. GUNN,¹ JR., M.A., Instructor in Economics, Business, and
Sociology.

B.S., Howard College, 1945; M.A., University of North Carolina,
1947. (1948)

DENNIS H. HALL, M.S., Instructor in Biology.

B.S., Utah State Agricultural College, 1947. (1949)

CLAUDE W. HAMMOND, B.S., Instructor in Metallurgy.

B.S., University of Nevada, 1931. (1947)

↓ JAY M. HANSEN, Ph.D., Assistant Professor of Physics.

B.S., University of Utah, 1941; M.A., Columbia University, 1944;
Ph.D., 1947. (1947)

EVERETT WHITE HARRIS, Ph.D., Professor of Mechanical Engi-
neering.

B.S., University of Nevada, 1926; S.M., Massachusetts Institute of
Technology, 1932; Ph.D., University of California, 1941. (1938-
1949)

¹Resigned, February, 1951.

HAROLD JOHN HENDRIKS, M.S., Assistant Professor of Electrical Engineering.

B.S., Iowa State College, 1940; M.S., 1941. (1948)

JACK L. HENRY, Ph.D., Instructor in Chemistry.

B.S., State College of Washington, 1942; M.S., 1947; Ph.D., 1949. (1949)

FELTON HICKMAN, B.A., Assistant Professor of Music.

B.A., University of Nevada, 1938. (1950)

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

A.B., Clark University, 1915; A.M., Stanford University, 1922; Ph.D., Clark University, 1931. (1924-1931)

ALFRED LESLIE HIGGINBOTHAM, A.M., Professor of Journalism.

A.B., Oberlin College, 1920; A.M., 1920. (1923-1936)

JAMES JULIAN HILL, M.A., B.S. in L.S., Director of Libraries and Professor of Library Science.

B.A., University of Oklahoma, 1915; M.A., 1915; B.S., University of Illinois, 1929. (1944)

FRANK HINMAN, JR., M.A., Instructor in Philosophy.

B.A., University of Utah, 1942; M.A., 1948. (1948)

ROBERT A. HUME, Ph.D., Associate Professor of English.

A.B., Stanford University, 1929; LL.B., 1932; M.A., 1935; Ph.D., Cornell University, 1940. (1944)

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. (1940-1943)

ERNEST L. INWOOD,¹ Ph.D., Professor of Economics, Business, and Sociology.

B.A., University of Nevada, 1927; Ph.D., University of California, 1935. (1930-1941)

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

B.S., Kansas State Agricultural College, 1928; M.S., 1929; Ph.D., Ohio State University, 1938. (1929-1944)

KEISTE JANULIS, M.S., Assistant Professor of Journalism.

B.A., Lehigh University, 1938; M.S., Columbia University, 1941. (1946-1948)

PAUL H. JENSEN, Ph.D., Assistant Professor of Education.

B.A., Dana College, 1933; B.D., Midland College, 1935; Ph.D., University of North Dakota, 1938. (1947-1948)

¹Absent on leave.

SHERMAN D. JOHNSON, M/Sgt., U. S. Army; Instructor in Military Science and Tactics.

(1946)

LOWELL L. JONES, Ph.D., Assistant Professor of Biology.

A.B., University of California, 1935; Ph.D., 1939. (1949-1950)

LAWTON B. KLINE, Ph.D., Assistant Professor of Foreign Languages.

B.A., University of Nevada, 1926; M.A., 1928; Ph.D., Stanford University, 1950. (1931-1937)

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

B.A., University of Iowa, 1925; M.A., 1927; Ph.D., Stanford University, 1940. (1943-1945)

JAMES A. LANGFORD, M.A., Assistant Professor of Education.

A.B., Western Kentucky Teachers College, 1937; M.A., University of Michigan, 1947. (1950)

IRA LA RIVERS, Ph.D., Assistant Professor of Biology.

B.S., University of Nevada, 1937; Ph.D., University of California, 1948. (1948)

E. RICHARD LARSON, Ph.D., Assistant Professor of Geology.

B.A., Columbia University, 1942; M.A., 1947. Ph.D., 1951. (1949)

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

B.S., North Dakota State Agricultural College, 1922; Ph.D., University of California, 1925. (1925-1935)

THOMAS M. LITTLE, Ph.D., Assistant Professor of Biology and Horticulture.

B.A., Bucknell University, 1931; M.S., University of Florida, 1933; Ph.D., University of Maryland, 1943. (1949)

HENRY R. MANAHAN, Ph.D., Instructor in Foreign Languages.

A.B., Northwestern University, 1939; M.A., 1940; Ph.D., 1949. (1950)

ANTHONY F. MARCELLI, M.B.A., Instructor in Economics, Business, and Sociology.

B.S., University of San Francisco, 1948; M.B.A., Stanford University, 1950. (1950)

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

B.S., Oregon State College, 1914; Professional Degree, 1933; M.S., Kansas State College, 1934; M.A., Ohio University, 1936. (1936-1937)

JOHN EDWARD MARTIE, M.P.E., Professor of Physical Education.

B.S., Central Missouri State Teachers College, 1923; M.P.E., Y.M.C.A. College, Springfield, Massachusetts, 1930. (1923-1929)

CONRAD MARTIN, B.S., Instructor in Geology.

B.S., University of Nevada, 1939. (1949)

FRANK JOSEPH MCGUIGAN, Ph.D., Assistant Professor of Psychology.

A.B., University of California, 1945; M.A., 1949; Ph.D., University of Southern California, 1950. (1950)

CHRISTIAN W. F. MELZ, Ph.D., Associate Professor of Foreign Languages.

B.A., University of California, 1931; M.A., 1933; Ph.D., 1935. (1941-1947)

WILLIAM CHARLES MILLER, Ph.D., Associate Professor of English.

B.S., University of Southern California, 1931; M.A., 1932; Ph.D., 1947. (1932-1947)

JOHN MILSTEAD, M.A., Instructor in English.

B.A., University of New Mexico, 1945; M.A., University of Iowa, 1947. (1948)

H. ELAINE MOBLEY, M.A., Dean of Women.

B.S., University of Oregon, 1926; M.A., University of California, 1947. (1946)

JOE EUGENE MOOSE, Ph.D., Professor of Chemistry.

A.B., Southern Methodist University, 1917; M.S., University of Illinois, 1922; Ph.D., 1924. (1945)

R. J. MORRIS, Ph.D., Assistant Professor of Chemistry.

B.S., University of Idaho, 1936; M.S., 1938; Ph.D., Ohio State University, 1947. (1947-1948)

JOHN W. MORRISON, Ph.D., Assistant Professor of English.

B.A., University of Washington, 1937; Ph.D., 1948. (1949-1950)

STANLEY G. PALMER, M.E., Sc.D., Dean of the College of Engineering and Professor of Electrical Engineering.

B.S., University of Nevada, 1909; M.E., Cornell University, 1910; Sc.D., University of Nevada, 1949. (1915-1942)

WALTER S. PALMER, E.M., Professor of Metallurgy.

B.S., University of Nevada, 1905; E.M., Columbia School of Mines, 1907. (1910-1917)

GABRIEL J. PAOLOZZI, A.M., Instructor in Foreign Languages.

A.B., Kenyon College, 1942; A.M., University of Southern California, 1948. (1950)

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

B.A., Stanford University, 1947; M.A., 1949. (1949)

GENEVIEVE PIERETTI,¹ M.A., Assistant Professor of Education.

B.S., University of Nebraska, 1934; M.A., Washington State College, 1947. (1949)

¹Resigned, January 1951.

- ALDEN J. PLUMLEY, M.A., Assistant Professor of Economics, Business, and Sociology.
B.A., University of Nevada, 1929; A.M., Brown University, 1932. (1931-1935)
- ROBERT H. POOLE, Ph.D., Assistant Professor of Foreign Languages.
Ph.B., University of Chicago, 1928; M.A., University of Nebraska, 1932; Ph.D., Stanford University, 1949. (1949)
- ROBERT C. POOLMAN, B.S., Assistant Professor of Civil Engineering.
B.S., California Institute of Technology, 1945. (1946-1948)
- JESSIE P. POPE, M.A., Associate Professor of Home Economics.
B.S., University of Nebraska, 1913; M.A., Columbia University, 1926. (1918-1929)
- THEODORE H. POST, M.A., Professor of Music; Director of Music.
New England Conservatory of Music, Certificate, 1918; A.B., Washburn College, 1922; M.A., Harvard University, 1926. (1927)
- JEANETTE CAMERON RHODES, B.A., Registrar.
B.A., University of Nevada, 1904. (1937)
- GALE LEE RICHARDS, Ph.D., Assistant Professor of English.
B.A., University of Akron, Ohio, 1940; M.A., University of Iowa, 1942; Ph.D., 1950. (1948)
- FRANK RICHARDSON, Ph.D., Associate Professor of Biology.
B.A., Pomona College, 1934; Ph.D., University of California, 1939. (1941-1949)
- HAROLD RICHARDSON, M.A., Assistant Professor of Psychology.
B.A., University of Minnesota, 1946; M.A., 1948; Ph.D., 1950. (1950)
- NORMAN KIETH ROBERTS,¹ M.S., Assistant Professor of Agricultural Economics.
B.S., Iowa State College, 1948; M.S., 1949. (1950)
- JOSEPH H. ROBERTSON, Ph.D., Associate Professor of Range Management and Agronomy.
A.B., Peru State Teachers College (Nebraska), 1928; M.Sc., University of Nebraska, 1932; Ph.D., 1939. (1947)
- EDITH M. RUEBSAM, M.A., Associate Professor of Education.
B.A., Columbia University, 1921; M.A., University of California, 1934. (1925-1935)
- RUTH IRENE RUSSELL, M.S., Assistant Professor of Physical Education for Women.
B.S., University of Colorado, 1937; M.S., University of Oregon, 1939. (1939-1947)

¹Resigned, January 1951.

- IRVING JESSE SANDORF, M.S., Professor of Electrical Engineering.
B.S., University of Michigan, 1923; M.S., University of Nevada,
1931. (1928-1944)
- ROSEMARY SCHAEFER, B.S., Assistant Professor of Education.
B.S., College of St. Benedict (Minnesota), 1943. (1951)
- VERNON E. SCHEID, Ph.D., Dean of the Mackay School of Mines.
A.B., Johns Hopkins, 1928; M.S., University of Idaho, 1940; Ph.D.,
Johns Hopkins, 1946. (1951)
- CHESTER M. SCRANTON, M.A., Associate Professor of Physical
Education for Men.
B.A., University of Nevada, 1924; M.A., 1928. (1928-1936)
- BERTON JAMES SCULL, M.S., Instructor in Geology.
B.S., University of Oklahoma, 1946; M.S., 1947. (1949)
- H. JEROME SEIM, Ph.D., Instructor in Chemistry.
B.A., St. Olaf College, 1941; M.S., Montana School of Mines,
1943; Ph.D., University of Wisconsin, 1949. (1949)
- EARL W. SHEETS, M.S., D.Agr., Acting Professor of Animal Hus-
bandry.
B.S., University of West Virginia, 1911; M.S., University of Illinois,
1914; D.Agr., University of Maryland, 1933. (1949)
- J. CRAIG SHEPPARD, B.F.A., Assistant Professor of Art.
B.F.A. in Painting, University of Oklahoma, 1938; B.F.A. in Sculp-
ture, 1939. (1947)
- JAMES COLEMAN SMEE, B.S., Lt. Colonel, U. S. Army; Profes-
sor of Military Science and Tactics.
B.S., University of Kentucky, 1938. (1946-1949)
- CLAUDE CARSON SMITH, Ph.D., Professor of History and Political
Science.
A.B., Carson-Newman College, 1921; M.A., University of Okla-
homa, 1924; Ph.D., Stanford University, 1947. (1929-1948)
- WILLIAM I. SMYTH, E.M., Professor of Metallurgy and Mining.
B.S., University of Nevada, 1914; E.M., 1927. (1925-1947)
- VERNON C. SORENSON, B.A., Instructor in Foreign Languages.
B.A., University of Utah, 1947. (1950)
- HOWARD WILLIAM SWARTHOUT, B.S., Instructor in Electrical
Engineering.
B.S., University of Colorado, 1949. (1950)
- MILDRED SWIFT, M.S., Professor of Home Economics.
B.S., Russell Sage College, 1927; M.S., Cornell University, 1930.
(1942)

ROY E. SWIFT, D.Eng., Assistant Professor of Mining and Metallurgy.

B.S., Missouri School of Mines, 1934; M.S., University of Washington, 1940; M.S., University of Utah, 1945; D.Eng., Yale University, 1949. (1949)

LOUIS TITUS, M.S., Professor of Agricultural Mechanics.

B.S., University of Nevada, 1924; M.S., Cornell University, 1931. (1933-1947)

FRED W. TRANER, Ph.D., Dean of the School of Education; Professor of Education.

A.B., Beloit College, 1908; M.A., University of California, 1920; Ph.D., 1930. (1915-1937)

ALFRED OWEN ULPPI, Ph.D., Assistant Professor of History and Political Science.

A.B., Stanford University, 1935; M.A., 1940; Ph.D., 1947. (1948)

JAMES R. VAN DYKE, M.E., Professor of Mechanical Engineering.

B.S., Pennsylvania State College, 1918; M.E., 1922. (1941-1944)

WILLIAM VAN TASSEL, M.S., Assistant Professor of Mechanical Engineering.

B.S., University of Nevada, 1943; M.S., University of Colorado, 1950. (1947-1950)

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., 1931; Ph.D., University of Colorado, 1934. (1929-1944)

LORING RIDER WILLIAMS, Ph.D., Associate Professor of Chemistry.

B.S., West Virginia Wesleyan, 1927; M.S., West Virginia University, 1932; Ph.D., University of Illinois, 1939. (1939-1944).

ELDON WITWER, Ph.D., Director of Resident Teaching in Agriculture; Professor of Agricultural Economics.

B.S., University of Nevada, 1922; Ph.D., Cornell University, 1930. (1938-1949)

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

A.B., University of Wisconsin, 1915; M.A., 1916; Ph.D., 1923. (1932-1938)

R. EDWIN WORLEY, Ph.D., Assistant Professor of Physics.

B.A., Pomona College, 1931; Ph.D., University of California, 1940. (1948)

Assistants, Fellows, and Lecturers

FRANCES BAGLEY, Ph.B., Lecturer in Economics, Business, and Sociology.

Ph.B., Loyola University, 1931. (1948)

- RICHARD CARLTON BERNHARD, Ph.D., Lecturer in Business, Economics, and Sociology.
B.A., Reed College, 1932; M.Sc., University of London, 1936; Ph.D., Northwestern University, 1939. (1948)
- JAMES R. BROWN, D.V.M., Lecturer in Animal Industry.
D.V.M., Colorado Agricultural and Mechanical College, 1942. (1951)
- MABEL MARIANI BROWN, B.A., Assistant in Education and Foreign Languages.
B.A., University of Nevada, 1928. (1946)
- JOHN BUNTEN,¹ B.S., Lecturer in Education.
B.S., Utah State Agricultural College, 1939. (1948)
- MARJORIE DICKINSON, A.B., Assistant in Education.
A.B., Florida State College, 1939. (1951)
- EPHRAIM EDWARD ERICKSEN, Ph.D., Lecturer in Philosophy.
B.A., Brigham Young College, 1908; Ph.D., University of Chicago, 1918. (1948)
- FRANK EUGENE INMAN, B.S., Lecturer and Instrument Maker in Physics.
B.S., University of Nevada, 1941. (1946-1949)
- HELEN JOSLIN, Lecturer in Art.
(1939-1949)
- MILDRED KLAUS, M.S., Assistant in Secondary Education.
B.A., University of Nevada, 1926; M.S., University of Southern California, 1946. (1941)
- LYMAN D. LINFESTY, B.S., Fellow in Chemistry.
B.S., University of Nevada, 1949. (1950)
- TED ROBERT LUSEBRINK, B.S., Fellow in Chemistry.
B.S., University of Nevada, 1950. (1950)
- MARJORIE ANN PRICE, A.B., Lecturer in Physical Education for Women.
A.B., Arizona State College, 1947. (1947-1950)
- OLINTO RICCI, B.S., Assistant in Economics, Business, and Sociology.
B.S., University of Nevada, 1951. (1951)
- JACK TORNEY RYAN, Superintendent of Shops and Supervisor of Shop Instruction.
(1931-1944)
- JAY SCHUMACHER, B.S., Assistant in Mechanical Engineering.
B.S., University of Nevada, 1926. (1946)

¹Resigned, February 1951.

EDWIN S. SEMENZA, M.A., Lecturer in English.

B.A., University of Nevada, 1930; M.A., University of Southern California, 1934. (1946-1947)

GORDON CALIOUN SHELLEY, LL.B., Lecturer in Economics.

A.B., Stanford University, 1947; LL.B., University of Denver, 1948. (1948)

C. E. SHEPHERD, Lecturer in Meteorology.

(1950)

LOUIS V. SKINNER, LL.B., Lecturer in Business Administration.

B.S., University of Nevada, 1927; LL.B., University of Oregon, 1935. (1947)

RUTH VAN DYKE, B.A., Assistant in Mathematics.

B.A., University of Minnesota, 1914. (1946)

LEGRANDE WALKER, B.S., Lecturer in Animal Husbandry.

B.S., Utah State Agricultural College, 1928. (1945-1949)

MARGARET JENSEN WILLIAMS, M.A., Assistant in Mathematics.

B.S., University of Nevada, 1938; M.A., 1940. (1941)

ETHEL CROUCH WRIGHT, B.A., Lecturer in Sociology.

B.A., University of Nevada, 1946. (1946)

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SHEPPARD, VAN DYKE, Alumni Secretary, Graduate Manager,
Chairman A. S. U. N. Publicity Committee.

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Student Welfare—

GRIFFIN, IRWIN, LITTLE, MOBLEY, RICHARDS, SANDORF.

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BYRD, IRWIN, MILLER, MORRIS, S. PALMER, RHODES, SCHEID, WITTEWER.

Assemblies and Lectures—

RICHARDS, ELLIOTT, LANGFORD, LITTLE, MARSH, POOLMAN, SEIM.

Board of Athletic Control (Faculty Representatives)—

BLODGETT, MOOSE.

Catalogue and Publications—

GORRELL, W. ADAMS, CREEL, DEMERS, FLEMING, HAYDEN, HILL,
LAIRD, S. PALMER, SCHEID.

Ceremonials—

DEMING, ELLIOTT, GRIFFIN, HIGGINBOTHAM, MOBLEY, POST, SANDORF,
SMEE, A. S. U. N. President.

Counselling, Orientation, Testing, Guidance—

IRWIN, GORRELL, GRIFFIN, HENDRICKS, HICKMAN, MILLER, MOBLEY,
F. RICHARDSON, RUSSELL, SHEPPARD, TITUS.

Faculty Advisory (Elected by the Faculty)—

BEESLEY, BILLINGS, BUCKMAN (Public Service Representative),
GIANELLA, GORRELL, HARRIS, IRWIN, MELZ, F. RICHARDSON,
WITTEWER.

Faculty Eligibility—

MORRISON, BEESLEY, BILLINGS, BROTEN, MILLER, MOOSE, POOLMAN.

Graduate Study—

TRANER, DUNN, GIANELLA, HARRIS, LAIRD, LA RIVERS, LEIFSON.

Health—

MARTIE, GRIFFIN, MOBLEY, RUSSELL, SMEE, A. S. U. N. President,
A. W. S. President.

High School Relations—

WITTWER, BROTEN, BROWN, BYRD, ELLIOTT, HENDRICKS, MILLER,
POOLMAN, POST, A. S. U. N. President.

Library—

HILL, DAVIS, ELDRIDGE, GOTTARDI, HANSEN, HUTCHESON, W. PAL-
MER, POPE, WEBSTER.

Registration—

RHODES, BYRD, TITUS.

Research—

BILLINGS, BEESLEY, DUNN, HARRIS, HICKS, HUME, MELZ, MORRIS,
VAWTER.

Schedules—

VAN DYKE, C. C. ADAMS, VAN TASSEL, WORLEY.

Scholarships and Prizes—

WILLIAMS, BROWN, GRIFFIN, HENDRICKS, MELZ, MOBLEY, ROBERT-
SON.

Student Activities—

GRIFFIN, BROTEN, JANULIS, MILLER, MOBLEY, RUSSELL, TITUS,
A. S. U. N. President, Sagebrush Editor, Y. W. C. A. Secre-
tary, Graduate Manager.

Summer Sessions—

BROWN, BLODGETT, ROBERTSON, WOOD.

Sketch of the University

THE UNIVERSITY AND ITS FUNCTIONS

Among western civilizations, the university is the recognized instrument with which man seeks the truth and seeds it abroad. Truth is sought by research; it is disseminated, indirectly through publication, directly by teaching students. Thus, a university is an institution for fostering and preserving culture; it is the custodian of tradition.

In Nevada, these activities are centered in the State University, the only recognized institution of higher learning in the State, and a member of the important American system of land-grant colleges and universities. The institution is supplied with ample facilities to do sound work, extensive grounds and good buildings, in which are classrooms, laboratories, and research collections. It is staffed with a competent administration and a varied faculty, teachers and research workers, scholars, scientists, and professional people. These men and women work in their special fields, some through independent research, some through foundations and institutions supported by Federal funds, by State appropriation, or by private benefaction. The major concern of the University is, however, and has been since its inception, the teaching of students and the training of young people.

All qualified students are admitted without distinction. The qualifications for admission are only those which seem necessary to restrict the privileges of the University to those who can profit from them; for these qualifications, see *Admission* in the index. Citizens of the State pay no tuition; those from without the State pay a moderate sum, and care is taken that personal expenses need not be large. For the cost of attending the University, see *Expenses of Students* in the index. Students are given a large degree of self-government, and are encouraged in artistic, scientific, professional, and cultural pursuits. Their health and social needs are provided for. Thus the young people live in a community conducive to building good citizens, capable experts, and cultured men and women. For more detailed information concerning the lives and activities of students, see *Student Life* in the index.

The University is organized and administered to provide serious undergraduates with unusually capable and helpful instruction. Graduate work is offered, but the bulk of the students at the University of Nevada come there for studies leading to the degrees Bachelor of Arts and Bachelor of Science. Accordingly, most of the University is organized for the benefit of these students. Faculty members are chosen, not alone for their capacity to conduct research, but also for their ability to impart their knowledge and to inspire young people. Classes are kept small so that students may receive individual attention, and even the beginning student finds that he has access to the best of teachers, many of them with national reputations. Thus the University of Nevada combines many of the advantages offered by the large universities with those more characteristic of the small endowed colleges.

The University offers a wide range of opportunity. Courses in languages, literatures, social studies, the sciences, and the arts offer ample opportunity for a broad culture. Selections from these courses will permit the student to lay the foundation for any specialized technical or professional training he may later elect. In addition, advanced training is offered in many fields, notably in agriculture and in engineering, and curricula are constantly being revised to fit changing conditions and to take advantage of educational developments. For courses and curricula offered by the University, see the index under subjects of individual interest, and for a general treatment, *Organization of the University* and *Courses of Instruction*.

SITUATION OF THE UNIVERSITY

The University of Nevada is situated in the Truckee River Valley on a low plateau at the northern edge of Reno, in the center of an area known for mountain and desert scenery. The Sierra Nevada mountains, crowned by snow-capped Mount Rose with an elevation of 10,800 feet, tower above the campus on the west; and rugged, varicolored desert ranges stretch into the distance in other directions.

The campus itself, consisting of more than eighty-six acres, harmonizes with its setting. It is built around a turfed quadrangle, at the northern end of which stands the famous statue of John W. Mackay, Comstock pioneer, wrought in bronze by Gutzum Borglum. West of the quadrangle Manzanita Lake mirrors the red-stone buildings and the green lawns, bordered by a variety of trees, shrubs and flowers.

At an elevation of 4,500 feet Reno has a climate which combines the dryness of the desert and the coolness of the mountains.

The air is clean and stimulating; temperatures are uniformly comfortable; and the sun shines on more than three hundred days of the year. Reno provides pleasant and healthful environment.

The city and University are rendered accessible by two railroads: the Southern Pacific, the main line between San Francisco and Ogden, Utah, and the Western Pacific, a transcontinental trunk line. Reno is also on the main transcontinental route of the Greyhound and Burlington bus lines. In addition, the Victory Highway passes through Reno from east to west, while other paved highways come from north and south. The main route of the United Air Lines joins Reno with all important points in the country. These various transportation facilities serve a substantially built and steadily growing city of more than 25,000.

University students at once feel the hospitality of Reno. Its churches and various actively maintained cultural features, such as the Reno Little Theater and the Nevada Community Concert Association, strengthen the bond of common enterprise between university and city.

HISTORY AND DEVELOPMENT

The University of Nevada has reached its present standing as an important institution of higher learning through steady growth from a small preparatory school of the pioneer West to a university offering a wide variety of courses of study and conducting significant research. The growth of the University paralleled the development of the West. First established in the early days of the State of Nevada, when high schools were almost unknown in the intermountain area, the University originally filled the requirements of a small population seeking elementary training. The expansion of the West brought demands for college work and more adequate funds from public and private sources. Development of mining and the benefactions of wealthy mine owners, notably the Mackay family, helped the institution to become known as a center for research and instruction in mining. This reputation has been deserved, but the University has remained, as it was begun, a general institution of higher learning.

In 1864 the University of Nevada was established by an article in the State Constitution authorizing the Legislature to "encourage, by all suitable means, the promotion of intellectual, literary, scientific, mining, mechanical, agricultural, and moral improvement," and to provide for "the establishment of a State University, which shall embrace departments for agriculture, mechanic arts and mining." The Constitution further provided for the establishment of a Board of Regents to supervise the University

and for a special tax to be used for the University's support. The Morrill Land Grant Act of 1862 had already provided federal aid for the establishment of a university. By the terms of the Act, the State received in 1866 a donation of 90,000 acres of land "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. The grant was supplemented in 1866 by a special Act of Congress donating seventy-two sections in the State to endowment of a university and providing for the "University Irreducible Fund," now amounting to \$60,000.13, derived from sale of this land.

It was not until March 7, 1873, however, that actual plans for a university were approved. The school was located in Elko by the State Legislature, and on October 12, 1874, it began actual work, on the preparatory level, with a class of seven students, under the supervision of D. R. Sessions. The University continued at Elko, primarily serving a few local students in elementary studies, until it was moved to Reno, nearer the center of the State's population, in 1885.

The University was formally reopened March 31, 1886, in Reno, and in 1887, under the administration of President LeRoy D. Brown, it began work with fifty students and Miss Hannah K. Clapp as the single member of the faculty. During the administrations of President Brown, from 1887 to 1889, and President Stephan A. Jones, from 1890 to 1894, departments of the University were established and the faculty was enlarged. By 1888 there were seven members of the faculty, and a School of Mines had been organized with Robert D. Jackson as Director, a Normal School with Miss Kate N. T. Tupper as the head, and a Military Department with Lieutenant Arthur C. Ducat, Jr., as commandant. Plans were also made for departments in the liberal arts, agriculture, and business. In 1889, by the terms of an Act of Congress known as the Hatch Act, the Agricultural Experiment Station was organized, with \$15,000 annually provided for its support. At the beginning of the administration of President Joseph Edward Stubbs in 1894, classes had been graduated by the State Normal School and by the Schools of Liberal Arts, Mining, and Agriculture. Morrill Hall, the "Dormitory Building," now Stewart Hall, the Agricultural Experiment Station Buildings, and the first machine shop had been completed; Washoe County had presented a 60-acre farm; and the general organization of the University had been established.

During the twenty-year administration of President Stubbs

Nevada developed into a modern university. New faculty members brought points of view from different parts of the world; enrollment increased to nearly 500 students; and the physical plant of the University was expanded until it more nearly filled the needs of the growing State. By the time of the University's thirtieth birthday in 1904, the Mechanical Building, the Chemistry Building, Lincoln Hall, Manzanita Hall, the Gymnasium, the President's House, and the hospital had been built on the campus. During the next ten years Federal aid and gifts from the Mackay family allowed further expansion. In 1906 the Adams Act of Congress provided \$15,000 annually for the support of the Agricultural Experiment Station, and in 1907 the Nelson Fund, amounting at present to \$25,000 a year, was established by Congress for the benefit of land-grant colleges. Acts of the State Legislature established the State Hygienic Laboratory in 1909 and the Laboratory for Pure Foods and Drugs and Weights and Measures in 1910, and provided in 1911 and 1913 for the Electrical Engineering Building and a small library building. The most notable improvements to the University's physical plant during this period were the result of donations by Mrs. John W. Mackay and Clarence H. Mackay, which were begun in 1907. The gifts included \$25,000 for beautifying the campus and funds which established the Mackay School of Mines and built the Mackay Athletic Field and the Mackay Training Quarters.

At the death of President Stubbs on May 27, 1914, Archer B. Hendrick became President of the University. During the three years of his administration, agricultural studies at the University made notable progress. The Smith-Lever Act of Congress in 1914 established a fund amounting to \$15,699 per year by 1923, for the purpose of agricultural extension, and the State Legislature authorized the State Veterinary Control Service in 1915. Two years later the 213-acre University Farm was purchased.

The administration of President Walter Ernest Clark began in 1917, with the University preparing for the varied types of war training service which were carried on during 1918 and 1919. During this administration, which continued until President Clark's retirement in 1938, the University continued its steady development and progress. The enrollment more than doubled; the faculty and physical plant were enlarged; and student body activities gained new form and vigor.

In 1924 the establishment of the Robert Lardin Fulton Lecture Foundation provided for bringing distinguished speakers to the campus. In 1929 a State Bureau of Mines was established and put under the control of the Regents of the University. In 1931 the land and building formerly used by the Nevada Historical Society were transferred to the University. During

the period from 1933 to 1940 various projects were financed by Federal Government Relief Administration Funds, and improvements were completed on the campus, in the greenhouse, on Mackay Field, and in several of the University buildings. In 1935 the Bankhead-Jones Act of Congress provided further funds for land-grant colleges to be used for resident teaching, agricultural extension, and agricultural experimentation. Many of the improvements during this period, however, were the result of gifts from friends and alumni. Clarence H. Mackay continued his benefactions; adding a file of the rare *Virginia City Enterprise* to the library; providing \$18,000 per year for the maintenance of the Mackay School of Mines; and providing funds for the Mackay School of Mines Museum, to enlarge the Mackay School of Mines Building and perfect its equipment, to enlarge the stadium and training quarters, to purchase about twenty-seven acres of land from the Evans Estate, increasing the acreage of the campus nearly fifty percent, and finally to build the \$415,000 Mackay Science Hall, dedicated and presented to the University by Mr. Mackay on October 24, 1932.

Another important addition to the University plant was the gift of William A. Clark, Jr., the \$250,000 Alice McManus Clark Memorial Library, which was presented to the University on October 21, 1927. The physical plant of the University was further improved in 1928 by the construction of a retaining wall back of the Engineering Buildings, financed by George Wingfield, and important improvements to Lincoln Hall, financed by Thomas F. Cole. The S. Frank Hunt Foundation, established in 1935, provided funds for field trips for geological study and mineral prospecting. The work of the department of music was aided in 1935 by a gift from the Carnegie Corporation of a Capehart phonograph and a collection of records, scores, and volumes on music.

At President Clark's retirement the University had assumed its present-day physical appearance and had advanced academically until it was approved in all departments by the Northwest Association of Secondary and Higher Schools.

President Clark was succeeded by Leon Wilson Hartman as Acting President in 1938 and President from 1939 until his death August 27, 1943. Acting President Charles Henry Gorman served from 1943 until the beginning of the administration of President John O. Moseley, July 1, 1944. Although enrollment dropped during the war and much of the University's work was turned in 1943 to Army training programs, the University of Nevada has continued to grow in recent years. From 1941 to 1943 projects costing about \$100,000 were completed on the campus by the Works Progress Administration of the Federal Government. In 1942 the new Engineering Building, constructed

at a cost of about \$175,000 on the authority of the State Legislature, was completed; and additions to the infirmary and to the dining hall were completed in 1942 and 1945. Facilities for work in agriculture were greatly improved in 1944 when Major Max C. Fleischmann gave the University his 258-acre farm, formerly the Ladino Dairy, with modern buildings and equipment and a herd of dairy cattle and other livestock.

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 in 1942, and it led to the establishment of the present ten-week Summer School. In 1945 a student center was established in the basement of Stewart Hall as a forerunner to a Student Union, and the Y. W. C. A., with a full-time secretary, was established with headquarters in the student center.

In the fall of 1944, an agreement between the Executive Committee of the Alumni Association and the administration of the University provided for the part-time services of Dr. R. S. Griffin as alumni secretary for a two-year period. New alumni chapters were organized. Addresses of men and women in the armed services were compiled and a news bulletin was sent out regularly to every corner of the globe. These enlarged activities pointed to the necessity of a full-time alumni secretary, culminating in the appointment in 1946 of Rex Daniels, '46, as the first full-time director of alumni activities. In the fall of 1949, Max Dodge, '47, took over the work so well begun by Mr. Daniels.

In 1946 and 1947 the University prepared for its increased postwar enrollment with the erection of quonset huts to house administrative offices and a group of prefabricated units for classes in English and Art. In 1946, housing for veterans was partially provided by University housing projects and the conversion of a section of the Old Gymnasium into a temporary dormitory. The peak enrollment was reached in the fall of 1947 with 1,820 students. The largest number of students enrolled under the veterans' programs occurred in the spring of 1947 with 800 enrolled under the G. I. Bill and 45 enrolled under the Vocational Rehabilitation program, making a total of 845. In 1948, the decision was reached to limit the enrollment to 1,800, the maximum number of students that can be handled efficiently with the University staff and facilities. That limitation is still in force.

In the fall of 1949, two dormitory units, purchased from the Reno Army Air Base, were moved to the campus to become Hartman Halls, men's dormitories, named in honor of President Leon Hartman.

In July of 1949, Colonel Gilbert E. Parker succeeded Dr. John O. Moseley as Acting President and served until September 1950.

Dr. Malcolm A. Love became President of the University in September 1950. During the first year of his administration, in February 1951, the Mackay School of Mines was established as a separate college of the University.

SURVEY OF UNIVERSITY ORGANIZATION

As a functioning institution, the University of Nevada acts through a flexible organization calculated to fulfill the needs of the State, of the students, and of those who devote their lives to the conduct of university affairs. The supreme authority for the government of the institution is vested in a Board of Regents, elected by the people of the State. This board acts through a president, to whom the deans and the directors of the various divisions of the University are responsible. The deans, in turn, work through the chairmen of instructional departments, through committees of the faculty, and through the general faculty and the faculties of the colleges, sitting as legislative bodies. Thus, there is throughout the University a carefully graduated hierarchy of authority and responsibility, a central structure which permits the University to work for common ends and with unified purpose. At the same time, within this general structure teachers and research workers find that there is left to them the latitude for individual initiative without which highly trained and responsible people cannot do their best work. Students find that the University is so adjusted that there are regularly organized patterns of life and learning into which they can adapt themselves with ease, and that there is sufficient flexibility to accommodate the exceptions when exceptions appear.

A more detailed sketch of the major divisions of the University and of the University administration follows:

THE COLLEGE OF ARTS AND SCIENCE

The College of Arts and Science offers a wide range of courses for students who seek a background of culture and scholarship in order to prepare for more intelligent living and for later specialization.

During the first two years the student receives basic instruction in English, foreign languages, and social and natural sciences. During the junior and senior years the student concentrates on becoming proficient in special fields.

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, geography, history, journalism, library science, mathematics, military science, music, philosophy, physical education, physics, political science, psychology, speech, sociology, and zoology.

In addition to the degrees of Bachelor of Arts and Bachelor of Science, special work is offered leading to the degrees of Bachelor of Arts in Journalism, Bachelor of Science in Business Administration and Bachelor of Science in Chemistry or Chemical Technology.

Standard courses for pre-medical, pre-nursing, and medical technologists are provided as are courses for pre-legal students and social workers.

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 teachers' high school diploma, entitling the teacher to a teachers' 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 Sessions and during the regular term, graduate courses are provided, leading to the Master of Arts Degree in Education.

THE COLLEGE OF ENGINEERING

The College of Engineering includes the Schools of Mechanical, Civil, and Electrical Engineering.

The Schools of Mechanical, Electrical, and Civil Engineering each offer four-year courses of instruction leading, respectively, to the degrees of Bachelor of Science in Mechanical, Electrical, and Civil Engineering. The professional degree of Mechanical, Civil, or Electrical Engineer may be conferred upon a graduate of this or another university under the conditions stated under the heading "Engineering Degrees." (See index.)

The classrooms and laboratories for Mechanical and Civil Engineering are in the new Engineering Building. Those for Electrical Engineering are in the Electrical Engineering Building, as is also the office of the Dean of Engineering.

THE MACKAY SCHOOL OF MINES

The Mackay School of Mines offers three four-year courses, one in general mining, one in metallurgy, and one in geological engineering. 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. The third is a specialized course in geology leading to the degree of Bachelor of Science in Geological Engineering.

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 a graduate who has held responsible mining positions for at least five years and who presents a satisfactory thesis.

The classrooms and laboratories, as well as the office of the Dean of the Mackay School of Mines, are housed in the Mackay School of Mines building.

THE COLLEGE OF AGRICULTURE

The College of Agriculture curricula lead to the degree of Bachelor of Science in Agriculture with majors in agricultural economics; agricultural education; animal industry, specializing in animal breeding, animal nutrition, milk production, or general animal sciences; plant industry, specializing in agronomy, range management, horticulture, or soils; and general agriculture. These are four-year curricula, which include basic courses in the arts and sciences in addition to the prescribed agricultural subjects.

The School of Home Economics is in the College of Agriculture. The curricula include three areas: teaching, foods and nutrition, and general home economics. Each of these fields of study leads to the degree of Bachelor of Science in Home Economics. Both men and women will find cultural and professional opportunities, as well as fundamentals for everyday living, in these areas of study.

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), from the Bankhead-Jones Act (1935), and from the Research and Marketing Act (1946). 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 disease, poisonous range plants, economical feeding of livestock, insect pests, plant diseases, and other problems of agricultural economics and practice.

AGRICULTURAL EXTENSION DIVISION

Cooperative Extension work in Agriculture and Home Economics as provided for by the Federal Smith-Lever, Capper-Ketchum, Bankhead-Jones, Bankhead-Flannagan, and Supplementary State Acts 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 DRUG CONTROL AND WEIGHTS AND MEASURES

The Department of Food and Drugs was created by a legislative Act of 1909. The Weights and Measures Law was enacted in 1911 and provided that the Commissioner of Food and Drugs, appointed by the Board of Regents, should be ex officio Sealer of Weights and Measures. In 1931 the Legislature passed a Petroleum Products Inspection Law to be administered under the Department of Weights and Measures. Laboratory facilities required under these Acts have been consolidated into a central laboratory located at 5th and Sierra Streets, Reno.

STATE VETERINARY CONTROL SERVICE

The State Veterinary Control Service was organized in 1915 to provide facilities for the diagnosis of communicable diseases of domesticated animals and poultry and for research into the

nature, cause, and methods of controlling them, 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.

GRADUATE DEGREES

Curricula leading to the degrees of Master of Arts and Master of Science are offered by the University under the direction of a Graduate Committee appointed by the President. These curricula include an integrated program of twenty-four hours of graduate courses in a major and minor field or in a field of concentration, and a thesis, and culminate in a final oral examination by a special examining committee.

The University of Nevada does not offer graduate work leading to the doctor's degree.

Professional degrees in the College of Engineering may be conferred upon graduates of the College of Engineering of the University of Nevada, who have held positions of responsibility in engineering, and who submit a thesis showing ability to conduct advanced engineering work.

THE SUMMER SCHOOL

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 and the College of Agriculture have been included when student need seemed to justify these offerings. There is a constant demand for work leading to State certification. Hence, subjects in the College of Arts and Science are always given.

CORRESPONDENCE STUDY

Correspondence work is offered by many departments of the University. Credit thus obtained may be used toward entrance and graduation requirements or renewing teachers' certificates.

Complete details concerning courses offered, fees, and other necessary information are contained in the *Correspondence Bulletin* which may be obtained from the Office of Correspondence. The following general regulations, however, should be observed:

1. Students while enrolled in a semester or summer session shall not be permitted to enroll in or to pursue a course by correspondence. Exceptions to this regulation may be granted by the Administrative Council only upon petition of the student, stating why he must have the course in question at that time and why he cannot take it in regular class; such petition must be submitted to the Dean of the College concerned before presentation to the Administrative Council.

2. A student may not repeat by correspondence a course that he has taken in regular or summer session.

3. Students suspended from the University may take correspondence courses only after petition to and favorable action by the Administrative Council.

4. The maximum number of credits of correspondence study that a student may apply toward graduation from the University is 32. Graduate credit cannot be earned by correspondence. Before credit earned by correspondence can be applied toward a degree, the student must have complied with all entrance requirements.

THE 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 Departments.

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 social welfare of all the women students is under the supervision of a Dean of Women. Regulations governing the women students on the campus, in the halls and sorority houses, are formulated by the women students and approved by the Dean. The residence halls are under the direct supervision of social directors but have, in general, self-government. The personnel record of each woman is on file in the office of the Dean of Women.

DEAN OF MEN

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

The Standing Committees, through which much of the business of the University Faculty is done, are listed elsewhere in this catalogue.

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 encroach 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.

¹Any member of the faculty not teaching during any given college year shall not have the privilege of voting in faculty meetings during that year.

DEPARTMENTS

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

THE UNIVERSITY PLANT

CAMPUS AND BUILDINGS

The University has at its disposal a modern educational plant, supplied partly through State appropriation, partly through private gifts. The major portion of the institution is situated on the main campus, which commands an eminence in the northern part of Reno. Here are gathered more than a score of buildings, centering upon Morrill Hall, the original structure on this site, in which the University was rededicated in 1886. Here are the main buildings which house the administrative offices, the classrooms and laboratories and libraries, the dining and living quarters for students, social and athletic facilities, and space for many of the research activities conducted by the University or associated with it.

The major buildings which house the University may be described as follows:

AGRICULTURE BUILDING—A three-story brick building east of Manzanita Lake. The first floor includes administrative and department offices, classrooms, agricultural library, and laboratories for agronomy, range management, foods, and child development. The second floor is devoted to home economics and biology, and includes the dining room, food and clothing laboratories, home economics offices and library, and the biological laboratories. The basement includes laboratories for animal industry pertaining to animal breeding, animal nutrition, meats, wool, dairy and poultry production, soils teaching and research, zoology, and botany. (1918*)

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

ARTEMISIA HALL—A modern brick residence accommodating 100 women students in comfortable rooms. The hall is located north of the dining hall on North Virginia Street. Artemisia's spacious living room, containing a large fireplace and a grand piano, becomes the center of social activities during recreation hours.

DINING HALL—A one-story brick building on the west side of

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

the campus, scientifically equipped and accommodating 350 students. (1926; enlarged 1945)

EDUCATION BUILDING—A two-story brick building, north of the Agriculture Building. It contains an auditorium seating 350, with stage and dressing room, a music room, and classrooms and offices of the School of Education. It also houses the Department of Economics, Business, and Sociology and the Department of Psychology. (1920)

ELECTRICAL ENGINEERING BUILDING—A two-story brick building, on the east side of the campus. The first floor contains offices, classrooms, and the electrical laboratories. The second floor contains the electrical engineering library and reading room, classrooms, and electronics and communications laboratories. (1912)

ENGINEERING BUILDING—A fireproof, reinforced concrete, brick and stone building, located on the flat east of the quadrangle, and facing west. It houses the Departments of Civil and Mechanical Engineering. The basement contains the following laboratories: (Civil Engineering) fluid mechanics, materials testing, concrete and cement testing; (Mechanical Engineering) calibration and general mechanical. The first and second floors are devoted to offices, classrooms, and drafting rooms. (1941)

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

NEW GYMNASIUM—A building of brick and reinforced concrete, north of the quadrangle. The main floor contains a large playing court flanked on either side by balconies for spectators. When used as an auditorium the main floor seats approximately 3,500. The building provides offices and facilities for athletics and for the Departments of Physical Education and Military. (1943)

OLD GYMNASIUM—A brick building north of the quadrangle, used as an auxiliary to the New Gymnasium. The basement contains the indoor rifle range. (1897; extension, 1922; converted for temporary use as a men's dormitory, 1946; reconditioned, 1949.)

HATCH STATION—Enlarged in 1926, 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 plant supplying 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—A one-story building containing nine rooms and a basement, situated between the Old Gymnasium and Lincoln Hall. There are four wards—two for men and two for women. A registered nurse is in charge at all times, and the physician engaged by the University Health Service has daily office hours. (1902; enlarged, 1941.)

JOURNALISM BUILDING—A one-story building situated on the west side of the quadrangle, constructed of brick and stone in conformity with the architecture of other buildings. It formerly housed the Library and the Department of English, and in 1947 it was remodeled as a Journalism Building. (1913)

LIBRARY—CLARK MEMORIAL—A two-story and basement fire-proof 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—A three-story brick building with accommodations for seventy-two men, situated north of and facing Manzanita Lake. (1896)

MACKAY SCHOOL OF MINES BUILDING—A gift of Mrs. John W. Mackay and Mr. Clarence H. Mackay, housing the Departments of Mining, Metallurgy, and Geology. In the basement are storerooms, laboratories, the museum, and the shower and locker rooms for the students. On the first floor are classrooms, laboratories, offices, a library, and the Mackay museum. On the second floor are the State analytical laboratory, the mezzanine floor of the museum, drafting room, seminar room, instruments room, office of the Department of Geology, the Mackay Research Library, maproom, petrography grinding and polishing room, classrooms, and laboratories. (1908; enlarged, 1926)

MACKAY SCIENCE HALL—A reinforced concrete, fireproof, brick and stone building, housing the Departments of Chemistry, Physics and Mathematics. A full basement and a subbasement 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. (1930)

MANZANITA HALL—A brick dormitory building, located on Manzanita Lake. It accommodates 100 women students.

MECHANICAL BUILDING—A two-story brick structure, on the east side of the quadrangle adjoining the Electrical Building. It contains the machine shop, pattern shop, and welding shop. (1897)

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

MORRILL HALL—A three-story brick building with a large basement. On the first floor are the offices of the President and the Comptroller. The Department of Philosophy and offices 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 University Post Office and storerooms and the office of the Superintendent of Maintenance are in the basement. (1886)

PRESIDENT'S HOME—A comfortable three-story structure situated on the southeast corner of the campus. (1900)

QUONSET HUTS—A number of quonset huts have been erected on the campus to provide temporary office and classroom space. Buildings located on the quadrangle north of Stewart Hall contain offices of the Dean of Men, the Dean of Women, the Alumni Secretary, the Registrar, and the Director of Admissions. Buildings northeast of the New Gymnasium are used for storage and for classes in military science and tactics.

STEWART HALL—A three-story brick building with a basement. The basement is used for the student recreation center and the office of the Y. W. C. A. Secretary. The Department of History and Political Science occupies the first floor. The second floor is occupied by the Department of Foreign Languages. (1890)

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

TEMPORARY DORMITORIES—Temporary housing for veteran students has been provided in the Highland Terrace dormitories,

housing about 130 men, and located at Beech and Highland Streets; in 112 apartments for married students at Victory Heights, located at the end of Evans Avenue; and in the 36 units of the University Trailer Court on West Second Street.

TEMPORARY ENGLISH AND ART BUILDINGS—Prefabricated metal buildings, east of the quadrangle. The buildings were provided by the Federal Government from war surplus as temporary housing for the Departments of English and Art. (1947)

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 provisions 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 basketball 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 are 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), which 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 have a seating capacity of more than five thousand.

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

VETERINARY SCIENCE BUILDING—A two-story brick and stone building situated on the east side of the campus directly east of the Mechanical Building. Remodeled in 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—A sixty-acre farm, east of the University campus, given by the citizens of Washoe County for agricultural experimentation. (1899)

THE UNIVERSITY DAIRY FARM—The University Dairy Farm, equipment, and dairy herd, a gift from Major Max C. Fleischmann in 1944, is located three miles south of Reno via Virginia

Road, and one mile west on Huffaker Lane. This 258-acre farm is equipped with buildings and laboratories for practical dairy farm operation. The dairy herd consists of purebred Holstein and Jersey cattle.

THE UNIVERSITY FARM—The University Farm was purchased by the State in 1917. It is located two miles south of Reno along Virginia Road and Hash Lane. From July 1931, to October 1, 1947, this farm was leased to private interests. At the present time, an effort is being made to rejuvenate the farm for use as a laboratory for the University. It will also be used as a performance testing laboratory in connection with the Experiment Station Regional Project in beef cattle breeding, entitled, "The Improvement of Beef Cattle Through the Application of Breeding Methods."

EQUIPMENT AND MATERIALS

Within the buildings of the University is the various equipment necessary for the operation of a modern educational institution. All bureaus and departments have special facilities for research or for effective instruction. Some collections of material, however, are of such intrinsic importance, or are so useful to the student or to the general public that they warrant special mention. These materials are all open for the use of qualified students, and in many instances to the general public. Many facilities are free; when a charge is made, it is nominal, and usually only enough to cover breakage, or the cost of materials and service required by the individual.

LIBRARIES

The University libraries are intended to supply the printed materials to support the courses offered by the University, to assist the investigations undertaken by the research and teaching staffs, and to provide space for study. Insofar as funds are available, an attempt is made also to provide for recreational and cultural reading. The libraries contain more than 90,000 bound volumes and more than 125,000 unbound serials and pamphlets. The current periodicals, chosen especially for their importance in cultural, technical, scientific, and scholarly fields, number almost 800; they include 25 newspapers. The actual choice of books is usually made by the University experts in the various fields, in order that the works will be available which will be most useful for the curricula which the University offers. The collections have been supplemented by private gifts.

The general collection is housed in the Alice McManus Clark Memorial Library Building, on the second floor of which is the general reading room and reference desk, where students may

obtain the books required in their courses. A general reference collection is available on the open-shelf plan, and individual rooms house special collections. Especially useful are seminar collections for the departments of agriculture, classics, economics, English, and foreign languages, where books in special subjects are brought together to facilitate the work of advanced students. These rooms are used also for some seminar classes, so that teacher, student, and source materials can be brought together for the best teaching results. Of special interest are the Hester Mayotte Library, containing rare books in foreign languages; the Nevada history collection, containing some of the rarest Nevada newspaper files; and the Charles Cutts loan collection of fine printing. The University is an all-depository for the publications of the Federal Government and the Army Map Service. The map collection now contains more than 25,000 items.

It is the purpose of the library staff to encourage new students to acquire early in their first year an ability to use the library and its principal tools, the card catalogue and the reference collection. This is accomplished mainly by personal instruction at the reference desk and by lectures to students in freshman English. For more advanced students a course in the use of the library is offered.

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, 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, comprising about 7,000 papers on desert geology, paleontology, ore deposits and other geologic subjects, is located in the Mackay research room on the second floor of the Mackay School of Mines Building. The funds to buy the library and to remodel and furnish the research room were supplied by Mr. Clarence H. Mackay.

COMSTOCK MAPS

Through the generosity of several donors the Mackay School of Mines has accumulated a very valuable collection of Comstock maps, both surface and underground. These are filed in a large map case, a gift of Clarence H. Mackay.

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

MILITARY LIBRARY

The Military Department maintains in the New Gymnasium a reference library of over 300 volumes on military, economic, and historical subjects.

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, are available in the music rooms and are especially valuable for students and teachers of public school music and for leaders of choral and instrumental groups.

OTHER DEPARTMENTAL LIBRARIES

Seven library collections are shelved outside the Clark library for the convenience of departments using them. Those dealing

with animal husbandry, biology, and home economics are housed in the Agriculture Building; those for chemistry and physics in the Mackay Science Hall, and those for education and veterinary science in the buildings devoted to these subjects.

COUNTY AND STATE LIBRARIES

Also available to the faculty and students of the University are the facilities of the Washoe County Public Library in Reno, a general collection of almost 80,000 volumes, and the Nevada State Library at Carson City, a collection of more than 240,000 volumes, especially rich in law, history, and government publications.

LABORATORIES

ARTS AND SCIENCE LABORATORIES

BIOLOGICAL—The Department of Biology is equipped with the modern apparatus, instruments, and greenhouse facilities necessary for university-level teaching and research in the life sciences and has the use of the University Herbarium, a biological library, and a museum. Transportation is provided for field work in taxonomy, entomology, plant ecology, vertebrate zoology, and wildlife management.

CHEMICAL—The Mackay Chemical Laboratory occupies the north half of Mackay Science Hall. In addition to the laboratory rooms for general, analytical, organic and physical chemistry, it contains special balance rooms, a dark room, a large lecture demonstration room, a department library and several small laboratories for advanced study and research. All laboratory rooms are designed for individual student work and equipped with efficient fume hoods.

JOURNALISM—Instruction in the Department of Journalism profits from the use of three laboratories. The newsroom is equipped with typewriters, a copydesk, newspaper files, a reference library, and other facilities similar to those in a daily newspaper newsroom. The printing laboratory includes type, presses, makeup materials, and other equipment of a complete, one-man job printing plant. The facilities of the Reno Evening Gazette, the Nevada State Journal, the Reno Bureaus of the United Press Associations and the Associated Press, the Thomas C. Wilson Advertising Agency, the State Advertising Agency, Radio Station KOH, Radio Station KWRN, the Carson City Nevada Appeal, and other journalistic organizations serve as laboratories for students in the course in journalism internship.

MUSIC—The Department of Music has a large collection of recordings of the music of many periods, schools and nationalities

from Greek hymns to contemporary modernists. Included is the College Music Set of records, Capehart phonograph and scores donated by the Carnegie Corporation of New York City. Records, scores and phonograph are available for reference in the music rooms and are used in the appreciation classes.

The University has a number of musical instruments, which are used in band and orchestra work and for class demonstrations, and one practice room with a piano.

PHYSICS—The physics laboratory, in the south wing of Mackay Science Hall, includes adequately equipped laboratories for general physics and electrical measurements. Contributing to the effectiveness of the laboratories are special rooms for advanced work and study of radio, spectroscopy, a storage battery room, a constant-temperature research room, a photometry room, a generator room, a shop which includes glass-blowing equipment, storerooms, and a steel and concrete vault for storing precision instruments.

ELECTRICAL ENGINEERING LABORATORIES

Electrical Machinery—The electrical machinery laboratory is very adequately equipped with power sources and electrical machines making possible a wide range of direct and alternating current experiments.

Small Motors—The small motors laboratory provides facilities to test generators, transformers, selsyns, amplidynes, etc.

Electronics—The most modern facilities are available for the study of fundamental electronic tubes and circuits.

Industrial Electronics—Modern equipment is at the disposal of students for the study of radio frequency, heating, welding, electronic control of machines, power rectification, and photoelectric devices.

X-ray—150 KV X-ray equipment is available for industrial and other purposes.

Radio—The radio laboratory is equipped with transmitters, receivers, radar, and other equipment covering the frequency spectrum up to the highest micro-wave frequencies.

Communication—The wide range of equipment available permits comprehensive study of communication circuits, such as transmission lines, filter, carrier systems, microphones, loudspeakers, etc.

In addition to the above laboratories, mobile radar equipment is available for the use of students. Also available to students in electrical engineering is the electronic equipment of the United States Naval Reserve, housed in the Armory on the campus.

MECHANICAL ENGINEERING LABORATORIES

Engineering Materials and Processes—This laboratory is equipped with the basic machines used in manufacturing processes. The welding section of the laboratory includes A.C. and D.C. welding as well as gas welding equipment.

Instruments and Calibrations—The instruments and calibrations laboratory is equipped with the usual test instruments, calorimeters, etc.

Internal Combustion—The internal combustion laboratory is equipped with a CFR Diesel testing engine including a 15hp dynamometer, a 100hp dynamometer for general use, and a 150hp Diesel engine generator set.

Steam—The steam laboratory is supplied by a high pressure tubular boiler which can produce saturated steam or superheated steam as is desired. A de-aerating feed water heater and chemical treatment is provided for use with the steam generator.

Air Conditioning—This section of the laboratory provides for a variety of measurements related to heating, cooling, and humidifying a well-insulated room.

Mechanical Vibrations—This section of the laboratory is provided with equipment to investigate critical speeds in rotating machinery.

Mechanical Refrigeration—This section of the laboratory contains a complete compression type refrigerator built especially for testing purposes and also arranged so that it can act as a service unit for cooling of the air conditioning room.

CIVIL ENGINEERING LABORATORIES

Fluid Mechanics—The fluid mechanics laboratory is equipped with pumps, weirs, metering devices, and other equipment to enable detailed studies of the flow of fluids and of the energy available from water in motion.

Surveying—The surveying laboratory is equipped with transits, levels, theodolites, tapes, rods, plane tables, and such equipment as is necessary to give the student in surveying opportunity to become familiar with the use and operation of surveying equipment.

Testing—The testing laboratories are equipped with two Universal testing machines, an impact testing machine, a hardness tester, a torsion machine, and equipment for studying the properties of nonmetallic materials.

MINING SCHOOL LABORATORIES

Assay—The fire assay laboratory in the Mackay Building is equipped with furnaces and other equipment for assay work. A

storeroom, a grinding room for the preparation of samples, and a weighing room are included in the laboratory equipment.

Chemical—Laboratory facilities are provided on the first floor of the Mackay Building for chemical research and study in connection with mining and metals.

Geological and Mineralogical—The Department of Geology is provided with reference collections illustrating ores, minerals, rocks, and fossils, with class collections for determination, and with publications and maps of the United States Geological Survey and foreign surveys. The mineralogical laboratory is equipped for blow-pipe and chemical work.

Petrographic—The petrographic laboratory includes equipment for sawing, grinding, and polishing, along with a large collection of slides and hand specimens of rocks and minerals.

Seismographic—Records of the seismograph in the Mackay Building are used chiefly for the study of earthquakes of local origin.

Metallurgical Laboratories—The metallurgical laboratories are excellently equipped with apparatus to conduct experiments and tests in ore dressing and hydrometallurgy. They include apparatus for microscopic study of metals and fire assaying, and some electro-metallurgical apparatus.

Metallographic—The metallographic laboratory is equipped with grinding and polishing equipment, photomicrographic cameras and other instruments for metallographic analysis.

Electro-Metallurgical—An electro-metallurgical laboratory, with furnaces and generating equipment, is located in the Mackay Building. Additional equipment is available in the United States Bureau of Mines Building.

Mining—The mining laboratory has equipment and machinery for practical mining experience. The operating mines of the Comstock Lode are near enough to offer opportunities for student study of operating mining equipment, both surface and underground.

AGRICULTURAL LABORATORIES

Agricultural Mechanics—The agricultural mechanics laboratory is equipped to give instruction in many phases of mechanical work which are considered essential to operating a mechanized farm or ranch. The equipment is, with few exceptions, that which would be found in a well-equipped farm or ranch shop.

Animal Industry Laboratories—The animal industry laboratories are for instruction in animal breeding, animal nutrition, wool, processing of meats, dairy and poultry production.

Experiment Station Chemical—The experiment station chemical laboratory, equipped for research and analysis, is used for work in relation to the agriculture of the State and to the research projects of the Agricultural Experiment Station.

Farm Crops, Range, and Pasture Management—This laboratory classroom contains samples of seeds of most of the important crop plants of the United States and maintains dried matured cereal, forage crops, range plants, and weed specimens for student use. Analytical balances, chemicals, and spray equipment are available for training in weed control. The equipment includes apparatus for sampling and grading grain and forage seeds and for making range forage studies and utilization estimates. In practice the laboratory extends to the fields and ranges of the State which are visited by classes and from which materials are brought to the campus. The University Farm is particularly useful in teaching forage crops and weed control.

Soils Research Laboratory, Experiment Station — The soils research 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 and a small experimental greenhouse are part of the equipment.

Veterinary Science—The veterinary science laboratory is fitted 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—Demonstration laboratory has a seating capacity of fifty. A preparation laboratory seats twelve, and a small home laboratory accommodates one.

Clothing—The laboratory is equipped with electric machines and small equipment necessary for work. Twenty students may be accommodated. Adjoining are the fitting and locker rooms.

Pre-School—The laboratory is equipped with Gesell observation screen and play materials used by groups of two- and three-year-old children.

SCIENTIFIC COLLECTIONS

MACKAY MUSEUM

The Mackay Museum, located in the northwest wing of the Mackay School of Mines, contains the mining, metallurgical, geological, and mineralogical displays. The exhibits in this museum

are arranged in such a manner as to give a good general idea of the mining industry of the State of Nevada, and to illustrate standard classifications of minerals and rocks. On the wall at the right of the entrance to the museum is a large map of Nevada, showing the location of all the mining districts of the State, while in the center of the museum at the rear there is a topographical relief map of the State on a scale of 4 miles to the inch. The showcases 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.

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. The most recent addition to the basement display is the valuable Joseph D. O'Brien mineral and curio collection, the gift of F. S. Markham.

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.

ZOOLOGICAL COLLECTIONS

The Zoological Collections are in the Department of Biology. A portion of the collections, including mounted birds and mammals and bird nests and eggs, is arranged here for public exhibition. The collections include some 550 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; over 10,000 Nevada insects and other arthropods; 150 mammal skins and mounts; 30 mounted skeletons of various vertebrates; over 5,000 Nevada cold-blooded vertebrates; and nearly a thousand general museum preparations.

HERBARIA

The Herbarium of the University of Nevada, a part of the Department of Biology, now contains approximately 22,000 sheets. This 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. Grasses and coniferous trees are particularly well represented. About 13,000 of the specimens were collected during a cooperative project under the auspices of the Department of Biology, the Bureau of Plant Industry, and the W. P. A. One branch of the Herbarium being built up at present is a collection of mycological and plant pathological specimens. The Herbarium is in charge of the botany staff in the Department of Biology.

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 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; samples of inorganic salts prepared by J. T. Baker Chemical Company; distillation products obtained from crude petroleum prepared by the Standard Oil Company and the Texas Oil Company, and zinc products prepared by the New Jersey Zinc Company.

Information for Students

GENERAL STATEMENT

The University endeavors to anticipate the needs of students and to provide them with a good home and with congenial surroundings for intellectual and social growth during their college years. Having in mind, also, that modest financial means should not be an insuperable bar to higher education, the administration makes every effort to reduce the necessary cost of attendance at the University. At the same time, the student should remember that even in an institution where much of the cost is borne by the State, higher education cannot be cheap if it is to be good. No student should attempt to attend the University without some financial backing. On the other hand, the University is able to offer assistance to worthy students, and there are many means within the community by which a serious and capable student can help himself.

STUDENT EXPENSES

A student's expenses will depend somewhat upon his course of study, but more upon his personal habits and the standard of living which he allows himself. A student's expenses may be conservatively estimated as follows:

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

	Low	Moderate	Liberal
*Tuition.....	None	None	None
Board, 8½ months.....	\$390.00	\$415.00	\$440.00
Room	80.00	135.00	270.00
*Laundry	25.00	35.00	50.00
*Books, stationery, etc.....	60.00	75.00	90.00
Fees (laboratory, athletic, health service, etc.).....	74.00	80.00	96.00
Fee (registration and incidental).....	30.00	30.00	30.00
*Totals	\$659.00	\$770.00	\$976.00

For a more detailed consideration of these expenses, see *Tuition, Fees, and Conditions* below, or consult the index for page references.

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

²Students from outside the State of Nevada must add a tuition of \$100 each semester.

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

⁴All engineering students will require complete drawing outfits and slide

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 the Chairman of the Campus Employment Committee, in the office of the Dean of Men. 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.*

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 devote many hours each week to work for pay. *Particularly it is desirable that first-year students should, if possible, plan to finance fully their first University year without the necessity of working for pay.*

EVERY STUDENT FROM NEVADA SHOULD HAVE AT LEAST \$175 CASH IN HAND, AFTER REACHING THE CAMPUS, TO START ANY UNIVERSITY YEAR PROPERLY. OUTSIDE STUDENTS SHOULD HAVE \$275 IN HAND TO START THE YEAR.

TUITION

The State of Nevada offers its citizens free tuition at the State University. The student is classified as a resident or nonresident by the Office of Admission when the student is admitted. Responsibility for providing full documentary proof of Nevada residency for purpose of securing waiver of nonresident tuition is upon any applicant making such claim of residency. Nonresident tuition will be collected at registration time from the claimant in whose case determinations are not complete. All students concerned should read the following statement from the Compiled

rule. These cost from \$55 to \$65. Students having this equipment should bring it with them.

¹⁰These amounts do not include the deposit of \$10 required of all students at the beginning of the 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.

Laws of Nevada which govern the payment of nonresident tuition.

WHEN THE REGENTS MAY CHARGE TUITION. *Section 7735, Chapter 167, Statutes of Nevada 1945, paragraph 10. The board of regents of the University of Nevada shall have the power to fix a tuition charge for students at that university; provided, however, that tuition shall be free*

- (a) *to all students whose families are bona-fide residents of the State of Nevada, and*
- (b) *to all students whose families reside outside of the State of Nevada providing such students have themselves been bona-fide residents of the State of Nevada for at least six months prior to their matriculation (first registration) at the University.*

As determined by Nevada law, no person shall be deemed to have gained residence by reason of attendance at the University of Nevada.

The Board of Regents set this tuition charge, payable by students from outside Nevada, at \$100 per semester, beginning with July 1945.

A rebate of two-thirds of this 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 this charge 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.

LIVING CONDITIONS

The University makes every effort to assure students of suitable living conditions, food, and housing. The core of the housing system is provided by the University dormitories, which supply complete living facilities for a considerable number of men and women. Here the young people have good rooms, meals prepared with dietetic control, and a supervised social life. A number of fraternities and sororities, national and local, maintain chapter houses which are considered part of the campus. They offer certain social advantages, along with good living conditions, and are under the supervision of the University administration. In addition to these facilities, exclusively for students, living quarters and dining rooms are available on a commercial basis in Reno, which, as a small city, offers a variety of accommodations.

RESIDENCE HALLS

DORMITORIES FOR WOMEN

The dormitories for women are Artemisia and Manzanita Halls. The Halls are located on the campus and are under University

management and the supervision of the Dean of Women. The housemothers are women trained and experienced in problems of group living. They serve at all times as advisers and coordinate the student government with University policies.

Artemisia and Manzanita Hall Associations are formed by the women residents. The students elect their officers and manage their student government through an executive board and committee system. Their dues, which are used for social functions, are \$2 per semester.

Required Residence—All unmarried women of normal college age not living with their parents or guardians are required to reside in a University residence until they graduate. The only exception to this rule may be made 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 or friends whose home is in Reno or Sparks.

Residence privilege in the dormitories will not be granted to married women unless they were students of the University prior to their marriage.

Applications for Residence—Students enrolled in the University should apply for residence privileges in Artemisia and Manzanita Halls during the latter part of the spring semester. Applications will be considered in order of their receipt. New students will receive an application for residence privilege when they receive their admission cards from the Committee on Admissions. The residence form should then be completed immediately and mailed to the Dean of Women together with a check* made payable to the Board of Regents.

Room rent for each semester (with roommate) \$48.

Single occupancy, \$60 (only a limited number available).

Room rent will be returned in full to the one making the reservation when notification of desire to cancel reservation is sent to the Dean of Women one week prior to the date of registration. If withdrawal is made from the University before the end of the third week of the semester, two-thirds of the room rent fee will be refunded. If withdrawal is made after the end of the third week and before the end of the eighth week, one-half of the room fee will be refunded. No refund will be granted 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.

Residence Requirements—All residents of women's dormitories are required to:

1. Register in and carry throughout each semester at least

*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.

fourteen credit hours of University work unless excused by the Dean of Women.

2. Conform to the regulations of the University and of the halls.

3. Provide bedding for single bed, including mattress pad, sheets, pillow cases, blankets, and spread.

4. Mark all personal articles and wearing apparel with the name of the owner.

5. Take care of their own room and linens.

MEN'S RESIDENCE HALLS

The University is currently providing living accommodations for single men in Lincoln Hall, in three dormitories in Highland Terrace, and in Hartman Halls. All dormitories are under direct supervision of the Dean of Men, and all assignments are made from his office. Applications for accommodations may be secured from the office of the Dean of Men, and all new students will be supplied with application forms by the Office of Admissions when the student receives his card of admission to the University.

To be honored, all applications must: (1) *Be on file with the Office of the Dean of Men at least three weeks prior to the opening day of the semester*; (2) *be accompanied by a sum covering the room rent for the semester concerned. All checks and money orders for rent should be made payable to the Board of Regents.*

In addition to the room rent, all residents of dormitories are required to contribute to the dormitory fund for the purchase of magazines and newspapers, and for the maintenance and replacement of laundry equipment. The amount is either fifty cents or one dollar each semester, depending on the dormitory in which the student resides. A key deposit is also required of all residents of dormitories. No exceptions will be made to the above requirements, regardless of whether or not the student uses the equipment.

Room rent is as follows:

For each man for each semester.....	\$40.00
For each man for a five weeks summer course....	\$15.00

Rent will be returned in full to the applicant if due notification of desire to cancel the reservation is sent to the Dean of Men one week prior to the opening of the dormitory for the semester. If cancellation or withdrawal is later than one week prior to the opening of the dormitory for the semester, but not later than 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 a men's dormitory, nor will space be reserved, until the room rent for the semester has been paid. The applicant must agree to accept the space reserved for him by the Office of the Dean of Men. It is not possible to notify an applicant as to the specific place allotted to him until he arrives on the campus.

The Dean of Men reserves the right to reject an application when in his opinion the applicant would not be a desirable resident of a dormitory.

The Dean of Men reserves the right to require a student to vacate his room space when in his opinion the conduct of the student is contrary to the best interests of the dormitory and the University.

All residents of men's dormitories are required:

(1) To abide by the regulations of the dormitories as adopted by the student residents and approved by the Dean of Men.

(2) To provide themselves with the following articles: One bedspread; at least two heavy blankets; one comforter; one pillow; one mattress protector pad 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 for the floor are desired, they also must be supplied by the individual.

The University furnishes lights, heat, sheets and pillow cases (which it launders), beds and mattresses, mattress covers, dressers, tables and chairs, clothes closets or lockers. Laundry facilities and equipment are provided for those who desire to do their own washing and ironing. The individual must supply his own electric iron.

FAMILY LIVING ACCOMMODATIONS

The University has 36 family units in the Trailer Court, and has 112 apartment units in the Victory Heights housing project. All family units are allotted to veterans only, and on the basis of priority, with residents of Nevada and former students from other States receiving preference. The current cost for family units is:

Trailer Court	\$20.00 per month
Victory Heights apartments.....	34.00 per month

Occupants are required to furnish all personal items, including dishes, tableware, cooking utensils, bedding, rugs, draperies, etc.

All applications for family dwelling units should be addressed to the Office of the Dean of Men. Application forms will be sent upon request. New students will automatically receive application forms from the Office of Admissions when the applicant receives his card of admission to the University.

Applications should be on file with the Office of the Dean of Men not later than four weeks prior to the opening date of the

semester for which the accommodations are desired. Notice of acceptance or rejection of the application for a family unit will usually not be sent earlier than two weeks prior to the opening of the particular semester. All occupants of family units are required to vacate them immediately upon withdrawal from the University or upon graduation therefrom.

THE UNIVERSITY DINING HALL

For the accommodation of students the University operates a dining hall under the supervision of a trained dietician. The price of board will be \$50 per month.*

REGULATIONS GOVERNING THE UNIVERSITY DINING HALL

1. All women students residing in a University dormitory are required to board at the University Dining Hall.
2. Students boarding at the dining hall will be expected to come with sufficient funds to keep their board bill paid one month in advance. The board bill must be paid at the Comptroller's office within the first five days of the month, or a 50 cents charge per day will be made. The board receipt must be presented to the dining hall and exchanged for a meal ticket. Those failing to obtain a meal ticket will be billed at guest rates for meals taken.
3. Months in which university vacations occur will be prorated.
4. Students who wish to board in the dining hall for a partial month will be charged 20 percent more than the rate charged for a full and continuous month.
5. Rebates for necessary absences or from withdrawals from the dining hall will not be made for periods of less than one week. For absences involving one week or more, the rate of rebate will be 80 percent of the amount paid by the student for the period in question. Due notice must be given and permission secured in advance or no rebate will be allowed.

DEFERMENTS

1. No deferment may be made for more than thirty days except in the following instances: (a) Students who have scholarships due them through University channels; (b) Veterans whose first subsistence allotments are delayed more than thirty days. (No deferment may be made for veterans beyond the time of receipt of the first full month's subsistence allotment); (c) Other students who can satisfy University officials of the absolute necessity for the deferment.
2. Procedure for securing deferment:

*With the approval of the Board of Regents the rate of board may be raised or lowered to conform with current prices.

(a) Secure the proper form for the request from the office of the Dean of Men or the Dean of Women.

(b) Secure the signed recommendation of the Dean of Men or the Dean of Women.

(c) Secure the approval of the Director of the Dining Hall. This is the final approval in all cases.

(d) The Director of the Dining Hall will issue the meal ticket for the specified time and will forward the completed request form to the office of the Comptroller.

3. When a student is in arrears in payments to the dining hall, the Director of the Dining Hall will report the fact to the Dean of Men or the Dean of Women, who will review the case and take appropriate action. Such action may include a recommendation to the President's office for temporary suspension from classes.

PREFERENCES IN DINING HALL AND DORMITORIES

The Board of Regents has 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.

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.

FEEES

All students are liable to some fees, although the total is seldom large. Students electing curricula requiring extensive equipment or considerable laboratory materials pay necessarily higher charges. Fees may also be assessed for disciplinary reasons, especially to insure prompt attention to necessary procedures, for example, in registration. A list and explanation of fees follows:

LATE REGISTRATION FEES

Each student is expected to complete his registration on registration day.

Each student who is registering for more than five credit hours and who begins registration before the end of the week of registration day shall pay to the Comptroller a progressively increasing late registration fee as follows:

\$1 if registration is completed on the second day after registration day;

- \$2 if completed on the third day;
- \$3 if completed on the fourth day;
- \$4 if completed on the fifth day; and
- \$5 if completed on any later day after registration day.

Each student who is registering for more than five credit hours and who does not begin his registration before the end of the week of registration day shall pay to the Comptroller a late registration fee of \$5.

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, and is not rebated.

REGISTRATION FEE

A registration fee of \$15 per semester is to be paid by every student. This fee is not rebated.

UNIFORMS

Women are required to furnish white gymnasium shoes and socks for Physical Education. Uniforms are furnished by the Physical Education Department.

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

Cadets enrolled in basic military courses normally deposit \$20, \$5 to guarantee against loss of texts and \$15 to guarantee the uniform. An excuse from drill constitutes a relief from \$15 of the deposit. Expenses for advanced students depend on current uniform costs and are arranged each year.

LABORATORY FEES

LABORATORY FEES—Departments giving laboratory courses must charge fees to cover special expenses incidental 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 fewer semester credits in the University.

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 \$14 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.

VISITORS' FEES

Students securing the privilege of visiting classes will be charged a fee of \$5 per course credit hour.

TABLE OF TUITION CHARGES, FEES AND DEPOSITS PER SEMESTER

	<i>Fees</i>
Agricultural Mechanics 210, 221, 331, 335, 341, 354, 356....	\$5.00
Agricultural Mechanics 312	10.00
Agronomy 104, 205, 346, 354, 359, 366, 468.....	5.00
Agronomy 364	10.00
Animal Husbandry 365, 443, 453, 464.....	5.00
Animal Husbandry 364	10.00
Animal Industry 101, 311, 303, 304, 344, 433, 474, 503, 504	5.00
Art 101, 102, 105, 107, 115, 121, 251, 252, 253, 254, 257, 258, 261, 355, 356, 359, 360, 362.....	3.00
Art 103, 363, 364.....	5.00
Art (Visitor's Fee)	10.00
Associated Students Fee	14.00
Botany 350	3.00
Botany 103, 104, 222, 231, 315, 317, 375, 491, 492.....	5.00
Botany 351, 355, 364, 370, 475, 476.....	10.00
Change of registration per course (see page 90).....	1.00
Chemistry 124, 242, 453, 454, 533, 554.....	5.00
Chemistry 101, 122, 231, 232, 271, 312, 333, 341, 342, 391, 443, 497, 498.....	10.00
Chemistry 599 (fee per credit hour).....	5.00
Civil Engineering 241, 363.....	5.00

	<i>Fees</i>
Civil Engineering 242, 367, 369, 374.....	10.00
Commercial Education 221, 222	5.00
Deposit, General	10.00
Deposit, Military, for basics taking drill.....	20.00
For basics not taking drill.....	5.00
For advanced students	Arranged each year
¹ Diploma (Degree or certificate)	8.00
Education 141, 388	3.00
Education 133	5.00
Electrical Engineering 368, 375, 483, 484.....	5.00
Electrical Engineering 231, 232, 233, 234, 353, 354, 391, 392, 393, 394, 462, 463, 464, 481, 482.....	10.00
Geology 325, 351, 478.....	3.00
Geology 211, 212, 352, 370, 477.....	5.00
Health Service	6.00
Home Economics 133, 253, 334, 436, 477, 478, 487, 488.....	3.00
Home Economics 115, 116, 118, 250, 366, 367, 495.....	5.00
Home Economics 131, 132, 357, 483, 484, 496.....	10.00
Home Economics 255, 499.....	15.00
Home Economics 494.....	18.00
Horticulture 355	5.00
Late Registration	1.00-5.00
Library	5.00
Matriculation (new students only)	5.00
Mechanic Arts 203, 205, 226.....	10.00
Mechanic Arts 207	10.00 per credit
Mechanic Arts 220	15.00
Mechanical Engineering 464, 465.....	15.00
Metallurgy 356, 471	5.00
Metallurgy 368, 480, 481.....	10.00
Metallurgy 341	20.00
Physical Education (Men)	3.00
Physical Education (Women)	3.00-10.00
Physics 103, 104, 153, 154.....	3.00
Physics 119, 357, 358, 368, 377, 378, 483, 484.....	5.00
Physics 375, 376	10.00
Physics 205, 206, 493, 494.....	3.00 per credit
Physics 599	5.00 per credit
Poultry Husbandry 334	5.00
Poultry Husbandry 331	10.00
Psychology 411	3.00
Registration	15.00
Soils 203, 212, 317, 318, 323, 425.....	5.00
Special Examinations, each	3.00
Sports (women, depending upon activity).....	1.00-12.00
Teacher Appointment Service	5.00
Transfer credit evaluation	3.00
² Transcript of student record.....	1.00
Tuition to non-Nevadans	100.00
Veterinary Science 301, 302	5.00
Visitors	5.00 per hour
Zoology 350, 368	3.00

¹If two diplomas are granted in one year, the charge will be \$8 for the first and \$7 for the second; if three diplomas are granted in any one year, the charge will be \$8 for the first, and \$7 each for the second and the third. These prices are subject to change according to prices charged to the University.

²When two or more transcripts of record are asked for at the same time, each additional transcript will be 50 cents.

	<i>Fees</i>
Zoology 101, 103, 322, 333, 335, 337, 364, 463, 491, 492.....	5.00
Zoology 209, 211, 346, 359, 370, 420.....	10.00
Correspondence Study	6.00 per credit
Summer Sessions fees	23.00 (per term—residents) 38.00 (per term—nonresidents)
For students enrolled for 3 hours or less.....	7.00 per credit
Health fee	2.00
Late registration	2.00

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, library, and hospital 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.

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. Through the cooperation of the Nevada State Department of Health, Section of Mental Hygiene, the services of a clinical psychologist are available to students on the campus. Students with psychological problems may be referred by the University physician for psychological examination. There is no charge for this service.

8. *Injuries or Illness Incurred On the Campus.* A student injured or taken ill while on the campus is entitled to the following benefits without additional charges: (a) Necessary emergency attention; (b) All laboratory examinations, X-rays, prescriptions, and medicines which may be required by the University physician in the course of the treatment in the infirmary; (c) use of the infirmary for a period not exceeding two weeks in any semester, including meals, treatment, visits of University physician, and general nursing.

NOTE: The term "campus" as used in this and succeeding paragraphs is hereby defined as the geographic limits of the campus proper, and all fraternities and sororities or other living quarters under supervision of University authorities and devoted exclusively to housing University students.

9. *Injuries or Illness Incurred Off the Campus.* A student injured or taken ill off the campus is subject to the following regulations: (a) All calls for medical or nursing service, whether provided by members of the regular infirmary staff or by other doctors and nurses, must be paid for by the individuals requesting such service; (b) a student injured or taken ill off the campus must pay all expenses of transportation to the campus, and must pay for all other expenses incurred off the campus by or through such illness or injury; (c) a student injured or taken ill off the campus may use the University Infirmary, provided that the student in question and his attending physician agree to rest convalescent care in the hands of the University physician and nurse, and provided he pay for all meals, laboratory examinations, X-rays, prescriptions, and medicines for the entire period of hospitalization.

10. After a period of two weeks hospitalization in any one semester, regardless of where the injury or illness occurred, the

student will be charged an additional \$2 per day for such extended period.

11. Requests for consultation periods with the University physician at times other than regular consultation periods at the infirmary must be paid for by the individual requesting it. A student may be hospitalized in the infirmary only upon the recommendation of the University physician acting in his capacity as such.

12. The Student Health Association will not be responsible, financially or otherwise, for the treatment and care of injuries incurred by a student participating in intercollegiate athletics, either in training or in competition, except as may be provided for all other students. Payments by the Health Association for X-rays for athletic injuries may not exceed \$20 per semester for any individual. All X-rays to be paid for by the Health Association must be ordered by the University physician. Any insurance compensation recovered from the State Insurance Fund for athletes shall be prorated between the Health Association and the Board of Athletic Control, according to expenditures for the injury for which the payment is received.

13. 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 costs connected therewith.

14. 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.

15. Neither the University nor the Student Health Association will assume any responsibility for the payment of hospital or other medical expenses incurred on or off the campus, unless such expense is expressly authorized by the University Health Committee. In certain instances of unusually heavy medical expenses, and when student health funds make it possible, the Student Health Committee, solely at its own discretion, may provide some financial relief to a student.

16. 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.

SOCIAL LIFE AND RECREATION

Student life at the University of Nevada is lively, and provides ample opportunity for recreation. The University is situated in a small city which is mainly a resort community; nearby are the

High Sierras, with recreational opportunities the year around. Associated with the University are a variety of professional, semi-professional, and social organizations which provide almost any sort of social diversion that the student may wish and can afford. For a list of these groups, see *Organizations* in the index.

POLICY OF THE UNIVERSITY TOWARD 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.

STUDENT SELF-GOVERNMENT

Students at the University of Nevada enjoy an unusual degree of self-government, in which they gain valuable experience for democratic citizenship. Student affairs generally are in control of the Associated Students of the University of Nevada (A. S. U. N.), which delegates a part of its authority to the Associated Women Students (A. W. S.). This organization functions through a Senate, through committees appointed by it with the cooperation of the University administration, and through officers elected by the student body under its supervision. Among the more important committees through which the Senate functions are the Finance Control Committee, the Board of Athletic Control, and the Publications Board. Dormitories have their own legislative and disciplinary organizations.

The political activity of the student body is highly democratic. Anyone who fulfills the eligibility rules for students in good standing may aspire to any office in the gift of the student body, and young men and women from all walks of life do rise to positions of considerable authority and responsibility. The constitution and bylaws of A. S. U. N., A. W. S., Pan-Hellenic Council, and the Interfraternity Council of the University of Nevada are printed in the *Student Handbook*, which is available at a nominal sum on the campus, or by addressing A. S. U. N.

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.

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.

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

A locker-and-laundry fee of \$3 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, and enough material to qualify her to direct physical education.

All women in the University are given opportunity to engage in leisure time activities through the Women's Recreation Association, a student organization administered by students under the direction of a faculty adviser. The activities sponsored by this organization are: Archery, badminton, basketball, bowling, dancing, equitation, golf, hiking, hockey, riflery, softball, swimming, tennis, etc. The Women's Recreation Association sponsors interclass competition in as many activities as possible.

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 \$3 is charged for lockers, towels, laundry, regulation outfits, and equipment. Bowling, riding, and swimming carry an additional fee which varies from \$6 to \$10, depending upon current costs.

ATHLETICS

Intercollegiate athletics is under the jurisdiction of the Board of Athletic Control, composed of seven members chosen from the faculty, the student body, and the alumni.

Excellent facilities are provided on the Mackay Athletic Field for all branches of athletics. Football, baseball, track, basketball, and tennis are the sports of special prominence at present.

To represent the University of Nevada in any athletic contest, whether in freshman or varsity sports, a student must be certified by the Faculty Eligibility Committee as eligible for participation.

FACULTY ELIGIBILITY 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 DEPARTMENT

1. The Army ROTC is organized under authority contained in the National Defense Act. The primary objective of this training is to qualify students for positions of military leadership in time of national emergency. The basic training of the first two years lays the practical and theoretical foundations of general military knowledge and contains most of the subjects essential to a noncommissioned officer's rating. The advanced training of the second two years leads to a reserve commission. A select few receive commissions in the regular services. The local unit offers Infantry training. The nature and scope of the course is uniform throughout the United States.

2. The University of Nevada Cadet Corps comprises all students enrolled in the Military Department. Special Regulations for the Cadet Corps are published in pamphlet form and are issued to each cadet upon registration. Familiarity with these regulations and careful observance of their requirements are demanded of every member of the corps.

3. Courses leading to a reserve commission as Second Lieutenant of Infantry, Army of the United States.

Freshman Year (basic) Military 101, 102.

Sophomore Year (basic) Military 201, 202.

Junior Year (advanced) Military 301, 302, 303.

Senior Year (advanced) Military 401, 402.

When the candidate has satisfactorily completed this program and received the final approval of the President of the University and the PMS&T, he is eligible for appointment in the Officers' Reserve Corps, Infantry Branch, Army of the United States.

4. When registering in military at the University for the first time, students are required to take examinations to determine their physical and mental fitness for enrollment in the ROTC.

5. Every male student is required by University regulations to complete two years of basic military training unless exempted therefrom by the chairman of the department.

6. The following are prohibited by law from enrollment and are automatically exempted upon presentation of necessary evidence:

a. Aliens are prohibited by law from enrollment in any ROTC courses.

b. Those who, upon initial registration in the University are over 23 years of age are prohibited from enrollment in basic courses. A student who has not attained his 27th birthday but who is otherwise qualified may enroll in advanced courses provided advanced training in the military department can be completed prior to the attainment of his thirtieth birthday.

c. Enlisted personnel of the armed forces who are in an active status.

d. Commissioned personnel of the armed forces in any status.

7. The following may be exempted:

a. Those who have satisfactorily completed, at an educational institution, equivalent training under supervision of an officer regularly detailed as PMS&T. Exemptions may cover part or all basic training. A freshman student who enters with one year of advanced military credit may be deferred in order that he may take subsequent training with his classmates.

b. Those who have completed equivalent training in the armed forces of the United States and have received honorable discharges therefrom. Exemptions may be based on service in the Army, Navy, Marine Corps, or Coast Guard, including all their various components. Six months of active duty is generally accepted as the equivalent of one year of basic training at the University. Active duty which is sufficient to justify exemption from the basic requirement may be insufficient when evaluated as a prerequisite for an advanced course.

c. Those who are physically unfit for military duty. A physical examination is prerequisite to initial enrollment either in a basic course or an advanced course.

d. Those who transfer to this University after having completed freshman and sophomore work in an educational institution which did not require military training during that period of their enrollment.

e. Students who have completed training in a reserve unit, such as the Naval Reserve or the Marine Corps Reserve. Freshmen enrolled in the reserve may have the University military requirement deferred for one year. Their reserve training during this year will be evaluated at the beginning of the sophomore year. Failure to acquire the normal total of equivalent training will be deemed sufficient justification for requiring the full two years of ROTC training thereafter.

8. The U. S. Government furnishes uniforms, texts, and instructional equipment. Advanced course students also receive \$75 per month while at camp and commutation of rations amounting to about \$27 per month for 18 months, providing this does not duplicate other allowances.

9. The texts, 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 \$20 will be required from each basic taking drill, \$5 from each basic who is not taking drill, and an undetermined amount not over \$10 from each first year advanced student when it becomes necessary to provide a guarantee to supplement the uniform allowance.

10. For the time being, cadets who obtain reserve commissions are liable for immediate active duty as Reserve Officers for tours of two years. Any Infantry officer on such active duty may embark on a competitive tour with a view of obtaining a permanent commission in the regular service. Present quotas indicate that about one-sixth of those on competitive tours will win permanent commissions. Reserve officers may transfer in grade to the National Guard to fill existing vacancies.

11. Students who have earned wartime commissions through other channels than the University of Nevada ROTC may be granted advanced credit toward graduation in any college. Each case will be considered by the PMS&T, primary consideration being given to the type of commission, scope of military education which qualified the student for his commission, and the nature of duty as a commissioned officer.

12. For the past four years, the University has been canvassed during the winter for those interested in obtaining appointments as cadets at the service academies. These appointments are for four years, all expenses paid by the government, with permanent commissions upon graduation. The list of academies includes West Point, Annapolis, and the Coast Guard Academy.

13. Participation in the ROTC program constitutes a continuing ground for deferment of induction under the selective service laws. At the time of initial enrollment, every cadet is considered as a prospective officer. The screening process operates continuously. Quotas available to the PMS&T are sufficient to assure deferment for all first year basics who maintain a satisfactory standing. At the end of the second year of basic training, those who are acceptable for the advanced courses are given the opportunity to sign a contract with the government binding them to (1) two years of advanced training including summer camp; (2) acceptance of a reserve commission if awarded at the end of the course; and (3) two years of active duty as a commissioned officer upon graduation if called. Deferment from selective service induction continues for those in good standing in the advanced courses. If the date of graduation from the University is later than the date of completion of the advanced course, deferment continues until graduation provided the University course does not take more than five years. The development of military leaders by means of the ROTC program is so important to the nation that provision is made for continued deferment even after the inception of a national emergency excepting members of the Enlisted Reserve Corps or National Guard enrolled in a basic course.

HONORS AND AWARDS FOR MILITARY EXCELLENCE

Distinguished Graduates—During the second year of advanced training, a limited number, not exceeding one-third of the class enrollment, will be announced as Distinguished Students. Upon graduation from both the ROTC and the University, some of these will be designated as Distinguished Graduates. Any Distinguished Graduate is eligible for a permanent commission in the regular service without further qualification. Those who aspire to regular commissions should consult with their military instructors regarding coordination of courses outside the Military Department.

Governor's Medal—Sec. 69(2), Chap. 153, Statutes of Nevada 1929, as amended by Chap. 214, Statutes of Nevada 1937, and further amended by Chap. 190, Statutes of Nevada 1945, makes provision for the presentation annually of a medal to be known as the "Governor's Medal," to a student of the military courses of the Military Department of the University of Nevada (ROTC), "whose proficiency in military training, observance of the rules of military courtesy and intelligent attention to duty has received the approbation of the Professor of Military Science and Tactics of the institution."

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 by the Governor of Nevada on Governor's Day.

President's Trophy. A gold medal will be awarded for the season's best individual record in ROTC rifle competition.

Kerak Temple Award. The three best-drilled first year cadets will receive gold, silver, and bronze medals. The name of the winner will be engraved on a permanent trophy which remains in the possession of the Military Department.

Scabbard and Blade Medals. At a competition to be held in April, the three best-drilled second year cadets will be chosen. Scabbard and Blade presents to them gold, silver, and bronze medals.

Reserve Officers' Association Award for Best Second Year Cadet. The name of the winner of the Scabbard and Blade Gold Medal will be engraved on a permanent trophy presented by the Reserve Officers' Association and retained in the Military Department.

Minor Sports Awards. Rifle shooting is a recognized minor sport. Teams are trained and competition is conducted under the supervision of the Military Department. Sweaters are awarded for the ten best season's records in intercollegiate competition.

UNIVERSITY REGULATIONS

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) Certificate of graduation from an accredited high school or other preparatory school.
- (2) Transfer from any university or college of recognized standing.
- (3) Entrance examinations.

ADMISSION BY CERTIFICATE FROM AN ACCREDITED PREPARATORY SCHOOL

Students desiring to enter the University should file their credentials with the Director of Admissions as soon as possible after the close of school in June in order that records may be examined to determine whether or not they meet the University entrance requirements. Receipt of credentials will be acknowledged and an application blank forwarded to the student. Registration may be delayed and the student greatly inconvenienced if the credentials are filed later than 30 days before the opening of the semester.

ADMISSION BY TRANSFER

All students who have attended college, even though the work

was not completed, are considered transfer students. A nonreturnable fee of \$3 for evaluation of transcripts is required of all transfer students. This fee is not to be applied to other 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.

Transfer students may be admitted on the basis of high school or college records or both.

An applicant from an accredited institution of collegiate standing must submit evidence that he has fulfilled entrance requirements for the University of Nevada for regular freshman standing, or that he has a grade average of "C" or better for all his collegiate-grade work and has completed 12 semester hours credit.

Nonresident students are not admitted as "Specials."

A student transferring from another institution where he is on probation is on probation when he enters the University of Nevada. Students who are dismissed at other colleges will not be admitted during the semester immediately following their dismissal.

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. 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. Final acceptance depends upon:

1. Quality of work at this university.
2. Possible duplication of credit.
3. Required subjects as determined by the Dean of the College.
4. Accreditation of institutions from which transfer credits are presented.

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.

A student may receive no more than two years' credit on advanced standing for graduation from an accredited two-year normal school or junior college. Such students will be expected to fulfill all requirements for graduation, including all special requirements outlined for the freshman and sophomore years.

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, Engineering or

Mining) and must have no entrance deficiencies, see Requirements For Admission To Regular Standing, below.

ADMISSION BY ENTRANCE EXAMINATION

Any graduate of a Nevada high school, or a graduate of an out-of-State high school who is a legal resident of this State (or whose parent or guardian is a legal resident of this State), who cannot meet the requirement of 6 quality credits, may, if he has no specific subject requirement deficiencies, qualify for admission by taking scheduled College Aptitude and Achievement Tests (see University Calendar). On passing these examinations and satisfying the Admission Committee through a personal interview that he is qualified to do University work, an applicant may be admitted as a regular student.

The College Aptitude Tests will be administered in the various high schools in the State in April. Achievement tests in natural science, social science, mathematics, and English and reading comprehension will be administered at several high school centers in June. They will be offered again at the University in September on Thursday and Friday preceding registration. Applicants wishing to enter the second semester should refer to the University Calendar for dates of examinations.

REQUIREMENTS FOR ADMISSION TO REGULAR STANDING

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

Limited Freshmen. Nevada high school graduates who have 13 or more but less than 15 acceptable high school units may be admitted as limited freshmen. Courses to remove these deficiencies shall take precedence over all other subjects in the University. Requirements pertaining to grades for these students are the same as for regular students. See also *Removing Entrance Deficiencies* below.

Restricted Freshmen. A restricted freshman is defined as a high school graduate who presents 15 acceptable units, but who is deficient in no more than 2 of the required units as specified below under *Specific Subject Requirements*. See also *Removing Entrance Deficiencies*, below.

Special Students. Nevada high school graduates and Nevada residents 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*, below.

Ten Academic Units. Of the 15 units required for admission, at least 10 must include acceptable academic subjects. See *Academic Subjects Acceptable for Admission* below.

Quality Units. Of the acceptable units presented for admission to first-year standing, six units must carry grades of 80 percent or better and four of the six must be in acceptable academic subjects.* See *Academic Subjects Accepted for Admission* below.

Deficiency in Quality Units. Any graduate of a Nevada high school, or a graduate of an out-of-State high school who is a legal resident of this State (or whose parent or guardian is a legal resident of this State), who cannot meet the requirement of six quality credits, may, if he has no specific subject requirement deficiencies (see below), qualify for admission by satisfying all three of the following conditions:

(1) Obtain a passing grade in the college entrance examinations. See *Admission by Entrance Examinations*, above.

(2) Obtain a satisfactory rating in the College Aptitude Test given by this University to all new students.

(3) Satisfy the Admission Committee through a personal interview that he is qualified to do university work.

Specific Subjects Requirements. Of the 15 units required for admission to regular standing, each college makes its own specific subject requirements, as follows:

THE COLLEGE OF ARTS AND SCIENCE

School of Education

English, 3 units.

Mathematics, 2 units, algebra and/or geometry.

THE COLLEGE OF ENGINEERING¹

All Schools

English, 3 units.

History, 1 unit.

Plane geometry, 1 unit.

Algebra, 1½ units.

Solid geometry or trigonometry, ½ unit.

Chemistry, or physics, 1 unit.

*This entrance requirement of six quality units will be required of all Nevada high school graduates, beginning with those who enter the fall semester of 1950.

¹It 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 unable to graduate in 4 years. Consult meaning of the term "restricted" freshman, and see also Mathematics 151 and Mathematics A. It is advised that the electives include 2 units of foreign language, preferably modern language.

THE COLLEGE OF AGRICULTURE

*School of Agriculture**School of Home Economics*

English, 3 units.

Mathematics, 2 units (algebra and/or geometry).

Natural science, 1 or 2 units.

Social science, 1 or 2 units.

} 3 units required.

REMOVING ENTRANCE DEFICIENCIES—

Time Requirements. 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.

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

In order to satisfy the specific subject requirements for entrance into his college (see above), the restricted freshman and special student must take the placement examination, and, if necessary, the noncredit course offered by the department concerned, see *English A, Mathematics A and B*. If a noncredit course is not offered by the department, college credit may be used. However, if the grade obtained in the college course is C or higher, the units need not be canceled, but may be used in a regular manner for college graduation.

Special Students. In addition to the method described above, entrance credits will be waived for special students who can meet the scholarship requirements set forth in the paragraph on obtaining regular status. See *Special Students* on page 89.

ACADEMIC SUBJECTS ACCEPTED FOR ADMISSION

<i>English</i> —	<i>Units</i>
1. (1st year).....	1
2. (2d year).....	1
3. (3d year).....	1
4. (4th year).....	1
5. Public speaking.....	1
6. Journalism.....	1
 <i>Languages</i> —	
1. French (1st year).....	1
2. French (Advanced).....	1-3
3. German (1st year).....	1
4. German (Advanced).....	1-3
5. Spanish (1st year).....	1
6. Spanish (Advanced).....	1-3
7. Latin (1st year).....	1
8. Latin (Advanced).....	1-3
9. Italian (1st year).....	1
10. Italian (Advanced).....	1-3
 <i>Social Sciences</i> —	
1. History (World).....	1
2. History (U. S.).....	1
3. History (Med. and Mod.).....	1
4. Civics.....	½ or 1
5. Economics.....	1
6. Sociology.....	1
 <i>Mathematics</i> —	
1. Algebra.....	1
2. Plane geometry.....	1
3. Advanced algebra.....	½
4. Solid geometry.....	½
5. Trigonometry.....	½
 <i>Sciences</i> —	
1. General science.....	1
2. Physics.....	1
3. Chemistry.....	1
4. Physical geography.....	½ or 1
5. Botany.....	½ or 1
6. Biology.....	½ or 1
7. Physiology.....	½ or 1
8. Hygiene.....	½ or 1
Commercial geography.....	½ or 1
Commercial law.....	½ or 1

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

Vocational Subjects. A maximum of five units in vocational subjects accepted by the high school toward graduation are acceptable for admission.

SPECIAL STUDENTS

STUDENTS WHO WISH TO BECOME CANDIDATES FOR A DEGREE

Requirements. Persons of serious purpose and good character 21 years of age or more and residents of Nevada, who wish to enroll for study at the University but find that their credentials do not satisfy the entrance requirements, may, at the discretion of the Director of Admissions, be admitted as special students. They will be required to submit a program of the work which they wish to undertake at the University and to have the program approved by the dean of the college in which registration is sought. This approval will largely depend on the evidence which the student submits as to his ability to pursue successfully the desired course of study. If the applicant has attended other colleges or universities previous to making application here, an official transcript of such work must be submitted before the application will be considered.

Registration. Special students will usually be expected to register in not fewer than 10 hours in courses of elementary character. 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 related to registration and scholarship.

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

A special student may matriculate as a regular Junior if he has satisfied the *specific subject requirements* for entrance into his college (see above), has satisfied all regular lower division requirements of his college course, and has successfully carried the regular prescribed course of his college during four semesters with an average of 2.5 grade points in all hours for which he has been registered, except cases of W, and has no unremoved conditions or failures. To retain the status of special student for a longer period than 4 semesters requires the permission of the dean of the college.

STUDENTS WHO ARE NOT CANDIDATES FOR A DEGREE

Persons of serious purpose and good character who are 21 years of age or more who wish to enroll for study at the University

may, at the discretion of the Director of Admissions, be admitted as special students and classified as *adult specials*. In general, such students will wish to take a few definite courses for training in one specific field of study, or several general courses for their cultural value. If the student has a bachelor's degree and does not wish to work for a master's degree, he may be registered as a *graduate special*.

VISITORS

With the consent of the dean and the instructor concerned, visitors may be enrolled. They shall be governed by the regular university rules and are due to pay a visitor's fee. 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.

REGULATIONS FOR REGISTRATION

1. **REGISTRATION PROCEDURE.** In accordance with the regulations prescribed by the Administrative Council the student must (a) present his admission card in order to 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 man, adjust his classification for military training with the Professor of Military Science and Tactics, (d) make out class cards, (e) secure the approval of the adviser, (f) present his admission card in order to receive the approval of the dean of his college, (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 is expected to complete his registration on registration day.

c. *Late Registration.* All registration must be completed by noon Saturday of the second week of the semester except in special cases approved by the Dean of the College concerned.

3. FEES FOR DELAYS IN REGISTRATION—

a. *Delay in Completing Registration.* A student who does not complete his registration on registration day may be subject to a late registration fee. (See page 69.)

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 Dean of the College concerned.

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 his adviser and 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, the adviser, and 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, F when the student is not passing. The symbol W is not a scholarship grade and shall not be used in any manner in determining a student's scholarship record.

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, and to the adviser. 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. *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. **FEEES 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 dean of the college concerned.

6. **REBATES.** A rebate of two-thirds of all *laboratory, library,*

and *hospital 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.

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.

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 101-102.* All students must register for English 101 and 102 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 two-year basic course of military training unless excused therefrom by the PMS&T. This basic course is scheduled for both semesters of the freshman and sophomore years.

d. *Political Science 301-302.* The State law of Nevada provides that no student shall receive a diploma of graduation or a teacher's certificate without previously having passed a satisfactory examination upon the Constitution of the United States and of Nevada. Under this provision it is necessary for students to take at an appropriate time Political Science 301 and 302.

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. Any student may enroll for a program one-half to three credits lower than the program usually required by his course. To reduce total credits by more than three from the required course, the student must have the permission of the dean of his college.

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. This rule applies also to changes in registration.

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 and to allow a prospective graduate as many as two hours beyond the specifications of his course in order to give him sufficient hours for graduation.

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 300 AND ABOVE. No course with the number 300 or above will be open to freshmen or sophomores without the written recommendation of the chairman of the department and the approval 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.

(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. A student on probation, however, may not be classified as a senior.

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 Registrar and the deans concerned.

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, of incomplete, 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, an incomplete I, and a failure F. W indicates withdrawal without failure; WF indicates withdrawal from the University with failure.

b. *Definition of Marks.* A, *excellent*, is that quality of work which may generally be expected from approximately the best ten students out of one hundred in any given course or subject; B, *good*, that quality produced by the next best twenty students; C, *average*, the quality produced by the middle forty students; D, *passing*, the quality produced by the twenty students just below the middle forty. 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. I is used when a student has for acceptable reasons been unable to complete the required work by the close of the semester. Whenever an I is given, the instructor must state upon the final report sheet the reason why the student was unable to complete the work. WF is used only when a student withdraws from the University and is failing in one or more courses.

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 grade¹ of his students by any method he may consider best adapted to his course. All final grades are to be submitted to the chairman of the department concerned before they are handed to the Registrar, but the chairman of the department shall not have the right to change the grades of his instructors.

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. In case of emergency when

¹Final 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.

it may prove an unreasonable hardship to a student to take a final examination at the scheduled time, the student, upon written petition to the Administrative Council, may be granted such dispensation as the Council may determine.

5. **SCHOLARSHIP AVERAGE.** In determining scholarship average the sum of the grade points received for each hour for which the student is registered shall be divided by the total number of hours for which the student is registered. In determining averages, E and I shall be counted as carrying no grade points. 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 GRADE.** After the class records have been filed with the Registrar, a grade may be changed only to correct a clerical error. Corrections of clerical errors in grades shall be submitted in writing to the Registrar by the instructor concerned after approval by the chairman of the department and the dean of the college.

7. **REPEATING A COURSE FOR GRADE POINTS.** A student may repeat a course in which he has received a passing grade in order to gain additional grade points, but he cannot gain additional credit by repeating such a course.

8. **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 student who desires to remove a term condition must present to the instructor under whom the deficient work is to be completed a statement from the Registrar certifying that he is eligible and that the fee of \$3 has been paid. The condition is removed when the student has satisfied the requirements of the department, and the instructor concerned has filed with the chairman of his department and the Registrar a written statement of completion.

c. *Fee for Removing.* Application for the removal of a condition will not be accepted by the Registrar until a fee of \$3 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.

9. REMOVING AN INCOMPLETE—

a. *Procedure.* A student may remove an incomplete by making up work which, for acceptable reasons, he has been unable to finish by the close of the semester. The incomplete is removed when the student has completed the work of the course and the instructor concerned has filed with the chairman of his department and the Registrar a written statement certifying the completion of the course and assigning a grade to it.

b. *Time for Removing.* Incomplete work must be completed by the close of the student's first semester of residence after the *I* was incurred.

c. *Grade after Removal of Incomplete.* When an incomplete course has been completed according to the rules, the student will receive whatever grade the instructor deems proper. If the course is not completed within the specified time limit, it will be graded *F*.

10. REPEATING A FAILED COURSE—

a. *Required Courses.* Any required course which has been failed must be repeated in class as soon as the course is repeated in the University program; such a course takes precedence over all others in the student's program. Failures, therefore, cannot be made up by correspondence or by extension and can be made up in other institutions only in special cases approved in writing by the chairman of the department and the dean of the college concerned.

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

11. PROBATION—

a. *Conditions Resulting in Probation—**Scholarship—*

(1) A student deficient 12 or more grade points is on probation.

(2) At midsemester a student must be passing in at least two-thirds of his work or he is on probation.

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

(4) A student transferring from another institution where he is on probation is on probation when he enters the University of Nevada.

Conduct—

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

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 unless he has a grade-point average of 2.0 or better for the preceding semester and the approval of his dean.

(2) A student on probation may not be classified as a senior.

c. *Release from Probation*—

A student is no longer on scholarship probation when he is deficient fewer than 12 grade points on his entire University of Nevada record.

A student on conduct probation remains on probation until removed therefrom by proper authority.

12. SUSPENSION—

a. *Conditions Resulting in Suspension*—

Scholarship—

(1) A student deficient 22 or more grade points at the end of any semester is suspended from the University.

(2) If the class preparation, attendance, or progress of a student toward a degree is deemed unsatisfactory, the student may be suspended from the University at any time.

Conduct—

(3) A student may be suspended or disqualified from the University by action of the appropriate committee any time his conduct warrants such action.

b. *Penalties for Suspension; Readmission*—

(1) Students suspended from the University may apply for readmission only after an interval of one semester. With the consent of the Committee on Scholastic Standing, however, a suspended student may enter the summer sessions at the University of Nevada and may be considered for readmission in the following fall semester if he has earned at least eight credits and a grade-point average of 2.0 or better in those summer sessions.

(2) When a student is readmitted after suspension, he is on probation.

13. DISQUALIFICATION—

a. *Conditions Resulting in Disqualification*—

(1) A student readmitted after suspension is disqualified whenever his grade-point average at the end of any semester is less than 2.0 unless he has reduced his total grade-point deficiency to less than 22.

(2) After he has reduced his grade-point deficiency below 22, a student is disqualified whenever he is again deficient 22 or more grade points at the end of a semester.

b. *Penalty for Disqualification*—

A disqualified student may not register in the University for credit, either in the regular or the summer sessions.

14. APPEAL TO COMMITTEE.

Any student on probation or suspended or disqualified may appeal to the Committee on Scholastic Standing, which may grant a change of status if the student's unsatisfactory record is due to reasons for which he is not personally responsible.

15. 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 at the University of Nevada except cases of W and WF.

b. *Credit-Hour Requirements*—

In the College of Arts and Science, 126 credits are required for graduation, except for the B.S. in chemistry and chemical technology which require 130.

In the College of Agriculture, the School of Agriculture requires 132 credits for graduation. The School of Home Economics requires 126 credits for graduation.

In the College of Engineering, 144 credits are required for graduation.

In the Mackay School of Mines, 144 credits are required for graduation.

The value of a *credit* is defined as three hours of work per week for one semester (usually one class hour plus two hours of preparation).

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 101 and 102; the two-year basic course in military science for men, and in physical education for both men and women, and Political Science 301 and 302 or Political Science 101 and 102. (*See History and Political Science in Courses of Instruction.*)

16. MID-SEMESTER REPORTS. At mid-semester instructors will report students whose grades are D, E, F, and I with a statement in each case of the reason for the low mark. When because of their low grades students are subject to probation or suspension, they will be required to meet with the Committee on Scholastic Standing.

17. 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 credit the student must obtain an application from the Admission Office. When this application is properly signed by the student, the Instructor, the Chairman of the Department, the Dean of the College, and carries the Comptroller's Stamp showing that the fee of \$3 is paid, it should be returned to the Chairman of the Committee on Admissions and Advanced Standing. A certificate of eligibility to take the examination will be issued, signed by the Chairman of the Committee. When this certificate is presented to the Instructor, the examination is authorized.

The Instructor will record the semester hours credit, the grade, and his signature on the certificate and together with a copy of the examination and the student's examination paper return it to the Admission Office.

No student will be permitted to take such an examination in a required subject which has been failed in class (see *Repeating a Failed Course*).

The amount of credit granted on the basis of such special examinations may not exceed the regular work of one semester in the college in which the student is registered.

No student will be permitted to take such an examination during a semester in which he has already enrolled for the maximum number of hours permitted.

No Freshman or Sophomore student may take such an examination in Upper Division Courses.

18. 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 AND DIPLOMAS*

The College of Arts and Science confers upon its graduates the degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Science in Business Administration, Bachelor of Science in

*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.

Chemistry or Chemical Technology, and Bachelor of Arts in Journalism.

Upon graduates of the College of Engineering are conferred degrees as follows: Graduates of the Schools of Mechanical Engineering, of Electric 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 Mackay School of Mines receive the degree of Bachelor of Science in Mining Engineering, Metallurgical Engineering or Geological 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.

A charge of \$8 is made for all baccalaureate diplomas. If two diplomas are granted in any one year, the charge will be \$8 for the first and \$7 for the second. The charge for a teacher's diploma, if received in addition to a baccalaureate diploma, is \$1.

ADVANCED DEGREES. For advanced and graduate degrees, see *Graduate Study* in the Index.

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 who have completed three years of approved work here may complete the work of the Senior year by satisfactory work in a professional school.*

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 the student has completed, in residence and in that college, credit equivalent to the requirements for one full year's work. Attendance at the Summer Sessions is construed as resident study, three summer sessions at the University of Nevada being considered the equivalent of one semester's residence.

UNDERGRADUATE THESES

Whenever a thesis is required for an undergraduate degree in any department, school, or college of the University, and such

thesis is to be filed in the University Library, the format of the thesis must conform to the requirements determined by the Graduate Committee for master's theses, in such matters as general style and mechanics, size and quality of paper, and type of binding.

MISCELLANEOUS INFORMATION

In this section of the catalogue is brought together various information which may be of interest for reference if printed in some detail, but which seems not suited to inclusion in this form in the earlier portions of the book. The section provides information concerning publications, lectures, organizations, foundations, prizes, awards, scholarships, and gifts to the University; for page references, see the Index under these titles.

PUBLIC LECTURES

The University endeavors to provide its students with opportunity to hear important figures of the day and to become acquainted with music and art. This endeavor is furthered by civic organizations in Reno, which make available various lecture and concert series, most of which are open to university students at reduced rates. The University presents lecturers of eminence, either through regular Assemblies, or through the agency of various organizations associated with the University. Of special note are the Fulton Lectures, provided through the Robert Lardin Fulton Lecture Foundation.

UNIVERSITY PUBLICATIONS

A variety of publications carry the name of the University, some because they are published directly by the University for organizational purposes or as a service to the State and the public, some because they are published by research bureaus more or less intimately associated with the University, some because they are the official publications of University students.

Student publications are under the general supervision of the A. S. U. N. Other University publications are coordinated through the Faculty Publications Committee, which undertakes to assure that all publications are worthy the name of the University. The Research Committee grants aid in research leading to publication, and in some cases supervises publication for the University. In addition, many individual faculty members are engaged in publication, submitting their work to commercial publishers.

A brief survey of publications associated with the University follows:

OFFICIAL PUBLICATIONS

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

The Alumnus—The official publication of the Alumni Association.

STUDENT PUBLICATIONS

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

The U. of N. Sagebrush—A weekly newspaper issued throughout the University year by The Associated Students of the University of Nevada.

A. S. U. N. Student Handbook—The official handbook of the student body, published annually by The Associated Students of the University of Nevada.

ORGANIZATIONS

Life at the University of Nevada is enriched by a variety of organizations. Some of these encourage and direct the scientific, scholarly, artistic, or humanitarian interests of students and of the faculty associated with the University. Some provide honorary recognition of achievement. Others are purely social, or combine learned interests with social recreation. Brief descriptions of these organizations follow.

THE ALUMNI ASSOCIATION

The Alumni Association was organized on June 1, 1895, to perpetuate undergraduate ties, promote good fellowship, and to advance and protect the interests of the University of Nevada. On December 23, 1947, the Association was incorporated under the laws of the State of Nevada, and its official title is now The University of Nevada Alumni Association, Inc.

All graduates and former students of the University are eligible for membership in the Association. Active membership is maintained by payment of dues. Annual membership is \$3, and a life certificate is \$100. The Association now operates on a calendar year with a general meeting and election of officers held each Homecoming.

In 1945 the policy of establishing active chapters in the principal cities of Nevada was inaugurated. The first active chapter in the State was established on November 25, 1945, at Las Vegas. Chapters have also been chartered at Elko and Winnemucca. In addition, there are chapters in Washington, D. C., and in Southern California (Los Angeles), and in the San Francisco Bay area.

The general affairs of the Association are managed by an Executive Committee composed of a maximum of fifty directors who are elected each Homecoming along with the Association officers. Regular meetings of the group are held on the third Wednesday of each month in the Alumni Office on the campus.

All matters pertaining to the Association should be addressed to: Alumni Association, University Station, Reno, Nevada.

Officers for 1950-1951

John Benson, '36.....	President
David Goldwater, '39.....	Vice President
Walter States, '38.....	Past President
Max Dodge, '47.....	Director of Alumni Office

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."

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 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 A. S. U. N. operates the University Bookstore, contributing profits to the Student Union Building Fund.

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 cooperation. The dues are 50 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 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. The society was founded in March 1935.

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.

THE HUMANITIES GROUP

The Humanities Group is an organization of men on the faculty actively engaged in research in language, literature, history, mathematics, philosophy, and social subjects. They meet once a month to read scholarly papers and to discuss methods of research in the humanities.

SIGMA XI CLUB

This organization is composed of members of the Society of the Sigma Xi, national honorary scientific society, whose purpose is the promotion of scientific research. Regular meetings are held throughout the year for the purpose of presentation and discussion of local research projects. Although active membership is limited to local faculty members and others who are members of the national society, the aim of the Club is to stimulate and foster research throughout the University. Each year the Club sponsors a lecture by a nationally known scientist.

HONORARY SOCIETIES

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.

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.

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.

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.

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. Open meetings are held for all those interested in the study of literature. The Nevada chapter received its charter in 1931.

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.

Delta Delta Epsilon—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.

Delta Sigma Rho—A national honor society composed of graduate and undergraduate forensics students. Admission is restricted to those who have achieved an outstanding record in intercollegiate forensic competition. Its prime object is to emphasize the value of effective and successful speech and debate. The Nevada chapter was established in 1948.

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

Kappa Tau Alpha—A 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.

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.

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.

Phi Alpha Theta—A national honorary society whose purpose is to encourage excellence in history study, by furnishing a goal and stimulus for students in this field. Eligibility for election is based on completion of twelve hours or more of work in history with satisfactory scholastic average.

Phi Kappa Phi—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. The local chapter was established in 1912.

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.

Sagers—A local service organization, members of which are chosen from among outstanding upperclassmen. 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.

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 Departments of Military Science and Tactics of American Universities and Colleges into closer relationship; to preserve and develop the essential qualities of efficient officers; to promote good fellowship among cadet officers; and to prepare them to take an active and influential

part in the community in which they may reside and to disseminate intelligent information concerning the military requirements of our national defense. The local unit, Company C, 7th Regiment, was organized May 14, 1929.

Sigma Delta Chi—A national professional journalistic fraternity. Members are elected annually from among upperclassmen preparing for the profession of journalism and with above-average scholarship. The Nevada undergraduate chapter was chartered in the spring of 1948.

Sigma Delta Psi—A national honorary fraternity in athletics, and is under the direction of the Physical Education Department. Requirements for membership are the passing of thirteen physical tests, which include track, swimming, gymnastic, football, and baseball events. Membership is open to any student regularly enrolled in the University.

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.

DEPARTMENTAL CLUBS

The Aggie Club—Founded by the agricultural students in 1909, the Aggie Club 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.

American Institute of Electrical Engineers—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.

American Society of Civil Engineers—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.

American Society of Mechanical Engineers—The University of Nevada Student Branch of the American Society of Mechanical Engineers was organized in January 1923. All students registered in mechanical engineering are eligible to membership. Meetings are held monthly to enable students to better understand the profession they have chosen. At the meetings student technical papers are presented and discussed, technical films are shown, or the branch is addressed by some prominent

member of the profession. This Branch sends representatives to the annual group student meeting held each spring at one of the seven Pacific Southwest Student Branches.

Associated Engineers—A society which includes the students of the College of Engineering and the Mackay School of Mines. The purpose is to plan such activities as Engineers' Day and meetings which are of interest to all engineering students.

The Chemistry Club—In 1941 the Chemistry Club applied for and received its charter as the University of Nevada Chapter of the Student Affiliates of the American Chemical Society. All students registered for the degree Bachelor of Science in Chemistry or in Chemical Technology or who are majoring in chemistry and whose chief academic interest is in the field of chemistry are eligible for active membership. Associate membership is open to a limited number of those who are interested in chemistry, but whose course of study does not make them eligible for active membership. The purpose of the organization is to keep its members in touch with present activities and development in the chemical field and to foster interest in the science of chemistry. From its membership, elections are made each year to the honor society, Sigma Sigma Kappa. Meetings are held on the second Tuesday of each month.

Chess Club—A group of undergraduate students and faculty members organized to develop an interest in the game of chess among University of Nevada students.

The Circle—A group of male undergraduate students organized to further creative and critical literary activity at the University of Nevada.

Circle Francais—Open to students of the University who have studied French for three semesters, or who speak French well enough to profit from the meetings. Organized lectures on French culture are given throughout the year.

The Commerce Club—Open to any interested student, especially one following a course in economics or business. Leading businessmen discuss their particular fields at each of the monthly meetings.

The Crucible Club—This is a student organization of the Mackay School of Mines. The club meets once a month for addresses by visiting engineers on mining, metallurgical, and geological subjects. The Crucible Club is an affiliated student society of the American Institute of Mining and Metallurgical Engineers.

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 monthly in the gallery in the Art Buildings.

German Club—A club organized to awaken an interest in the knowledge and use of the German language and thereby to promote a study of German culture.

The Home Economics Student Club—A social and professional organization with membership in the National American Home Economics Association. Open to all students in Home Economics; meetings bimonthly.

International Relations Club—A group of students interested in bringing about better understanding and friendship among the foreign and American students at the University.

The Mathematics Club—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.

Musical Organizations—Organizations for the promotion of vocal and instrumental music are heartily encouraged. The groups at present are 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. A maximum total of 12 credits shall be allowed any student for participation in the three musical organizations (band, chorus, and orchestra), to be distributed as the student prefers, with not more than eight credits in any one organization. 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.

Orchesis—This organization attempts to bring modern dance to the attention of Reno and its neighboring schools and communities. The group is also active in sponsoring concert artists in order to broaden the interest in modern dance.

Paniwallas—Open to any University student interested in developing ability in synchronized swimming. The group presents at least one aquacade or equivalent water exhibition annually.

"Pems"—Group of all physical education majors and minors, organized to promote friendship, good sportsmanship, and provide an organization for the management of matters concerning the general welfare of this specialized field.

The Nevada Polkateers—A social organization for the enjoyment of and participation in folk and square dancing. Membership is open to all students and staff of the University. Meetings are held weekly.

ROTC Corps of Sponsors—The Corps of Sponsors is an organization closely allied with the ROTC Corps of Cadets. They have a distinctive uniform, drill with the Cadets, and stage exhibition drills. The unit is limited to 45 girls and 5 alternates. Election and tryouts are staged during the month of September subsequent to the opening of school.

Ski Club—Organized to further the sport of skiing on the University of Nevada campus, through organized activities.

The University of Nevada Press Club—A professional and social organization of students in journalism and members of the staffs of the campus publications. Elections are held twice each year.

The University of Nevada Rifle and Pistol Club—An organization which sponsors all organized competitive shooting activities, indoors and outdoors. It is affiliated with the Nevada State Rifle and Pistol Association and with the National Rifle Association.

Women's Recreation Association—An organization which sponsors a varied program of all types of recreational activities, including archery, badminton, basketball, bowling, dancing, golf, hockey, riding, rifling, softball, roller skating, swimming, tennis, and volleyball. Under the W. R. A. there are three honorary clubs for special activities: Orchesis-dancing, Paniwallas-swimming, and Saddle and Spurs-riding.

RELIGIOUS ORGANIZATIONS

Banyan Club—Established on the Nevada campus in 1949 to promote good times and activities in wholesome surroundings, among friends who uphold the standards and ideals of the Church of Jesus Christ of Latter-Day Saints.

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

The 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.

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.

Y. W. C. A.—The Young Women's Christian Association has a branch organization among the students. 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.

SOCIAL ORGANIZATIONS

Artemisia Association—A group which consists of all women students residing in Artemisia Hall. The purpose of the Association is the student control of group living and social activities. The executive officers, elected by the girls, coordinate student government with University policies.

Fraternities—The following fraternities have chapters, the figures in parentheses giving the dates charters were established at this University: National fraternities—Sigma Nu (1914), Sigma Alpha Epsilon (1917), Phi Sigma Kappa (1917), Alpha Tau Omega (1921), Theta Chi (1925), Lambda Chi Alpha (1929); local fraternity—Sigma Rho Delta (1942), Delta Sigma Phi Colony (1948), Sigma Pi Colony (1947).

The Highlanders—A local organization whose membership is composed of student veterans living in the veterans' dormitories at Highland Terrace. Its purpose is to promote a well rounded student life for the members through organized participation in the various activities of the campus, both social and nonsocial.

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.

Manzanita Association—This is comprised of the women residents of Manzanita Hall. The executive officers, elected by popular vote, direct the student government and social activities of the Association.

Sororities—The following sororities have chapters, the figures in parentheses giving the dates chapters were established at this University: National sororities—Delta Delta Delta (1933), Pi Beta Phi (1915), Gamma Phi Beta (1921), Kappa Alpha Theta (1922).

Sundowners of the Sagebrush—The organization is composed of men who are elected to membership because they have exhibited the characteristics of good fellowship. Membership is not restricted to undergraduate students.

AWARDS AND SCHOLARSHIPS

Partly through provisions made by the Board of Regents and the University, and partly by benefactions from organizations and individuals, a considerable number of scholarships, awards, and other advantages are available to students. Some of these awards are in the form of medals or honors, intended to provide recognition for superior work. Others are grants in aid, intended to assist students during the course of their studies, especially students who show exceptional promise. These funds are administered through the faculty Scholarships and Prizes Committee, which is empowered to receive and consider applications. Unless otherwise specified, all scholarships will be administered in two equal payments. These payments will be made six weeks after the registration day for each semester. A list of foundations, scholarships, awards, and prizes, with the specifications required by each will be found below. (See also *Honors and Awards for Military Excellence*, pp. 81, 82.)

UNIVERSITY SCHOLARSHIP HONORS

HONORABLE MENTION

Semester Honor Roll

A scholarship honor roll which includes the upper five percent of the undergraduate student body who have completed at least fifteen semester hours is announced by the Registrar at the end of each semester.

Senior Honor Roll

At commencement an announcement is made by the Committee on Scholarships and Prizes of those seniors who have taken an average of fifteen hours each semester with an average grade equal to or above the lower limit of the fall semester honor roll.

Four-Year Honor Roll

At commencement an announcement is made by the Committee on Scholarships and Prizes of those graduating seniors having maintained an average grade equal to or above the average of the lower limits of the past seven honor rolls.

MEDALS

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 chairman of the department of foreign languages, is most deserving of this honor.

THE HERZ GOLD MEDAL AWARD

Established 1923

R. Herz & Brothers, Reno jewelers, award a gold medal annually to that member of the graduating class who has attained the highest average scholarship throughout his college course and has taken all of the required work for his degree (to within 8 units) at the University of Nevada. In the event of a tie, the University is privileged to buy a second medal at cost.

PRIZES

THE ALBERT SENIOR PUBLIC SERVICE PRIZE

Established 1924

These prizes were founded by Dr. Henry Albert, formerly Director of the State Hygienic Laboratory, and perpetuated in his memory by Mrs. Albert.

Two prizes of \$37.50 each are awarded annually at commencement to two outstanding students on the basis of good scholarship, good character, and worthy service to the University or the community.

The winners of the Albert Senior Public Service Prizes are chosen by the chairmen of the Faculty Committees on Scholarship and Athletics, the Dean of Women, the Master of Lincoln Hall, and the President of the University.

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN MEMBERSHIPS

Established 1944

The Board of Directors of the American Association of University Women annually selects three graduating senior girls to receive honorary memberships. The selection is determined upon the recommendation of the Deans of the University and the names of the recipients are announced on Commencement Day.

BENNETT NEWS PHOTOGRAPHY AWARD

Established 1950

In 1950, Charles Bennett of Reno, Nevada correspondent of International News Photos, set up an annual award of a week's all-expense training in news photography in San Francisco for a promising student in pictorial journalism in the Department of Journalism.

The recipient, who is chosen by the chairman of the Department, spends the week working with top staff members of the International News Photo, Acme, Associated Press, The Call Bulletin, The Examiner, and other San Francisco newspapers to develop and increase his skill in news reporting by camera.

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 Honorable 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.

GINSBURG JEWELRY COMPANY AWARDS

Established 1939

At the beginning of the second semester of each year the Ginsburg Jewelry Company of Reno awards a fine watch of seventeen or more jewels to a man and a woman of the sophomore class in regular standing who have been in residence at the University for three consecutive semesters. These students must possess outstanding scholarship records, character, high personal conduct, and Americanism. The selection of the winners is made by the University Committee on Prizes and Scholarships.

C. F. AND FRANK WITTENBERG MEMORIAL PRIZE

Established 1950

By the will of Marie W. Burdick, about \$1,700 was bequeathed to the University of Nevada for the establishment of the C. F. and Frank Wittenberg Memorial Prize. This prize of \$100 is to be awarded at commencement to the senior in the College of Agriculture who has attained the highest scholastic average for the four-year course.

SCHOLARSHIPS*

1. JEWETT W. ADAMS SCHOLARSHIP FUND

Established 1942

In conformance with the will of Mrs. Emma Lee Adams, wife of the late Honorable Jewett W. Adams, former governor of Nevada, the Jewett W. Adams Scholarship Fund of \$40,000 was established. The interest on this money is used to assist deserving students.

The Committee on Scholarships and Prizes presents the awards with attention to the following qualifications:

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

2. ARMANKO OFFICE SUPPLY SCHOLARSHIPS

Established 1936

The Armanko Office Supply Company of Reno offers two

*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.

scholarships of \$100 each to students in the Departments of Chemistry and Physics. These scholarships are awarded on Commencement Day by the heads of the Departments of Chemistry and Physics and the Chairman of the Committee on Scholarships and Prizes to students possessing the following requirements:

1. Upright moral character.
2. General scholarship.
3. Outstanding scholastic attainment in the department.
4. Evidence of interest in the field.
5. Completion of a minimum of four hours in the department during the past school year.
6. Financial need is considered only when two students otherwise possess equal qualifications.

One half of this award is paid in the fall and the other half in the spring semester.

3. ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP

Established 1918

The Associated Women Students of the University of Nevada present an annual scholarship of \$50 to a woman student who possesses excellent character, good scholarship, and leadership ability.

This scholarship shall be awarded on Commencement Day by the Committee of Scholarships and Prizes from recommendations submitted by the Associated Women Students' Council. The award shall be made to a freshman, sophomore or junior student who has completed at least one year of study at the University of Nevada.

4. JOSEPHINE BEAM SCHOLARSHIPS

Established 1944

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 Education Fund. The yearly income of approximately \$3,000 is shared equally by the University of Utah and the University of Nevada.

These scholarships are awarded to incoming freshmen by the President of the University of Nevada, the State Superintendent of Public Instruction, and a representative of the trustee, on the basis of high school scholastic record, principal's recommendation, and college aptitude tests.

Each scholarship is paid in two installments: one each semester. The Committee reserves the right to withhold the second payment should the student's first semester record prove unsatisfactory.

5. THE HORACE P. BOARDMAN SCHOLARSHIP IN
CIVIL ENGINEERING

Established 1941

Fred A. and Betty R. Roemer provide a \$100 annual scholarship known as the Horace P. Boardman Scholarship in Civil Engineering.

The individual selected must possess good character and good scholarship and be in need of financial assistance. Also, he should have earned either junior or senior standing as a duly enrolled student in the University of Nevada. Both the principal and alternate are chosen by the Civil Engineering faculty.

One half of this scholarship is payable each semester, provided the winner is regularly enrolled as a student at the University.

6. THE FRANK O. BROILI SCHOLARSHIP IN
ELECTRICAL ENGINEERING

Established 1942

The late Mrs. Francis Leonard Broili Bradley of Reno 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.

7. THE MARYE WILLIAMS BUTLER SCHOLARSHIP

Established 1921

In memory of her daughter Marye Williams Butler, a graduate of the University of Nevada Normal School, class of 1899, Mrs. Sophia E. Williams, Nye County, established a scholarship fund of \$1,000.

The income from this fund, payable in the fall semester, is to be awarded by the University Committee on Scholarships and Prizes to that student who has completed mathematics through calculus with an average grade of "B" in all work in mathematics, who has earned due credit in this minimum of mathematics not later than the second semester of his junior year, and who receives no other scholarship.

8. THE A. W. (BERT) CAHLAN SCHOLARSHIP

Established 1947

A. E., John F., and Mrs. Marion Cahlan established a scholarship of \$200 to be awarded at Commencement to a senior, who, during his or her entire course at the University of Nevada, has manifested the most outstanding qualities of leadership and character and proved himself or herself to be the best citizen of the University community. In selecting the student who is to receive this award, not only is the number of activities in which

the student has been engaged to be taken into consideration, but also loyalty to the highest ideal and traditions of the University and altruistic service in all activities in which he has participated.

This scholarship will be awarded by a committee named by the donors, the award to be approved by the President of the University.

9. THE AZRO E. CHENEY SCHOLARSHIP

Established 1922

The Honorable Azro E. Cheney bequeathed \$5,000 in trust to the University of Nevada to be controlled and invested by the Board of Regents. The income from this fund is awarded by the University Committee on Scholarships and Prizes at each annual commencement to that member of the freshman or sophomore class who is a *bona fide* resident of Nevada and who is certified by the chairman of the Department of English as being the best student in English during that year. Both character and improvement are also considered.

One half of this award is payable in the fall term and the other half in the spring.

10. THE CHARLES ELMER CLOUGH SCHOLARSHIPS IN ENGINEERING

Established 1926

Mr. Charles Elmer Clough of Reno established two scholarships in engineering, each of which carries an annual value of one-half of the income received from the Charles Elmer Clough Trust Fund during the calendar year from one University commencement to the next. The scholarships are awarded at the end of each University year, beginning with the award in May 1927.

The winners are chosen by the head professors of the Schools of Civil, Electrical, and Mechanical Engineering from the students enrolled in those schools. The two recipients must be the best all-round students, must be self-supporting in whole or in part, and be of good character and of good scholarship. One of them must have earned senior standing, and the other junior standing, in the University of Nevada.

11. CHARLES FRANCIS CUTTS SCHOLARSHIP

Established 1950

By the will of Charles Francis Cutts, about \$72,500 was bequeathed to the University of Nevada for the purpose of establishing the Charles Francis Cutts Scholarship Fund, which is to be controlled and invested by the Board of Regents. From the income of this fund a scholarship of \$1,000 is awarded at Commencement to a graduate of the University of Nevada who has high moral character and an outstanding scholastic record and is

planning to enroll in graduate work at the University of Nevada.

The University Committee on Scholarships and Prizes awards this scholarship annually upon the recommendation of the chairman of the department in which the student will do the major portion of the graduate work.

12. THE DAUGHTERS OF THE AMERICAN REVOLUTION
SCHOLARSHIP

Established 1939

The Nevada Sagebrush Chapter (Reno) of the Daughters of the American Revolution grants an annual scholarship of \$50 to either a man or a woman 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.

One half of this award is paid each semester provided the winner is registered in the University.

13. THE DELTA DELTA DELTA SCHOLARSHIP

Established 1949

Theta Theta chapter of Delta Delta Delta offers an annual scholarship of \$150 to a woman student at the University of Nevada. In selecting the recipient, the following requirements are given attention:

1. Financial need.
2. General scholarship.
3. Upright moral character.
4. Campus leadership ability.

This scholarship is announced on Commencement Day by the Chairman of the Committee on Scholarships and Prizes. One-half of the scholarship is paid in the fall semester and the other half in the spring semester.

14. THE THOS. E. DIXON SCHOLARSHIP

Established 1945

This scholarship fund of \$3,000, a gift of Mr. Dixon of Caliente to aid deserving students, is administered jointly by the faculty of Lincoln County high school and the Chairman of the Committee of Scholarships and Prizes. The high school faculty chooses the recipient, while the chairman of the University committee determines when payments are to be made.

15. EPSILON SIGMA PHI 4-H CLUB SCHOLARSHIP

Established 1940

The Nevada Chapter of Epsilon Sigma Phi, honorary society of agricultural extension workers, established the Epsilon Sigma Phi 4-H Club Scholarship of \$50 in the College of Agriculture of the University of Nevada.

The Dean of the College of Agriculture and two members of the staff of the University's Agricultural Extension Service selected by Epsilon Sigma Phi, choose as the recipient of the scholarship that boy or girl who has achieved the most in his Nevada 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. One half is paid one month after the beginning of both semesters of his freshman year.

16. THE MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS

Established 1938

By successive gifts, Major Max C. Fleischmann has provided approximately \$175,000 worth of securities as a scholarship fund. The income from approximately \$118,000 goes to regular University of Nevada students, and that from approximately \$57,000, to incoming freshmen.

The regular students must fulfill the following requirements:

1. Need financial assistance to the amount of the scholarship in order to continue in the University.
2. Give promise of becoming effective citizens upon graduation and be worthy of such assistance.
3. Show qualities of leadership, good character, high personal conduct, and a spirit of cooperation by active participation in a student activity or activities.
4. Have excellent scholastic records.

These scholarships are paid in three equal installments during the school year.

The freshmen are selected on the following basis:

1. High school scholarship record of seven semesters.
2. High school principal's recommendation.
3. College aptitude test.

One half of these scholarships are awarded in the fall and the other half in the spring semester, providing the student has made a creditable record during his first term of attendance at the University.

17. THE GRAND ARMY OF THE REPUBLIC SCHOLARSHIP

Established 1934-1935

The Woman's Relief Corps of the Department of California and Nevada established the Republic Memorial Scholarship Fund, the interest of which is used for scholarships.

The income of the Relief Corps' fund, supplemented by gifts from the Nevada Relief Corps at Carson City, Reno, and Virginia City, provides a \$100 scholarship.

One half of this scholarship is paid in the fall and the other half in the spring semester.

18. THE CARL RAYMOND GRAY SCHOLARSHIP IN VOCATIONAL AGRICULTURE

Established 1926

Each year, the Union Pacific Railroad offers a scholarship to a high school boy from each Nevada county served by the railroad. This recipient must have completed a high school vocational agriculture course with the highest average rank in scholarship, supervised practice work, and qualities of leadership. This scholarship may be used in any one of the following ways:

(A) \$100 will be awarded under the provisions of this offer to a student entering a four-year course in agriculture at the State College of Agriculture, or a State School of Agriculture or for Agricultural Engineering, Agricultural Education, Forestry and Veterinary Medicine, when these courses are in another school within the State College of Agriculture; or

(B) \$100 will be awarded for a student entering a full two-year short course in agriculture at the State College of Agriculture; or

(C) \$50 will be awarded for a student entering a winter short course of four weeks or more in agriculture at the State College of Agriculture.

The winner in each county is selected by a committee of three from that county.

Payment of the scholarship award is made upon certification that the student has enrolled at the University for a course in agriculture. Payment is made as follows:

1. The \$100 scholarship award will be paid in one installment six weeks after registration in college and upon the certification of the Director of Resident Teaching in Agriculture.

2. The \$50 scholarship award for the winter short course will be paid upon satisfactory completion of the first month of work when certified by the short course director.

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

Established 1926

Each year, the Union Pacific Railroad offers a scholarship in agriculture or home economics to one boy or girl 4-H Club member in each county served by the railroad, specified as follows:

(A) \$100 will be awarded under the provisions of this offer to a student entering a four-year course in agriculture or home economics at the State College of Agriculture or for Agricultural Engineering, Agricultural Education, Forestry and Veterinary Medicine, when these courses are in another school within the State College of Agriculture; or

(B) \$100 will be awarded for a student entering a full two-year short course in agriculture or home economics at the State College of Agriculture; or

(C) \$50 will be awarded for a student entering a winter short course of four weeks or more in agriculture or home economics at the State College of Agriculture.

The winner of the award in each county is selected by a committee of three from that county 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 is made upon certification that the student has enrolled at the University for a course in agriculture or home economics. Payment is made as follows:

1. The \$100 scholarship award will be paid in one installment six weeks after registration in college and upon the certification of the Director of Resident Teaching in Agriculture.

2. The \$50 scholarship award for the winter short course will be paid upon satisfactory completion of the first month of work when certified by the short course director.

20. EDISON AND LAURA SMITH MEMORIAL SCHOLARSHIPS

Established 1945

Harold's Club of Reno provides an annual scholarship to a graduate of Carson City High School and a resident of the Nevada Orphans' Home. The candidate is recommended by the principal of Carson City High School and approved by the Dean of the college in whose school he expects to register. This scholarship covers all expenses for four years of college work.

21. ROYAL D. HARTUNG INDUSTRIAL EDUCATION SCHOLARSHIP

Established 1942

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 is awarded annually to a qualified student or students (preferably orphans) who are seeking an industrial education in the College of Engineering.

22. THE HERD & SHORT SCHOLARSHIP

Established 1944

Mr. Hugh Herd and Mr. Charles Short, clothiers, of Reno, offer a scholarship of \$100 to a student in the Department of Economics, Business, and Sociology. This scholarship is awarded on Commencement Day by the head of the Department of Economics, Business, and Sociology, and the chairman of the Committee on Scholarships and Prizes with attention to the following requirements:

1. Upright moral character.
2. General scholarship.
3. Outstanding scholastic ability in the department.
4. Evidence of interest in the field.
5. Completion of a minimum of four hours in the department during the past school year.
6. Financial need, considered only when two students otherwise possess equal qualifications.

One half of this award is paid in the fall and the other half in the spring semester.

23. THE MRS. CARL OTTO HERZ SCHOLARSHIP

Established 1926

This scholarship was established by Mrs. Carl Otto Herz of Reno and for several years after her death was continued by Mr. Carl Otto Herz. At the 1930 commencement Mrs. Herz's heirs presented funds to the University to endow perpetually this scholarship in her memory.

The income from this fund is awarded at the end of each University year by the University Committee on Scholarships and Prizes to one of three electrical engineering students nominated by the head professor of electrical engineering. The nominees must be self-supporting in whole or in part, be of good character and of good scholarship and must have earned senior standing in the University of Nevada.

24. KENNECOTT COPPER CORPORATION SCHOLARSHIP

Established 1948

An annual scholarship of \$750 to a student of the Mackay School of Mines for the senior year who has completed three years' requirements of his course. Selection shall be based upon the following qualities: (a) Proficiency in engineering studies, (b) Leadership, willingness, cooperativeness, initiative and ambition, (c) Ability to direct and stimulate others, and (d) Good health and a physique that commands respect.

The chairmen of departments of the Mackay School of Mines shall recommend to the Kennecott Copper Corporation at least three students from which the Corporation will choose the recipient.

25. THE CARRIE BROOKS LAYMAN MEMORIAL SCHOLARSHIP
Established 1929

This annual scholarship, established in memory of Carrie Brooks Layman, provides for ten consecutive payments of \$20 each to a worthy, self-supporting sophomore or upperclassman or woman student, who while in college, avoids bad debts and abstains from intoxicants and tobacco.

The recipient of this scholarship is 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.

The initial \$20 is payable during the first month of the fall semester and after the recipient has completed registration.

26. THE WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM
Established 1935

Ethel Lunsford Frost and Harry J. Frost established this annual scholarship of \$100 to be known as the William S. Lunsford Scholarship in Journalism.

This scholarship is awarded to a man or woman student having all 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 field of concentration in journalism.
5. Junior or senior standing during the University year the scholarship is held.

The University Committee on Scholarships and Prizes awards this scholarship upon the recommendation of the head of the Department of Journalism. Should the recipient fail to keep in good standing in his studies, except through circumstances beyond his control, he automatically forfeits the scholarship, which is then awarded to an alternate chosen by the same committee and satisfying the same conditions.

27. THE HONORABLE WILLIAM O'HARA MARTIN AND
LOUISE STADTMULLER MARTIN SCHOLARSHIP IN
HISTORY AND POLITICAL SCIENCE
Established 1946

Anne Henrietta Martin and Clara Martin Wight established a scholarship fund of \$2,000 in memory of their parents, Honorable William O'Hara Martin and Louise Stadtmuller Martin, Nevada pioneers.

The income from the fund shall provide an annual scholarship

of \$50 in the Department of History and Political Science to be awarded on Commencement Day to a woman student completing her sophomore or junior year of college by the chairman of the Department of History and Political Science and the chairman of the Committee on Scholarships and Prizes with attention to the following requirements:

1. Courageous citizenship and high personal conduct.
2. General scholarship.
3. Outstanding scholastic ability in the department.
4. Evidence of interest in the social science field.
5. Completion of a minimum of ten hours in history or political science.
6. Financial need is a consideration only when two students otherwise possess equal qualifications.

One half of this award is paid in the fall and the other half in the spring semester.

28. THE ROSE SIGLER MATHEWS SCHOLARSHIP

Established 1920

In memory of his wife, Rose Sigler Mathews, Mr. Isaac R. Mathews of Reno established a scholarship fund of \$10,200.

Awards are made by the Committee on Scholarships and Prizes on the basis of scholarship, need, character, and promise of good citizenship.

29. THE EMPORIUM OF MUSIC SCHOLARSHIP

Established 1944

Mr. and Mrs. W. R. Woodward offer a scholarship of \$100 to a student in the Department of Music. This scholarship is awarded annually on Commencement Day by the head of the Department of Music and the chairman of the Committee on Scholarships and Prizes with attention to the following requirements:

1. Upright moral character.
2. General scholarship.
3. Outstanding scholastic ability in the department.
4. Evidence of interest in the field as shown by participation in band, chorus, or orchestra.
5. Completion of a minimum of four hours in the department during the past school year.

6. Other things being equal, preference is given to the student intending to specialize in music.

7. Financial need is a consideration only when two students otherwise possess equal qualifications.

One half of this award is paid in the fall and the other half in the spring semester.

30. THE GRAND LODGE OF THE INDEPENDENT ORDER
OF ODD FELLOWS SCHOLARSHIPS

Established 1939

This fraternal order authorizes the award of four annual scholarships not to exceed the sum of \$150 each. The students who receive these awards are 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 are 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 the 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.

One half of the scholarship money is payable to the respective winners each semester, 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.

31. PREMEDICAL-PRENURSING SCHOLARSHIP

Established 1931

This annual scholarship of \$100, the gift of an anonymous donor, is awarded by the University Committee on Scholarships and Prizes and the chairman of the Department of Biology, to the worthiest premedical or prenursing student who has completed the freshman or sophomore year at the University of Nevada.

One half of this scholarship is paid in the fall and the other half in the spring semester.

32. THE NEVADA STATE PRESS ASSOCIATION SCHOLARSHIP
IN JOURNALISM

Established 1938

The Nevada State Press Association established this annual

scholarship of \$100 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

1. Must be a graduate of a Nevada high school.
2. Must be registered in the course in Journalism or have elected a field of concentration in journalism.
3. Must have revealed talent in this field.
4. Must have shown proficiency and earnestness in the courses in Journalism.
5. Must have attained in all university work the average grade required for graduation.
6. 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 the awarding of the scholarship.

7. 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 is chosen by the chairman of the Department of Journalism, and receives the award from the Committee on Scholarships and Prizes.

If the recipient of the scholarship fails to keep in good standing, except through circumstances beyond his control, or fails to attend the University the following year, he automatically forfeits the scholarship. The award then goes to an alternate chosen under the same conditions.

33. 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:

1. 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.

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

3. 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.

4. 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 chooses 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 are payable to the respective winners, one half in the fall, and the other half in the spring semester.

34. RENO BUSINESS AND PROFESSIONAL WOMEN'S CLUB SCHOLARSHIP

Established 1945

An annual scholarship of fifty dollars (\$50) shall be awarded by the Committee on Scholarships and Prizes and the Committee on Scholarships of the Reno Business and Professional Women's Club to a woman student with attention to the following requirements:

1. Good moral character.
2. Must be a graduate of a Nevada high school.
3. Must give promise of future achievement.
4. An average grade no less than the average grade of the University.
5. Sophomore or junior standing during the University year the scholarship is held.
6. Must be in need of financial assistance.

One half of this award is paid in the fall and the other one half in the spring semester.

35. THE ROTARY CLUB OF RENO SCHOLARSHIP

Established 1939

Reno Rotary Club No. 248 awards an annual scholarship of \$300 to an incoming freshman who is selected by the officers of the Rotary Club of Reno in cooperation with the chairman of the Committee on Scholarships and Prizes with attention to the following requirements:

1. Good moral character.
2. Good high school scholastic record.
3. Promise of becoming a good citizen.
4. Preferably a graduate of a high school in Reno or vicinity.
5. Reasonably active in extra-curricular activities.

36. 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 \$1,650) a year plus a special allowance of 100 pounds. A Rhodes scholar should be prepared, if possible, to supplement this amount by at least \$250 a year from his own resources.

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

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

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

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

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

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

- 1907—ARTHUR LEONIDAS ST. CLAIR, Deeth.
- 1908—WILLIAM SCOTT UNSWORTH, Reno.
- 1910—STANLEY MAYHEW WILTON, Goldfield.
- 1911—CEDRIC HARDING BEEBE, Reno.
- 1913—FLOYD SHERMAN BRYANT, Sparks.
- 1914—WALTER CLARENCE JEPSEN, Verdi.
- 1917—THOMAS HENRY EDSALL, Reno.
- 1919—STANLEY M. PARGELLIS, Reno.

- 1921—CHARLES M. CHATFIELD, Reno.
 1922—LESLIE MALTRY BRUCE, Reno.
 1923—PAUL A. HARWOOD, Reno.
 1925—JOHN OCHELTRIE, Reno.
 1926—FRED SIEBERT, Reno.
 1928—FRED ANDERSON, Carson City.
 1929—FRANCIS DUBORG, Reno.
 1932—ALDEN SIBLEY, Reno.
 1937—RUSSELL W. McDONALD, Reno.
 1949—ROBERT BARNEY CHILDS, Palo Alto, California.

37. SEARS, ROEBUCK AGRICULTURAL FOUNDATION SCHOLARSHIPS

The Sears, Roebuck Company, in a nation-wide program for the benefit of the agricultural industry and for the individual students regularly enrolled in the Colleges of Agriculture, established the Sears, Roebuck Agricultural Foundation Scholarships. Six scholarships of \$125 each are awarded to freshmen students and one scholarship of \$200 is awarded to a sophomore student.

The recipients of these awards are selected by the Dean or Director of the College of Agriculture on the basis of worthiness and need of financial assistance.

38. THE SEMENZA SCHOLARSHIP IN BUSINESS ECONOMICS AND SOCIOLOGY

Established 1946

In honor of her husband, Mr. John L. Semenza, Mrs. John L. Semenza of Reno established a scholarship of \$100 in the Department of Economics, Business and Sociology. This scholarship is awarded on Commencement Day to a student completing the sophomore or junior year in the University by the chairman of the Department of Business, Economics and Sociology and the chairman of the Committee on Scholarships and Prizes with attention to the following requirements:

1. Upright moral character.
2. General scholarship.
3. Outstanding scholastic ability in the department.
4. Evidence of interest in the field.
5. Student's intention to elect a field of concentration in business, economics, or sociology.

One half of this award is paid in the fall and the other half in the spring semester.

39. STANDARD OIL COMPANY OF CALIFORNIA SCHOLARSHIPS

Established 1949

The Standard Oil Company of California established four scholarships of \$500 each to be awarded on Commencement Day, 1950, one to a senior, one to a junior, one to a sophomore, and one to a freshman, on a competitive basis.

In selecting students for these scholarships, either boys or girls may be chosen and no limitation will be made as to race, color, or creed. In making selections the following requirements shall be considered.

1. Scholarship record.
2. Financial need.
3. Promise of future leadership and potential good citizenship as evidenced by participation in campus and community life.
4. Good character and high personal conduct.

These scholarships shall be awarded by the Committee on Scholarships and Prizes.

40. RAYMOND SPENCER SCHOLARSHIP

Established 1937

In memory of her husband Raymond Spencer, class of 1912, Mrs. Isabelle Schuler Spencer, also 1912, established an annual scholarship of \$250 to be given to a student in the School of Electrical or Mechanical Engineering who has good character, good scholarship, and junior or senior standing at the time of the award, and is self-supporting in whole or in part.

The scholarship, paid in ten equal monthly installments, is annually created from the profits of the Spencer Lumber Company, Walnut Creek, California, as the business will allow.

The student is chosen by a committee of three, consisting of the Dean of Engineering, the chairman of the Committee on Scholarships and Prizes, and a third person to be named by these two. The winner must be enrolled in electrical or mechanical engineering in the University of Nevada during the time the payments are being made; otherwise the payments are made to an alternate, chosen under the same conditions.

41. THE MARY ELIZABETH TALBOT MEMORIAL SCHOLARSHIP

Established 1944

Ida Mary Hoover, Harry J. Robinson, and Sidney W. Robinson, niece and nephews of Mary Elizabeth Talbot, are the donors of this \$300 annual scholarship in mathematics.

The scholarship is awarded by the chairman of the Department of Mathematics and the chairman of the Committee on Scholarships and Prizes with attention to the following requirements:

1. Upright moral character.
2. Outstanding scholastic ability in mathematics for a period of at least one year prior to the award.
3. Students with fields of concentration in mathematics to receive preference.
4. Financial need of student to be a factor of first consideration only when two or more students are otherwise equally qualified to receive the award.

One half of this award is paid in the fall and the other half in the spring semester.

42. THE REUBEN C. THOMPSON SCHOLARSHIP IN PHILOSOPHY
Established 1948

In recognition of the exceptional services rendered by Doctor Reuben Cyril Thompson to the University of Nevada, its students, and the community in which it is situated over a period of forty years as teacher, adviser, head of the Department of Philosophy and Dean of Men, a scholarship of \$100 is established in the Department of Philosophy. This scholarship is awarded on Commencement Day to a student completing the sophomore or junior year in the University by the chairman of the Department of Philosophy and the chairman of the Committee on Scholarships and Prizes, with attention to the following requirements: upright moral character, the student's intention to elect a field of concentration in philosophy, outstanding scholastic ability in this department.

One half of the scholarship will be paid in the fall semester and the other half in the spring semester following the announcement of the award, provided the recipient is then regularly enrolled as a student at the University.

43. UNIVERSITY OF SAN FRANCISCO RESIDENT TUITION
SCHOLARSHIP IN LAW
Established 1935

The University of San Francisco offers to a graduate of the University of Nevada an annual scholarship of one year's free resident tuition in its day law school.

The recipient must be recommended by the President of the University of Nevada, as being, in his judgment, well-qualified scholastically and personally to profit by this scholarship.

44. THE RITA HOPE WINER MEMORIAL SCHOLARSHIP
Established 1938

This scholarship, established by gifts from friends of Rita Hope Winer, provides that \$50 from the principal and the income shall be 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.

FOUNDATIONS

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 subject. 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, and of Engineering, and of the School of Education and the Director of the Mackay School of Mines.

<i>Lecturers</i>	<i>University Year</i>
DR. ROBERT A. MILLIKIN.....	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. MILLIKIN.....	1938-1939
MISS MARY A. DINGMAN.....	1940-1941
DR. WILL DURANT.....	1945-1946
MRS. RUTH BRYAN OWEN ROHDE.....	1946-1947
MR. JOHN SCOTT.....	1947-1948
DR. EDWARD HOWARD GRIGGS.....	1948-1949

THE S. FRANK HUNT FOUNDATION

Established 1935

In memory of Mr. S. Frank Hunt, discoverer and developer of the Rio Tinto mine, the Regents of the University established the Hunt Foundation from successive gifts of cash, mining stocks, automobiles, and equipment that Mr. Hunt gave the University for the Mackay School of Mines.

As Mr. Hunt desired, the foundation provides the opportunity for faculty and students to make trips to operating mines, mills, and mining meetings during the college year, along with week-end trips in connection with school courses. It also provides for the Hunt trip, a free summer course of several weeks to enable a chosen number of students to make a study of mines, prospecting, and geological mapping.

*Suspended for the years 1931-1938 at the desire of the executor of the estate of the donor. Because of readjustment of plan, no lectures were given in 1939-1940, 1941-1945, or 1949-1950.

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. Paradis, State Chairman of the Committee on Student Loan Fund, 1640 Knox Drive, Reno, Nevada.

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

The Olin Ward Bequest—Two scholarships 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. They 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 a reasonable period of time which shall be stated on his agreement, pay or cause to be paid to the Board of Regents a sum equivalent to that received, for the purpose of providing a scholarship in the University for some boy having like qualifications and chosen as above specified.

It shall be understood that seven years after receiving such scholarship shall be considered the maximum period for the carrying out of the agreement entered into, as provided above.

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 chairman 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 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 chairman of the Department of Mathematics of the University of Nevada.

The Marion Lyster Kittle Scholarship Loan Fund—A loan fund for students of the Mackay School of Mines was established in 1944 by Otis A. Kittle, B.S., Mackay School of Mines, 1941, in memory of his wife and as a token of appreciation for the great good and happiness that came to both of them in Nevada.

This loan fund of \$1,000 with its accumulations is managed by the University of Nevada, with loans available to junior and senior students majoring in geology, mining, and metallurgy upon the recommendation of the faculty of the School. The rate of interest is not to exceed 4 percent and co-makers are required, preferably with the parent or parents as one co-maker. No faculty member of the University of Nevada is permitted to be a co-maker.

The Goodfellow Loan Fund—William Goodfellow left in his will the sum of \$50,000, the income from which is to be used for a student loan fund.

The Paul J. Sirkegian Memorial Loan Fund—A student loan fund to be known as the Paul J. Sirkegian Memorial Loan Fund, the principal sum of which is approximately \$1,100, was established in 1949 by his friends to be administered as follows:

1. Preference should be given students in the Mackay School of Mines, and application for the loan should be made through its Director.

2. The amount of the loan will be determined by the Director

of the Mackay School of Mines and the Dean of Men, administrator of loan funds.

3. No limit is placed on the amount of the loan.

OTHER AID TO STUDENTS

For aid to students other than by scholarships, see *Aid to Students*, in the Index.

A WORD TO DONORS

Many of the functions of the University have been advanced by private benefactions, and some very important activities are due almost entirely to the generosity of groups or of individuals. The University will be greatly aided in its program of service to Nevada and to the Nation if substantial donations are given to it, either in general endowment or in donations which will be of benefit to the student body as a whole. The administration will gladly give advice as to the manner in which gifts or bequests may be most suitably made.

It is advisable for anyone contemplating a bequest for charitable purposes to ascertain the requirements of the law in the State in which he resides, and to take special pains to comply with such requirements. For tax purposes, gifts to the University including premiums for life insurance made payable to the University are allowable deduction from gross income. A suggested form for bequests to the University immediately precedes the Index in this catalogue.

The College of Arts and Science

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 Arts¹ 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 300 or above. Prescribed courses are to be distributed as follows:²

- I. From two to six units in military and physical education as required by the University, and political science 301-302 as required by the State law.
- II. A minimum of six units in English 101-2³ shall be required of all students.
- III. A minimum of sixteen units⁴ in foreign languages as outlined below:

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.

¹Students who have majored in mathematics or science may on application to the Dean be granted the degree of Bachelor of Science.

²By action of the faculty, requirements for prescribed courses and requirements for a field of concentration (see page 141) were changed in 1949. Students entering the University for the first time in September 1949, or thereafter will follow the rules for graduation outlined in this catalogue. Students entering the University before September 1949, may elect to follow either the rules prescribed in this catalogue or the rules in effect at the time they entered the University.

³Subject to provisions stated under *English Language and Literature*, see Index.

⁴The 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.

With three entrance units the requirements are three college credits in the same language or course 101-102 in another language.

With two entrance units: Course 103-104 in the same language or course 101-102 in another language.

With one entrance unit: Courses 102 and 103-104 in the same language.

With no entrance credit: Courses 101-102 and 103-104 in any one foreign language, or courses 101 and 102 in each of two foreign languages.

IV. A minimum of ten credits each in Groups 1 and 2 and six credits in Group 3 as shown below. To fulfill requirements the student must take courses in at least two subjects of each group.

GROUP 1. *Natural Sciences*: Astronomy, botany, zoology, geology, geography (courses 103 and 109), chemistry, physics, mathematics, meteorology.

GROUP 2. *Social Sciences*: Economics (except courses 356, 361, and 362), geography (except courses 103 and 109), history, political science (except courses 301 and 302), psychology, sociology (except courses 381 and 386).

GROUP 3. *Humanities*: Art history and appreciation, English literature, foreign literature, music history and appreciation, speech history and interpretation, philosophy.

In order that these requirements may be used to the best advantage in assuring a well-balanced course and at the same time give the student some freedom of choice in the selection of his courses, the course of study as given below is prescribed for the first two years. At least five credits per semester must be selected from courses fulfilling the above group requirements and those in language (see III, page 138). Due to the variation in the language requirement it may be necessary for some students to complete as many as eight credits per semester. To be classified as a junior, the student must have completed to within twelve credits of the requirements specified in I-IV above.

		<i>Freshman Year</i>	
<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Military and Physical		Military and Physical	
Education.....	½ to 1½	Education.....	½ to 1½
English 101.....	3	English 102.....	3
Language.....	} 5 to 8*	Language.....	} 5 to 8*
Natural Science.....		Natural Science.....	
Social Science.....		Social Science.....	
Humanities.....		Humanities.....	
Electives.....	3 to 7	Electives.....	3 to 7
	<hr/> 15½		<hr/> 15½

		<i>Sophomore Year</i>	
<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Military and Physical Education.....	½ to 1½	Military and Physical Education.....	½ to 1½
Language.....	5 to 8*	Language.....	5 to 8*
Natural Science.....		Natural Science.....	
Social Science.....		Social Science.....	
Humanities.....	3 to 7	Humanities.....	3 to 7
Electives.....		Electives.....	
<hr/>		<hr/>	
15½		15½	

*These credits may not include courses in groups in which the requirements have already been fulfilled.

Courses open to freshmen which may be used to fulfill the above requirements in natural sciences, social sciences, and humanities are listed below:

GROUP 1—Natural Sciences and Mathematics—
 Botany 103
 Chemistry 101-102, 122, 124
 Geography 103, 109
 Geology 101, 102
 Mathematics 101, 102, 110
 Physics 101-102, 107, 117-118, 151-152, 153-154
 Zoology 101, 103

GROUP 2—Social Sciences—
 Economics 107, 110
 Geography 101
 History 101-102, 105-106

Social Sciences—Continued
 Political Science 101-102, 105-106
 Psychology 121, 201
 Sociology 102

GROUP 3—Humanities—
 Art 115, 261
 English (including speech) 131-132, 135, 141, 145, 171-172, 221-222, 231-232, 247-248, 253-254, 261, 268, 291.
 German 109-110
 Music 203, 204
 Philosophy 101, 102, 107, 108

Courses requiring a prerequisite or sophomore or upper-division standing which may be used to fulfill requirements in natural sciences, social sciences, and humanities.

GROUP 1—Natural Sciences and Mathematics—

Botany courses numbered above 200.
 Chemistry courses numbered above 200.
 Mathematics 140, 151-152, and courses numbered above 200.
 Physics 103-104 and courses numbered above 200.
 Zoology courses numbered above 200.

GROUP 2—Social Sciences—

Economics 201-202, 218, and courses numbered above 300 except 356, 361, and 362.
 History courses numbered above 300.
 Political Science courses numbered above 300 except 301-302.
 Psychology courses numbered above 200.
 Sociology 201 and courses numbered above 300 except 381 and 386.

GROUP 3—Humanities—

Art 359-360, 362.
 English (including speech) courses numbered above 300 except 305-306, 311-312, 315-316, 317-318, 327-328, 385, 405-406, 413, 419-420, 421-422.
 French courses numbered above 300 except 355-356, 373-374, 389-390.
 German courses numbered above 300 except 355-356, 359-360, 379-380.
 Italian courses numbered above 300 except 355-356.
 Latin courses numbered above 300.

Music 303, 304.

Philosophy courses numbered above 300.

Portuguese courses numbered above 300 except 361-362.

Spanish courses numbered above 300 except 355-356, 379-380.

Students who, upon their initial registration in the University, are over 26 years of age are excused from physical education.

No course with a number above 300 will be open to freshmen or sophomores without the written recommendation of the chairman of the department and the approval of the Dean.

When students transfer to the College of Arts and Science from other colleges, they will be considered deficient in as many hours in arts and science as they are deficient in the college from which they transferred.¹

No student may transfer from the College of Agriculture, the College of Engineering, or the Mackay School of Mines 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

To accomplish the aims of the College, a candidate for the baccalaureate degree must:

1. Select courses totaling not less than *forty credits* in courses numbered above 300. (Required Political Science 301-302 cannot be used in fulfilling this requirement.)

2. Complete the requirements listed under I-IV, pp. 138, 139.

3. Complete requirements for a field of concentration² of 50 credits in a program representing a unity of aim. The particular grouping of courses will depend on the particular aim of the student but must be in accord with either Plan I or Plan II as outlined below.

Plan I. The major interest of the student is confined to a single subject. The 50 credits shall include not less than 26 nor more than 36 credits in the major interest subject, the remainder

¹The hour requirement for graduation from the College of Engineering and the Mackay School of Mines 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.

²By action of the faculty, requirements for prescribed courses (see pp. 140-141) and for a field of concentration were changed in 1949. Students entering the University for the first time in September 1949, or thereafter, will follow the rules for graduation outlined in this catalogue. Students entering the University before September 1949 may elect to follow either the rules prescribed in this catalogue or the rules in effect at the time they entered the University.

being chosen from related subjects as outlined under Courses of Instruction (p. 138), and approved by the Chairman of the major interest department.

Plan II. The major interest of the student involves two or more subjects. The 50 credits shall represent a specified objective and form a unified program acceptable to the departments involved (see p. 138).

Specific requirements for various fields of concentration are described in this catalogue at the beginning of each department's list of Courses of Instruction.

It is advisable that students should plan their work for their junior and senior years as early as the sophomore year, in order that the studies then elected may fit in with their work later. At the beginning of the junior year, each student must give the Dean a written notice of his selection of a field of concentration; such selection shall bear the approval of the chairman of the department sponsoring the field of concentration.

The remaining units necessary to make a total of 126 may be freely elected from any department, or, subject to the limit of twenty, from the other colleges of the University.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CHEMISTRY OR IN CHEMICAL TECHNOLOGY

The following courses of study are designed for students looking toward the field of chemistry or of chemical engineering as a profession. They are intended to fit students to enter directly into industrial work or to prepare them for more advanced study in chemistry or in chemical engineering.

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 chairman of the department, and should be chosen in consultation with him.

		Credits				Credits	
First Semester		Chem. ¹	Tech. ²	Second Semester		Chem. ¹	Tech. ²
Chemistry 101	4	4	4	Chemistry 102, 122	5	5	5
English 101	3	3	3	English 102 ³	3	3	3
Mathematics 151	5	5	5	Mathematics 152	5	5	5
Military and Physical Education	1½	1½	1½	Military and Physical Education	1½	1½	1½
Mechanical Arts 203 .....	..	2	2	Mechanical Engineer- ing 105 .....	..	2	2
Social Science	3	..	..	Social Science	2	..	..
Art 107 .....	..	1	1				
		16½	16½			16½	16½

¹Refers to requirements for Bachelor of Science in Chemistry.

²Refers to requirements for Bachelor of Science in Chemical Technology.

³Subject to provisions stated under *English Language and Literature*, see Index.

Sophomore Year

First Semester		Credits	Second Semester		Credits
Chemistry 231	3	3	Chemistry 232	3	3
Mathematics 231	3	3	Mathematics 232	3	3
Physics 203	4	4	Physics 204	4	4
Physics 205	1	1	Physics 206	1	1
Economics 201 or Business Adm. 241	3	..	Economics 202 or Psychology 201	3	..
Business Adm. 241	..	3	Psychology 201	..	3
Military and Physical Education	1½	1½	Military and Physical Education	1½	1½
Electives	1	..	Electives	1	1
		16½			16½
		15½			16½

Junior Year

First Semester		Credits	Second Semester		Credits
Chemistry 341	4	4	Chemistry 342	4	4
German 101	5	5	German 102	5	5
Chemistry 333	3	..	Chemistry 312	3	3
Chemistry 337	½	..	Chemistry 388	½	..
Mathematics 341	..	3	Business Adm. 306	..	3
Electrical Engineer- ing 323	..	2	Chemistry 362	..	2
Electives	3½	2	Electives	3½	..
		16			16
		16			17

Senior Year

First Semester		Credits	Second Semester		Credits
Chemistry 451	3	3	Chemistry 452	3	3
Chemistry 453	1	1	Chemistry 454	1	1
German 103	3	3	German 104	3	3
Chemistry 487	½	½	Chemistry 488	½	½
Political Science 801	1	1	Political Science 802	1	1
Chemistry 497	2	..	Chemistry 498	2	..
Chemistry 461	..	3	Mechanical Engineer- ing 462	..	2
Mechanical Engineer- ing 358	..	3	Civil Engineering 372	..	3
Chemistry 415	3	..	Chemistry 482	2	..
Elective	2½	1½	Elective	3½	2½
		16			16
		16			16

THE COURSE IN JOURNALISM LEADING TO THE DEGREE OF BACHELOR OF ARTS IN JOURNALISM

In its four-year professional Course in Journalism, the University of Nevada offers approved preparation for the journalistic vocations leading to the degree Bachelor of Arts in Journalism.

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 humanities, as well as in journalism.

To complete the Course in Journalism, the student must present among the 126 units required for graduation:

Thirty-six credit hours in Journalism including Journalism 101-102 (6 credits), 221-222 (6 credits), 351-352 (4 credits), 353 (3 credits), 367 (3 credits), 372 (2 credits), 379 (2 or 3 credits), 481-482 (4 credits), and five or six additional credits chosen with the counsel of the department chairman from among Journalism courses numbered 300 and above.

Nine to twelve credit hours in English literature.

Twenty-five credit hours in the social sciences (history, political science, economics, sociology, psychology, and geography—except courses 103 and 109), selected so that they represent at least four of these subjects.

Six credit hours in the humanities.

The general requirements of the College of Arts and Science.

Subjects required of all candidates for graduation from the University of Nevada.

To complete a field of concentration in journalism or the Course in Journalism, a student must earn an average of *at least* two grade points in his courses in journalism.

University credits acquired in meeting the arts and science requirements in the social sciences and the humanities may be counted toward the requirements in the social sciences, English literature, and the humanities in the Course in Journalism.

In choosing subjects to meet these requirements of the Course in Journalism, the student will be guided by the chairman of the journalism department.

In each group, the following courses will be found to best furnish the student with a comprehensive background. Those starred are especially valuable:

Journalism—231*-232, 354*, 356*-357*, 361*-362*, 365-366, 368, 386.

English Literature—131*-132*, 141*, 145*, 231*-232*, 247*-248*, 267*, 337*, 345-346, 355-356, 441*-442*, 465*-466*, 471-472, 481, 482, 485-486.

Social Science—Business 243-244, 247, 368*, 371*-372*, Economics 107*, 110*, 201*, 202*, 218, 351, 364*, Geography 101*, 103*, 109*, 455*, History 101*-102*, 105*-106*, 393*-394*, 405*, 408*, 421*-422*, 441*-442*, 451*-452*, Library Science 335, Philosophy 101*, 351, 352, 353*-354*, 461, 482, Political Science 101*-102*, 105*-106*, 416*, 427, 431*-432*, Psychology 201*, 231*, 361*, 363, 371*, 375, 381*, 441*, Sociology 102*, 201*, 350, 370*, 371*, 379*, 380*, 381, 383.

The Humanities—Art 101-102, 105, 355*, English 221-222, 321-322, 421-422, Music 203, 204, 303, 304, Philosophy 455.

Specific journalism courses required for the completion of the Course in Journalism or a field of concentration in journalism (prescribed under *Journalism in Courses of Instruction* in this catalogue) are designed to give each student a sound foundation in the principles and the skills basic to *all* fields in journalism.

In his electives in journalism, and in the various other offerings of the university, each student will wish to stress the subjects which will be most useful to him in the *special* field of journalism to which he is looking forward.

Students interested chiefly in the *news and editorial phases of newspaper and press association work* will wish to elect, in addition to the required journalism courses, Journalism 354, 368, 375, and 365.

Students interested chiefly in *community newspaper work* will wish to elect, in addition to the required courses, Journalism 354, 356-357, 365-366, 368, and 375. Certain courses in business also may well be elected.

Students interested primarily in *radio journalism* will wish to elect, in addition to the required courses in journalism, Journalism 354, 356-357, 368, and 386. Several courses in public speaking are advised.

Students preparing for a *career in advertising* will wish, in addition to the required journalism courses, to elect Journalism 356-357, 365-366, 368, and 386. Certain courses in business also are advised.

Through a suitable combination of courses, in addition to those required in journalism, a student may organize his studies in preparation for the teaching of journalism in high school, for magazine article free lancing, for publicity and public relations work, or for publications management.

A number of courses in journalism are open to students specializing in other subjects. Some are designed for non-journalists, while others are arranged both for professionals and nonprofessionals.

PRELEGAL COURSE

Students who intend to study law will find it necessary to satisfy University requirements for the Bachelor's degree.

In the opinions of 118 eminent members of the legal profession, including the Chief Justice of the United States, the following subjects lead in probable usefulness to the student who anticipates entering a law school; subjects are here listed alphabetically and not always in order of importance: Economics, English, History, Latin, Mathematics, Philosophy, Physics, Political Science, Psychology and Sociology. It appears that descriptive rather than theoretical courses in Economics and Political Science are preferred. "A few subjects such as Commercial Law, Constitutional Law, Roman Law and Jurisprudence may be excluded on the ground that they are technical legal studies that may be much better pursued in law school."

Professors Hicks and Hume are designated advisers of pre-legal 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. The majority of the medical colleges prescribe much the same minimum of subject matter which includes general zoology, vertebrate anatomy, embryology, general inorganic chemistry, qualitative analysis, organic chemistry, general physics, and a reading knowledge of French or German. Quantitative analysis is also required by many 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.

RECOMMENDED PREMEDICAL COURSE AND PRE-DENTAL COURSES

To permit the inclusion of all the essential premedical subjects and to satisfy the University requirements for the B.A. or B.S. degree, the following arrangement of the course of study has proved a desirable one:

Freshman Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
English 101	3	English 102	3
Chemistry 101	4	Chemistry 102-122	5
Botany 103	3	Zoology 103	4
Military and Physical Edu- cation	1-1½	Mathematics 102	2
Mathematics 110	3	Military and Physical Education	1-1½
Electives .....	..	Electives .....	..
	15½		15½

As electives the student should choose either the continuance of French or German if he has some entrance credits in these languages or he may elect a social science, preferably psychology in the second semester.

Sophomore Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
German 101	5	German 102	5
Chemistry 231	3	Chemistry 232	3
Zoology 209	5	Military and Physical Education	1½
Military and Physical Education	1½	Electives .....	..
Electives .....	..	
	15½		15½

Junior Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
German 109	3	German 110	3
Physics 151, 153.....	4	Physics 152, 154.....	4
Chemistry 341	4	Chemistry 342	4
Political Science 301	1	Zoology 364	4
Electives	4	Political Science 302	1
	<hr style="width: 10%; margin: 0 auto;"/>		<hr style="width: 10%; margin: 0 auto;"/>
	16		16

Senior Year

Elective or approved credential from professional school.

Completion of the above curriculum plus Zoology 350 and Chemistry 487-488 will satisfy a combined chemistry and zoology field of concentration.

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.

Predental students are advised to take the above premedical course with possible minor modifications. Such students may then become eligible for the degree of Bachelor of Arts or Bachelor of Science from this University following a comparable procedure to that outlined for medical students above.

For further advice relative to premedical work, the student is referred to the premedical advisers, Professors Richardson and Jones.

PRE MEDICAL-TECHNOLOGIST COURSE

Medical Technologist or Clinical Laboratory Technician training is available at many hospital laboratories of the country. The following three-year curriculum includes the uniformly required and strongly advised courses for admission to such training schools, as well as certain electives and courses required for graduation. Electives must satisfy graduation requirements of the College of Arts and Science.

Freshman Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
English 101	3	English 102	3
Chemistry 101	4	Chemistry 102-122	5
Botany 103	3	Zoology 103	4
Physical Education 101	1	Mathematics	2
Elective	4½	Physical Education 102.....	1
		Elective	½
	15½		15½

Sophomore Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Chemistry 231	3	Chemistry 242	4
Zoology 211	4	Botany 370	3
Psychology 201	3	Sociology 102	3
Physical Education 201.....	½	Physical Education 201.....	½
Elective	5	Elective	5
	15½		15½

Junior Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Botany 351	4	Physics 152, 154.....	4
Physics 151, 153	4	Zoology 346	5
Political Science 301.....	1	Political Science 302.....	1
Zoology 322	3	Elective (300 or above).....	6
Zoology 368*	2		
Elective (300 or above).....	2		
	16		16

*Recommended, but not required.

A student completing the three-year pre medical-technologist course in residence at this University may be granted a Bachelor of Arts or a Bachelor of Science degree from the University of Nevada when he or she has, in addition, completed the 12 to 18 months' technologist training course, has received a certificate or diploma from the laboratory where the training was taken, and has passed the national registry examination of the American Society of Clinical Pathologists. A testimonial similar to that described under the premedical course may be presented from the director of the medical technology school. The only type of laboratory training acceptable will be that obtained from a medical technology school approved by the Council of Medical Education and Hospitals of the American Medical Association. The laboratories of Dr. Lawrence Parsons at St. Mary's Hospital in Reno are approved for the training of clinical laboratory technicians.

RECOMMENDED THREE-YEAR PRENURSING COURSE

Freshman Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Botany 103	3	Zoology 103	4
English 101	3	English 102	3
Chemistry 101	4	Chemistry 102-242	6
History 101	3	Physical Education 102.....	1
Physical Education 101.....	1	Elective	1½
Elective	1½		
	15½		15½

Sophomore Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Zoology 211	4	Foreign Language	5
Foreign Language	5	Sociology 102	3
Sociology 201	3	Physical Education 202.....	½
Psychology 201	3	Elective	7
Physical Education 201.....	½		
	15½		15½

Junior Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Botany 351	4	Zoology 346	5
English or Foreign Language... 3	3	Home Economics	3
Elective (Courses 300 or above)	8	English or Foreign Language... 3	3
Political Science 301.....	1	Elective (Courses 300 or above)	4
		Political Science 302.....	1
	16		16

A student completing the three-year prenursing course in residence at this University 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.

WILDLIFE MANAGEMENT COURSE

The four-year course outlined below aims to give both a liberal education and a foundation for work in the fields of State Fish and Game Management, the Federal Fish and Wildlife Service, and other Federal branches such as the National Parks Service and the Geological Survey which do biological work. Graduate study may be necessary to qualify for certain positions. Electives are to be chosen to satisfy the Arts and Science requirements for the Bachelor's Degree. This course will satisfy the requirements for a field of concentration in zoology.

Freshman Year

	1st Sem.	2d Sem.
Chemistry 101, 102.....General Inorganic Chemistry.....	4	2
English 101-102.....Composition and Rhetoric.....	3	3
Botany 103.....General Botany	3	..
Zoology 103.....General Zoology .....	..	4
Mathematics 101 or 110, and 102	Algebra and Trigonometry..... 2	3
Military and Physical Education.....	1½	1½
Electives	2	2
	<hr/>	<hr/>
	15½	15½

Sophomore Year

	1st Sem.	2d Sem.
Foreign Language.....First Year	5	5
Zoology 209.....Comparative Anatomy	5	..
Botany 222.....Taxonomy .....	..	4
Chemistry 242.....Introductory Organic .....	..	4
Military and Physical Education.....	1½	1½
Zoology 322	Parasitology	3
Electives.....	1	1
	<hr/>	<hr/>
	15½	15½

Junior Year

	1st Sem.	2d Sem.
Zoology 359.....General Entomology	4	..
Zoology 337.....Mammals .....	..	3
Botany 317.....Agrostology .....	..	3
Botany 491	Special problems in wildlife food plants	3
Geology 101.....Physical geology	3	..
Political Science 301-302.....Constitutions of the U. S. and Nevada	1	1
Zoology 333.....Fishes, Amphibians, and Reptiles..	..	3
Electives.....	5	6
	<hr/>	<hr/>
	16	16

Senior Year

	1st Sem.	2d Sem.
Zoology 335.....Birds .....	..	3
Zoology 463.....Game management	3	..
Zoology 492.....Special problems in bird farm man- agement and fish culture.....	..	3
Zoology 350.....Genetics .....	..	3
Zoology 420	Limnology	3
Botany 475-476.....Ecology	4	4
Electives	9	..
	<hr/>	<hr/>
	16	16

Suggested electives are: Agronomy 216, 359, 360; Botany 355; Economics 201, 202; English 111, 112, 131, 132; Psychology 201.

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 field of concentration in sociology (see p. 140) is organized for this purpose. Electives should include Political Science 418, 431, and 432; Psychology 241 and 441, and English 111 and 112.

M. J. Webster has been named as adviser for students wishing to prepare for social work.

COURSE OF STUDY LEADING TO THE DEGREE—BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

Freshman Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Economics 107	2	English 102	3
English 101	3	Foreign Language	5
Foreign Language	5	Mathematics or Science.....	3-5
Mathematics or Science.....	4-5	Military and Physical Educ... $\frac{1}{2}$ - $1\frac{1}{2}$	
Military and Physical Educ... $\frac{1}{2}$ - $1\frac{1}{2}$		Electives	-
	<hr/>		<hr/>
	15 $\frac{1}{2}$		15 $\frac{1}{2}$

Sophomore Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Economics 201	3	Economics 202	3
Business Administration 241....	3	Business Administration 244....	3
Business Administration 243....	3	Foreign Language	3
Foreign Language	3	Mathematics or Science.....	5-6
Mathematics or Science.....	2-3	Military and Physical Educ... $\frac{1}{2}$ - $1\frac{1}{2}$	
Military and Physical Educ... $\frac{1}{2}$ - $1\frac{1}{2}$			
	<hr/>		<hr/>
	15 $\frac{1}{2}$		15 $\frac{1}{2}$

Junior Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Business Administration 355....	3	Business Administration 356....	3
Economics 361	3	Business Administration 368....	3
Mathematics or Science.....	3	Political Science 302.....	1
Political Science 301.....	1	Electives	9
Electives	6		
	<hr/>		<hr/>
	16		16

Senior Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Economics 373	3	Business Administration 374....	3
Business Administration 365....	3	Electives	13
Business Administration 247....	3		
Electives	7		
	16		16

Electives shall include a minimum of nine credits in courses numbered above 300, six of which shall be in business administration and three of which shall be in economics.

This selection should accord with the individual needs of the student. For students who expect to enter a business career, courses in mathematics or psychology are recommended; for those expecting to teach commercial subjects courses in education are recommended; these latter students should elect Business Administration 353.

It is strongly advised that electives include Mathematics 210 and Psychology 201, 381, 382, 391. Electives must be so chosen as to satisfy the requirements of the College of Arts and Science.

SCHOOL OF EDUCATION

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 equips 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. See fields of concentration outlined under *Education in Courses of Instruction* in this catalogue.

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. See fields of concentration outlined under *Education* in the *Courses of Instruction* in this catalogue.

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 221, Education 190, 310, six hours of 420, 448, 449, and 482.

For the agriculture certificate the students are required to take the following courses: Psychology 221, Education 190, 310, six hours of 420, 445, 446, 447, and 482.

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 221 and most 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.

Students who elect the field of concentration in elementary education will be entitled to this certificate.

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 111, 134, 186, 190, 120, and 121.

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>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Education 111	2	Education 134	3
English 101	3	English 102	3
Physical Education (Women)..	1	Physical Education (Women)..	1
Physical Education (Men).....	$\frac{1}{2}$	Physical Education (Men).....	$\frac{1}{2}$
Military (Men)	1	Military (Men)	1
Education Electives	5-6	Education Electives	5-6
Other electives .....	..	Other electives .....	..
	<hr style="width: 10%; margin: 0 auto;"/> 16		<hr style="width: 10%; margin: 0 auto;"/> 16

Sophomore Year

<i>First Semester</i>	<i>Credits</i>	<i>Second Semester</i>	<i>Credits</i>
Practice teaching	5	Practice Teaching	5
Education 190	2	Education 186	2
Physical Education	$\frac{1}{2}$	Physical Education	$\frac{1}{2}$
Military (Men)	1	Military (Men)	1
Political Science 301	1	Political Science 302.....	1
Education Electives	1-2	Education Electives	1-2
Other electives .....	..	Other electives .....	..
	<hr style="width: 10%; margin: 0 auto;"/> 16		<hr style="width: 10%; margin: 0 auto;"/> 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 courses for the Normal School Diploma, as above, but must take also Education 190 and Political Science 301-302.

THE KINDERGARTEN-PRIMARY CERTIFICATE

Students may qualify for this certificate by fulfilling requirements for the field of concentration in kindergarten-primary education outlined under *Education* in the *Courses of Instruction* in this catalogue. Graduates from this course will also be entitled to a first-grade elementary certificate.

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.

COOPERATING TEACHERS

For Secondary Certificates:

Helene Aldaz, Physical Education.
Helen Bledowski, General Science.
E. Lois Campbell, Algebra.
Louise Carl, Commercial.
Georgia Cole, Physical Education.
Margaret Ernst, Mathematics.
John Fant, Mathematics.
Kathleen Griffin, Commercial.
Helene Halley, Algebra.
Mildred S. Klaus, Commercial.
Hattie Mae Kilpatrick, Commercial.
Florence Lehnars, English.
Andrew Rosaschi, Social Studies.
Beulah Singleton, Social Studies.
Anna Maud Stern, Commercial.
Marian Trabert, General Science.
Velva Trulove, History.
Margaret B. Watt, Science.

For Elementary Certificates:

Pablo Arenaz, seventh grade.
Alfred Artuso, seventh grade.
Joseph Bashista, seventh grade.
Angelina Birks, fourth grade.
Adah Bowen, first grade.
Rose Bullis, fifth grade.
Clarence Byrd, eighth grade.
M. Lucille Byrd, sixth grade.
Kathryn Clark, fourth grade.
Dorothea Comer, first grade.
Anthony Cudinski, seventh grade.
Cecelia Daley, third grade.
Angela De Nevi, sixth grade.
Alene De Ruff, sixth grade.
Bertha Doty, eighth grade.
Esther Doyle, first grade.
Juanita Elcano, second grade.
Ethel Figley, fourth grade.
Tennys Friberg, first grade.
Theodore Furchner, seventh grade.
Inez Gillies, fifth grade.
Bonny Gori, seventh grade.
Dolores Grady, fourth grade.
Chester Green, eighth grade.
Mamie Hildebrand, fifth grade.
Lorraine Houghton, fourth grade.
Elinor Jensen, seventh grade.
Viola Jones, second grade.

Rae C. Kennedy, sixth grade.
 Melva Lauritzen, fourth grade.
 Alphonsine Liotard, third grade.
 Jeanne Mason, fourth grade.
 Ruth McAlley, sixth grade.
 Marguerite Nelson, fourth grade.
 Dorothea Nightingale, second grade.
 Margaret Patrick, fifth grade.
 Edith Peddicord, fifth grade.
 Dorris Reed, fifth grade.
 Lyle Roush, seventh grade.
 Gene Scarselli, eighth grade.
 Helen Shaw, first grade.
 Madeline Shoemaker, sixth grade.
 Elizabeth Simonson, seventh grade.
 Emma Smith, fourth grade.
 Lucille Smith, first grade.
 Olivia Treanor, sixth grade.
 Norma Utley, eighth grade.
 Edward Van Gorder, seventh and eighth grades.
 John Walpole, seventh grade.
 Vaol Ward, eighth grade.
 Vera Warren, eighth grade.
 Sessions S. Wheeler, seventh grade.
 Helen Zoellern, fourth grade.

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 accepted for practice teaching in the elementary grades unless he has completed 15 semester hours of work at the University of Nevada including 8 hours of appropriate courses in education; four of these hours must be in appropriate methods. Candidates for practice teaching in the high schools must have completed 15 hours at the University of Nevada including eight hours of secondary education, with at least one appropriate methods course and must have adequate preparation in the subject matter fields to be taught.

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 fee charged for the service rendered is \$5 to be paid by the candidates at the time of enrollment to cover the necessary costs of postage, printing, and stenographic help.

The College of Engineering

1. THE SCHOOL OF MECHANICAL ENGINEERING.
2. THE SCHOOL OF ELECTRICAL ENGINEERING.
3. THE SCHOOL OF CIVIL ENGINEERING.

AIM

The aim of the College of Engineering is to give young men a knowledge of those subjects which form the bases of the 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 Mechanical Building, Electrical Building, New Engineering Building, Mackay Science Hall, Laboratories for Geology and Mineralogy, and the Chemical Laboratories, in the earlier part of this catalogue.

ADMISSION REQUIREMENTS

For admission requirements, entrance subjects, and the number of credits belonging to each, see *Requirements for Admission, Index*.

REQUIREMENTS FOR A BACCALAUREATE DEGREE IN ENGINEERING

The degree of Bachelor of Science in (a) Mechanical Engineering, (b) Electrical Engineering, and (c) Civil Engineering is conferred upon students who have satisfactorily completed the full course in the Schools of (a) Mechanical Engineering, (b) Electrical Engineering, and (c) Civil Engineering, aggregating 144 semester units in each case.

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.

COLLEGE OF ENGINEERING
UNIFORM FRESHMAN YEAR

First Semester

	LAB.	LEC.
English 101.....Composition and Rhetoric.....	..	3
Chemistry 101.....General Inorganic Chemistry.....	2	2
Mathematics 151.....Mathematical Analysis.....	..	5
Mechanical Eng. 105.....Engineering Drawing and Descriptive Geometry.....	2	..
Military 101.....Basic Course.....	1	..
Physical Education.....Developmental Exercises.....	½	..
*Elective		2 or 3

17½ or 18½

Second Semester

English 102.....Composition and Rhetoric.....	..	3
Chemistry 102.....Metals.....	..	2
Chemistry 124.....Qualitative.....	1	1
Mathematics 152.....Mathematical Analysis.....	..	5
Mechanical Eng. 106.....Engineering Drawing and Descriptive Geometry.....	2	..
Military 102.....Basic Course.....	1	..
Physical Education 102.....Developmental Exercises.....	½	..
*Elective		2 or 3

17½ or 18½

SCHOOL OF MECHANICAL ENGINEERING

Uniform Freshman Year (see page 161)

Sophomore Year—First Semester

Physics 203.....General Physics for Engineers.....	..	4
Physics 205.....Physical Measurements.....	2	..
Civil Engineering 241.....Elementary Surveying.....	1	2
Mathematics 251.....Engineering Calculus.....	..	4
English 111.....Public Speaking.....	..	2
Military 201.....Basic Course.....	..	1
Physical Education 201.....Advanced Exercises.....	½	..
*Elective.....		2

18½

Sophomore Year—Second Semester

Physics 204.....General Physics for Engineers.....	..	4
Physics 206.....Physical Measurements.....	2	..
Mathematics 252.....Engineering Calculus.....	..	4
Metallurgy 206.....Engineering Metallurgy.....	..	2
Mechanic Arts 226.....Manufacturing Processes.....	1	..
Military 202.....Basic Course.....	..	1
Physical Education 202.....Advanced Exercises.....	½	..
*Elective.....		3

17½

*Must be chosen from Humanities and Social Sciences with approval of advisor.

<i>Junior Year—First Semester</i>		LAB.	LEC.
Mathematics 341.....	Analytic Mechanics.....	..	3
Electrical Engineering 351.....	Direct Current Machinery.....	..	3
Electrical Engineering 353.....	Direct Current Machinery Laboratory.....	2	..
Mechanical Eng. 351.....	Kinematics	1	2
Mechanical Eng. 355.....	Thermodynamics .....	..	3
Mathematics 351.....	Differential Equations.....	..	2
*Elective.....	.....	..	2

18

<i>Junior Year—Second Semester</i>			
Mathematics 342.....	Analytic Mechanics.....	..	2
Civil Engineering 376.....	Mechanics of Materials.....	1	3
Civil Engineering 374.....	Metals Testing Laboratory.....	1	..
Electrical Engineering 352.....	Alternating Current Machinery.....	..	3
Electrical Engineering 354.....	Alternating Current Machinery Laboratory.....	2	..
Mechanical Eng. 356.....	Applied Thermodynamics .....	..	3
*Elective.....	.....	..	3

18

<i>Senior Year—First Semester</i>			
Mechanical Eng. 457.....	Machine Design.....	1	2
Mechanical Eng. 461.....	Heat Transfer.....	..	3
Mechanical Eng. 464.....	Mechanical Engineering Laboratory.....	2	..
Mechanical Eng. 471.....	Heat-Power Engineering .....	..	2
Civil Engineering 367.....	Elementary Fluid Mechanics.....	1	3
Political Science 301.....	Constitution of U. S.....	..	1
*Elective.....	.....	..	3

18

<i>Senior Year—Second Semester</i>			
Mechanical Eng. 458.....	Machine Design	2	1
Mechanical Eng. 465.....	Mechanical Engineering Laboratory	2	..
Mechanical Eng. 472.....	Air Conditioning and Refrigeration ..	..	3
Mechanical Eng. 476.....	Mechanical Vibrations .....	..	3
Mechanical Eng. 477.....	Internal Combustion Engines.....	..	3
Civil Engineering 368.....	Fluid Mechanics Laboratory.....	1	..
Political Science 302.....	Constitution of Nevada.....	..	1
*Elective .....	.....	..	3

18

*Electives in the freshman and sophomore years are to be chosen from the humanities and social sciences. Electives in the junior and senior years should preferably be chosen so as to be part of a well-integrated program of professional development, *e. g.*, business administration, economics, and psychology for those who intend to enter business; mathematics and physics for those who intend to enter research; education for those who expect to teach, etc.

SCHOOL OF ELECTRICAL ENGINEERING

Uniform Freshman Year (see page 161)

Sophomore Year—First Semester

	LAB.	LEC.
Physics 203.....General Physics for Engineers.....	..	4
Physics 205.....Physical Measurements.....	2	..
Mathematics 251.....Calculus for Engineers.....	..	4
Civil Engineering 241.....Surveying.....	1	2
English 111.....Public Speaking.....	..	2
Military 201.....Basic Course, second year.....	..	1
Physical Education 201.....Advanced Exercises.....	$\frac{1}{2}$	..
*Elective.....Humanities.....	..	2

18½

Sophomore Year—Second Semester

Physics 204.....General Physics for Engineers.....	..	4
Physics 206.....Physical Measurements.....	2	..
Mathematics 252.....Calculus for Engineers.....	..	4
Metallurgy 206.....Engineering Materials and Processes.....	..	2
Mechanic Arts 226.....Engineering Materials and Processes Laboratory.....	1	..
Military 201.....Basic Course, second year.....	..	1
Physical Education 202.....Advanced Exercises.....	$\frac{1}{2}$	..
*Elective.....Humanities.....	..	3

17½

Junior Year—First Semester

Electrical Engineering 351...Direct Current Machinery.....	..	3
Electrical Engineering 353...Direct Current Machinery Lab.....	2	..
Electrical Engineering 355...Introduction to Electric Circuits.....	..	2
Mathematics 341.....Mechanics.....	..	3
Business Adm. 241.....Business Organization.....	..	3
Mathematics 351.....Differential Equations.....	..	2
*Electives.....	..	3

18

Junior Year—Second Semester

Electrical Engineering 352...Alternating Current Machinery.....	..	3
Electrical Engineering 354...Alternating Current Machinery Laboratory.....	2	..
Electrical Engineering 356...Alternating Current Circuits.....	..	2
Electrical Engineering 368...Introduction to Electronics.....	1	2
Civil Engineering 372.....Strength of Materials.....	..	3
Mathematics 342.....Mechanics.....	..	2
*Electives.....	..	3

18

*See footnote, page 162.

<i>Senior Year—First Semester</i>		LAB.	LRC.
Electrical Engineering 461...Advanced Alternating Current Machinery	3	..	..
Electrical Engineering 463...Advanced Alternating Current Laboratory .....	..	..	2
Electrical Engineering 457...Advanced Electrical Circuits.....	2	..	..
Electrical Engineering 481...Advanced Electronics	3	..	..
Electrical Engineering 483...Advanced Electronics Laboratory....	..	..	1
Mechanical Eng. 457.....Machine Design	2	..	1
Political Science 301.....Constitution of the United States....	1	..	..
*Electives.....	3	..	..

18

<i>Senior Year—Second Semester</i>			
Electrical Engineering 462...Electrical Design	2	..	1
Electrical Engineering 464...Advanced Alternating Current Laboratory .....	..	..	2
†Electrical Engineering 466.Generation and Distribution or of Power	3	..	..
†Electrical Engineering 482.Electrical Communication	3	..	..
†Electrical Engineering 484.Communication Engineering Laboratory .....	..	..	1
Electrical Engineering 488...Seminar	1	..	..
Mechanical Eng. 353.....Fundamentals of Thermodynamics..	3	..	..
Mechanical Eng. 464.....Mechanical Laboratory .....	..	..	2
Political Science 302.....Constitution of Nevada.....	1	..	..
*Electives.....	3	..	or 2

18

SCHOOL OF CIVIL ENGINEERING

*Uniform Freshman Year (see page 161)**Sophomore Year—First Semester*

Mathematics 251.....Calculus.....	4	..	4
Physics 203.....General Physics for Engineers.....	..	..	4
Physics 205.....Physical Measurements.....	2	..	..
Civil Engineering 241.....Plane Surveying.....	1	..	2
Civil Engineering 245.....Engineering Problems.....	1	..	1
English 111.....Public Speaking.....	..	..	2
Military 201.....Basic.....	1	..	..
Physical Education 201.....Advanced Exercises.....	½	..	..

18½

Sophomore Year—Second Semester

Mathematics 252.....Calculus.....	4	..	4
Physics 204.....General Physics for Engineers.....	..	..	4
Physics 206.....Physical Measurements.....	2	..	..
Civil Engineering 242.....Plane Surveying.....	2	..	2
Civil Engineering 246.....Construction Materials.....	..	..	3
Military 202.....Basic.....	1	..	..
Physical Education 202.....Advanced Exercises.....	½	..	..

18½

*See footnote, page 162.

†Electrical Engineering 466 and 482 are intended as options—i. e., it is not intended that a student will take both 466 and 482. It will be permissible, with the consent of the adviser, to take one of the above courses as the "option" and the other as an "elective."

<i>Junior Year—First Semester</i>		LAB.	LEC.
Mathematics 341.....	Analytical Mechanics.....	..	3
Civil Engineering 363.....	Curves and Earthwork.....	1	2
Civil Engineering 367.....	Elementary Fluid Mechanics.....	1	3
Civil Engineering 369.....	Nonmetallic Testing Laboratory.....	1	..
Economics 203.....	Engineering Economics.....	..	3
Political Science 301.....	Constitution of United States.....	..	1
Elective.....	.....	..	3

18

<i>Junior Year—Second Semester</i>			
Mathematics 342.....	Analytical Mechanics.....	..	2
Civil Engineering 491.....	Contracts and Specifications.....	..	2
Civil Engineering 366.....	Roads and Pavements.....	..	4
Civil Engineering 376.....	Mechanics of Materials.....	1	3
Civil Engineering 374.....	Metals Test—Laboratory.....	1	..
Civil Engineering 368.....	Fluid Mechanics—Laboratory.....	1	..
Political Science 302.....	Constitution of Nevada.....	..	1
Elective.....	.....	..	3

18

<i>Senior Year—First Semester</i>			
Civil Engineering 481.....	Framed Structures.....	2	3
Civil Engineering 485.....	Mechanics of Reinforced Concrete... 1	3	
Civil Engineering 489.....	Sanitary Engineering.....	..	3
M. E. 353.....	Fundamentals of Thermodynamics... ..	..	3
Elective.....	.....	..	3

18

<i>Senior Year—Second Semester</i>			
Civil Engineering 484.....	Structural Design.....	2	2
Civil Engineering 486.....	Reinforced Concrete Design.....	2	1
Civil Engineering 488.....	Engineering Economy.....	..	2
Civil Engineering 490.....	Sanitary Engineering.....	..	3
Civil Engineering 492.....	Foundations.....	..	3
Elective.....	.....	..	3

18

Mackay School of Mines

GENERAL MINING COURSE

Freshman Year—First Semester

	LAB.	LEC.
English 101.....Composition and Rhetoric.....	..	3
Chemistry 101.....General Inorganic Chemistry.....	2	2
Mathematics 151.....Mathematical Analysis.....	..	5
Mechanical Eng. 105.....Engineering Drawing and Descriptive Geometry.....	2	..
*Art 101.....Freehand Drawing.....	1	..
Mining 101.....Introductory Mining.....	..	1
Military 101.....Basic Course.....	1	..
Physical Education 101.....Developmental Exercises.....	½	..

17½

Freshman Year—Second Semester

English 102.....Composition and Rhetoric.....	..	3
Chemistry 102.....Metals.....	..	2
Chemistry 124.....Qualitative.....	1	1
Mathematics 152.....Mathematical Analysis.....	..	5
Mechanical Eng. 106.....Engineering Drawing and Descriptive Geometry.....	2	..
Geology 110.....Engineering Geology.....	..	3
Military 102.....Basic Course.....	1	..
Physical Education 102.....Developmental Exercises.....	½	..

18½

Summer Work

Mining A.....Practical Mine Work.....	Four Weeks
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Sophomore Year—First Semester

Mathematics 241.....Differential Calculus.....	..	3
Physics 203.....Engineering Physics.....	..	4
Geology 211.....Determinative Mineralogy.....	2	..
Chemistry 231.....Quantitative Chemistry.....	2	1
Geology 102.....Historical Geology.....	..	3
Military 201.....Basic Course.....	..	1
Physical Education 201.....Advanced Exercises.....	½	..
Elective.....	1	..

17½

*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>Sophomore Year—Second Semester</i>		LAB.	LEC.
Mathematics 242.....	Integral Calculus.....	..	3
Physics 204.....	General Physics for Engineers.....	..	4
Metallurgy 204.....	Engineering Metallurgy.....	..	2
Geology 212.....	Blowpipe Analysis.....	2	..
Geology 214.....	Descriptive Mineralogy.....	..	2
Military 202.....	Basic Course.....	..	1
Physical Education 202.....	Advanced Exercises.....	$\frac{1}{2}$	..
Chemistry 232.....	Quantitative Analytical Chemistry..	2	1
Elective.....	.....	1	..

18½

<i>Junior Year—First Semester</i>			
Mining 351.....	Excavation.....	..	3
Metallurgy 341.....	Pyro-Metallurgy Laboratory.....	3	1
Mathematics 341.....	Analytic Mechanics.....	..	3
Civil Engineering 241.....	Plane Surveying.....	1	2
Geology 351.....	Petrology.....	1	1
Elective.....	.....	..	3

18

<i>Junior Year—Second Semester</i>			
Mining 352.....	Mine Plant.....	..	3
Metallurgy 366.....	Ore Dressing.....	..	2
Metallurgy 368.....	Ore Dressing Laboratory.....	2	..
Geology 360.....	Economic Geology Nonmetallic.....	..	3
Civil Engineering 242.....	Plane Surveying.....	2	2
Geology 352 or Metallurgy 356.....	Petrography or Physical Metallurgy.....	2	1

17

<i>Senior Year—First Semester</i>			
Geology 461.....	Economic Geology of Metals.....	..	3
Mining 461.....	Mining Methods.....	..	3
Metallurgy 471.....	Hydro-Metallurgy.....	1	2
Metallurgy 461.....	Pyro-Metallurgy, nonferrous metals.....	..	3
Political Science 301.....	Constitution of U. S.....	..	1
Mining 479, Metallurgy 479, or Geology 479.....	.....	2	..
Civil Engineering 361.....	Hydraulics.....	..	3

18

<i>Senior Year—Second Semester</i>			
Mining 472.....	Mine Administration.....	..	3
Mining 474.....	Mineral Industry Economics.....	..	3
Electrical Engineering 375.....	Electricity in Mining.....	..	3
Political Science 302.....	Constitution of Nevada.....	..	1
Mining 480, Metallurgy 480, or Geology 479.....	.....	2	..
Civil Engineering 372.....	Strength of Materials.....	..	3
Civil Engineering 374.....	Metals Testing Laboratory.....	1	..
Elective.....	3

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**MACKAY SCHOOL OF MINES
METALLURGY COURSE**

First Year—same as General Mining Course

Summer Work

Mining A.....Practical Metallurgical Work.....Four Weeks

Sophomore Year—First Semester

	LAB.	LEC.
Mathematics 241.....Differential Calculus.....	..	3
Physics 203.....Engineering Physics.....	..	4
Physics 205.....Physical Measurements.....	2	..
Geology 211.....Determinative Mineralogy.....	2	..
Chemistry 231.....Quantitative Chemistry.....	2	1
Military 201.....Basic Course.....	..	1
Physical Education 201.....Advanced Exercises.....	½	..
Elective.....		2

17½

Sophomore Year—Second Semester

Mathematics 242.....Integral Calculus.....	..	3
Physics 204.....General Physics for Engineers.....	..	4
Physics 206.....Physical Measurements.....	1	..
Metallurgy 204.....Introduction to Metallurgy.....	..	2
Geology 212.....Blowpipe Analysis.....	2	..
Geology 214.....Descriptive Mineralogy.....	..	2
Chemistry 232.....Quantitative Chemistry.....	2	1
Military 202.....Basic Course.....	..	1
Physical Education 202.....Advanced Exercises.....	½	..

18½

Junior Year—First Semester

Metallurgy 358.....Ferrous Metallurgy.....	..	2
Metallurgy 341.....Pyro-Metallurgy Laboratory.....	3	1
Mathematics 341.....Analytic Mechanics.....	..	3
Civil Engineering 241.....Plane Surveying.....	1	2
Political Science 301.....Constitution of U. S.....	..	1
Elective.....	..	3

16

Junior Year—Second Semester

Metallurgy 356.....Physical Metallurgy.....	1	2
Metallurgy 366.....Ore Dressing.....	..	2
Metallurgy 368.....Ore Dressing Laboratory.....	2	..
Geology 360.....Economic Geology Nonmetallic.....	..	3
Civil Engineering 242.....Plane Surveying.....	2	2
Political Science 302.....Constitution of Nevada.....	..	1
Elective.....	..	3

18

Senior Year—First Semester

Chemistry 451.....Physical Chemistry.....	1	3
Metallurgy 471.....Hydro-Metallurgy.....	..	2
Metallurgy 461.....Pyro-Metallurgy.....	..	3
Metallurgy 473.....Hydro-Metallurgy Laboratory.....	1	..
Civil Engineering 361.....Hydraulics.....	..	3
Metallurgy 479.....Project in Metallurgy.....	2	..
Elective.....	..	3

NOTE—See footnote, page 169.

18

<i>Senior Year—Second Semester</i>		LAB.	LEC.
Chemistry 452.....	Physical Chemistry.....	1	3
Mining 474.....	Mineral Industry Economics.....	..	3
Electrical Engineering 375.....	Electricity in Mining.....	..	3
Civil Engineering 372.....	Strength of Materials.....	..	3
Civil Engineering 374.....	Metals Testing Laboratory.....	1	..
Metallurgy 472.....	Electro-Metallurgy.....	..	2
Metallurgy 476.....	Problems and Seminar.....	..	2
Metallurgy 480.....	Project in Metallurgy.....	2	..

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MACKAY SCHOOL OF MINES
GEOLOGICAL ENGINEERING

(First two years—same as General Mining Course except that
Mining A is not required)

<i>Junior Year—First Semester</i>			
Civil Engineering 241.....	Plane Surveying.....	1	2
*Foreign Languages.....	First Year.....	..	5
Geology 351.....	Petrology.....	1	1
Geology 370.....	Field Geology.....	1	..
Geology 382.....	Structural Geology.....	..	3
Mining 461.....	Mining Methods.....	..	3

17

<i>Junior Year—Second Semester</i>			
Civil Engineering 242.....	Plane Surveying.....	2	2
Geology 352.....	Petrography.....	2	1
Geology 354.....	Geologic Reports.....	..	2
Geology 360.....	Economic Geology of Nonmetals.....	..	3
*Foreign Languages.....	First Year.....	..	5

17

<i>Summer Course</i>			
Geology 471.....	Summer Field Geology.....	..	6

<i>Senior Year—First Semester</i>			
Political Science 301.....	Constitution of U. S.....	..	1
*Geology 388.....	Sedimentation.....	1	2
*English 111.....	Public Speaking.....	..	2
Geology 461.....	Economic Geology of Metals.....	..	3
Geology 477.....	Paleontology.....	1	2
Geology 479.....	Geology Project.....	2	..
Geology 480.....	Geophysical Methods.....	1	2

17

<i>Senior Year—Second Semester</i>			
Political Science 302.....	Constitution of Nevada.....	..	1
Geology 440.....	Geomorphology.....	..	3
Geology 478.....	Stratigraphy.....	..	3
Geology 479.....	Geology Project.....	2	..
*Geology 430.....	Petroleum Geology.....	..	3
Geology 485.....	Seminar.....	1	..
Elective.....	.....	..	3

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. Two nontechnical electives may be taken in the senior year.

*May be substituted for by permission.

The College of Agriculture

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

AIM

The aim of the College of Agriculture is to give such training in scientific and vocational agriculture and home economics as will furnish a well-rounded education and fit students for professional positions.

EQUIPMENT

AGRICULTURE BUILDING AND UNIVERSITY FARMS—For descriptions see *Buildings*, Index.

ANIMAL INDUSTRY—The laboratories in the Agricultural Building are equipped with facilities for studying animal breeding, animal nutrition, meats, wool, dairy and poultry production.

FARM MECHANICS SHOP—The shop for farm mechanics work is located in a Quonset hut on the north end of the campus. It is well equipped, with forges and other equipment for blacksmithing, tools and equipment for sheetmetal work, soldering, plumbing, cold metal work, building construction, farm machinery repair and gas engine and tractor work.

GREENHOUSE—A greenhouse is available to students for laboratory work in courses in botany, horticulture, agronomy, and soils. A large room is devoted to experimental work in plant physiology, plant diseases, and plant propagation, 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, agricultural education, animal industry, and plant industry will be conferred upon students who satisfactorily complete the full course of study in the selected field in the School of Agriculture aggregating 132 semester units.

Candidates for the degree of Bachelor of Science in Agriculture who have not had ranch or farm experience should consult their adviser relative to obtaining this experience if they wish to be recommended for positions requiring such experience.

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.

CURRICULA IN AGRICULTURE

Uniform Freshman Year

	<i>1st</i>	<i>2d</i>
	<i>Sem.</i>	<i>Sem.</i>
Military 101-102.....Basic Military	1	1
Physical Education		
101-102.....Developmental Exercises	½	½
Agricultural Economics		
103.....Orientation in Agriculture.....	1	..
Agronomy 104.....Elements of Agronomy.....	..	3
Animal Industry 101.....Elements of Animal Industry.....	3	..
Botany 103.....General Botany	3	..
Chemistry 101-102.....General Chemistry	4	2
English 101-102.....Composition and Rhetoric.....	3	3
Zoology 103.....General Zoology .....	..	4
Electives according to major.....	..	3
	15½	16½

AGRICULTURAL ECONOMICS MAJOR

Uniform Freshman Year (see p. 171)

Sophomore Year

		1st Sem.	2d Sem.
Military 201-202.....	Basic Infantry	1	1
Physical Education			
201-202.....	Advanced Exercises	$\frac{1}{2}$	$\frac{1}{2}$
Economics 201.....	Principles of Economics	3	..
Agricultural Economics			
212	Principles of Agricultural Economics .....	..	3
Agricultural Economics			
211-212.....	Principles of Economics with Application to Agriculture.....	3	3
Agronomy 205.....	Forage Crops	3	..
Animal Husbandry 303.....	Livestock Judging	2	..
Animal Industry 234.....	Principles of Feeding .....	..	3
English 111-112.....	Public Speaking	2	2
Soils 203.....	Soils	3	..
Electives.....		2	7
		<hr/>	<hr/>
		16 $\frac{1}{2}$	16 $\frac{1}{2}$

Junior Year

Agricultural Economics			
245.....	Farm Accounting	3	..
Agricultural Economics			
355-356.....	Farm Finance and Land Economics	2	2
Agricultural Economics			
352.....	Agricultural Economic Policy.....	..	3
Agricultural Economics			
357.....	Marketing Agricultural Products....	3	..
Agricultural Mechanics			
356.....	Irrigation .....	..	3
Economics 353.....	Money and Banking.....	3	..
Political Science 301-302.....	Constitution of U. S. and Nevada..	1	1
Sociology 350.....	Rural Sociology .....	..	2
Electives.....		5	6
		<hr/>	<hr/>
		17	17

Senior Year

Agricultural Economics			
464.....	Cooperative Organization .....	..	2
Agricultural Economics			
465.....	Agricultural Prices	3	..
Agricultural Economics			
476.....	Farm Management .....	..	3
Agricultural Electives.....		7	3
Electives.....		7	8
		<hr/>	<hr/>
		17	16

AGRICULTURAL EDUCATION

This course of study is designed to meet the needs of those students who are planning to teach vocational agriculture in rural high schools. In this curriculum, emphasis is given to practical farm experience, a broad general training in the basic fields of

Junior Year

		1st Sem.	2d Sem.
Agricultural Mechanics			
332.....	Farm Machinery .....	..	2
Agricultural Economics			
245.....	Farm Accounting	3	..
Agricultural Mechanics			
312.....	Welding .....	..	2
Political Science 301-302.....	Constitution of U. S. and Nevada..	1	1
Psychology 221.....	Educational Psychology .....	..	3
Dairy Husbandry 311.....	Market Milk Production.....	3	..
Veterinary Science 301.....	Anatomy and Physiology of		
	Farm Animals	3	..
Animal Industry 303.....	Livestock Judging	2	..
Agricultural Mechanics			
354.....	Gas Engines and Tractors.....	..	2
Electives according to major.....		5	6
		<hr/>	<hr/>
		17	16

Senior Year

First Semester

Agronomy 359.....	Principles of Range and		
	Pasture Management		3
Animal Husbandry 353.....	Beef Production		3
Journalism 370.....	Agricultural and Home Economics		
	Journalism		2
Agricultural Economics			
357.....	Marketing Agricultural Products.....		3
Electives according to major.....			5
			<hr/>
			16

Second Semester
1st 6 wks. 2d 6 wks. 3d 6 wks.

Agricultural Education				
447.....	Methods of Teaching			
	Vocational Agriculture.....	3	..	..
Agricultural Education				
445.....	Methods of Teaching			
	Farm Mechanics	1	..	1
Education 482.....	Noninstructional Responsi-			
	bility of H. S. Teachers.....	1	..	1
Agricultural Education				
420.....	Practice Teaching in Voca-			
	tional Agriculture .....	..	6	..
Agricultural Education				
446.....	Problems in Agricultural			
	Education .....	..	..	2
Education 344.....	Methods in Adult Voca-			
	tional Education .....	..	..	2

17

Suggested Electives—

Animal Husbandry 354, 363, 443	Farm Management 341, 354
Animal Industry 304	Horticulture 102, 201, 355, 356
Agronomy 346, 367	Mathematics 102
Agricultural Economics 355	Poultry Husbandry 331
Dairy Husbandry 413	Soils 212, 316
English 111	Veterinary Science 302

ANIMAL INDUSTRY MAJOR

Students may specialize in animal breeding, animal nutrition, milk production or general animal sciences.

Uniform Freshman Year (see p. 171)

		<i>1st</i>	<i>2d</i>
		<i>Sem.</i>	<i>Sem.</i>
<i>Sophomore Year</i>			
Military 201-202.....	Basic courses	1	1
Physical Education			
201-202.....	Advanced exercises	½	½
Economics 201.....	Principles of Economics.....	3	..
Agricultural Economics			
212.....	Principles of Agricultural Economics .....	..	3
Agronomy 205.....	Forage Crops	3	..
Animal Industry 234.....	Principles of Feeding.....	..	3
Chemistry 242.....	Introductory Organic .....	..	4
English 111.....	Public Speaking	2	..
Soils 203.....	Soils	3	..
Zoology 350.....	Genetics .....	..	3
Electives.....	.....	4	2
		<hr/>	<hr/>
		16½	16½
<i>Junior Year</i>			
Agronomy 359.....	Range and Pasture Management... 3	3	..
Animal Industry 303-304.....	Livestock Judging	2	2
Animal Industry 343-344.....Animal Nutrition—Animal			
	Genetics	3	3
Veterinary Science 301-302.. Anatomy and Physiology of			
	Farm Animals, Diseases of		
	Farm Animals and Poultry.....	3	3
Animal Industry Electives.....	.....	3	3
Electives.....	.....	3	6
		<hr/>	<hr/>
		17	17
<i>Senior Year</i>			
Political Science 301-302.....	Constitution of U. S. and Nevada.. 1	1	1
Animal Industry 401-402.....	Animal Industry Seminar	1	1
Agricultural Electives .....	.....	7	8
Electives.....	.....	8	6
		<hr/>	<hr/>
		17	16

PLANT INDUSTRY
AGRONOMY MAJOR

Uniform Freshman Year (see p. 171) with Horticulture 102 Required

Sophomore Year

		1st Sem.	2d Sem.
Military 201-202.....	Basic Infantry	1	1
Physical Education			
201-202.....	Advanced Exercises	½	½
Economics 201.....	Principles of Economics.....	3	..
Agricultural Economics			
212.....	Principles of Agricultural Economics .....	..	3
Agricultural Mechanics			
221.....	General Mechanics	2	..
Agronomy 205.....	Forage Crops	3	..
Botany 222.....	Taxonomy .....	..	4
Botany 350.....	Genetics .....	..	3
Chemistry 242.....	Organic Chemistry .....	..	4
Soils.....	Soils	3	..
Electives.....		4	2
		<hr/>	<hr/>
		16½	17½

Junior Year

Agricultural Mechanics			
356.....	Irrigation .....	..	3
*Agronomy 354.....	Cereal Crops .....	..	3
*Agronomy 355.....	Crop Ecology	3	..
Agronomy 359.....	Range and Pasture Management....	3	..
Animal Industry 234.....	Principles of Feeding.....	..	3
Botany 355.....	Plant Physiology	4	..
Soils 317.....	Soil Fertility	3	..
Soils 312.....	Soil Conservation .....	..	3
Zoology 359.....	Entomology	4	..
Electives.....		..	5
		<hr/>	<hr/>
		17	17

Senior Year

Agricultural Economics			
476.....	Farm Management .....	..	3
Agricultural Mechanics			
332.....	Farm Machinery .....	..	2
Agronomy 346.....	Weeds and Weed Control.....	..	3
*Agronomy 457.....	Methods in Research.....	2	..
*Agronomy 469.....	Range and Pasture Literature.....	1	..
Botany 464.....	Plant Pathology	4	..
English 111.....	Public Speaking .....	..	2
Political Science 301-302.....	Constitution of U. S. and Nevada..	1	1
Electives.....		8	5
		<hr/>	<hr/>
		16	16

*Agronomy 354, 355, 457, and 469 are given in alternate years.

Suggested Electives—

For students more interested in Field Crops:

Agricultural Economics 357. Horticulture 203, 355 and 353 or 356.
 Agronomy 360, 364, and 456. Zoology 359.
 Botany 317.

For students more interested in Soil Conservation:

Agricultural Economics 354, 357. Geology 110.
 Agricultural Mechanics 341. Journalism 370.
 Agronomy 360 and 364. Mathematics 101 and 102.
 Chemistry 231. Soils 318 and 323.
 Civil Engineering 241 and 242.

HORTICULTURE MAJOR

Uniform Freshman Year (see p. 171) *with Horticulture 102 Required*
Sophomore Year

	<i>1st</i> <i>Sem.</i>	<i>2d</i> <i>Sem.</i>
Military 201-202.....Basic Courses	1	1
Physical Education		
201-202.....Advanced Exercises	½	½
Economics 201.....Principles of Economics.....	3	..
Agricultural Economics		
212.....Principles of Agricultural Economics .....	..	3
Agricultural Mechanics		
221.....General Mechanics	2	..
Botany 231.....Plant Anatomy	3	..
Botany 350.....Genetics .....	..	3
Chemistry 242.....Organic Chemistry .....	..	4
English 111.....Public Speaking	2	..
Horticulture 201 or 203.....Ornamental Horticulture or Plant Propagation	2	..
Soils 203.....Soils	3	..
Electives.....	..	5
	16½	16½

Junior Year

Agricultural Economics		
476.....Farm Management .....	..	3
Agricultural Mechanics		
341.....Farm Structures	2	..
Botany 222.....Taxonomy .....	..	4
Botany 355.....Plant Physiology	4	..
Botany 364.....Plant Pathology	4	..
Horticulture 201.....Ornamental Horticulture	2	..
Horticulture 353.....Fruit Growing	3	..
Horticulture 356.....Vegetable Growing .....	..	3
Soils 312.....Soil Conservation .....	..	3
Electives.....	2	4
	17	17

<i>Senior Year</i>		<i>1st</i>	<i>2d</i>
		<i>Sem.</i>	<i>Sem.</i>
Agricultural Economics			
357.....	Marketing	3	..
Agricultural Mechanics			
332.....	Farm Machinery and Equipment... ..		2
Agricultural Mechanics			
356.....	Irrigation		3
Agronomy 346.....	Weeds		3
Agronomy 457.....	Methods of Research.....	2	..
Horticulture 355.....	Disease and Pest Control.....	2	..
Horticulture 491-492.....	Special Problems	2	2
Political Science 301-302.....	Constitution of U. S. and Nevada..	1	1
Electives.....		7	5
<i>Suggested Electives</i>		<hr/>	<hr/>
		17	16
Agricultural Economics			
352.....	Agricultural Economic Policy.....		3
Agricultural Economics			
464.....	Cooperative Organization		2
Agricultural Economics			
465.....	Prices	3	..
Agricultural Mechanics			
211.....	Forging	2	..
Agricultural Mechanics			
312.....	Welding		2(1)
Agricultural Mechanics			
335.....	Advanced Mechanics	2	..
Agricultural Mechanics			
353.....	Gas Engines and Tractors.....	2	..
Agronomy 456.....	Crop Improvement		3
Botany 495-496.....	Seminar	1	1
Journalism 370.....	Agricultural Journalism		2-3
Mathematics 110.....	College Algebra	3	3
Mathematics 220.....	Mathematical Statistics		3
Soils 423.....	Soil Genesis and Classification... 3		..
Soils 314.....	Soil Fertility		3(1)

*Numbers in parentheses are number of laboratory periods.

RANGE AND PASTURE MANAGEMENT MAJOR

Uniform Freshman Year (see p. 171)

Sophomore Year

Military 201-202.....	Basic course	1	1
Physical Education			
201-202.....	Advanced Exercises	½	½
Economics 201.....	Principles of Economics.....	3	..
Agricultural Economics			
212.....	Principles of Agricultural Economics		3
Agronomy 205.....	Forage Crops	3	..
Animal Industry 234.....	Principles of Feeding.....		3
Botany 222.....	Taxonomy		4
Chemistry 242.....	Introductory Organic		4
English 111.....	Public Speaking	2	..
Mathematics 102.....	Plane Trigonometry	2	..
Soils 203.....	Soils	3	..
Electives.....		2	2
		<hr/>	<hr/>
		16½	17½

Junior Year

		1st Sem.	2d Sem.
Agricultural Economics			
356.....	Land Economics .....	..	2
Agricultural Mechanics			
221.....	General Mechanics	2	..
Agronomy 346.....	Weeds and Weed Control.....	..	3
Agronomy 359.....	Principles of Range and Pasture Management	3	..
Agronomy 362.....	Poisonous Range Plants .....	..	1
Agronomy 364.....	Range Field Trip .....	..	1
Agronomy 366.....	Range Condition, Classification and Improvement .....	..	2
Botany 355.....	Plant Physiology	4	..
Civil Engineering 241.....	Surveying	3	..
Soils 312.....	Soil Conservation .....	..	3
Zoology 337	Mammals .....	..	3
Electives.....		5	2
		17	17

Senior Year

Agronomy 457.....	Methods in Agronomy Res.....	2	..
Agronomy 468.....	Advanced Range Management.....	..	3
Agronomy 469.....	Range and Pasture Literature.....	2	..
Animal Husbandry 464.....	Livestock Management .....	..	3
Botany 317	Range Agrostology .....	..	3
Botany 475.....	Plant Ecology	4	..
Political Science 301-302.....	Constitution of U. S. and Nevada..	1	1
Electives.....		8	6
		17	18

Range and Pasture Major

Suggested Electives—

Veterinary Science 301.

Animal Industry 303.

Botany 476.

Geology 110.

Agricultural Journalism 370.

Mathematics 110, 220.

SOILS MAJOR

*Uniform Freshman Year (see p. 171) with Chemistry 122 Required**Sophomore Year*

Military 201-202.....	Basic Infantry	1	1
Physical Education			
201-202.....	Advanced Exercises	½	½
Economics 201.....	Principles of Economics.....	3	..
Agricultural Economics			
212.....	Principles of Agricultural Economics .....	..	3
Agricultural Mechanics			
221.....	General Mechanics	2	..
Agronomy 205.....	Forage Crops	3	..
Chemistry 231.....	Quantitative Analysis	3	..
Chemistry 242.....	Organic Chemistry .....	..	4
Geology 110.....	Geology .....	..	3
Soils 203.....	Soils	3	..
Soils 212.....	Soil Conservation .....	..	3
Electives.....		2	2
		17½	16½

Junior Year

		1st Sem.	2d Sem.
Agricultural Mechanics			
356.....	Irrigation .....	..	3
Botany.....	Plant Physiology	4	..
English 111.....	Public Speaking .....	..	2
Physics 151-152.....	General Physics	3	3
Physics 153-154.....	General Physics Laboratory.....	1	1
Soils 317.....	Soil Fertility	3	..
*Soils 323.....	Soil Physics	3	..
*Soils 318.....	Soil Analysis .....	..	2
Electives.....		3	5
		<hr/>	<hr/>
		17	16

Senior Year

Agricultural Economics			
476.....	Farm Management .....	..	3
Agricultural Mechanics			
331.....	Farm Machinery	2	..
Botany 364.....	Plant Pathology	4	..
Political Science 301-302.....	Constitution of U. S. and Nevada..	..	1
*Soils 425.....	Soil Genesis	3	..
Soils 473.....	Soil Problems .....	..	2
Botany 351.....	Bacteriology	4	..
Electives.....		3	10
		<hr/>	<hr/>
		16	16

*Soils 318, 323, and 425 are given in alternate years.

Suggested electives—

Agronomy 355 and 457.	Horticulture 102.
Civil Engineering 241 and 242.	Mathematics 101, 102, 110,
Chemistry 232 and 352.	and 140.

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 and their application to living.

These are days of challenging responsibilities, of great opportunities, to be better equipped to take one's place in the home and in the community.

Three areas of concentration are offered in order to meet individual needs: teaching, foods and nutrition, and general. The degree of Bachelor of Science in Home Economics is conferred upon satisfactory completion of 126 semester units.

VOCATIONAL HOME ECONOMICS

The following program is designed for students who wish to qualify as teachers of Home Economics under the provision of the National Vocational Education Acts. Student teaching and accompanying courses in methods of teaching are offered in the Senior year.

Arrangements are made for students to secure the minimum six hours of student teacher experience in an approved off-campus center.

Freshman Year

	<i>1st Sem.</i>	<i>2d Sem.</i>
English 101-102.....Composition and Rhetoric.....	3	3
Chemistry 101-102.....General Inorganic Chemistry.....	4	2
Home Economics 103.....Orientation.....	2	..
Home Economics 131.....Food for Families		
or		
Home Economics 115.....Clothing.....	3	..
Home Economics 132.....Foods for Families		
or		
Home Economics 116.....Textiles.....	..	3
Music 203 or 204.....Music Appreciation.....	..	2
Physical Edu. 161-162.....Freshman Practice.....	1	1
Art 101-102.....	2	..
Economics 218.....Family Economics.....	..	3
Electives.....	..	1
	<hr/>	<hr/>
	15	15

Sophomore Year

Physics 119.....Physics of the Home.....	4	..
Home Economics 115.....Clothing		
or		
Home Economics 131.....Food for Families.....	3	..
Home Economics 116.....Textiles		
or		
Home Economics 132.....Foods.....	..	3
Home Economics 133.....Nutrition and Health.....	3	..
Home Economics 367.....Clothing the Family.....	..	3
Education 190.....School Law.....	2	..
Journalism 370.....Agricultural Journalism.....	..	3
English 111.....Public Speaking.....	2	..
Psychology 221.....	..	3
Art.....Appreciation	2	..
Physical Edu. 261-262.....Sophomore Practice.....	½	½
Electives.....	..	3
	<hr/>	<hr/>
	16½	15½

Junior Year

Education 310.....Problems in Secondary Education....	2	..
Home Economics 475.....Child Development.....	3	..
Home Economics 477-478.....Child Guidance	2	2
Home Economics 366.....Advanced Clothing.....	..	3
Home Economics 253.....Care of Family Health.....	3	..
Home Economics 476.....Family Living.....	..	3
Home Economics 255.....Meals for Families.....	..	4
Home Economics 487.....Home Decoration.....	3	..
Home Economics 486.....Managing Homes.....	..	3
Political Science 301.....Constitution of United States.....	1	..
Sociology 380.....The Family.....	..	3
Electives.....	3	..
	<hr/>	<hr/>
	17	18

Senior Year

	1st Sem.	2d Sem.
Home Economics 402.....Seminar .....	..	2
Home Economics 499.....Demonstration.....	3	..
Education 489.....Methods in Teaching Homemaking..	..	3
Home Economics 488.....Household Equipment.....	2	..
Education 448.....Problems in Homemaking Edu.....	..	3
Botany 351.....General Bacteriology.....	4	..
Education 420.....Supervised Teaching in High School.....	..	6
Political Science 302.....Constitution of Nevada.....	1	..
Education 482.....Noninstructional Responsibility of High School Teacher.....	..	2
Elective.....	3	..
	<hr/>	<hr/>
	13	16

FOODS AND NUTRITION

This area of concentration not only provides experience in food preparation and meal planning in relation to the requirements of good health, but provides pre-professional training in dietetics and institution management. Upon completion of a year's internship in an approved hospital or institution, the student is eligible to membership in the American Dietetic Association. This area also provides fundamental preparation for work as a nutrition specialist, consultant in social work, and as agent in extension service.

Freshman Year

English 101-102.....Composition and Rhetoric.....	3	3
Chemistry 101-102.....General Inorganic.....	4	2
Home Economics 131-132.....Foods.....	3	3
Home Economics 103.....Orientation.....	2	..
Chemistry 242.....Introductory Organic.....	..	3
Sociology 102.....	..	3
Physical Education 161-162.....	1	1
Electives.....	2	1
	<hr/>	<hr/>
	15	16

Sophomore Year

Physics 119.....	4	..
Home Economics 116.....Textiles.....	..	3
Psychology 201.....General.....	3	..
Psychology 241.....	..	3
Philosophy 221.....	..	3
Economics 218.....	..	3
Agricultural Economics 201.....	3	..
Physical Education 261-262.....	$\frac{1}{2}$	$\frac{1}{2}$
Electives.....	5	4
	<hr/>	<hr/>
	15 $\frac{1}{2}$	16 $\frac{1}{2}$

<i>Junior Year</i>		<i>1st Sem.</i>	<i>2d Sem.</i>
Chemistry 271.....	Physiological	5	..
Home Economics 334.....	Nutrition.....	..	3
Home Economics 499.....	Demonstration.....	3	..
Home Economics 493.....	Experimental Foods.....	2	..
English 315.....	.....	..	2
Home Economics 255.....	Meal Planning.....	..	4
Zoology 346.....	Physiology.....	..	5
Electives.....	.....	5	2
		<hr/>	
		15	16
<i>Senior Year</i>			
Home Economics 491.....	.....	3	..
Home Economics 475-476.....	.....	3	3
Home Economics 477-478.....	Child Guidance	2	2
Home Economics 436.....	Nutrition.....	..	3
Political Science 301-302.....	Constitutions of the United States and Nevada.....	1	1
Biology 351.....	Bacteriology.....	4	..
Home Economics 498.....	.....	..	3
Home Economics 496.....	.....	..	3
Home Economics 402.....	Seminar.....	..	2
Electives.....	.....	4	..
		<hr/>	
		17	17

GENERAL

In addition to the two professional areas in the School of Home Economics (Teaching, and Foods and Nutrition), a General area is offered for the young women who expect to marry soon after graduation. The subjects for the general area are widely selected from home economics, the humanities, the life sciences and social sciences; they should help the student acquire the appreciation, understandings, and skills necessary for successful personal, family, and community living today.

The number of electives scheduled makes possible the opportunity to meet special interests and needs for each student.

<i>Junior Year</i>		<i>1st</i>	<i>2d</i>
		<i>Sem.</i>	<i>Sem.</i>
Home Economics 367-486.....	Family Clothing Problems :		
	Home Management.....	3	3
Home Economics 253.....	Care of Family Health.....	3	..
Political Science 301-302.....	Constitutions of the United States		
	and Nevada.....	1	1
Sociology 379-380.....	Race Problems : The Family.....	2	2
Psychology 375.....	Marriage, Homemaking, and		
	Divorce.....	..	2
Art 362.....	History of European Art.....	..	3
Music 304.....	Music of Today.....	..	2
Elective.....	English.....	2 or 3	..
	Other.....	4 or 3	2
		<hr/>	<hr/>
		15	15
 <i>Senior Year</i> 			
Home Economics 475-476.....	Child Development.....	3	3
Home Economics 477-478.....	Child Guidance	2	2
Home Economics 487-402.....	Home Decoration : Home Economics		
	Seminar.....	3	2
Philosophy 462.....	Philosophy of Religion.....	..	2
Philosophy 482.....	Philosophy of Political Problems .....	..	2
Elective.....	English.....	3	..
	Other	5	5
		<hr/>	<hr/>
		16	16

DESIRABLE ELECTIVES

Freshmen

Choose two credits : Art 101, 105 ; English 131, 141, 145, 171 ; Music 105, 106, 111, 112, 117, 118.

Sophomores

Choose six credits : English 231, 232, 247, 248, 253, 254, 261 ; Music 203, 204 ; Philosophy 222 ; Art 251, 257 ; Business 221, 222 ; Typing 243 ; Home Economics 116 ; Physical Education, individual sports or hygiene.

Juniors

Choose eight credits : English 335, 337, 345, 346, 355, 356 ; History 314 ; Music 313 ; Psychology 361 ; Art 362, 363 ; Business 353 ; Home Economics 366, 368 ; Physical Education, same activities as sophomores ; Journalism 370.

Seniors

Choose seventeen credits : English 441 ; Psychology 405 ; Home Economics 488, 499 ; History 403, Journalism 370.

GRADUATE STUDY

OPPORTUNITY FOR GRADUATE WORK

The University offers graduate work leading to the following advanced degrees: Master of Arts, Master of Science, and certain professional degrees in the College of Engineering. Most of the departments in the College of Arts and Science will accept candidates for the master's degree. Specialization in any department, however, will be limited to the specialties of the department staff.

Professional engineering degrees are given on satisfactory completion of certain professional work and a thesis as described later in the section *Engineering Degrees*.

Although, in general, all work for the master's degree will be expected to be done in residence, certain departments, at their discretion, may allow a portion of the course work to be done at other recognized graduate schools. Whenever a student is accepted for graduate work leading to the master's degree, he may be assured that he will be given instruction of superior quality, and counseling that will be intimate and generous. Since the master's degrees are the only advanced degrees offered by the University, effort is made to keep the work exceptionally high in standard, and in value to the student. The candidate for the master's degree need not fear that he will be slighted in behalf of others seeking a doctor's degree, as no work is offered leading to the Ph.D. degree.

GENERAL REQUIREMENTS FOR THE MASTER'S DEGREE

1. *Undergraduate Prerequisite.* Excepting the special case of senior undergraduates in residence at the University of Nevada (as presented in paragraph 8 of the section on General Regulations) no student will be accepted for graduate work unless he has earned the bachelor's degree from an accredited college or university.

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 in the department, and in no case may this prerequisite be less than the requirements for an undergraduate minor or its equivalent. If a student is deficient in undergraduate prerequisites he must make up such deficiencies. In case of uncertainty as to the candidate's ability to undertake graduate work in the depart-

ment, the head of the department may require the candidate to take a qualifying examination.

Every department reserves the right to determine what candidates it will accept for graduate work.

2. *Residence Requirements.* A thesis and a total of 24 semester hours in graduate courses (for definition see section entitled *Graduate Courses*) are required in residence at the University of Nevada or, by special arrangement, at other approved institutions, as follows:

I. For graduates of the University of Nevada: 12 semester hours of graduate courses may be done in other accredited institutions, and be accepted toward the degree when such courses have been approved in advance by the major or minor department.

II. For graduates of other institutions: 8 semester hours of graduate courses in other institutions may be accepted under the conditions specified above.

3. *Course Requirements.* The candidate for the Master's degree shall choose one of the two following procedures for the selection of graduate courses.

I. He shall select a department in which to pursue a major field of study to comprise at least 12 of the 24 graduate hours and he shall select a minor field of study to comprise at least six hours. The minor may be in a different department or it may be in a second division of the major department, when the major department consists of two or more separate divisions, frequently organized as departments.

II. He shall select a department which will constitute his field of concentration. The department and the student will then arrange such a program of graduate courses as will best meet the needs and abilities of the student. Subject to the approval of the graduate committee more than the minimum may be required for either the major or the minor as conditions may require. Whatever number of the 24 hours is not required for the major and minor may be elected by the student in any department; they will normally be chosen to support the candidate's thesis.

Students should not enroll in any course for graduate credit without first securing the approval of the department head that such courses are acceptable toward a major or a minor. Not any six or twelve hours may be chosen, but only such as combine to make the design that the student may or should have in mind.

It should be emphasized, however, that, although there are

these certain formal requirements expressed in a specified number of hours, the student should not think of graduate work as primarily the completion of a number of required courses. These courses are intended to give the student a comprehensive understanding of his whole major field and of some segment of his minor field. This understanding will be checked in the final oral examination.

4. *The Thesis.* Graduate work is intended to prepare the student in search of truth as yet undiscovered. The master's degree at the University of Nevada is designed to lay the foundation for further graduate study and research. This objective of graduate study is sought in the thesis requirement.

As the thesis is considered the most distinctive characteristic of the master's degree, great importance is assigned to it in determining the eligibility of the candidate for the degree. Generally the thesis should demonstrate the ability of the student to select and delimit a specific problem or topic, to assemble the pertinent and necessary data, to make some original research or contribution, to organize ideas and data acceptably, and to prepare a written report in clear and effective English.

As the thesis usually requires close and constant supervision by the director in charge, the candidate should plan to develop the thesis while in residence. It is almost impossible to make satisfactory progress on the thesis wholly or largely in absentia. The candidate should not expect therefore to carry a full load of graduate courses in residence and do the thesis away from the campus. When considerable progress has been made while in residence in collecting data and in outlining the thesis, the candidate may be permitted to attempt the completion of the thesis away from the campus, under such arrangements as the supervisor of the thesis may specify.

Other general regulations concerning the thesis are described later.

5. *Credits for the Thesis.* When the candidate has been recommended by the Graduate Committee and approved by the Faculty for the master's degree, six credits will be recorded on his official scholarship record for the work completed on the thesis.

6. *The Final, Oral, Examination.* Not later than three weeks before the date of the Commencement at which the degree is to be conferred, a final examination will be held. This examination is usually oral, though it may be written, and is conducted by a committee of five, appointed by the graduate committee. In the examination the student should be able to demonstrate a comprehensive understanding of a broad field, and a somewhat more detailed understanding of a more limited field. The examination may cover also the contents of the thesis, and facts, principles, or theories related to or suggested by the thesis.

PROCEDURE FOR BECOMING A CANDIDATE FOR THE MASTER'S DEGREE

1. *Submission of Undergraduate Transcript.* Graduates of recognized colleges or universities who desire to become candidates for the master's degree at the University of Nevada should submit to the chairman of the Graduate Committee, considerably in advance of the registration date, an official transcript of his complete undergraduate record with official evidence that the bachelor's degree has been conferred.

2. *Application for Candidacy.* Before registering for any graduate course the candidate should receive from the chairman of the Graduate Committee an application blank for admission to candidacy, and, in consultation with his major and minor professors, should indicate upon the blank the general program of studies that he is to pursue. The blank should be returned to the Graduate Committee before registration is begun.

3. *Registration.* At the date of registration, the graduate student whose application has been approved by the departments concerned and by the Graduate Committee, will (a) secure his registration coupons from the Registrar, (b) secure the signature of the professor for each course in which he wishes to enroll, with the notation that the course is for graduate credit, (c) secure the signature of the chairman of the Graduate Committee, (d) make out his class cards, writing "graduate credit" on each card that represents a course signed for graduate credit,* (e) present the registration card to the Registrar for computation of fees to be paid, and (f) present the card to the Comptroller and pay the fees.

GRADUATE COURSES

Graduate courses consist of those numbered 500 and above, and of such courses numbered 300 to 500 as the department concerned may accept for graduate credit. To be acceptable for graduate credit such courses will require such additional and individual work as the instructor may deem necessary to demonstrate ability on the part of the student to do independent study and thinking. No such course will be acceptable for graduate credit if the student has already received undergraduate credit in it. The thesis, or a course offered in the thesis, is not counted as part of the 24 hours required for the degree.

FEEES

Graduate students are subject to the payment of the following fees:

*It is the responsibility of the student to see that each course is properly signed for graduate credit on the registration card and that each class card carries the notation "graduate credit." Neglect in doing this may result in failure to receive graduate credit.

1. **Matriculation Fee**—Every student is required to pay a matriculation fee of \$5 upon the occasion of his first registration in the University. This fee is payable only once.

2. **Registration and Incidental Fees**—A registration fee of \$7.50, an incidental fee of \$5, and a library fee of \$2.50 is payable each semester by every student enrolled for more than 5 credit hours.

3. **Laboratory and Course Fees**—A considerable number of courses, especially the laboratory courses, carry specific fees to pay for supplies or for other extras; these fees vary with the nature of the course, and may be ascertained from the department head or the Registrar. Fees for courses, other than science, as history, English, foreign languages, etc., are unusual.

4. **Diploma Fee**—A fee of \$6 is charged to cover the cost of the diploma. If the student does not desire to buy the master's hood, it is possible to rent one for the Commencement ceremony through the University library for a nominal fee.

5. **Nonresident Tuition Fee**—Students who are not residents of the State of Nevada must pay a tuition fee of \$100 each semester.

6. **Summer Session Fees**—A fee for each summer session of five weeks is payable by every student enrolled.

7. **Student Union and Health Fees**—Graduate students are not required to pay the A. S. U. N. semester fee of \$13 and the health service fee of \$6 per semester, but they may avail themselves of the services provided upon payment of the fees.

THESIS REGULATIONS

a. **Date of Submission**—The thesis must be completed in typed form, unbound, for submission to the examining committee not later than four weeks before the date of the Commencement at which the degree is to be conferred; this date precedes the final examination by one week. A copy of the thesis should be provided for each of the five members of the examining committee.

b. **Format and Binding**—The thesis should be typed on a good quality of bond paper, 8½ x 11 inches, with ample margin on the left to permit binding. Matters of form respecting capitalization, abbreviations, quotations, footnotes, bibliography, etc., should conform with the best usage as set forth in standard manuals on research writing; on all such items the practice should be consistent throughout the thesis. A sample of the formal title page may be secured from the chairman of the Graduate Committee.

When the thesis has been approved by the examining committee at least three copies should be bound in accord with specifications prepared by the Graduate Committee.

c. **Copies for Deposit**—Three bound copies of the thesis must

be submitted to the Graduate Committee; not all these copies need be the first impression, but, if carbon copies are included, they should be distinct and easily legible. Two copies will be deposited in the University library and one copy will be retained by the major department. Majors in the Education Department may submit an additional copy to be forwarded to the U. S. Office of Education, Washington, D. C., to be deposited there for cataloguing and for inter-library loan purposes.

THE EXAMINING COMMITTEE

The examining committee which passes upon the thesis and conducts the final examination consists of five members of the faculty: a representative of the major department, a representative of the minor department, a member of the Graduate Committee, some member to represent the faculty at large, and the professor directing the thesis.

Whenever the decision of the examining committee is not unanimously favorable on either the examination or the thesis, it shall be the responsibility of the Graduate Committee to give consideration to the merits of the case and to make final determination.

GENERAL REGULATIONS

1. Graduate credit will not be allowed in any course in which the grade received is less than B.

2. A candidate will not be recommended to the faculty for the master's degree unless he has been approved by the examining committee both on the thesis and on the final oral examination.

3. No graduate student may register for more than fourteen hours of graduate work in any semester, nor for more than six in any five weeks summer session. Candidates should not plan to enroll for the maximum hours in every session as this will prevent the necessary time for work on the thesis.

4. All the requirements for the master's degree must be satisfied within the period of five calendar years immediately preceding the granting of the degree.

5. The head of the major or minor departments may require a reading knowledge of a foreign language (usually French or German).

6. Correspondence and extension courses will not be accepted for credit towards the master's degree.

7. Candidates for the master's degree may not at the same time be candidates for any other degree.

8. Undergraduates at the University of Nevada 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.

9. Members of the University staff who are employed on full-time salary may not register for more than 6 credits during one semester.

10. Veterans must carry a minimum number of 9 hours of graduate work to be eligible for full veterans' benefits. Veterans actually carrying on their thesis preparation while in residence may register for as many hours of thesis credit, to a maximum total of six for all semesters, as the chairman of the major department may approve; it must be understood that such thesis hours can not be included in the 24 hours of required graduate course work, and that final credit for such registered hours will not be officially recorded until the candidate has been approved by the Faculty for the master's degree.

11. At least three months before the expected date of the final examination, the candidate for the Master's degree must report to the Chairman of the Graduate Committee, with the approval of the professor directing his thesis, the date that he expects to be ready for his final, oral, examination.

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 or the Mackay School of Mines 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 or the Mackay School of Mines 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 \$6.

Courses of Instruction

On the following pages, listed under their respective headings, are given all the courses in which instruction is offered by the University. These are arranged in alphabetical order, as in the table below. If 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	Electrical Engineering
Agricultural Mechanics (See Plant Industry)	English Language and Literature
Agromony and Range Management (See Plant Industry)	Literature and Composition
Animal Industry	Speech
Animal Husbandry	Foreign Languages
Dairy Husbandry	French
Poultry Husbandry	German
Veterinary Science	Italian
Art	Latin
Astronomy (See Physics 107)	Portuguese
Biology	Spanish
Botany	Geography
Zoology	Geology
Business (See Economics, Business, and Sociology)	German (See Foreign Languages)
Chemistry	History and Political Science
Civil Engineering	Home Economics
Dairy Husbandry (See Animal Industry)	Horticulture (See Plant Industry)
Economics, Business, and Sociology	Italian (See Foreign Languages)
Education	Journalism
Kindergarten—Primary	Latin (See Foreign Languages)
General Elementary	Library Science
Secondary	Mathematics and Mechanics
Educational Psychology	Mechanical Engineering
Vocational Agriculture	Mechanic Arts
	Metallurgy
	Military Science and Tactics
	Mineralogy (See Geology)
	Mining
	Music

Philosophy	Portuguese (See Foreign Languages)
Physical Education	Poultry Husbandry (See Animal Industry)
Men	Psychology
Women	Sociology (See Economics, Business, and Sociology)
Physics	Soils (See Plant Industry)
Plant Industry	Spanish (See Foreign Languages)
Agronomy and Range Management	Speech (See English)
Horticulture	Veterinary Science (See Animal Industry)
Soils	Zoology (See Biology)
Agricultural Mechanics	
Political Science (See History and Political Science)	

COURSE NUMBERS

The numbers prefixed to courses ordinarily denote the classes of students for whom the work is primarily intended. The following rules apply:

1. The capital letters, A, B, C, etc., designate noncredit courses.
2. The numbers 101-299 designate lower-division courses.
The numbers 101-199 are used for courses *primarily* for freshmen. Usually, beginning courses in all subjects are designated 101, 102, etc.
The numbers 201-299 are used for courses *primarily* for sophomores.
3. The numbers 301-499 designate upper-division courses.
4. The numbers 501-599 designate courses *primarily* for graduate students, but to which juniors or seniors of superior scholastic standing may be admitted upon approval of the instructor and department chairman concerned.
5. For courses extending beyond one semester, an odd number designates the first part of the course.
6. When the same course may be repeated for credit, successive terms of the course may be designated by the small letters *a, b, c, etc.*, following the course number.
7. Numbers joined by a hyphen (101-102, 315-316, etc.), indicate that the course extends throughout the year.

AGRICULTURAL ECONOMICS

Professors WITTEWER (Chairman of Department), TITUS;
Assistant Professor WILLIAMS.

103. ORIENTATION IN AGRICULTURE. A course designed to acquaint the student with the history, functions, and services of the different divisions of the College of Agriculture, with the different State and Federal agencies serving agriculture in this State, and with the various fields of instruction in the College of Agriculture.

Freshman year. First semester. One credit. Agricultural Staff.

106. AGRICULTURAL RESOURCES. A survey of the agricultural resources of the world, the United States, and Nevada, including a study of the economic relationship of soil, climate, and topography to types of farming.

Second semester. Three lectures. Three credits. Staff.

212. PRINCIPLES OF AGRICULTURAL ECONOMICS. An introduction to the principles of Agricultural Economics with emphasis on the application of economic principles to the solution of agricultural problems.

Prerequisite: Economics 201. *Second Semester. Three credits. Staff.*

245. FARM ACCOUNTING. A study of various survey forms and types of record books, farm accounting methods and the use of farm accounts in the organization and management of farms. Actual farm records will be used and the various factors which make for successful farming criticized and studied.

First semester. Three credits. Titus.

352. AGRICULTURAL ECONOMICS POLICY. A study of the agricultural economic policy in the United States. A review of past and present policies and an evaluation of these policies.

Prerequisite: Economics 201 and Agricultural Economics 212. *Three credits. Staff.*

353. FARM APPRAISAL. A study of the principles of farm appraisal and valuation, with the practical application of these principles. A comparison of different systems of appraisal.

Prerequisites: Agricultural Economics 212. *First semester. Three credits. Two lectures and one laboratory period. Staff.*

355. AGRICULTURAL 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.

356. LAND ECONOMICS. A study of 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.

Prerequisites: Economics 201 and Agricultural Economics 212. *Second semester. Two credits. Roberts.*

357. 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.

464. COOPERATIVE ORGANIZATIONS. A study of the development of cooperation in agriculture in the United States and foreign countries. Analysis of principles and problems peculiar to cooperative associations. The organization, financing, and management of different types of cooperative marketing and purchasing associations.

Junior year. Second semester. Two credits. Wittwer.

465. 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.

Prerequisites: Economics 201 and Agricultural Economics 212. *First semester. Three credits.* Wittwer.

471. CURRENT ECONOMIC PROBLEMS OF AGRICULTURE. Business cycles and trends, foreign trade, taxation, farm labor problems, and other topics of special interest will be studied in their relation to agriculture.

Prerequisite: Senior standing. *First semester. Two credits.* Staff.

476. FARM MANAGEMENT. Principles and problems involved in the organization and management of farms. Selecting a farm; size and diversity of the farm business; leases; farm layout; crop and livestock systems; capital requirements; efficient use of labor and equipment; use of farm records.

Prerequisite: Junior standing. *Second semester. Three credits.* Wittwer.

484. EXTENSION ORGANIZATION AND METHODS. A study of extension and research organization and methods, with emphasis on economics and marketing problems. Project planning, methods of collecting information, organizing data, preparing and presenting reports will be emphasized.

Prerequisite: Junior standing or consent of instructor. *Second semester. Three credits.* Wittwer.

598-599. THESIS COURSE IN AGRICULTURAL ECONOMICS.

Either semester. Credit to be arranged. Wittwer.

AGRICULTURAL MECHANICS

(See Plant Industry)

AGRONOMY AND RANGE MANAGEMENT

(See Plant Industry)

ANIMAL INDUSTRY

Professor SHEETS (Chairman of Department); Assistant Professor ADAMS; Mr. VAWTER, Mr. WALKER.

Students electing Animal Industry as a major-interest subject are expected to complete a minimum of 24 hours in this field. The Chairman of the Department should be consulted before selecting electives.

Students entering graduate work in Animal Industry must have had a thorough training in the fundamental principles of the subject, either with or in addition to a course in agriculture substantially equivalent to the one outlined in this catalogue.

Special opportunities are offered to graduate students for technical training and original research in breeding, nutrition, and the methods involved in the various phases of production and in the processing and utilization of livestock products. Those contemplating graduate work

should consult the Chairman of the Department as to requirements for graduation and the selection of a subject.

Students planning to take a preveterinary science course should consult the Chairman of the Department.

Animal Industry

101. ELEMENTS OF ANIMAL HUSBANDRY. A study of the breeds, market classes and grades of livestock; the selection of animals for market, riding and breeding purposes; nomenclature of parts; use of the score card; comparative judging of the various types; characteristics of the major breeds of livestock.

First semester. Two lectures and one laboratory period. *Three credits.* Fee \$5. Staff.

234. PRINCIPLES OF FEEDING. The basic principles of feeding farm animals; feeding standards; composition and nutritive value of feeds; compilation and preparation of rations; economy and efficiency in the feeding of animals; and interpretation of results.

Prerequisite: Animal Industry 101. *Second semester.* *Three lectures.* *Three credits.* Sheets.

303-304. LIVESTOCK JUDGING. The fitting, showing, scoring, and judging individual and groups of the principal breeds of farm animals.

Prerequisite: Animal Industry 101. *First and second semester.* *Two laboratory periods.* *Two credits each semester.* Fee \$5. Staff.

343. ANIMAL NUTRITION. A study of the chemistry and physiology of nutrition and requirements for growth, reproduction, lactation, maintenance, fattening, production, and body functions.

Prerequisite: Animal Industry 234 and Chemistry 242 or equivalent. *First semester.* *Two lectures and one laboratory period.* *Three credits.* Sheets.

344. LIVESTOCK GENETICS. Inheritance of anatomical and physiological abnormalities; sex and auto-somal linkages; inheritance of color; systems of breeding in livestock production; genetic significance in inbreeding and cross breeding; improvement through breeding.

Prerequisite: Animal Industry 101 and Zoology 350. *Second semester.* *Two lectures and one laboratory period.* *Three credits.* Fee \$5. Adams.

433. ADVANCED JUDGING. Instruction and practice in judging farm animals as it is done in livestock fairs, shows, and collegiate judging contests.

Prerequisite: Animal Industry 303 and 304 or permission from Chairman of Department. *First semester.* *One laboratory period.* *One credit.* Fee \$5. Staff.

462. ADVANCED BREEDS AND TYPES. An advanced study of the breeds and types of livestock; methods employed in establishment; foundation stock used; leading herds; founders and early improvers and leading present-day breeders.

Prerequisite: Animal Industry 101. *Second semester. Three lectures. Three credits. Staff.*

474. ANIMAL BREEDING. The male and female genital organs; estrus; semen; fertility and factors affecting it—nutritional, genetical, hormonal, etc.; artificial insemination. The course is designed to help students analyze the fertility complex and exercise control over breeding efficiency through management of live-stock and poultry.

Prerequisite: Animal Industry 344, Veterinary Science 301. *Second semester. Two lectures and one laboratory period. Three credits. Fee \$5. Adams.*

401-402. ANIMAL INDUSTRY SEMINAR. Preparation, presentation of papers, and discussion of subjects in the field of animal science.

Prerequisite: Senior standing. *First and second semesters. Two hours a week to be arranged. One credit each semester. Staff.*

403-404. ANIMAL INDUSTRY PROBLEMS. A study of specific problems relating to some one phase of animal industry by each student.

Prerequisite: Senior standing. *First and second semesters. Lectures, laboratory and field work according to credit. One to three credits each semester. Staff.*

501-502. METHODS OF RESEARCH. A course offering opportunity for individual study. Special methods and sources of error in experimental work; planning, conducting, interpretation of experimental results, preparation of reports for publication and use.

Registration by permission of Chairman of Department. *First and second semesters. One lecture. One credit each semester. Sheets.*

503-504. INVESTIGATION WITH THESIS. A course offering opportunity for detailed study of an individual problem under one of the following Animal Industry groups: A. Breeding; B. Nutrition; C. Production; and D. Utilization of Products.

Prerequisite: Senior standing. *First and second semesters. Lectures, assignments, and laboratory according to credit. Credit to be arranged. Fee \$5. Staff.*

Animal Husbandry

353. BEEF PRODUCTION. Breeds of beef cattle; requirements for registration, and practice in tracing bloodlines; selection of animals for breeding, grazing, and feedlot; herd management on the range and improved pastures; maintenance, fattening; preparation for exhibition and showing, and marketing.

Prerequisite: Animal Industry 234. *First semester. Three lectures and occasional field trips. Three credits. Sheets.*

354. SHEEP PRODUCTION. Principal breeds of sheep, requirements for registration; flock management on the range and improved pasture; practice in selecting breeding animals; feeding for maintenance, fattening, and showing.

Prerequisite: Animal Industry 234. *Second semester. Three lectures and occasional field trips. Three credits. Sheets.*

363. SWINE PRODUCTION. Principal breeds of swine; requirements for registration; herd management; practice in selection of breeding animals; feeding for maintenance, fattening, and showing.

Prerequisite: Animal Industry 234. *First semester. Three lectures. Three credits. Staff.*

364. HORSEMANSHIP. A study of the breeds, requirement for registration, selection, stable management, and shoeing equipment for work, exhibition, showing and riding. Emphasis will be given to the place of horses in livestock production, health, and recreation.

Prerequisite: Animal Industry 101 or approval of Chairman of Department. *Second semester. One lecture and two laboratory periods and practice. Three credits. Fee \$10. Staff.*

365. SELECTION AND USE OF MEATS. The selection of meat animals; the relation of the live animal to the dressed carcass; killing, cooling, cutting and curing; physical and chemical composition; nutritive values; economy and utilization of cuts; wholesale and retail buying; preparation of meat products; principles of meat selection and use.

Prerequisite: Animal Industry 101 or permission from the Chairman of Department. *First semester. One lecture and two laboratory periods. Three credits. Fee \$5. Staff.*

453. WOOL TECHNOLOGY. Production and consumption of wool in Nevada, the Western States and the world; a study of the physical structure of wool; preparation for market, sampling, grading, scouring, drying, and determination of wool values.

Prerequisite: Animal Husbandry 354. *First semester. Two lectures and one laboratory period, with occasional field trips. Three credits. Fee \$5. Sheets.*

464. LIVESTOCK MANAGEMENT. Improved methods of handling livestock on the range and improved pasture; value and use of different types of forage; the relation of livestock grazing to the establishment, maintenance, preservation, improvement, utilization and management of improved pasture, forest and open range; water supply, fencing and improvements; deficiencies, and how to supply them.

Prerequisites: Animal Husbandry 353 or 354 or Agronomy 359 or permission from Chairman of Department. *Second semester. Three lectures and occasional field trips. Three credits. Fee \$5. Sheets.*

Dairy Husbandry

311. MARKET MILK PRODUCTION. The feeding and management of the dairy cow for optimum milk and butterfat production, sanitation requirements, preparation of milk and butterfat for market.

Prerequisite: Animal Industry 234. *First semester. Two lectures and one laboratory period. Three credits. Fee \$5. Adams.*

414. HERD MANAGEMENT. The management of dairy cattle, barns, and equipment; breeding purebred cattle; breed characteristics, adaptability and their effect upon selection; foundation animals; records; herd improvement and costs of production.

Prerequisite: Dairy Husbandry 311. *Second semester. Three lectures. Three credits. Adams.*

Poultry Husbandry

331. POULTRY PRODUCTION. The feeding and management of chickens for egg production; of chickens and turkeys for meat production, preparation of eggs and poultry for market.

Prerequisite: Animal Industry 234. *First semester. Two lectures and one laboratory period. Three credits. Fee \$10. Adams.*

334. ADVANCED POULTRY PRODUCTION. Selection, feeding, and management of the breeding flock; incubation and brooding; factors affecting fertility in the fowl.

Prerequisite: Poultry Husbandry 331. *Second semester. Two lectures and one laboratory period. Three credits. Fee \$5. Adams.*

Veterinary Science

301. ANATOMY AND PHYSIOLOGY OF FARM ANIMALS. A course dealing with topographical and regional anatomy and physiology of farm animals. Special emphasis is given to the structure and function of the digestive and reproductive systems and endocrine control of each.

Prerequisites: Animal Industry 234. Zoology 103 and Chemistry 242. *First semester. Two lectures and one laboratory period. Three credits. Fee \$5. Vawter.*

302. DISEASES OF FARM ANIMALS AND POULTRY. A course dealing with the nature and causes of infectious, noninfectious, nutritional and parasitic diseases in farm animals and poultry, with consideration of preventive and sanitary procedures.

Prerequisites: Animal Industry 234. Veterinary Science 301. *Second semester. Two lectures and one laboratory. Three credits. Fee \$5. Brown.*

ART

Assistant Professor SHEPPARD (Chairman of Department); Mrs. JOSLIN.

A total laboratory fee of \$10 per course will be charged to all visitors.

101-102. ELEMENTARY FREEHAND DRAWING. Principles of drawing, values and perspective, taught in the freehand drawing of models and still life in monochrome. Also rapid figure sketching in several art media.

Two credits each semester. Fee \$3. Joslin and Sheppard.

103. MODERN TRENDS IN ART EDUCATION. Techniques of handling art media—finger paint, clay, easel paint, chalk, watercolor, etc. Planned especially for elementary school teachers who wish to use new methods in art teaching.

Two credits. Fee \$5. Joslin.

105. DESIGN. Problems in using natural and historic motifs in both two and three dimensional design. Laboratory practice in the creative use of design, color, theory, and their application to crafts, architecture, and industry.

Two credits. Fee \$3. Sheppard.

107. FREEHAND DRAWING. *Designed for Engineers.*

First semester only. One credit. Fee \$3. Sheppard.

115. ART APPRECIATION. Lecture and slides; course to illustrate the place of art in social and cultural life, past and present. Planned to give an intelligent appreciation of the visual arts by logical analysis and criticism of painting, sculpture, and architecture.

Either semester. Two credits. Fee \$3. Sheppard.

121-122. FREEHAND DRAWING. Evening Class. Sketching from models and still life.

Either semester. One credit per semester. Fee \$3. Sheppard.

251-252. WATERCOLOR PAINTING. The technique and handling of watercolor in still life and landscape.

Three credits each semester. Fee \$3. This course may be repeated for credit as Art 351-352. Joslin.

253-254. ADVANCED FREEHAND DRAWING. Drawing from models and still life in several media, charcoal, conti, chalk, etc. A preparation for work in portrait and life classes. Also rapid figure sketching in different media.

Three credits each semester. Fee \$3. This course may be repeated for credit as Art 353-354. Joslin.

257-258. OIL PAINTING. The technique and handling of oil colors in still life, portrait, figure, and landscape.

Three credits each semester. Fee \$3. This course may be repeated for credit as Art 357-358. Sheppard.

261. HISTORY OF ANCIENT AND CLASSICAL ART. Lecture and slides. The study of the related arts—painting, sculpture, and architecture from prehistoric man through Egypt, Babylon, Assyria, Crete, Greek and Roman periods.

Three credits. Fee \$3. Staff.

355-356. COMMERCIAL ART. Lecture and laboratory. Practical modern methods of reproduction used in commercial art. Poster, illustration, bill board, and magazine advertisements. Problems in color and black and white, in various media: wash, pen and ink, show card, air brush, etc. Class is handled as much

like an advertising agency as possible to give students actual working problems.

Prerequisites: Art 101-102-251-252. *Three credits each semester.* Fee \$3. Sheppard.

359-360. ART STRUCTURE AND PICTORIAL COMPOSITION. Lecture and laboratory course in creative structure and graphic expression. An analytical approach to composition created through movement, color, techniques, theories, and methods.

Two credits each semester. Fee \$3. To be arranged. Staff.

362. HISTORY OF EUROPEAN ART. Lecture and slides. The study of the related arts, painting, sculpture, and architecture of Europe from the Renaissance to the Moderns.

Three credits. Fee \$3. Staff.

363-364. CLAY MODELING. An exploratory course in three dimensional form. Portrait, figure, and animals from life. Problems in the composition and design of form. Casting methods. To be arranged.

Three credits each semester. Fee \$5. This course may be repeated for credit as Art 463-464. Sheppard.

ASTRONOMY (See Physics 107)

BIOLOGY

Associate Professors BILLINGS (Chairman of Department); RICHARDSON; Assistant Professors JONES, LARIVERS, LITTLE; Mr. HALL.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN BIOLOGY

1. BIOLOGY: *Major-interest subject* (36 credits)—Botany 103 (3 credits), 104, (4 credits), 495 or 496 (1 credit), and at least 8 additional credits in botany of which at least 4 must be in courses numbered above 300. Zoology 103 (4 credits), 209 (5 credits), 350 (3 credits), and 9 additional credits in zoology of which at least 4 credits must be in courses numbered above 300. *Related Subjects* (14 credits)—Chemistry 101 (4 credits), 102, 242 (6 credits); and at least 3 additional credits to be assigned by adviser.

2. BOTANY: *Major-interest subject* (33 credits)—Botany 103 (3 credits), 104 (4 credits), 222 (4 credits), 231 (3 credits), 350 (3 credits), 355 (4 credits), 495-496 (2 credits), and at least 13 additional credits in botany. *Related Subjects* (17 credits)—Chemistry 101 (4 credits), 102 (2 credits), 242 (4 credits), Zoology 103 (4 credits).

3. ZOOLOGY: *Major-interest subject* (33 credits)—Zoology 103 (4 credits), 209 (5 credits), 359 (4 credits), 346 (5 credits), 350 (3 credits), 364 (4 credits) and at least 8 additional credits in zoology. *Related Subjects* (17 credits)—Botany 103 (3 credits); Chemistry 101, 102, 242 (10 credits); and four credits to be assigned by adviser.

Students planning to take a preforestry course should consult the Chairman of the Department of Biology.

Students selecting a field of concentration in biology who wish to qualify for a secondary teachers' certificate should consult the School of Education (see pp. 153-159) concerning requirements.

Botany

103. GENERAL BOTANY. An introduction to the classification, structure, and physiology of the flowering plants.

Either semester. Two lectures; one laboratory period. Three credits. Fee \$5. Billings, Little, and Staff.

104. SURVEY OF THE PLANT KINGDOM. The structure and life cycles of representative types of algae, fungi, mosses, ferns, gymnosperms, and angiosperms.

Prerequisite: Botany 103. Second semester. Two lectures; two laboratory periods. Four credits. Fee \$5. Hall.

222. 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 103. Second semester. Two lectures; two laboratory periods. Four credits. Fee \$5. Billings.

231. PLANT ANATOMY. Structure and development of major cell types and tissues; comparative anatomy of roots, stems, and leaves of the higher plants.

Prerequisite: Botany 103. First semester. One lecture; two laboratory periods. Three credits. Fee \$5. Alternates with Botany 370. Hall.

315. DENDROLOGY. The intensive study of the taxonomy, silvics, and practical identification of the important North American forest trees.

Prerequisite: Botany 222. Second semester. One lecture; two laboratory periods. Three credits. Fee \$5. Alternates with Botany 317. Billings.

317. RANGE AGROSTOLOGY. The study of grasses, and practice in identification. Particular emphasis is given to range grasses.

Prerequisite: Botany 222. Second semester. One lecture; two laboratory periods. Three credits. Fee \$5. Alternates with Botany 315. Billings.

350. GENETICS. A study of the fundamental principles underlying the inheritance of structural and physiological characters in plants and animals.

Prerequisite: Botany 103 or Zoology 103. Second semester. Two lectures; one laboratory period. Three credits. Fee \$3. Little.

351. GENERAL BACTERIOLOGY. A course of lectures and laboratory exercises on the morphology and life processes of the bacteria, with some reference to allied organisms. The relation of microorganisms to soil fertility, dairy products, water purity, sewage, and the production of disease will be considered. Can be used for either botany or zoology credit.

Prerequisite: Zoology 103 or Botany 103. *First semester. Two lectures; two laboratory periods. Four credits. Fee \$10. Jones.*

355. 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 103 and Chemistry 242. *First semester. Three lectures; one laboratory period. Four credits. Fee \$10. Billings.*

364. MYCOLOGY AND AN INTRODUCTION TO PLANT PATHOLOGY. The study of fungi. Diseases of economic plants, their causes, identification and control.

Prerequisite: Botany 103 and preferably Botany 222. *First semester. Two lectures; two laboratory periods. Four credits. Fee \$10. Hall.*

370. MICROTECHNIQUE. The preparation of materials and permanent slides of plant and animal tissues for microscopic study.

Prerequisite: Junior standing and at least six credits in biology. *First semester. Alternates with Botany 231. One lecture; two laboratory periods. Three credits. Fee \$10. Hall.*

375. WOOD TECHNOLOGY. The structure of economic woods with emphasis upon the identification of these woods by their physical properties and minute anatomy.

Prerequisite: Botany 231. *Second semester. One lecture; two laboratory periods. Three credits. Fee \$5.*

475-476. PLANT ECOLOGY. The relationships between natural vegetation and the factors of the environment: light, temperature, moisture, wind, topography, soil, and biotic. Plant association types and vegetational succession. The use of indicator plants in recognizing overgrazing, soil conditions, and forest sites.

Prerequisite: Botany 222. *Both semesters. Four credits each semester. Three lectures; one laboratory period or field trip. Fee \$10 each semester. Billings.*

480. BIOLOGICAL SURVEY TECHNIQUES. Designed to provide training in the collecting of museum and herbarium specimens, in the observation of animals and plants in the field, and practice in organizing ecological surveys of limited areas, with special attention to basic field problems in fish and game management, conservation, and agriculture. Transportation will be provided.

Prerequisite: Certification by Biology staff of ability to handle a zoological or botanical specialty in the field. *Two weeks immediately following Commencement Exercises in June of each year. Two credits. Staff. 1951, LaRivers and Richardson. Fee to be arranged. Same as Zoology 480.*

491-492. BOTANICAL PROBLEMS. Special problems in some field of botany. Assigned readings and reports.

Prerequisite: The equivalent of two years of botany. *One to three credits each semester. Student is limited to a total of eight credits in Botany 491-492. Fee \$5. Billings and Staff.*

495-496. 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 instructor. *One meeting per week. One or two credits each semester.* Billings and Staff

549-550. THESIS COURSE FOR GRADUATES.

Zoology

101. 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. Laboratory study of different animal types. Designed for general students.

First semester. Two lectures; one laboratory period. Three credits. Fee \$5. Richardson and Staff.

Zoology 101 and 103 cannot both be taken for credit.

103. 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 and habits of species representing the principal animal groups.

Second semester. Two lectures; two laboratory periods. Four credits. Fee \$5. Richardson and Staff.

Zoology 101 and 103 cannot both be taken for credit.

209. COMPARATIVE ANATOMY OF VERTEBRATES. Lectures on the adult anatomy, embryology, and evolution of structural systems in back-boned animals. Laboratory dissection of the dog-fish, salamander, and a mammal.

Prerequisite: Zoology 103. *First semester. Three lectures; two laboratory periods. Five credits.* Fee \$10. Richardson.

211. 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 101 or 103. *First semester. Two lectures; two laboratory periods. Four credits.* Fee \$10. Jones.

322. PARASITOLOGY. Introductory study of the relation of animals to the causation and transmission of disease.

First semester. Two lectures; one laboratory period. Three credits. Fee \$5. LaRivers.

333. FISHES, AMPHIBIANS, AND REPTILES. A course especially designed for field workers, teachers, and naturalists. It includes a study of the classification, variety, habits, and economic importance of fishes, amphibians, and reptiles. Regular field trips are taken for the careful identification and observation of local forms.

Prerequisite: Zoology 103. *Second semester. Two lectures; one laboratory period. Three credits. Fee \$5. LaRivers.*

335. BIRDS. A course especially designed for field workers, teachers, and naturalists. Plan of study similar to Zoology 333.

Prerequisite: Zoology 101 or 103. *Second semester. Two lectures; one laboratory period. Three credits. Fee \$5. Alternates with Zoology 337. Richardson.*

337. MAMMALS. A study especially of Nevada mammals, including big game, fur bearing, and predatory species. Plan of study similar to Zoology 333.

Prerequisites: Zoology 101 or 103. *Second semester. Two lectures; one laboratory period. Three credits. Fee \$5. Alternates with Zoology 335. Richardson.*

346. PHYSIOLOGY. Principles of animal physiology, with special reference to the human being.

Prerequisites: Zoology 103 or 211 and one year of Chemistry. *Second semester. Three lectures; two laboratory periods. Five credits. Fee \$10. Jones.*

350. GENETICS.

Same as Botany 350.

355. EVOLUTION. The study of organic evolution, the fields of evidence for it, and explanations of just how it has taken and may be taking place. Modern species concepts are considered.

Prerequisite: One year of college biology. *First semester. Two lectures. Two credits. Alternates with Zoology 463. Richardson.*

359. ENTOMOLOGY. An introduction to the principles of entomology: life histories, morphology, physiology and classification of insects and a brief introduction to insect control. Each student will make an insect collection, with appropriate field data, and those desiring to do their collecting the summer preceding the course should make such arrangements during the spring semester.

Prerequisite: Zoology 103. *First semester. Two lectures; two laboratory periods. Four credits. Fee \$10. LaRivers.*

364. 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.

Prerequisites: Zoology 103; Recommended Zoology 209. *Second semester. Two lectures; two laboratory periods. Four credits. Fee \$5. Jones.*

368. HISTOLOGY. Study of animal tissues and the study of the development and structure of vertebrate organs.

Prerequisite: Zoology 103 and Zoology 209 or 211. *First semester. One lecture; one laboratory period. Two credits. Fee \$3. Jones.*

370. MICROTECHNIQUE.

Same as Botany 370.

420. LIMNOLOGY. Designed to acquaint the advanced wildlife student with the biologic, chemical and physical characteristics of the aquatic environment, with particular emphasis on the application of limnologic principles to fisheries biology.

Prerequisite: Chemistry 101-102, Zoology 333 and 359. A course in qualitative chemical analysis (Chemistry 122 or 124) is recommended. *Second semester. Two lectures; one laboratory period. Three credits.* Fee \$10. LaRivers.

463. 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 335, 337, and Botany 222. *First semester. Two lectures; one laboratory period. Three credits.* Alternates with Zoology 355. Fee \$5. Richardson.

480. BIOLOGICAL SURVEY TECHNIQUES. Designed to provide training in the collecting of museum and herbarium specimens, in the observation of animals and plants in the field, and practice in organizing ecological surveys of limited areas, with special attention to basic field problems in fish and game management, conservation, and agriculture. Transportation will be provided.

Prerequisite: Certification by Biology staff of ability to handle a zoological or botanical specialty in the field. *Two weeks immediately following Commencement Exercises in June of each year. Two credits.* Staff. 1951, LaRivers and Richardson. Fee to be arranged. Same as Botany 480.

491-492. ADVANCED ZOOLOGY. Special zoological problems. Students specializing in zoology may select some problem for investigation under the direction of the instructor. Library reading, laboratory work, and reports.

Credits to be arranged. Student is limited to a total of eight credits in Zoology 491-492. Fee \$5. Staff.

549-550. THESIS COURSE FOR GRADUATES.

BUSINESS

(See Economics, Business, and Sociology.)

CHEMISTRY

Professors DEMING, MOOSE (Chairman of Department); Associate Professor WILLIAMS; Assistant Professor MORRIS; Mr. HENRY, Mr. LUSEBRINK, Mr. LINFESTY, Mr. SEIM.

REQUIREMENTS FOR FIELD OF CONCENTRATION IN CHEMISTRY

Major-interest subject (26 credits)—Chemistry 101, 102, 122 (9 credits); 231-232 (6 credits); 341-342 (8 credits); 352 (2 credits); and 387-388 (1 credit). *Related Subjects* (16 credits)—Mathematics 102, 110,

140 (8 credits) ; Physics 151-152, 153-154 (8 credits). *Additional credits*—8 additional credits in major-interest subject or related subjects to be chosen with the approval of the adviser.

Students selecting a field of concentration in chemistry who wish to qualify for a secondary teachers' certificate should consult the School of Education (see pp. 153-159) concerning requirements.

Requirements for the degree Bachelor of Science in Chemistry: See outline for course of study, pages 142, 143.

101. GENERAL INORGANIC CHEMISTRY. A lecture and laboratory course dealing with the fundamental principles of chemistry and the properties and uses of the common nonmetallic elements.

First semester. One lecture, two recitations, two two-hour laboratory periods. Four credits. Fee \$10. Staff.

102. GENERAL CHEMISTRY OF THE METALS. A lecture course dealing with the properties and uses of the common metals.

Prerequisite: Chemistry 101. Second semester. Two lectures. Two credits. Staff.

122. QUALITATIVE ANALYSIS. A lecture and laboratory course dealing with the principles and techniques of the semimicro method of systematic qualitative analysis.

Prerequisite: Must be taken concurrently with or following Chemistry 102. Second semester. One lecture and two laboratory periods. Three credits. Fee \$10. Staff.

124. QUALITATIVE ANALYSIS. A lecture and laboratory course dealing with the principles and techniques of the macro method of systematic qualitative analysis.

Prerequisite: Must be taken concurrently with or following Chemistry 102. Second semester. One lecture and one laboratory period. Two credits. Fee \$5. Staff.

231-232. QUANTITATIVE ANALYSIS. A lecture and laboratory course dealing with the fundamental principles and techniques of accurate volumetric and gravimetric methods of analysis. Special emphasis placed on calculations needed for quantitative determinations.

Prerequisites: Chemistry 122 or 124. One lecture and two laboratory periods. Three credits each semester. Fee \$10. Seim.

242. INTRODUCTORY ORGANIC CHEMISTRY. A lecture and laboratory course designed to acquaint students with some of the fundamental principles of carbon chemistry.

Prerequisite: Must be taken concurrently with or following Chemistry 102. Second semester. Three lectures and one laboratory period. Four credits. Fee \$5. Morris.

271. PHYSIOLOGICAL CHEMISTRY. A lecture and laboratory course dealing primarily with the compounds of carbon that are essential to physiological processes.

Prerequisite: Chemistry 242. First semester. Three lectures and two laboratory periods. Five credits. Fee \$10. Morris.

312. ADVANCED INORGANIC CHEMISTRY. A lecture and laboratory course dealing with some of the more difficult chemical reactions and laboratory techniques in the preparation of inorganic substances.

Prerequisite: Chemistry 333. *Second semester. One lecture and two laboratory periods. Three credits. Graduate credit given with consent of instructor. Fee \$10. Moose.*

333. ADVANCED ANALYTICAL CHEMISTRY. A lecture and laboratory course designed to give the students a knowledge of some of the more difficult methods of analysis and a familiarity with instrumentation.

Prerequisite: Chemistry 232. *First semester. One lecture and two laboratory periods. Three credits. Fee \$10. Williams.*

341-342. ORGANIC CHEMISTRY. A lecture and laboratory sequence dealing with the fundamental principles of the chemistry of carbon and carbon compounds.

Prerequisite: Chemistry 232. *Two lectures and two laboratory periods. Four credits each semester. Fee \$10. Morris.*

352. INTRODUCTION TO PHYSICAL CHEMISTRY. A lecture course designed to illustrate the applications of physical methods to chemical problems. This course is designed for engineering and premedical students who desire an introductory course and chemistry students who feel that they need more preparation for Chemistry 451-452.

Prerequisite: Chemistry 232. *Second semester. Two lectures. Two credits. Deming.*

362. INDUSTRIAL CHEMICAL TECHNOLOGY. A lecture and recitation course dealing with industrial processes. A cross section of manufacturing processes, flow charts, energy and material balances.

Prerequisite: Chemistry 341. *Second semester. Two lectures. Two credits. Moose.*

387-388. CURRENT CHEMICAL LITERATURE. A seminar course designed to help the student to become more familiar with the various sources of chemical information and afford him practice in summarizing such information for discussion.

Prerequisite: Two years college chemistry. *One-half credit each semester. Staff.*

391. SPECIAL PROBLEMS. A laboratory or lecture course designed to give the student training in a special field not covered in regularly scheduled courses. To be arranged by consultation with the chairman of the department.

Prerequisite: Chemistry 232. *Either semester. Two laboratory periods. Two credits. Fee \$10. Moose and Staff.*

415. THE PERIODIC LAW. A lecture and seminar course dealing with the critical study of the periodic law and the more

important periodic tables. Use is made of recent developments in atomic structure to correlate the properties of the elements.

Prerequisite: Three years of college chemistry. *First semester. Three lectures. Three credits.* Graduate credit given with consent of instructor. Williams.

443. QUALITATIVE ORGANIC ANALYSIS. A study of the methods available for the detection and identification of organic compounds.

Prerequisite: Chemistry 342. *First semester. Two lectures and two laboratory periods. Four credits.* Graduate credit given with consent of the instructor. Fee \$10. Moose.

451-452. PHYSICAL CHEMISTRY. A lecture course based on the application of the laws of physics and the methods of calculus to chemical problems.

Prerequisites: Chemistry 232; Physics 152 or 204; Mathematics 232 or 242 or 252. *Three lectures. Three credits each semester.* Graduate credit given with consent of instructor. Deming.

453-454. PHYSICAL CHEMISTRY LABORATORY. A laboratory course designed to accompany the lecture course, 451-452.

Prerequisites: Same as for Chemistry 451-452. Must be taken concurrently with or following Chemistry 451-452. *One laboratory period. One credit each semester.* Graduate credit given with consent of the instructor. Fee \$5. Henry.

461. THE CHEMICAL TECHNOLOGY OF UNIT OPERATIONS. A lecture and recitation course dealing with the application of chemical and physical fundamentals to unit processes and the manufacture of industrial chemicals.

Prerequisites: Chemistry 362. *First semester. Three lectures. Three credits.* Moose.

482. HISTORY OF CHEMISTRY. A lecture course based upon the historical development of the ideas and concepts of the science of chemistry.

Prerequisite: Three years college chemistry. *Second semester. Two lectures. Two credits.* Graduate credit given with the consent of the instructor. Deming.

487-488. SEMINAR. A course designed to give practical experience in the organization and presentation of reports on selected chemical topics.

Prerequisite: Chemistry 388. *One-half credit each semester.* Graduate credit given with consent of department chairman. Staff.

497-498. THESIS COURSE FOR UNDERGRADUATES. A laboratory and library course based on a special topic chosen from inorganic, analytical, organic or physical chemistry. To be arranged by consultation with the instructors.

Prerequisite: Three years of college chemistry. *Two credits each semester.* Fee \$10. Moose and Staff.

514. CHEMISTRY OF THE LESS FAMILIAR ELEMENTS. A lecture

course designed to cover the chemistry of the less familiar elements not included in other inorganic chemistry courses.

Prerequisite: Chemistry 415. *Second semester.* Not given concurrently with Chemistry 516. *Two lectures. Two credits.* (Open to seniors with consent of the instructor.) Staff.

516. ADVANCED INORGANIC TOPICS. A lecture course designed to cover advanced topics and recent developments in inorganic chemistry.

Prerequisite: Chemistry 415. *Second semester.* Not given concurrently with Chemistry 514. *Two lectures. Two credits.* (Open to seniors with the consent of the instructor.) Staff.

544. ADVANCED ORGANIC CHEMISTRY. A lecture course of advanced topics in organic chemistry. Modern theories on structure and reaction mechanisms. Special assignments.

Prerequisite: Chemistry 342. *Second semester. Two lectures. Two credits.* (Open to seniors with consent of instructor.) Morris.

546. ADVANCED ORGANIC CHEMISTRY. Advanced topics in organic chemistry. A continuation of Chemistry 544. (Not offered concurrently with Chemistry 544.)

Prerequisite: Chemistry 544. *Second semester. Two lecture periods.* (Open to seniors with consent of the instructor.) Morris.

553-554. ADVANCED PHYSICAL CHEMISTRY. A discussion and laboratory course dealing with special topics in phase rule, colloids and electrochemistry.

Prerequisite: Chemistry 452. *One discussion and one laboratory period. Two credits each semester.* (Not given concurrently with Chemistry 555 and 556.) Fee \$5. Henry.

555-556. CHEMICAL THERMODYNAMICS. A lecture course dealing with the thermodynamical functions and their partial derivatives. Emphasis is placed upon the application of laws of thermodynamics to chemistry.

Prerequisite: Chemistry 452. *Two lectures. Two credits each semester.* Henry.

599. THESIS COURSE FOR GRADUATE STUDENTS. Special problems for research chosen in consultation with some member of the department and carried on under his direction.

Prerequisite: Four years of chemistry and graduation from an approved college. *Either semester. Maximum of six credits.* Fee \$5 per credit hour, according to work. Moose and Staff.

CIVIL ENGINEERING

Professor BLODGETT (Chairman of Department); Assistant Professors BONELL, POOLMAN; Mr. BREESE.

241. PLANE SURVEYING. An introductory course designed to acquaint the student with the fundamental principles of plane surveying and the instruments used in ordinary plane surveying operations.

Prerequisite: Mathematics 152. *Two classroom periods and one field period. Three credits. Laboratory fee \$5.*

242. PLANE SURVEYING. A continuation of Civil Engineering 241 leading to a detailed study of topographical surveying methods, field astronomy, and other problems usually encountered in civil engineering practice.

Prerequisite: Civil Engineering 241. *Two classroom periods and two field or drawing room periods. Four credits. Laboratory fee \$10.*

245. ENGINEERING PROBLEMS. The systematic solution of typical problems encountered in engineering practice. The use of the slide rule and other computational aids is contemplated.

Prerequisite: Mathematics 152. *One classroom period and one drawing room period. Two credits.*

246. CONSTRUCTION MATERIALS. A detailed study of the source, manufacture, and use of the materials ordinarily used in construction and machines.

Prerequisite: Sophomore standing in engineering. *Three classroom periods. Three credits.*

361. HYDRAULICS. A course designed to give a sound working knowledge of the laws concerning the flow of water through open and closed conduits and metering devices. Hydrostatic problems are also considered. Civil and Mechanical Engineering students enroll for Civil Engineering 367.

Prerequisite: Mathematics 252. *Three classroom periods. Three credits.*

363. CURVES AND EARTHWORK. A study of the factors involved in the location of routes and the computation of quantities of earthwork for highways, canals, railways, and similar routes.

Prerequisite: Civil Engineering 242. *Two classroom periods and one field or drawing room period. Three credits. Laboratory fee \$5.*

364. HYDROLOGY. The fundamental principles of hydrology and its related problems of climatology, stream-flow, run-off, underground water and snow surveys. An elective course.

Prerequisite: Junior standing in engineering. *Three classroom periods. Three credits.*

366. ROADS AND PAVEMENTS. A study of the various types of street and highway construction with consideration of the natural and economic factors which influence the selection and location of streets and highways.

Prerequisite: Civil Engineering 242. *Four classroom periods. Four credits.*

367. ELEMENTARY FLUID MECHANICS. This course devotes considerable time to the study of fluids, including water, at rest and in motion. A sound understanding of practical hydraulics is not overlooked.

Prerequisite: Mathematics 252. *Three classroom periods and one laboratory or computation period. Four credits. Laboratory fee \$10.*

368. FLUID MECHANICS LABORATORY. A laboratory course designed to exemplify the principles studied in Civil Engineering 367.

Prerequisite: Civil Engineering 367. *One laboratory period. One credit. Fee \$10.*

369. NONMETALLIC TESTING LABORATORY. A laboratory course affording a study of the physical properties of the nonmetallic materials used in construction, including soils, hydraulic cements, concrete, stone, brick, tile, timber, and bituminous materials.

Prerequisite: Mathematics 252 and Civil Engineering 246. *One laboratory period. One credit. Laboratory fee \$10.*

372. STRENGTH OF MATERIALS. The application of the principles of mathematics and mechanics to engineering problems involving beams, columns, shafts, and other structural units or machine parts. A consideration of the physical properties of the usual materials from which these units and parts are made.

Prerequisite: Mathematics 341. Civil Engineering students enroll in Civil Engineering 376. *Three classroom periods. Three credits.*

374. METALS TESTING LABORATORY. A laboratory course giving an opportunity for the detailed study of the physical properties of the metals generally used in engineering operations. This course is coordinated with, and supplements Civil Engineering 376.

Prerequisites: Mathematics 341. *One laboratory period. One credit. Laboratory fee \$10.*

376. MECHANICS OF MATERIALS. A more extensive course than Civil Engineering 372.

Prerequisite: Mathematics 341. *Three classroom periods and one laboratory or computation period. Four credits.*

481. FRAMED STRUCTURES. An introductory presentation of the classification and analysis of simple (statically determinate) structural frames. Algebraic and graphical methods are presented. Loadings are fully considered.

Prerequisite: Mathematics 341 and Civil Engineering 376. *Three classroom periods and two drawing room periods. Five credits.*

484. STRUCTURAL DESIGN. Comprehensive and total problems in the structural design of typical engineering structures.

Prerequisite: Civil Engineering 481. *Two classroom periods and two drawing room periods. Four credits.*

485. MECHANICS OF REINFORCED CONCRETE. The design and analysis of structural members and units constructed from reinforced concrete. An introduction to the stress analysis of rigid and continuous frames.

Prerequisite: Civil Engineering 376. *Three classroom periods and one drawing room period. Four credits.*

486. REINFORCED CONCRETE DESIGN. A continuation of Civil

Engineering 485 with emphasis upon the total design of typical engineering structures wherein the use of reinforced concrete predominates.

Prerequisite: Civil Engineering 485. *One classroom period and two drawing room periods. Three credits.*

487. HIGHWAY ENGINEERING. A continued and more detailed study of topics introduced in Civil Engineering 366, with supplementary information abstracted from current Road Builders publications and periodicals. An elective course.

Prerequisite: Civil Engineering 363, 366. *Three classroom periods. Three credits.*

488. ENGINEERING ECONOMY. The principles of cost comparison and the selection of the most economical arrangement of the component parts of engineering structures.

Prerequisite: Senior standing in engineering. *Two classroom periods. Two credits.*

489. SANITARY ENGINEERING. The collection, treatment, and distribution of potable water supplies. The Public Health aspects are contemplated.

Prerequisite: Civil Engineering 364, 367. *Three classroom periods. Three credits.*

490. SANITARY ENGINEERING. The collection, treatment and distribution of storm and domestic sewage and industrial wastes. The Public Health aspects are contemplated.

Prerequisite: Civil Engineering 489. *Three classroom periods. Three credits.*

491. CONTRACT AND SPECIFICATIONS. An elementary presentation of the basic legal and ethical principles of importance to the engineer engaged in preparing specifications and letting contracts for public or private construction.

Prerequisite: Junior standing in engineering. *Two classroom periods. Two credits.*

492. FOUNDATIONS. A study of the principles and practices of the design and construction of foundations for engineering structures, with an introduction to soil mechanics.

Prerequisite: Civil Engineering 378, 485. *Three classroom periods. Three credits.*

494. IRRIGATION ENGINEERING. A study is made of the collection, storage, and distribution of water for irrigation, with emphasis on the engineering aspects of these problems. An elective course.

Prerequisite: Civil Engineering 364, 367, 481, 485. *Three classroom periods. Three credits.*

510. HYDRAULICS OF OPEN CHANNELS. Elective. An advanced study of the flow of water through open channels.

Prerequisite: Civil Engineering 367. *Two classroom periods. Two credits.*

511. HYDRAULIC MACHINERY. Elective. The theory, construction, operation, and characteristics of hydraulic turbines, pumps, and other hydraulic machinery.

Prerequisite: Civil Engineering 367. *Two classroom periods. Two credits.*

514. ADVANCED HYDRAULIC PROBLEMS. Elective. Offers an opportunity for the superior student to undertake detailed studies in the field of hydraulics not dealt with in other courses.

Prerequisite: Civil Engineering 367. *Credits to be arranged.*

520. ADVANCED STRUCTURAL DESIGN. Elective. This course affords the interested student an opportunity for more extensive studies in the field of structural design and stress analysis than is possible in previous courses.

Prerequisite: Civil Engineering 484, 486. *Three credits.*

521. ADVANCED STRUCTURAL DESIGN. Elective. A continuation of Civil Engineering 520 affording the superior student an opportunity for specialized study in the field of structural design and stress analysis.

Prerequisite: Civil Engineering 520. *Credits to be arranged.*

524-525. SPECIAL ENGINEERING PROBLEMS. Elective. This makes catalogue provision for specialized study in any of the subjects pertaining to civil engineering. The subject matter and credit may be arranged after conference with the Staff members and Administrative officers concerned.

599. GRADUATE RESEARCH OR THESIS. This course makes catalogue provision for advanced study in specialized fields and is expected to include the writing of a suitable report or thesis. The subject matter and credit may be arranged after conference with the Staff members and Administrative officers concerned.

DAIRY HUSBANDRY
(See Animal Industry)

ECONOMICS, BUSINESS, AND SOCIOLOGY

Professors INWOOD, WEBSTER (Chairman of Department); Assistant Professor PLUMLEY; Mr. BAGLEY, Mr. BERNIARD, Mr. GUNN, Mr. MARCELLI, Mr. SHELLEY, Mr. SKINNER, Mrs. WRIGHT.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN ECONOMICS, BUSINESS ADMINISTRATION, AND SOCIOLOGY

1. BUSINESS ADMINISTRATION: *Major-interest subject* (33 credits)—Business Administration 241, 243, 244, 247, 355, 356, 365, 368, 374 (27 credits) and 6 additional credits in courses in business administration numbered above 300. *Related subjects* (17 credits)—Economics 107, 201,

202, 361, 373 (14 credits) and 3 additional credits in economics numbered above 300. Psychology 201, 381, 382, 391; Mathematics 210; and courses in philosophy are strongly recommended as electives. See course of study outlined on pages 151, 152.

Students completing the requirements of this field will be granted the degree: Bachelor of Science in Business Administration.

2. **ECONOMICS:** *Major-interest subject* (30 credits)—Economics 201, 202, 351, 353, 357, 361, 365, 492 (24 credits) and 6 additional credits in courses in economics numbered above 300. *Related subjects* (20 credits)—Business Administration 243, 244 (6 credits) and 14 additional credits selected with the approval of the department from the following subjects: philosophy, psychology, mathematics, political science.

3. **SOCIOLOGY:** *Major-interest subject* (27 credits)—Sociology 201, 350, 352, 357, 371, 379, 380, 383, 490 (21 credits) and 6 additional credits in sociology. *Related subjects* (23 credits)—Economics 201, 202 (6 credits); Psychology 201, 205, 361 (8 credits); and 9 credits selected with the approval of the department from philosophy or political science.

Economics

107. **ECONOMIC GEOGRAPHY.** Resources and industries of the world with special reference to their bearing on geographic specialization and international trade.

First semester. Two credits. Open to freshmen. Staff.

110. **ECONOMIC HISTORY OF THE UNITED STATES.** Introductory historical treatment of the economic development of America.

Second semester. Two credits. Open to freshmen. Staff.

201. **PRINCIPLES OF ECONOMICS.** An introduction to economic theory. A discussion of economic problems together with economic principles applicable to their solutions.

Prerequisite: Sophomore standing. *Either semester. Three credits. Staff.*

202. **PRINCIPLES OF ECONOMICS.** A continuation of economics 201.

Either semester. Three credits. Staff.

203. **ECONOMICS FOR ENGINEERS.** Consideration of economic problems and principles with special emphasis on the engineering point of view. College of Engineering students only.

First semester. Three credits. Inwood.

218. **CONSUMER ECONOMICS.** A study of the consumer from the standpoint of family buying and financial management, marketing and income distribution. No credit to students who have credit in Economics 201 or 203.

Second semester. Three credits. Inwood.

351. **PUBLIC FINANCE.** Public expenditures and sources of public revenue.

Prerequisite: Economics 201-202. *First semester. Three credits. Gunn.*

352. STATE AND LOCAL FINANCE. Public revenue and expenditures on the State and local basis.

Prerequisite: Economics 351 or Economics 357. *Second semester. Two credits.*

353. MONEY AND BANKING.

Prerequisite: Economics 201-202. *First semester. Three credits.* Plumley.

354. GOVERNMENTAL REGULATION OF INDUSTRY. The development, organization, characteristics and legal status of public service enterprises.

Prerequisite: Economics 201-202. *Second semester. Three credits.* Gunn.

356. INSURANCE.

Prerequisite: Economics 202-202, Business 241. *Second semester. Two credits.* (Offered in even-numbered years.) Plumley.

357. ADVANCED ECONOMIC THEORY.

Prerequisite: Economics 201-202. *First semester. Three credits.* Bernhard.

358. INTERNATIONAL TRADE. Theory of international trade. Tariffs and tariff history.

Prerequisites: Economics 201-202. *Second semester. Three credits.* Inwood.

361. STATISTICAL METHODS. Elementary statistical methods as used in business and in the social sciences.

Either semester. Two lectures and one laboratory period per week. Three credits. Plumley.

362. TRANSPORTATION. The growth and development of transportation in the United States with emphasis on bases of rate structures and regulation.

Prerequisites: Economics 201-202, Business 241. *Second semester. Two credits.* (Offered in odd-numbered years.) Plumley.

363. ECONOMIC HISTORY OF EUROPE. The economic background of national and international development during ancient, medieval and modern times.

First semester. Two credits.

365. LABOR ECONOMICS. A study of the wage earner, his compensation and problems of insecurity together with industrial and governmental solutions.

Prerequisite: Economics 201-202. *First semester. Three credits.* Plumley.

366. SPECIAL LABOR PROBLEMS. Employer-employee relationships, unemployment compensation.

Prerequisite: Economics 365. *Second semester. Three credits.* Plumley.

373. BUSINESS CYCLES.

Prerequisite: Economics 201-202. *First semester. Three credits.* Plumley.

492. HISTORY OF ECONOMIC THEORY.

Prerequisite: Economics 201-202. *Second semester. Three credits.*
Bernhard.

Business

241. FUNDAMENTALS OF BUSINESS ORGANIZATION. An introductory survey of problems and methods of business administration.

Prerequisite: Sophomore standing. *Either semester. Three credits.*
Hoyt.

243-244. ELEMENTARY ACCOUNTING. Accounting theory and practice. Problems and practice sets.

Prerequisite: Sophomore standing. *Two lectures and one laboratory period per week. Three credits each semester.*

247. BUSINESS LAW. A comprehensive study of the forms and procedure with respect to law of contracts, negotiable instruments and general commercial practice.

First semester. Three credits. Skinner.

353. OFFICE MANAGEMENT. 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. Inwood. (Offered in even-numbered years.)

355-356. ADVANCED ACCOUNTING. Advanced theory of accounts and its application. Selected problems and readings.

Prerequisite: Business 243-244. *Three credits each semester.*

363. REAL ESTATE. Principles of real property ownership and real estate practice. Property management, subdividing and developing, zoning and its effects.

First semester. Two credits. Inwood. (Offered in odd-numbered years.)

365. ADMINISTRATION OF FINANCE. Principles and problems of financing business enterprises.

Prerequisite: Business 241. *First semester. Three credits.*

366. INDUSTRIAL MANAGEMENT. Internal organization and control of different forms of business enterprise.

Prerequisite: Business 241. *Second semester. Three credits.* Inwood.

367. PERSONNEL MANAGEMENT. Selection, placement, and efficiency of personnel. Employer-employee relationships.

Prerequisite: Business 241. *First semester. Two credits.* Inwood.

368. MARKETING. A study of distribution methods and costs together with advertising and sales promotion methods.

Prerequisite: Economics 201-202, Business 241. *Second semester. Three credits.* Inwood.

370. INVESTMENTS. Selection, appraisal, and shifting of capital investments.

Prerequisite: Business 241, Business 365, Economics 201, 202. *Second semester. Three credits. Plumley.*

371. MERCHANDISING. Operation of retail stores treating specifically store organization, lay-out, and principles of salesmanship and customer service.

First semester. Two credits.

372. ECONOMICS OF ADVERTISING. Methods of evaluation, criticism, purchase and control of advertising by the business man; social and economic aspects of advertising; organization and research in advertising; selection of media and planning of campaigns; social control of advertising. (Psychology 381 recommended.)

Second semester. Two credits.

374. ADVANCED BUSINESS LAW. An advanced course in business law for those who are specializing in a preparation for business.

Prerequisite: Business 247. *Second semester. Three credits. Skinner.*

385-386. COST ACCOUNTING. A comprehensive study of all elements of manufacturing cost accounting.

Prerequisite: Business 243-244. *Three credits each semester. Staff.*

388. 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 243-244. *Second semester. Two credits. Staff.*

492. AUDITING. The principles and practice of auditing. Practice problems.

Prerequisite: Business 243-244. *Second semester. Three credits. Staff.*

Sociology

102. SOCIAL PROBLEMS. The major problems of modern social life and their remedies.

Either semester. Three credits. Wright.

201. PRINCIPLES OF SOCIOLOGY. The fundamentals of social processes and evolution.

Prerequisite: Sophomore standing. *Either semester. Three credits. Wright.*

350. RURAL SOCIOLOGY. Rural life and problems with special reference to Nevada conditions.

Second semester. Two credits. Webster.

352. JUVENILE DELINQUENCY. Causes, conditions and prevention of juvenile crime.

Second semester. Two credits. Webster.

357. CULTURAL ANTHROPOLOGY. Primitive cultures as a basis for modern social organization.

First semester. Two credits. Webster.

370. SOCIAL CONTROL. The social processes providing control of behavior.

Second semester. Three credits. Webster.

371. SOCIAL ORGANIZATION. The structure, forms, functions and development of major social groups and institutions.

First semester. Three credits. Webster.

379. RACE PROBLEMS. The social significance of race and racial minorities.

First semester. Two credits. Webster.

380. THE FAMILY. Forms and functions of the family as a social institution. Emphasis on present trends.

Second semester. Two credits. Webster.

381. PUBLIC WELFARE. Emphasis on welfare of children.

First semester. Two credits. Bagley.

383. POPULATION. The social and economic significance of numbers and quality of population. Migration.

First semester. Two credits. (Offered in even-numbered years.) Webster.

384. SOCIAL SECURITY. Theory and development of modern provisions for economic security. Emphasis upon old age and unemployment in the United States.

Prerequisite: Economics 201-202. Second semester. Two credits. (Offered in odd-numbered years.) Webster.

386. METHODS IN SOCIAL WORK. Principles and methods in applied sociology.

Prerequisite: Sociology 102 and 201. Second semester. Two credits.

490. ADVANCED SOCIAL THEORY. Emphasis upon modern schools of social thought.

Prerequisite: Sociology 201. Second semester. Three credits. Webster.

EDUCATION

Professors TRANER (Chairman of Department), BROWN, IRWIN, TITUS, WOOD; Associate Professors RUEBSAM, SCRANTON, WILLIAMS; Assistant Professors HICKMAN, JENSEN, LANGFORD, RUSSELL, SCHAEFER; Mrs. BROWN, Mr. BUNTEN, Mrs. JOSLIN, Miss KLAUS.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN EDUCATION

1. KINDERGARTEN PRIMARY: *Major-interest subject* (35 credits)—Education 117, 133, 134, 141, 149, 186, 190 (16 credits); 120 or 320, practice teaching in the kindergarten and in a primary grade (10 credits); 9 credits to be selected with the approval of the adviser, with at least one course from each of the following groups: a. Education 314, 315, 332; b. Education 348, 363. *Related Subjects* (15 credits)—To be selected in consultation with the adviser. The following courses are recommended: English 111 or 112, 121, 221 (6 credits); Music 101-102, 107 or 108, 113 or 114 (4 credits) unless already proficient in which case substitutions may be made: Physical Education for Women 170 and 281 (3 credits); Sociology 380 (2 credits).

2. GENERAL ELEMENTARY: *Major-interest subject* (30 credits)—Education 111, 186, 190 (6 credits); 6 credits to be selected from 130, 131, 135, 136, 137 (6 credits); 121, 321, or 323 (5 credits); 13 credits to be selected from at least three of the following groups: a. An additional course from Education 121, 321, 323; b. Education 133, 134, 149 and course not selected from 130, 131, 135, 136, 137; c. Education 348; d. Education 388, 485-486; e. Education 266 (Psychology 221); f. Education 351, 352. *Related Subjects* (20 credits)—To be selected in consultation with the adviser. The following courses are recommended: English 111 or 112, 121, 385; Geography 101, 359 or 455; History 331, 372, 376; Psychology 233.

3. SECONDARY EDUCATION: *Major-interest subject* (18 credits)—Education 190 (2 credits), 310 (2 credits), 471 (3 credits), 420 (4 credits), course in subject methods (2-4 credits), additional credits in courses in secondary education to be selected with the approval of the adviser (5-7 credits). *Related Subjects*—Academic preparation in high school teaching subjects: a. Specified credits in one of the titles in Group A below, plus one approved title in Group B; or, b. Specified credits in each of three titles in Group B. Candidates for teaching vocational home economics see page 181; candidates for vocational agriculture see page 171.

GROUP A

1. COMMERCIAL EDUCATION: Economics 201-202 (6 credits), Business Administration 243-244 (6 credits), B.A. 247 (3 credits), B.A. 241 (3 credits), B.A. 353 (2 credits), and at least 6 additional credits selected from the following: Econ. 353, 358, and B. A. 355-356, 368. The student must also be able to pass a test of proficiency in stenography and typing.

2. ENGLISH, SPEECH, JOURNALISM: English 281 (3 credits), 291 (3 credits), 441 (3 credits), 465 (3 credits), 493 (3 credits), 385 (3 credits), 111-112 (4 credits), 121 (2 credits); Journalism 221 (3 credits), 387 (2 credits).

3. MATHEMATICS: Mathematics 101 (2 credits), 102 (2 credits), 110 (3 credits), 140 (3 credits), 231 (3 credits), 232 (3 credits), 391 (2 credits); and five credits selected from Mathematics 325, 371, 372, 392, 425, or from other upper-division courses approved by the Department of Mathematics. Students with sufficiently strong background may not be required to take 101 and 102.

4. SOCIAL SUBJECTS: History 105-106 (6 credits), 305-306 (6 credits), 331 (2 credits); Political Science 101-102 (6 credits); Economics 201 (3 credits); Sociology 201 (3 credits); Journalism 101 (3 credits).

5. SCIENCE COMBINATIONS OF BOTANY, ZOOLOGY, PHYSICS, AND CHEMISTRY: Botany 103 (3 credits), 203 (4 credits), Zoology 103 (4 credits),

335 or 337 (3 credits); Physics 151-152 (6 credits), 153-154 (2 credits); Chemistry 101 (4 credits), 102 (2 credits), 124 (2 credits).

6. CHEMISTRY, PHYSICS, AND MATHEMATICS: Chemistry 101 (4 credits), 102 (2 credits), 122 (3 credits); Physics 151-152 (6 credits), and 153-154 (2 credits); Mathematics 101 (2 credits), 102 (2 credits), 110 (3 credits), 140 (3 credits); and for students having high school credits for Mathematics 101, two credits from Math. 301, 371, 391, and 392.

7. OTHER COMBINATIONS: For students who have elected as their field of concentration a subject usually important in high school curricula, and who may wish to qualify for a secondary teachers' certificate, it may be possible to arrange an acceptable program, provided the courses already completed and the electives still available make possible the completion of one of the titles in Group B.

GROUP B

1. CHEMISTRY-PHYSICS: Chemistry 101 (4 credits), 102 (2 credits), 122 (3 credits); Physics 151-152 (6 credits), 153-154 (2 credits).

2. MUSIC: Music 101-102 (2 credits), 301-302 (6 credits), 303 or 304 (2 credits), 111-112 or 117-118 (2 credits), and 3 credits selected from 103, 104, 107, 108, 113 and 114.

3. MATHEMATICS: Mathematics 101 (2 credits), 102 (2 credits), 110 (3 credits), 140 (3 credits), and 5 to 7 credits selected from 301, 371, 372, 391, 392, or from substitutions approved by the department of mathematics.

4. PHYSICAL EDUCATION FOR MEN: Physical Education 101-102 (1 credit), 201-202 (1 credit), 210 (3 credits), 301 (1 credit), 340 (2 credits), 430 (2 credits), 451 (3 credits), and 440 (3 credits).

5. PHYSICAL EDUCATION FOR WOMEN: Physical Education 161-162 (2 credits), 180 (2 credits), 261-262 (1 credit), 263-264 (2 credits), 281 (3 credits), 290 (2 credits), and 372 (3 credits).

6. BOTANY-ZOOLOGY: Botany 103 (3 credits), 203 (4 credits); Zoology 103 (4 credits), 335 or 337 (3 credits).

7. HISTORY: History 101-102 (6 credits), 105-106 (6 credits), 312 (2 credits), 331 (2 credits).

8. ART: Art 101-102 (4 credits), 103 (2 credits), 105 (2 credits), 115 (2 credits), and 6 credits of 251-252 or 257-258.

9. SPANISH: (1) For students entering with no Spanish in high school, Spanish 101, 102, 103, 104 (16 credits), 351-352 (4 credits); (2) for students entering with one year of high school Spanish, Spanish 102, 103, 104 (11 credits), 351-352 (4 credits), 355 or 356 (2 credits); (3) for students entering with two years of Spanish in high school, Spanish 103, 104 (6 credits), 351-352 (4 credits), 355 or 356 (2 credits), 379 or 380 (2 credits), and 369, 370, 371, or 372 (2 credits).

10. ENGLISH: English 281 (3 credits), 291 (3 credits), 441 (3 credits), 465 (3 credits), 493 (3 credits).

11. SPEECH, DRAMATICS, AND JOURNALISM: English 111-112 (4 credits), 121 (2 credits), 217 (2 credits); Journalism 101 (3 credits), 221 (3 credits), 387 (2 credits).

Kindergarten-Primary Education

117. KINDERGARTEN-PRIMARY EDUCATION. Kindergarten-primary education as a unified experience, emphasizing the history, theory and curriculum.

First semester. Three credits. Ruebsam.

120. SUPERVISED TEACHING IN KINDERGARTEN-PRIMARY GRADES. Opportunity for teaching open to freshmen and sophomores desiring to qualify for the elementary teaching certificate.

Prerequisite: Students enrolled must have completed 15 hours in the University including 8 hours of primary education and must have had or be taking Education 134. *Either semester. Five credits. Ruebsam.*

125. OBSERVATION OF TEACHING. Observation and discussion of specific classroom work in the kindergarten-primary grades.

First semester. One credit. Ruebsam.

134. THE TEACHING OF LANGUAGE ARTS IN THE PRIMARY GRADES. Includes beginning reading, activities, seat work, picture studies, stories, dramatization.

Second semester. Three credits. Ruebsam.

141. CONSTRUCTIVE ACTIVITIES FOR KINDERGARTEN-PRIMARY GRADES. A consideration of the materials by means of which the child organizes and expresses his ideas.

First semester. Two credits. (Given in alternate years beginning in 1947.) Fee \$3. Ruebsam.

314. AUXILIARY SUBJECTS IN THE KINDERGARTEN-PRIMARY CURRICULUM. The contribution of arts and crafts, music, games and rhythms, to the education of the kindergarten and primary child.

Second semester. Two credits. (Given in alternate years beginning in 1948.) Ruebsam.

315. CONTENT MATERIAL IN KINDERGARTEN-PRIMARY GRADES. Study of objectives, methods, and desirable experiences in the fields of arithmetic and social science.

Second semester. Two or three credits. (Given in alternate years beginning in 1947.) Ruebsam.

320. SUPERVISED TEACHING IN KINDERGARTEN-PRIMARY GRADES. Opportunity for teaching open to juniors and seniors desiring to qualify for the elementary teaching certificate.

Prerequisite: Students enrolled must have completed 15 hours in the University including 8 hours of primary education and must have had or be taking Education 134. *Either semester. Five credits. Ruebsam.*

332. LITERATURE IN THE KINDERGARTEN-PRIMARY GRADES. Children's stories and poetry as a background to literature, with practical guidance in selection and teaching; dramatizations, and simple puppetry.

Second semester. Two credits. Ruebsam.

363. EARLY GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD. The factors affecting the physical, motor, intellectual, social, and emotional development of the child through the primary grades. Primarily for teachers in service.

First semester. Two credits. (Given in alternate years beginning in 1948.) Ruebsam.

General Elementary

111. PRINCIPLES OF ELEMENTARY EDUCATION. A discussion of objectives, curriculum and procedures in the modern elementary school and the problems of the elementary school teacher.

First semester. Two credits. Ruebsam.

121. SUPERVISED TEACHING IN THE INTERMEDIATE GRADES. Opportunity for teaching, open to freshmen and sophomores desiring to qualify for the first grade elementary teaching certificate.

Prerequisite: Students enrolled must have completed 15 hours in the University including 8 hours of elementary education of which 4 must be elementary methods. *Either semester. Five credits.*

130. TEACHING SOCIAL SUBJECTS. Emphasis upon all phases of social development of children for democratic living, and particular emphasis on teaching geography and history.

Second semester. Three credits. Langford.

131. THE TEACHING OF ARITHMETIC. Emphasis on diagnostic and remedial treatment of pupil difficulties; content, pupil readiness to learn arithmetic, and the principal objectives of arithmetic.

Second semester. Two credits.

133. 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. Fee \$5. Joslin.

135. THE TEACHING OF LANGUAGE. A study of the principles, materials, and methods involved in the teaching of the language subjects in the intermediate and upper grades.

Second semester. Two credits. Traner.

136. THE TEACHING OF READING. The improvement of reading ability in the intermediate and grammar grades, the diagnosis of reading difficulties and remedial procedures, and the developing of interest in broad reading for comprehension and pleasure.

First semester. Two credits. Langford.

138. TEACHING ELEMENTARY SCIENCE. A course designed to give teachers help in building functional science concepts and how to use science equipment in performing simple experiments.

First semester. Two credits. Langford.

149. 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. Music materials, rote 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. Hickman.

186. NONINSTRUCTIONAL PROBLEMS OF THE CLASSROOM TEACHER. Extra-class responsibilities and requirements of the elementary teacher such as reports, records, daily program, types of school furniture, equipment and supplies, school lunches, and community relations.

Second semester. Two credits. Langford.

190. STATE SCHOOL ORGANIZATION AND SCHOOL LAW. The principles of State school organization and school law as revealed by a study of the school code of the State; meets all certification requirements for school law.

Either semester. Two credits. Brown.

321. SUPERVISED TEACHING IN THE INTERMEDIATE GRADES. Opportunity for teaching, open to juniors and seniors desiring to qualify for the elementary teaching certificate.

Prerequisite: Students enrolled must have completed 15 hours in the University including 8 hours of elementary education of which 4 must be elementary methods. *Either semester. Five credits. Langford.*

323. SUPERVISED TEACHING IN SEVENTH AND EIGHTH GRADES. This course provides opportunity for teaching specific subjects in the seventh and eighth grades. Credits apply to elementary certificates.

Prerequisite: Students enrolled must have completed 15 hours in the University including 8 hours of elementary education of which 4 must be elementary methods. *Either semester. Four or five credits. Brown.*

348. AUDIO-VISUAL AIDS IN ELEMENTARY SCHOOLS. The purpose of this course is to consider the various uses of audio-visual aids available for elementary schools. Study and evaluation of material and equipment. Selection of material for grade levels.

Credit will not be allowed if Education 345 has been taken for credit.

First semester. Lectures and laboratory. Three credits. Fee \$1.50.

388. EDUCATION TESTS AND MEASUREMENTS. The most serviceable tests and scales for measuring the elementary subjects; the course will involve giving and scoring of the tests.

First semester. Two credits. (Given in alternate years beginning in 1948.) Fee \$3. Brown.

485-486. GUIDANCE AND PUPIL ADJUSTMENT IN THE ELEMENTARY SCHOOL. A study of the fundamental principles and methods of guidance. Emphasis on basic growth concepts, case history, tests, interviews, and questionnaires to discover the mental, physical, social, and emotional needs of elementary school children.

Credit will not be allowed if Education 381-382 has been taken for credit.

Each semester. Three credits.

Secondary Education

303. WORKSHOP IN VOCATIONAL EDUCATION. Summer conferences concerning the curriculum and other problems of vocational home economics, agriculture, and trades and industries, as organized under the direction of the State Department of Vocational Education; for in-service teachers of these subjects.

One credit.

310. PROBLEMS OF SECONDARY EDUCATION. The place and extent of secondary education in our school system; the purpose of education in a democracy; and the organization and content of a curriculum based on that purpose.

First semester. Two credits. Traner.

330. TEACHING OF HIGH SCHOOL SOCIAL STUDIES. Treatment of subject matter and materials of high school social studies with particular reference to history and American government.

Second semester. Two credits. Brown.

331. TEACHING OF HIGH SCHOOL MATHEMATICS. Selection and organization of subject matter and procedures in teaching.

First semester. Two credits. (Given in alternate years beginning in 1949.) Wood.

335. TEACHING HIGH SCHOOL ENGLISH. Acceptable material and methods in oral and written composition and in literature.

First semester. Two credits. Traner.

338. TEACHING OF HIGH SCHOOL SCIENCE. A study of the most suitable subject matter for the various sciences and of methods of teaching.

Second semester. Two credits. Williams.

339. 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. First semester. (Given in alternate years beginning in 1947.) Two credits. Klaus.

340. THE TEACHING OF BOOKKEEPING, GENERAL BUSINESS TRAINING, AND ALLIED SUBJECTS. The curriculum, methods of teaching, objectives, standards, grading, etc., in the teaching of bookkeeping, general clerical practice, consumer education, etc.

First semester. Two credits. (Given in alternate years beginning in 1948.) Klaus.

341. 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 each week. Two credits. Scranton.

344. METHODS OF VOCATIONAL EDUCATION FOR ADULTS. Designed for the vocational 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.

Either semester. Three credits. Schaefer.

345. AUDIO-VISUAL AIDS IN SECONDARY SCHOOLS. A study of the function of audio-visual aids in education, showing advantages, limitations, and practical uses of various types of audio-visual aids. Critical appraisal of films, slides, film strips, and transcriptions, operation of equipment and selection of material.

Credit will not be allowed if Education 348 has been taken for credit.
Second semester. Lectures and laboratory. Three credits. Fee \$1.50.

347. ORGANIZATION AND ADMINISTRATION OF GIRL'S PHYSICAL EDUCATION. Objectives, methods and general principles including, first, a discussion of the biological, physiological, psychological, and sociological principles underlying those objectives, and, second, a study of acceptable methods of administering a physical education program to achieve these objectives.

Prerequisite: Physical Education 180. (Identical with Physical Education 380 for Women.) *Two lectures. Two credits.*

349. HIGH SCHOOL MUSIC. Practical consideration of problems involved in various phases of high school music. Assembly singing, conduction, choral groups, instrumental groups, etc. Applicant must be a junior or senior taking courses in music. Active participation in band, orchestra, or chorus required.

Second semester. (Same as Music 349.) Two credits. Hickman.

381-382. GUIDANCE AND COUNSELING IN SECONDARY SCHOOLS. A study of the history and meaning of guidance and counseling, clinical and group guidance, principles, procedures, and techniques in counseling, and the place of the high school teacher in the guidance program. This course will also include a study of problems in vocational guidance, interests and aptitudes, placement, and the cumulative record.

Credit will not be allowed if Education 485-486 has been taken for credit. *Each semester. Three credits.*

420. SUPERVISED TEACHING IN THE HIGH SCHOOL. Teaching in grades nine to twelve in subjects in which the student is specializing. Required of all candidates for the high school teachers' diploma. Students enrolled must have had or be taking methods courses.

Prerequisite: Students enrolled must have completed 15 hours in the University including 8 hours in secondary education, with at least one methods course and must have adequate preparation in the subjects listed under concentration in secondary education on page 222.

Either semester. Two to six credits. Brown.

444. METHODS OF TEACHING FARM MECHANICS. A course

designed for students preparing to meet the qualifications for 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.

446. PROBLEMS IN AGRICULTURAL EDUCATION. Selecting the subject matter for high school courses in agriculture and for farmers' 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.

447. METHODS IN TEACHING VOCATIONAL AGRICULTURE. 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.

Second semester. Three credits.

448. PROBLEMS IN HOMEMAKING EDUCATION. Curricula, methods of teaching, and making home contacts. 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. Three credits. Schaefer.

449. METHODS IN TEACHING HOMEMAKING. Analysis of objectives, content, and experience 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.

Second semester. Three credits. Schaefer.

471. GENERAL METHODS OF HIGH SCHOOL INSTRUCTION. 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. To be taken in the senior year.

First semester. Three credits. Brown.

482. NONINSTRUCTIONAL RESPONSIBILITIES OF THE HIGH SCHOOL TEACHER. Growth and advancement in the profession, ethical responsibilities, satisfactory administration and professional relations.

For seniors only. Second semester. Two credits. Traner.

General Education

266. ELEMENTARY EDUCATIONAL PSYCHOLOGY. A consideration of the applications of psychology to educational problems. Identical with Psychology 221.

Prerequisite: Psychology 201. Second semester. Three credits. Irwin.

319. THE ELEMENTARY SCHOOL CURRICULUM. A study of basic, present day, curriculum needs of children with emphasis on philosophy, how children learn, and planning a curriculum reorganization program.

Prerequisite: Students enrolled should have had considerable training in elementary education, including methods courses and practice teaching or experience. First semester (Given in alternate years beginning in 1951). Two credits. Langford.

351. HISTORY OF EDUCATION. General course. The development of educational thought and practice viewed as a phase of social progress.

Two credits. First semester. (Given in alternate years beginning in 1951.) Brown.

352. HISTORY OF EDUCATION IN THE UNITED STATES. A study of factors and conditions which have been influential in the shaping of educational ideals, theories, and practices of present day American education.

Two credits. Second semester. (Given in alternate years beginning in 1951.) Brown.

354-355. COMPARATIVE EDUCATION. A comparative study of national ideologies, philosophies, and systems of education in North and South America, Europe, and Japan.

Two credits. Each semester.

363. EARLY GROWTH AND DEVELOPMENT OF THE SCHOOL CHILD. The factors affecting the physical, motor, intellectual, social, and emotional development of the child through the primary grades of school. Primarily for teachers in service.

First semester. (Given in alternate years beginning in 1948.) Two credits. Ruebsam.

367. PSYCHOLOGY OF THE ELEMENTARY SCHOOL SUBJECTS. The scientific experiments and investigations relating to learning and

teaching of the elementary branches; psychological problems of immediate concern to the teacher in the classroom.

Second semester. (Given in alternate years beginning in 1949.) *Two credits.* Langford.

369. THE EDUCATION OF EXCEPTIONAL CHILDREN. The problems of teaching retarded, gifted, and the physically handicapped child with emphasis on psychology, methods, and evaluation.

First semester. (Given in alternate years beginning 1952.) *Two credits.* Langford.

392. THE ADMINISTRATION OF THE ELEMENTARY SCHOOLS. Designed to acquaint teachers, administrators, and prospective principals of elementary schools with such problems as grouping children for instruction, pupil progress, library services, curriculum, cumulative records, health, and community relations.

Second semester. (Given in alternate years beginning in 1950.) *Two credits.* Langford.

421. SUPERVISED TEACHING FOR TEACHERS-IN-SERVICE. Preparation of lesson plans, observation and evaluation of teacher's presentation, reading and discussion on curriculum and method.

Either semester. Three credits. Staff.

Commercial Education

101-102. TYPEWRITING. Touch typing. Rhythm drills; dictation exercises; arrangement of business letters. Students with one year of high school typing may not take Commercial Education 101 for credit. Credit allowed only upon attainment of prescribed production requirements.

Two credits each semester. Fee \$5 per semester.

111-112. STENOGRAPHY. Gregg Shorthand. Students must also take Commercial Education 101-102, unless they have had equivalent training. Students who have had one year of high school shorthand may not take this course for credit.

Two credits each semester.

211-212. ADVANCED STENOGRAPHY. Speed and accuracy development in Gregg Shorthand. Study of stenographic duties and techniques essential for business employment.

Prerequisite: Commercial Education 111-112. *Two credits each semester.* Fee \$5 per semester.

Graduate Courses

501. 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.

502. INDEPENDENT STUDY FOR GRADUATE STUDENTS. The intensive study of some specific educational problem of particular

interest to the student, involving an exhaustive survey of research and previous study, original research, and a written report of the study.

Intended primarily for candidates for the Master's degree. *Two to six credits.* May be repeated for a total of six credits. Members of the Staff.

590. SUPERVISION IN HOME ECONOMICS. Intended for supervisors of student teaching in home economics. Analysis of objectives, techniques, and experiences which promote student-teacher growth.

First semester. Two or three credits. Schaefer.

ELECTRICAL ENGINEERING

Professors S. G. PALMER, SANDORF (Chairman of Department); Assistant Professor HENDRIKS; Mr. GLIMM, Mr. SWARTHOUT.

231-232-233-234. ELECTRICAL ENGINEERING LABORATORY. This course offers the electrical engineering student an opportunity to undertake a project in his chosen field. The nature and scope depends upon background of student.

Open to freshmen and sophomores. *One or two credits each semester.* A laboratory fee of \$10 per credit may be required, depending on nature of project undertaken.

323. ELEMENTS OF ELECTRICAL ENGINEERING. An elementary course in electric circuits, machinery, electronics, and measurements. Includes lectures and demonstrations. Designed primarily for students not taking electrical engineering, the course will be adapted to needs of the students.

Both semesters. Two credits.

351. DIRECT CURRENT MACHINERY. A course for electrical and mechanical engineering students on the theory, characteristics, construction, and operation of direct current machines and circuits.

Prerequisites: Physics 204, Mathematics 252. *First semester. Three credits.*

352. ALTERNATING CURRENT MACHINERY. A continuation of Electrical Engineering 351 covering a similar study of alternating current machines and circuits.

Prerequisite: Electrical Engineering 351. *Second semester. Three credits.*

353. DIRECT CURRENT MACHINERY LABORATORY. This course is normally accompanied or preceded by Electrical Engineering 351 and has same prerequisites.

First semester. Two credits. Fee \$10.

354. ALTERNATING CURRENT MACHINERY LABORATORY. This course is normally accompanied or preceded by Electrical Engineering 352.

Second semester. Two credits. Fee \$10.

355. INTRODUCTION TO ELECTRIC CIRCUITS. The study of elementary electric and magnetic circuits and fields, steady state and transient response to alternating current and direct current of simple circuits.

Prerequisite: Physics 204, preceded or accompanied by Mathematics 351. *First semester. Two credits.*

356. ALTERNATING CURRENT CIRCUITS. A continuation of Electrical Engineering 355, including a study of series and parallel alternating current circuits, coupled circuits, and transmission lines. Complex quantities and vector notation are employed.

Prerequisites: Electrical Engineering 355, Mathematics 351. *Second semester. Three credits.*

367. ELECTRICAL ILLUMINATION. A study of the principles and practice of electrical illumination.

Prerequisite: College physics. *First semester. Two credits.*

368. INTRODUCTION TO ELECTRONICS. Theory and application of vacuum and gas-filled tubes and circuits.

Prerequisite: Electrical Engineering 355 or equivalent. Must be preceded or accompanied by 356. *Second semester. Lectures and laboratory. Three credits. Fee \$5.*

373. ELEMENTARY ELECTRONIC CIRCUITS. An elementary course in the principles of electronics. Emphasis will be placed upon the application of electronic tubes and circuits to industrial and biological instruments and processes. Lectures and demonstrations. Designed primarily for students not taking Electrical Engineering.

Prerequisite: College Physics. *Either semester. Two credits.*

375. ELECTRICITY IN MINING. The study of the theory and application of electrical equipment commonly used in mining and associated fields.

Second semester. Lectures and laboratory. Three credits. Fee \$5.

391-392-393-394. ELECTRICAL ENGINEERING PROJECT. The nature of the project depends upon the student's interest and ability. It must be in the field of electrical engineering. The student is expected to take the initiative in consulting periodicals and the instructional staff.

One or two credits. A fee of \$10 per credit may be required.

457. ADVANCED ELECTRIC CIRCUITS. A continuation of E. E. 356 including filters, and other networks, and transients in linear systems.

Prerequisite: Electrical Engineering 356. *First semester. Two credits.*

461. ADVANCED ALTERNATING CURRENT MACHINERY. A continuation of Electrical Engineering 352.

Prerequisite: Electrical Engineering 352 and 356. *First semester. Three credits.*

462. ELECTRICAL DESIGN. Study of the fundamental principles underlying the design of electrical equipment. An inspection trip to Hoover Dam is included as part of the course. Lectures and computation periods.

Prerequisite: Electrical Engineering 461. *Second semester. Three credits. Fee \$10.*

463. ADVANCED ALTERNATING CURRENT LABORATORY. A continuation of Electrical Engineering 353 and 354, normally accompanied by Electrical Engineering 461.

First semester. Two credits. Fee \$10.

464. ADVANCED ALTERNATING CURRENT LABORATORY. A continuation of Electrical Engineering 463.

Second semester. Two credits. Fee \$10.

466. GENERATION AND DISTRIBUTION OF POWER. Study of the economic and technical factors underlying the location, design, construction, operation, and protection of generating, transmission, and distribution systems. A discussion of symmetrical components and stability is included.

Prerequisite: Electrical Engineering 461. *Second semester. Three credits.*

481. ADVANCED ELECTRONICS: A continuation of Electrical Engineering 368, including the study of amplifiers, oscillators, rectifiers, modulators, etc., as used in the power and communication fields.

Prerequisites: Electrical Engineering 356 and 368. *First semester. Three credits. Fee \$10.*

482. ELECTRICAL COMMUNICATION. The principles of communication by wire and radio, including microphones, loudspeakers, and microwave systems.

Prerequisites: Electrical Engineering 457, 481. *Second semester. Three credits. Fee \$10.*

483. ADVANCED ELECTRONICS LABORATORY. A laboratory course normally accompanying Electrical Engineering 481, and having the same prerequisites as the latter.

First semester. One credit. Fee \$5.

484. COMMUNICATION LABORATORY. A laboratory course normally accompanying Electrical Engineering 482.

Second semester. One credit. Fee \$5.

487-488. SEMINAR. Discussion of technical articles appearing in current periodicals.

Prerequisite: Senior standing. *One credit.*

495-496. THESIS. The subject and its scope must have the approval of the instructor.

One to three credits. A fee of \$5 per credit may be required.

ENGLISH LANGUAGE AND LITERATURE

Professors ELDRIDGE, GRIFFIN, LAIRD; Associate Professors GORRELL (Chairman of Department), HUME, MILLER; Assistant Professors DALEY, MORRISON, RICHARDS; Mr. DICKINSON, Mr. GIBBY, Mr. MILSTEAD, Mr. PFLUG, Mr. SEMENZA.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN
ENGLISH AND SPEECH

Students will normally be expected to elect courses in accordance with at least one of the approved options which follow. Many students are able to fill requirements for more than one option.

1. LIBERAL ARTS. *Major-interest subject* (30 credits)—English 281, 291 (6 credits), 451, 465, 493 (9 credits), four courses selected from 441, 461, 471, 475, 481, 485 (12 credits), one course selected from 442, 452, 462, 466, 469, 472, 476, 482, 486 (3 credits). *Related Subjects* (20 credits)—Each student should choose one of the four groups and select 20 credits from the courses listed in it. a. *Artistic*: History 393-394 (4 credits); Philosophy 455 (2 credits), 14 credits, with at least one course from each of the departments designated, selected from Art 115, 261, 362; English 221-222, 321-322, 323-324, 423-424, 425-426; Music 203, 204, 304 (14 credits). b. *Language*: First and second year courses in a language other than that by which the student has fulfilled his Arts and Science requirements (16 credits); 4 credits selected from English 221-222, 421-422; History 371-372, 393-394; Philosophy 455; courses in foreign languages numbered above 300 (4 credits). c. *Social Studies*: History 305, 306, or 341-342 (6 credits), 393-394 (4 credits); 10 credits selected from Economics 201, 363; English 315, 317-318, 321-322, 425-426; History 376, 427-428, 429-430; Philosophy 455; Psychology 361; Sociology 371, 380 (10 credits). d. *Special Interest*: For students having special interests not well reflected in one of the three groups above, 20 credits to be chosen in consultation with the adviser.

2. GENERAL LITERATURE. (See also Foreign Languages, pp. 242-249). *Major-interest subject* (36 credits in Departments of English and Foreign Languages)—Courses in foundations of language and literature regularly taken sophomore year, English 281, 291 (6 credits), broad courses selected from English 331, 333, 337, 339; Spanish 373-374 (6 credits); courses in either or both departments intended to introduce the student to comparative methodology and practice selected from French 351-352, 371, 372; German 351-352, 371-372; Italian 351-352; Spanish 351-352, 369-370; English 452, 461-462, 472, 475-476, 485-486 (6 credits). Remaining courses are to be distributed roughly equally among two or more bodies of literature, normally a part of the literature of two nations or peoples. Courses acceptable include those in Foreign Languages numbered above 300 and those in English numbered above 400. This division of the concentration must include one course, given in either the Department of Foreign Languages or the Department of English which is in the main an undergraduate thesis of a scholarly or critical nature, concerned with relationships and characteristics of the two bodies of literature in which the student is professing interest. (Such courses are not numbered in the 1951-1952 catalogue) (18 credits). *Related Subjects* (14 credits)—To be selected according to one of the following plans: a. Courses in one foreign language other than those selected for concentration in the major subject (14 credits). b. Courses in social sciences and the humanities to be selected in consultation with the adviser (14 credits).

3. LITERARY WRITING. *Major-interest subject* (29-33 credits)—English 201-202 (4 credits); 281, 291 (6 credits); 305-306, 405-406 (4-8 credits); and five courses to be selected from 331, 337, 339, and courses numbered above 400 (15 credits). *Related Subjects* (17-21 credits)—The student shall select 17-21 credits from one of the four groups of related subjects listed for Option 1 above.

4. SPEECH, PUBLIC SPEAKING, ARGUMENTATION, RADIO SPEECH. *Major-interest subject* (23 credits)—English 111-112 (4 credits); 217-218 (4 credits); 221-222 (4 credits); 311 (3 credits); 315 (3 credits); 327 (3 credits); 411 (3 credits); 425-426 (4 credits). Students doing outstanding work in speech courses may sometimes, with the consent of the department, substitute an equal number of credits in related subjects for certain credits in the major subject. *Related Subjects* (22 credits)—22 credits to be selected from the following courses, at least 6 credits of which shall be in psychology; English 281, 291, 441-442, 465, 485; History 303, 305, 306, 312, 393-394; Philosophy 107, 108, 221, 222; Psychology 201, 205, 361, 362.

5. SPEECH, THEATER AND INTERPRETATION. *Major-interest subject* (27 credits)—4 credits selected from 111-112, 311 (4 credits); 4 credits selected from 217-218, 315, 317-318 (4 credits); 3 credits selected from 411, 412 (3 credits); 12 credits selected from 121-122, 221-222, 321-322, 323-324, 423-424 (12 credits); 425-426 (4 credits). Students doing outstanding work in speech courses may sometimes, with the consent of the department, substitute an equal number of credits in related subjects for certain credits in the major subject. *Related Subjects* (23 credits)—23 credits selected from the following courses, at least 14 credits of which shall be in English literature; Art 101, 115; English 253, 254, 291, 331, 337, 355, 356, 441, 442, 465, 466, 485; Psychology 361.

A. ELEMENTARY COMPOSITION. A noncredit course in the mechanics of composition required of those who are unable, in the placement examinations given all beginning students, to demonstrate the proficiency in expression normally expected of high school graduates.

One semester. No credit. Staff.

101-102. COMPOSITION AND RHETORIC. The study of English as a means of self-expression, with special attention to the writing of exposition.

Three credits each semester. Staff.

NOTE—At the recommendation of the department, students may be allowed to substitute for either English 101 or 102, or both, certain prescribed courses within the department numbered to 300, provided that at least six units of work in English are completed. 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 102 will be required to register for English 102 the following semester.

Faculty rules specify that 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 chairman of the department thinks advisable.

131-132. APPRECIATION OF LITERATURE. The reading of a wide

selection of recent and contemporary literature of various types, intended to cultivate sound literary taste.

Two credits each semester. Staff.

135. INTRODUCTION TO SCIENTIFIC LITERATURE. Reading and study of writing on scientific subjects from ancient times to the present.

Three credits. Staff.

141. INTRODUCTION TO THE SHORT STORY. A study of significant short stories and of the short story as a form of literature.

Two credits. Staff.

145. THE MODERN AMERICAN NOVEL. A study of the American novel with stress on contemporary writers.

Two credits. Staff.

171-172. SHAKESPEARE FOR PLEASURE. Shakespeare's principal plays read for their social interest and their literary excellence. Not intended for students selecting a field of concentration in English.

Two credits each semester. Staff.

201-202. ADVANCED COMPOSITION. Study of methods of composition with extensive practice adjusted to the interests and experience of the student.

Two credits each semester. Staff.

231-232. GREAT BOOKS. Masterpieces from many ages and from various great literatures of the world read in English for recreation and for general culture.

Three credits each semester. Staff.

247-248. THE WORLD NOVEL. The reading of significant modern novels for recreation and for the appreciation of the novel as an integrated approach to life.

Three credits each semester. Staff.

253-254. THE DRAMA OF TODAY. The reading of a variety of modern plays as an introduction to drama.

Two credits each semester. Staff.

261. INTRODUCTION TO POETRY. A study of selected poems for the purpose of increasing ability to understand, appreciate, and evaluate poetry.

Three credits. Staff.

267. INTRODUCTION TO THE ESSAY. A study of important English and American essayists and of the essay as a form of literature.

Two credits. Staff.

281. INTRODUCTION TO LANGUAGE. A study of the nature of language with a sketch of the growth of the American language.

Three credits. Laird.

291. INTRODUCTION TO LITERARY STUDY. A critical examination of creative writing and a survey of basic methods of literary study.

Three credits. Gorrell and Hume.

NOTE—English 281 and 291 are required of students with fields of concentration in the department, except those electing speech options. The courses need not be taken in their numbered sequence.

305-306, 405-406. ADVANCED TRAINING IN CREATIVE WRITING. The course is conducted as a writer's workshop. Required for the field of concentration in creative writing.

Prerequisite: The submission of a sample of superior creative work. *Two credits each semester.* Staff.

331-332. GREEK AND LATIN LITERATURE IN TRANSLATION. Study of classical literature in translation, considering the contribution of Greek and Latin literature and culture to modern literature. Same as Foreign Languages 331-332.

Three credits each semester. Staff.

333. FAR EASTERN LITERATURE. The study of Chinese and Japanese literature in translation, with special emphasis on its relations with Western cultures.

Two credits. Morrison.

337. THE BIBLE AS LITERATURE. The study of representative literary types found in the Old and New Testaments.

One semester. Three credits. Eldridge and Hume.

339. MYTHOLOGY AND FOLKLORE. An introduction to primitive literature as a revelation of the human mind, and some attention to folkloristic methodology.

One semester. Two credits. Laird.

345-346. THE ENGLISH NOVEL. A study of the development of the novel in England from the eighteenth century to the present.

Three credits each semester. Hume and Gorrell.

355-356. MODERN DRAMA. Representative English and American dramatists, since 1890.

Two credits each semester. Gorrell.

385. DESCRIPTIVE GRAMMAR. An objective description of modern English usage, with a sketch of grammar as it is conventionally taught. Designed primarily for prospective teachers.

One semester. Three credits. Laird and Eldridge.

441-442. AMERICAN LITERATURE. English 441 is a survey of the development of American literature from the beginning to the present; 442 is an intensive study of special problems in American literature.

Three credits each semester. Eldridge and Hume.

451-452. THE HEROIC AND MEDIEVAL AGES. English 451 is a

broad study of English literature from its sources in the Celtic, Germanic, Classical, and Christian traditions to 1500, with special emphasis on Chaucer; 452 is a study of special problems in the period.

Three credits each semester. Laird.

461-462. THE RENAISSANCE. English 461 presents a broad view of English literature from the end of the Middle Ages to the Restoration, with special attention to influences from abroad; 462 considers in detail special topics in literature of the period.

Three credits each semester. Gorrell and Daley.

465-466. SHAKESPEARE. English 465 is a general survey of Shakespearean drama, based upon a study of about fifteen of the dramatist's best known plays; 466 considers some of the less commonly studied plays and special problems of Shakespeare study.

Three credits each semester. Gorrell.

469. MILTON. A study of the representative writings of John Milton.

One semester. Three credits. Hume and Gorrell.

471-472. THE AGE OF REASON. English 471 is a survey of English literature from Dryden to Burke, with attention to continental influences; 472 is a study of special problems in eighteenth-century literature.

Three credits each semester. Hume.

475-476. THE ROMANTIC MOVEMENT. English 475 is a survey of the rise of romanticism in the eighteenth century and its flowering in the nineteenth, with special attention to the English romantics; 476 studies special problems in the period.

Three credits each semester. Laird.

481-482. THE VICTORIAN AGE. English 481 is a study of the social and artistic movement of the nineteenth century as exemplified in English poetry and prose; 482 is an intensive study of individual writers or problems in the period.

Three credits each semester. Laird and Morrison.

485-486. MODERN LITERATURE. English 485 is a survey of modern writing with emphasis on contemporary American and British literature; 486 is an intensive study of selected figures in modern literature.

Three credits each semester. Eldridge and Hume.

493. SURVEY OF ENGLISH LITERATURE. A broad view of English and American literatures and their social and international relationships. Intended to encourage the student to integrate his four years of study, the course may be required of seniors specializing in the department. (See requirements for fields of concentration in English.)

One semester. Three credits. Laird and Staff.

495-496, 497-498. INDEPENDENT STUDY.

Open to junior and seniors specializing in English with permission of the instructor. Hours to be arranged with individual students. *One credit a semester.* Staff.

501-502. SEMINAR.

Open only to graduate students. Hours and credits to be arranged with individual students. Staff.

591-592. THESIS COURSE.

Open only to candidates for a master's degree. Staff.

Speech

109. SPEECH IMPROVEMENT. A course especially designed for those students who desire or need concentrated work directed to the improvement of voice production. Attention will be given to voice drills and exercises both for individuals and for the class as a group.

One credit. May be repeated without credit. Richards.

111-112. 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.

Two credits each semester. Staff.

121-122. THEATER PRACTICE. An introduction to the several aspects of play production, excluding acting and directing. Through work backstage in University and Reno Little Theater productions, the student is oriented to practical theater.

Two credits each semester. Miller and the staff of the Reno Little Theater.

217-218. 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 expressions of thoughtful opinions on current topics are stressed.

Two credits each semester. Staff.

221-222. INTERPRETATION. The oral interpretation of the forms of literature with special attention directed to diction.

Two credits each semester. Staff.

311. ADVANCED SPEECH COMPOSITION. Study for effective speech composition, based upon application of rhetorical and psychological principles. Open to a limited number of students with consent of instructor.

Three credits. Staff.

315. 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 111-112 or 217-218. *Three credits.* Richards.

317-318. 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 217-218. *One or two credits each semester.* Richards.

321-322. ADVANCED INTERPRETATION. A study of advanced techniques of oral expression to develop imagination, reading skill, and platform deportment in all its phases. Practice will include radio presentations of dramatic materials.

Prerequisite: English 221-222, or the consent of the instructor. *Two credits each semester.*

323-324. THE ORAL INTERPRETATION OF SHAKESPEARE. The oral interpretation of Shakespeare's plays. During the second semester the class will present a full-length production.

Two credits each semester. Miller.

327. RADIO SPEAKING. Practice and discussion of radio speaking and production.

Prerequisite: English 111-112 or other elementary work in speech. *Three credits.* Richards.

411. PHONETICS. A study of the phonetics of American English treating with the sounds of the International Phonetics Alphabet, as applied to English. Primary consideration will be given to the manner in which the speech mechanism produces sounds and integrates them into meaningful patterns, with a brief consideration of physiological and acoustical principles involved in voice production.

Prerequisite: Consent of instructor. *Three credits.* Richards.

412. CORRECTION OF SPEECH DEFECTS. A course designed for teachers and others with a special interest in effective oral communication. The course deals with the nature and causes of the various speech defects, and with the therapeutical procedures used to correct them. Not designed to train clinicians, but to create an insight into subnormal speech problems.

Three credits. Richards.

413. PARLIAMENTARY LAW AND PRACTICE. Study and practice of the parliamentary rules and procedure governing deliberative assemblies.

Two credits.

415-416. HISTORY OF PUBLIC ADDRESS. The study and appraisal of the speeches of famous orators, viewing each in relation to the

social milieu in which the speech situation is set. The first semester will treat ancient, medieval, and English orators; the second American orators.

Registration with instructor's permission. *Two credits.* Richards.

417. 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.

419-420. PRE-LEGAL ARGUMENTATION. Study and practice, especially for pre-legal students, of the forensic aspects of law. The course will include participation in mock trials and the auditing of exemplary cases and suits in local courtrooms.

Two credits each semester.

423-424. HISTORY OF THE THEATER. A study of the development of the theater from its earliest beginning to contemporary theater.

Two credits each semester. Miller.

425-426. PLAY DIRECTING. The reading, study, and production of representative and modern plays, with lectures, readings and reports.

Prerequisite: Consent of instructor. *Two credits each semester.* Miller.

FOREIGN LANGUAGES

Associate Professors GOTTARDI, MELZ (Chairman of Department); Assistant Professors DANDINI, KLINE, POOLE; Mrs. BROWN, Mr. MANAHAN, Mr. PAOLOZZI, Mr. SORENSON.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN FOREIGN LANGUAGES

Requirements for a major-interest subject in the Department of Foreign Languages: With no admission units, courses 101-102 (10 credits), 103-104 (6 credits), and 12 credits in courses numbered 300 or above as required for the respective language, making a total of 28 credits; with 2 admission units, courses 103-104 (6 credits), and the 12 credits in the courses numbered 300 or above as required for the respective language, in addition 8 credits to be selected from courses numbered 300 or above in the respective language, making a total of 28 college credits. *Related subjects* (22-24 credits), including courses in the departments of History, English, and Foreign Languages and electives to be selected in consultation with the adviser.

Requirements for major-interest subjects for a Field of Concentration in one language:

1. FRENCH. *Major-interest subject* (26-28 credits)—French 101-102 (10 credits), 103-104 (6 credits), 351-352 (4 credits), 355-356 (4 credits) or 371-372 (4 credits), 357-358 (4 credits).

2. GERMAN. *Major-interest subject* (26-28 credits)—German 101-102 (10 credits), 103-104 (6 credits), 351-352 (4 credits) or 371-372 (4 cred-

its), 355-356 (4 credits) or 379-380 (4 credits), 357-358 (4 credits) or 369-370 (4 credits) or 375-376 (4 credits) or 335-336 (4 credits).

3. ITALIAN. As a major-interest subject Italian may be taken only by students without high school admission units in this language. *Major-interest subject* (28 credits)—Italian 101-102 (10 credits), 103-104 (6 credits), 351-352 (4 credits), 381-382 (4 credits), 355-356 (4 credits).

4. SPANISH. *Major-interest subject* (26-28 credits)—Spanish 101-102 (10 credits), 103-104 (6 credits), 351-352 (4 credits) or 371-372 (4 credits), 355-356 (4 credits) or 379-380 (4 credits), 357-358 (4 credits).

5. ROMANCE LANGUAGES. 50 credits in at least two of the following languages: French, Italian, Latin, Portuguese, Spanish. With at least 2 admission units in one Romance Language, courses 101-102 (10 credits) in another Romance Language 103-104 (12 credits) in two languages; of the remaining 28 credits a student must take at least 4 credits in composition in one language and 16 credits in literature, with a minimum of 4 credits in one language, the remaining 8 credits to be selected in consultation with the adviser.

6. GENERAL LITERATURE. (See also English, p. 235). *Major-interest subject* (36 credits in Department of English and Foreign Languages)—Courses in foundations of language and literature, regularly taken in sophomore year English 281, 291 (6 credits); broad courses selected from English 333, 335, 337, Spanish 373-374 (6 credits). Courses in either or both departments intended to introduce the student to comparative methodology and practice selected from French 351-352, 371-372; German 351-352, 371-372; Italian 351-352; Spanish 351-352, 369-370; English 452 (6 credits), 461-462, 472, 475-476, 485-486. Remaining courses are to be distributed roughly equally among two or more bodies of literature, normally a part of the literature of two nations or peoples; courses acceptable include those in Foreign Languages numbered above 300 and those in English numbered above 400. The division of the concentration must include one course, given in either the Department of Foreign Languages or the Department of English which is in the main an undergraduate thesis of a scholarly or critical nature, concerned with relationships and characteristics of the two bodies of literature in which the student is professing interest (such courses are not numbered in the 1951-1952 catalogue) (8 credits). *Related subjects* (14 credits)—To be selected according to one of the following plans: a. Courses in one foreign language other than those selected for concentration in the major subject (14 credits). b. Courses in social sciences and the humanities to be selected in consultation with the adviser (14 credits).

Students selecting a field of concentration in foreign languages who wish to qualify for a secondary teacher's certificate should consult the School of Education (see pp. 153-158) concerning requirements.

Courses numbered above 300 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 300 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 chairman of the department, a given course numbered above 300 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 359*a*).

For all foreign-languages courses numbered "104" the prerequisite is three years of high school work or courses 101, 102, and 103 in the same language.

Foreign Languages

501. FOREIGN LANGUAGE THESIS COURSE. Open only to candidates for the master's degree.

Six credits.

French

101. FIRST YEAR FRENCH. Drill in the essentials of grammar. Elementary composition and conversation.

First semester. Five credits. Staff.

102. FIRST YEAR FRENCH (Continued). Grammar, composition and conversation. Translation of simple prose texts.

Prerequisite: French 101 or one year of high school French. Second semester. Five credits. Staff.

103-104. SECOND YEAR FRENCH. Readings from modern French prose writers. A review of grammar. Conversation and composition.

Prerequisite: French 101-102 or two years of high school French. Three credits each semester. Gottardi.

351-352. THE FRENCH NOVEL. Rapid reading of masterpieces of French fiction: Balzac, Sand, Mérimée, Zola, Daudet, etc.

Prerequisite: French 103-104. Two credits each semester.

353-354. FRENCH POETRY. A study of the French lyric poets from Villon to contemporary writers.

Prerequisite: French 103-104. Two credits each semester.

355-356. INTERMEDIATE FRENCH COMPOSITION AND CONVERSATION. This course should be taken simultaneously with the first year junior-senior reading courses in French.

Prerequisite: French 103-104. Two credits each semester.

357-358. 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 103-104. Three credits each semester.

359-360. 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 103-104. Two credits each semester.

369-370. FRENCH CLASSIC DRAMA. The development of the drama in France with special study of the works of Corneille, Racine, and Molière.

Prerequisite: French 103-104. Two credits each semester.

371-372. MODERN FRENCH DRAMA. A study of the drama of France in the nineteenth and twentieth centuries.

Prerequisite: French 103-104. Two credits each semester.

379-380. **ADVANCED FRENCH COMPOSITION AND CONVERSATION.** Includes a study of French epistolary style. This course should be taken simultaneously with the second year of junior-senior reading courses in French.

Prerequisite: French 103-104. *Two credits each semester.*

381-382. **THE EIGHTEENTH CENTURY IN FRENCH LITERATURE.** A study of the works of Montesquieu, Voltaire, Rousseau, etc.

Prerequisite: French 103-104. *Two credits each semester.*

389-390. **FRENCH PHONETICS.** A study of pronunciation on the basis of practical phonetics. This course is especially arranged for prospective teachers of French.

Prerequisite: French 103-104. *Two credits each semester.* Gottardi.

German

101. **FIRST YEAR GERMAN.** A systematic study of grammar, elementary composition and conversation.

First semester. Five credits. Melz in charge.

102. **FIRST YEAR GERMAN (Continued).** Grammar and composition. Reading and conversation.

Prerequisite: German 101 or one year of high school German. *Second semester. Five credits. Melz in charge.*

103-104. **INTERMEDIATE GERMAN.** Grammar review. Reading of German short stories, with exercises in conversation and composition. In German 104 additional reading material in the various sciences will be offered as an introduction to scientific German.

Prerequisite: German 101-102, or two years of high school German. *Three credits each semester. Melz in charge.*

335-336. **THE AGE OF GOETHE.** This course is designed to give a comprehensive view of the great period of German Literature from the middle of the eighteenth century to Goethe's death in 1832. Due cognizance will be given to currents of European thought and literature during this period with emphasis on Goethe's life and works. Taught entirely in English. No knowledge of German required.

Two credits each semester. Melz.

351-352. **THE GERMAN "NOVELLE."** The development of the "Novelle" from the Romantic period to modern times: Hauff, Tieck, Hoffmann, Ludwig, Storm, Keller, Meyer, Mann, etc. Rapid reading and discussion.

Prerequisite: German 103-104. *Two credits each semester. Melz.*

355-356. **INTERMEDIATE GERMAN COMPOSITION AND CONVERSATION.** This course should be taken with the first year of junior-senior reading courses in German.

Prerequisite: German 103-104. *Two credits each semester. Melz.*

357-358. 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 103-104. *Three credits each semester.* Melz.

359-360. SCIENTIFIC GERMAN. Readings from German scientific works. This course is particularly recommended to pre-medical students and to those who intend to specialize in any one of the scientific fields.

Prerequisite: German 103-104 or 109-110. *Two credits each semester.*

369-370. GERMAN CLASSICS. Reading and technical study of representative works of Lessing, Schiller, and Goethe.

Prerequisite: German 103-104. *Both semesters. Two credits each semester.*

371-372. MODERN GERMAN DRAMA. A study of the German drama from Romanticism to Naturalism: Kleist, Grillparzer, Hebbel, Hauptmann, Schnitzler, etc.

Prerequisite: German 103-104 or the equivalent. *Two credits each semester.* Melz.

375-376. GOETHE. *First semester:* Der junge Goethe (1749-1775). Poems, *Götz von Berlichingen*, *Werther*, *Dichtung und Wahrheit*. Lectures on Goethe and "Sturm und Drang." *Second semester:* *Faust*. Complete reading of part I. Selected readings and discussions of part II. Lectures on Goethe in Weimar (1775-1832).

Prerequisites: German 103-104. *Both semesters. Two credits each semester.* Melz.

379-380. ADVANCED COMPOSITION AND CONVERSATION. This course should be taken simultaneously with the junior-senior reading courses.

Prerequisite: German 103-104 or 109-110. *Two credits each semester.*

Italian

101. FIRST-YEAR ITALIAN. Elementary grammar, composition, and conversation. Reading of modern Italian prose.

First semester. Five credits. Gottardi in charge.

102. FIRST-YEAR ITALIAN (Continued). Grammar, composition, and conversation. Translation of modern Italian prose and poetry.

Prerequisite: Italian 101 or one year of high school Italian. *Second semester. Five credits.* Gottardi in charge.

103-104. INTERMEDIATE ITALIAN. Grammar review. Reading of prose and poetry. Exercises in conversation and composition.

Prerequisite: Italian 101-102, or two years of high school Italian. *Three credits each semester.*

351-352. THE ITALIAN NOVEL. Rapid reading of masterpieces of modern Italian fiction: Manzoni, Fogazzaro, Verga, etc.

Prerequisite: Italian 103-104. *Two credits each semester.* Gottardi.

355-356. INTERMEDIATE COMPOSITION.

Prerequisite: Italian 103-104. *Two credits each semester.* Gottardi.

381-383. 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 103-104. *Two credits each semester.* Gottardi.

Latin

101. FIRST-YEAR LATIN. Drill in the essentials of Latin grammar. Word study and composition. Roman life and customs.

First semester. Five credits.

102. FIRST-YEAR LATIN (Continued). Translation of easy Latin prose. Composition. Roman antiquities.

Prerequisite: Latin 101 or one year of high school Latin. *Second semester. Five credits.*

103. CICERO. Orations. Study of Roman law and government.

Prerequisite: Latin 102 or two years of high school Latin. *First semester. Three credits.*

104. VERGIL. First six books of the *Æneid*. Study of classic myths.

Prerequisite: Latin 103 or three years of high school Latin. *Second semester. Three credits.*

331-332. GREEK AND LATIN LITERATURE IN TRANSLATION. Study of classical literature in translation, considering the contribution of Greek and Latin literature and culture to modern literature.

Three credits each semester. Manahan. (This course is also listed under English.)

351-352. ADVANCED LATIN. Selected readings of Latin prose. History of Latin literature. Composition.

Prerequisite: Latin 104 or four years of high school Latin. *Two credits each semester.*

353-354. LATIN LYRIC POETRY. Horace and Catullus.

Prerequisite: Latin 104 or four years of high school Latin. *Two credits each semester.*

Portuguese

301-302. 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 in a field of concentration or towards meeting the language requirement.

Prerequisite: Course 103-104 in any romance language or Latin or the equivalent. *Three credits each semester.* Gottardi.

373-374. 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 361-362 or the equivalent. *Two credits each semester.*

Spanish

101. FIRST-YEAR SPANISH. Drill in the essentials of grammar. Elementary composition and conversation.

First semester. Five credits. Gottardi in charge.

102. FIRST-YEAR SPANISH (Continued). Grammar, composition and conversation. Translation of simple prose and poetry.

Prerequisite: Spanish 101 or one year of high school Spanish. Second semester. Five credits. Gottardi in charge.

103-104. SECOND-YEAR SPANISH. Readings from modern Spanish writers. A review of grammar. Conversation and composition.

Prerequisite: Spanish 101-102 or two years of high school Spanish. Three credits each semester. Melz in charge.

351-352. THE MODERN SPANISH NOVEL. Rapid reading of masterpieces of Spanish fiction: Galdós; Valdés; Ibáñez; etc.

Prerequisite: Spanish 103-104. Two credits each semester. Kline.

355-356. INTERMEDIATE SPANISH COMPOSITION AND CONVERSATION. This course should be taken with the first-year of junior-senior reading courses in Spanish.

Prerequisite: Spanish 103-104. Two credits each semester. Dandini.

357-358. 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 103-104. Three credits each semester. Gottardi.

359-360. "THE ENSAYISTAS." A study of representative critical and esthetic prose revealing Spanish thought from the eighteenth century to modern times.

Prerequisite: Spanish 103-104. Two credits each semester. Dandini.

367-368. 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. Two credits each semester.

369-370. SPANISH CLASSIC DRAMA. Literature of the sixteenth and seventeenth centuries—Lope de Vega; Tirso de Molina, etc.

Prerequisite: Four credits junior-senior work. Two credits each semester. Gottardi.

371-372. MODERN SPANISH DRAMA. A study of Spanish dramatic literature from the Golden Age to the twentieth century.

Prerequisite: Spanish 103-104. Two credits each semester. Dandini.

373-374. SPANISH-AMERICAN LITERATURE. Prose and poetry.

Prerequisite: Spanish 103-104. Two credits each semester. Melz.

379-380. ADVANCED SPANISH PROSE COMPOSITION AND CON-

VERSATION. This course should be taken simultaneously with the second year of junior-senior reading courses in Spanish.

Prerequisite: Spanish 103-104. *Two credits each semester.* Dandini.

GEOGRAPHY

Mr. CLASSEN.

101. SURVEY OF WORLD GEOGRAPHY. A study of the natural environment and human use regions of the world and their interrelationships with emphasis on map work and place location.

Either semester. Three credits. Classen.

103. PHYSICAL GEOGRAPHY. A survey of climatic phenomena, land forms, vegetation, soils, and natural resources with special reference to the significance of these factors on man's activities. Satisfies natural science requirements.

First semester. Three credits. Classen.

109. CLIMATOLOGY. An outline of climatic elements, and a study of world climates with emphasis on their geographic significance. Satisfies natural science requirements.

Second semester. Three credits. Classen.

359. GEOGRAPHY OF NORTH AMERICA. A regional analysis of the interrelationships of the physical setting, agriculture, transportation and marketing, mineral industries, and manufacturing. Special emphasis on the United States.

Prerequisite: Geography 101, 103, or by permission. *First semester. Three credits.* Classen.

455. GEOGRAPHY OF ASIA. An analysis of the natural resources, agriculture, industry, and potential of the Asiatic Countries with special emphasis on China and the Soviet Union. The Soviet Union is dealt with here in its entirety even though it is not wholly on the Asiatic Continent.

Prerequisites: Geography 101, 103, or by permission. *Second semester. Three credits.* Classen.

461. SPECIAL PROBLEMS IN GEOGRAPHY. Study of selected problems of a geographical nature, including research and written reports.

Prerequisites: Geography 101 or 103, 359. *Either semester. One to three credits; graduate credit arranged.* Classen.

GEOLOGY

Professor GIANELLA (Chairman of Department); Assistant Professor LARSON; Mr. MARTIN, Mr. SCULL.

101. 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.

Either semester. Three credits. Staff.

102. 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 101 or 110. *Either semester. Three credits.* Larson, Scull.

110. 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. Gianella, Martin.

211. DETERMINATIVE MINERALOGY. The first few weeks are devoted to elementary crystallography followed by the determination of the more common minerals, chiefly by means of their physical properties.

Prerequisite: Chemistry 101, 102, or the equivalent. *First semester. Two credits.* Fee \$5. Scull, Martin.

212. BLOWPIPE ANALYSIS. The determination of minerals by blowpipe analysis.

Prerequisite: Chemistry 101, 102, or the equivalent, and Geology 211. *Second semester. Two credits.* Fee \$5. Martin, Scull.

214. DESCRIPTIVE MINERALOGY. Lectures and recitations on the classification, characteristic properties, occurrence, association, genesis, and uses of the more important minerals, illustrated by typical specimens.

Prerequisite: Geology 211. *Second semester. Two credits.* Scull, Martin.

325. ADVANCED MINERALOGY. Advanced study of either blowpipe analysis, crystallography, or the determination of minerals by their optical properties.

Prerequisites: Geology 211, 212, and 214. *Either semester. One or two credits.* Additional problems may be taken as 325a, 325b, etc. Fee \$3. Gianella, Scull.

351. PETROLOGY. Laboratory study of rocks and rock-forming minerals in hand specimens. Lectures on the character, origin, and classification of rocks.

Prerequisites: Physics 151-152 or 203-204, Geology 101 or 110, 102, 211, and 212. *First semester. Two credits.* Fee \$3. Scull, Martin.

352. PETROGRAPHY. Lectures on the genesis of rocks, and the study of thin sections of rock-forming minerals and rocks under the petrographic microscope.

Prerequisite: Geology 351. *Second semester. Three credits.* Fee \$5. Gianella.

354. GEOLOGIC REPORTS. Study and practice in the preparation, illustration, and oral presentation of geologic reports.

Prerequisite: Geology 351. *Second semester. Two credits.* Gianella,

360. ECONOMIC GEOLOGY OF THE NONMETALS. Geology of ground water and the occurrence, distribution, origin, and economic value of other nonmetals.

Prerequisites: Geology 101 or 110, 211, 212, and 214. *Second semester. Three credits.* Martin.

370. FIELD GEOLOGY. Instruction in field methods and investigation of geologic features of several areas. Transportation is provided by the S. Frank Hunt Foundation.

Prerequisites: Geology 211, 212, 214. *First semester. One credit.* Fee \$5. Staff.

382. STRUCTURAL GEOLOGY. A study of the deformation of the earth's crust.

Prerequisite: Junior standing. *First semester. Three credits.*

388. SEDIMENTATION. A course dealing with the agents and processes that form, transport and deposit sediments. Emphasis is placed on the relation of sediments to mountain building processes.

Prerequisites: Geology 351, 382. *First semester. Three credits.* Larson.

430. PETROLEUM GEOLOGY. Principles of the occurrence and accumulation of petroleum.

Prerequisite: Geology 351. *Second semester. Three credits.* Scull.

440. GEOMORPHOLOGY. Development and interpretation of the relief features of the earth.

Prerequisites: Geology 101 or 110, and 102, 382. *Second semester. Three credits.* Scull.

461. ECONOMIC GEOLOGY OF THE METALS. The geology of ore deposits, including distribution, origin, mode of occurrence, and alteration; with special reference to the more important mining districts of North America.

Prerequisites: Geology 211, 212, 214, and 351 (Geology 352 recommended). *First semester. Three credits.* Gianella.

471. SUMMER FIELD GEOLOGY. (S.F. Hunt Geologic Foundation Field Course). A six-weeks field study beginning about June 10 in a previously unmapped Nevada mining district selected for its variety of petrologic, stratigraphic, and structural problems, its mineralization, and availability of aerial photographs or other suitable base maps. On the basis of detailed stratigraphic studies, map units will be selected and accurately plotted on a large-scale base by plane table methods. Individual field party manuscript maps will be assembled into a finished

geologic map. Geologic cross-sections and mine maps will also be prepared.

Prerequisites: Senior standing and/or approval of Chairman, Department of Geology. (Prospective registrants must be approved prior to May 1 and registration will probably precede the opening date of summer school.) *Six credits.* Fee (including registration): \$75. In addition, \$90 to cover cost of board will be assessed in advance.

NOTE—Geology 470 may be substituted for Civil Engineering 258 (summer surveying). Staff.

477. PALEONTOLOGY. A course in invertebrate paleontology. Emphasis is placed on morphology and the application of paleontology to stratigraphic problems.

Prerequisites: Geology 101 or 110, and 102. A knowledge of zoology is desirable. *Three credits. First semester.* Fee \$5. Larson.

478. STRATIGRAPHY. A short course in the stratigraphy of North America. Emphasis is placed on principles and the relationship of stratigraphy to tectonics.

Prerequisite: Geology 477. *Three credits. Second semester.* Fee \$3. Larson.

479. GEOLOGY PROJECT. Original investigation of a geologic problem.

Prerequisite: Geology 351, 352, and 360, or equivalent training. *Either semester. Two credits.* Additional projects may be taken as 479a, 479b, etc. Staff.

480. GEOPHYSICAL AND GEOLOGICAL EXPLORATION METHODS. A course including prospecting and geological surface and subsurface methods.

Prerequisites: Geology 351 and 382, Mathematics 151-152, and Physics 203-204. *First semester. Three credits.* Scull.

485. SEMINAR. Library work and reports on topics of geologic interest.

Second semester. One credit. May be repeated for credit as 485a, b, etc. Staff.

579. ADVANCED GEOLOGIC INVESTIGATION.

Credits and fee to be arranged according to work undertaken. *Either semester.* Staff.

599. THESIS.

Either semester. Six to ten credits. Fee to be arranged according to work undertaken. Staff.

GERMAN

(See Foreign Languages)

HISTORY AND POLITICAL SCIENCE

Professors HICKS (Chairman of Department), SMITH; Associate Professor HUTCHESON; Assistant Professors ELLIOTT, ULPH.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN
HISTORY AND POLITICAL SCIENCE

1. HISTORY. *Major-interest subject* (30 credits)—History 101-102 (6 credits), 105-106 (6 credits), and 18 additional credits to be selected from courses in history numbered above 300 and political science courses 416 and 427. *Related subjects* (20 credits)—Courses to be selected in consultation with the adviser. Choice of one of the following: a. 20 credits in economics, excluding business; b. 20 credits from Art 115, 261, 362; Psychology 201, 361, 362; Philosophy 101, 102, 351, 352; Geography 103, 359, 455; c. 20 credits in Political Science, 101-102 (6 credits), 105-106 (4 credits), and 10 additional credits in courses numbered above 300—excluding 301-302; d. 20 credits in American, English, and European literature, English 415, 416, 423, 424; e. 20 credits in foreign language literature in courses numbered 300 and above; f. 20 credits in psychology; g. 20 credits in sociology. Certain deviations may be allowed in exceptional cases.

2. POLITICAL SCIENCE. *Major-interest subject* (30 credits)—Political Science 101-102 (6 credits), 105-106 (4 credits) and 20 additional credits to be selected from courses in political science numbered above 300, excluding 301-302, and history courses 341-342, 395, 405, 408, 451-452. *Related subjects* (20 credits)—Courses to be selected in consultation with the adviser. Choice of one of the following: a. 20 credits in economics, excluding business; b. 20 credits in history, 101-102 (6 credits), 105-106 (6 credits), and 8 additional credits in courses numbered above 300; c. 20 credits from Geography 103, 359, 455; Philosophy 101, 102, 107, 108, 351, 352, 353, 354; Psychology 201, 361, 362, 411, 412; d. 20 credits in psychology; e. 20 credits in sociology. Certain deviations may be allowed in exceptional cases.

Students selecting a field of concentration in history and political science who wish to qualify for a secondary teacher's certificate should consult the School of Education (see pp. 155-161) concerning requirements.

Students desiring a better comprehension of the Constitutions of the United States and Nevada than can be obtained in Political Science 301 and 302, and *students desirous of conforming to legal requirements in certain other States, should take Political Science 101 and 102.*

Any course in history or political science is open to students with fields of concentration in other departments, subject only to the consent of the instructor and to the regulation that courses numbered above 300 are for juniors and seniors.

Political Science 301 is not open to students who take Political Science 101 or History 341; Political Science 302 is not open to students who take Political Science 102 or History 342. Students who take Political Science 101 after taking 301 will receive only two credits in 101; students who take 102 after taking 302 will receive only two credits in 102. History 341-342 may be substituted for Political Science 301; full credit will be given for History 341-342 even when the student has taken Political Science 301.

History

101-102. UNITED STATES. Colonial times to the present: Social, political and diplomatic.

Three credits each semester. Open to freshmen and sophomores. Hicks, Hutcheson, Elliott.

105-106. EUROPEAN CIVILIZATION. The development of civilization in Europe from the dawn of history to the present.

Open to freshmen and sophomores. *Three credits each semester.* Ulph, Hutcheson.

303. 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. Elliott.

305. UNITED STATES, 1776-1861. The Revolution; constitution-making; problems of peace; War of 1812; domestic problems; slavery and State rights; the Oregon question; Texas; the Mexican War.

First semester. Three credits. Elliott.

306. UNITED STATES SINCE 1861. The Civil War; reconstruction; economic and diplomatic affairs; the Far West; the tariff; war with Spain; the World War and its aftermath.

Second semester. Three credits. Elliott.

309. THE STUDY OF HISTORY. Historiography—history of history—great historians and their works. Methods of historical criticism and writing from sources. "Philosophies" of history; old and new viewpoints.

First semester. Two credits. Hutcheson.

312. 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. Elliott.

314. WESTERN NORTH AMERICA. The Far West; The Rocky Mountains and West Coast States; activities of the Spanish, Russians, British, and Americans on the Pacific Coast.

Second semester. Three credits. Hutcheson.

331. NEVADA HISTORY. From early exploration to the present. *Two credits each semester.* Hutcheson.

341-342. AMERICAN CONSTITUTIONAL HISTORY. A narrative and interpretative study of the origin and growth of the institutional forms and principles which have crystallized into the American constitutional system.

Three credits each semester. Elliott.

371-372. ANCIENT CIVILIZATION. Origins of Western civilization in the Near East, Greece, and Rome: art, culture, society, and politics.

Two credits each semester. Hutcheson.

376. MEDIEVAL HISTORY, 400-1500. Civilization of medieval

Europe: culture, the Church, and law. Background of modern nations.

Second semester. Three credits.

393-394. ENGLAND AND THE BRITISH EMPIRE. History of England and its empire: social, economic, and political. Background of English literature and law. Second semester begins at Elizabethan age.

Two credits each semester. Hutcheson.

395. 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. Hutcheson.

411-412. THE FRENCH REVOLUTION AND NAPOLEON. An intensive study of the great epoch extending from 1789 to 1815.

Two credits each semester.

421-422. HISTORY OF RUSSIA. Foundations of the Russian state and society. The imperial and revolutionary eras.

Three credits each semester.

427-428. EUROPE, 1300 - 1789. Nature of the relationship between material culture and ideas as expressed through the major intellectual movements and institutional changes.

Three credits each semester.

429-430. EUROPE SINCE 1789. A continuation of 427 and 428.

Three credits each semester. Ulph.

431-432. MODERN GERMANY AND AUSTRIA. The problem and achievement of unification; Germany as a world factor.

Three credits each semester.

441-442. LATIN AMERICA. History of Spanish and Portuguese America from the age of discovery to the present: domestic and international.

Two credits each semester. Hicks.

451-452. THE FAR EAST. Domestic and international relations of China and Japan from the earliest times to the present.

Two credits each semester. Hicks.

497-498. UNDERGRADUATE SEMINAR.

Credits arranged. Staff.

501-502. GRADUATE SEMINAR.

Credits arranged. Staff.

591-592. GRADUATE THESIS.

Either semester. Credits arranged. Staff.

Political Science

101-102. AMERICAN GOVERNMENT. A basic course dealing with the organization, the working principles, structural problems, and functional processes of the federal, state, and local governments of the United States; and with recent trends in administration and constitution-making. 101, federal government; 102, state and local.

Open to freshmen and sophomores. *Three credits each semester.* Smith.

105-106. COMPARATIVE GOVERNMENT. A study of the frameworks, functions and motivating ideals of various representative democratic and totalitarian governments.

Open to freshmen and sophomores. *Two credits each semester.* Smith, Hutcheson.

301-302. CONSTITUTIONS OF THE UNITED STATES AND NEVADA. Origins, history, and essentials of these constitutions—with emphasis upon devotion to American institutions and ideals. 301, United States Constitution; 302, Nevada Constitution.

One credit each semester. Credits in this course do not count toward fulfilling the requirement for 40 credits in courses numbered above 300. Hicks, Smith.

357. 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. Smith.

369. 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. Smith.

404. 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. Smith.

416. POLITICAL PARTIES. The party system in the United States; the history, composition, and functions of parties—their organization and methods.

Second semester. Three credits. Smith.

418. 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. Smith.

427. 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. Smith.

431-432. PRINCIPLES OF PUBLIC ADMINISTRATION. Principles and problems of public administration; the budget; forms of administrative action; types of control; administrative law.

Two credits each semester. Smith.

497-498. UNDERGRADUATE SEMINAR.

Credits arranged. Staff.

501-502. GRADUATE SEMINAR.

Credits arranged. Staff.

591-592. GRADUATE THESIS.

Either semester. Credits arranged. Smith.

HOME ECONOMICS

Professor SWIFT (Chairman of Department); Associate Professor POPE; Assistant Professors CARROLL, MARSH.

The following curricula are offered in the School of Home Economics:

1. Teaching and Extension work.

2. Foods and Nutrition.

This area gives preliminary training for hospital dietitians and institutional managers. Graduates of this course are eligible for a 12-month internship in an accredited hospital or institution. This is a requirement of The American Dietetics Association.

3. General (see p. 184).

Students concentrating in the College of Arts and Science and wishing to select related subjects in home economics should consider the following courses, open to men and women:

Freshmen

Orientation, 103

Foods, 131-132

Clothing, 115-116-117

Sophomore

Food and Nutrition, 250

Care of Family Health, 253

Art and Science of Meal

Service, 255

Nutrition and Health, 334

Junior

Nutrition, 334

Cookery for Men, 357

Tailoring, 366

Family Clothing Problem, 367

Costume, 368

Senior

Child Development, 475-476

Home Management, 486

Home Decoration, 487

Household Equipment, 488

Experimental Foods, 494

Institutional Management, 498

103. ORIENTATION. A discussion of opportunities in the field of home economics as a basis for the choice of major. Also application of standards of social conduct to daily living.

First semester. Two lectures. Two credits. Swift.

115. CLOTHING. A study of the college girl's budget, good

grooming, clothing selection and construction of garments made by hand and machine.

First semester. One lecture. Two laboratories. Three credits. Fee \$5. Pope.

116. TEXTILES FOR HOME AND INSTITUTIONS. A study of construction of fabrics and fiber content, their selection, care, and use. New textiles and new finishes. Field trips.

First semester. Two lectures. One laboratory. Three credits. Fee \$5. Pope.

118. COSTUME DESIGN AND CONSTRUCTION. Application of color, line, and the principles of art in the selection of clothing for the individual. Fitting and simple pattern design.

Second semester. One lecture. Two laboratories. Three credits. Fee \$5. Pope.

131. FOOD FOR THE FAMILY. A study of food including the principles of selection, preparation, care and use of foods for maintaining the nutrition of the individual and his family. Preparation of family meals with emphasis on breakfasts and lunches.

First semester. One lecture. Two laboratories. Three credits. Fee \$10. Staff

132. FOOD FOR THE FAMILY. A study of food, including the daily food patterns, standards for selection, care, cost, and preparation of family meals, with emphasis on dinners.

Second semester. One lecture. Two laboratories. Three credits. Fee \$10. Staff

133. NUTRITION FOR THE COLLEGE STUDENT. Relation of food to physical fitness.

First semester. Three lectures. Three credits. Fee \$3. Marsh.

250. FOOD AND NUTRITION. Designed for the pre nurse. This course deals with food preparation, service and applied nutrition.

Second semester. Alternate years. Two lectures. One laboratory. Three credits. Fee \$5. Marsh.

253. CARE OF FAMILY HEALTH. A study of State and Community Agencies building good-health programs and care of health in the home.

First semester. Two lectures. One laboratory. Three credits. Fee \$3. Marsh.

255. THE ART AND SCIENCE OF MEAL SERVICE. Student actually purchases, prepares and serves family meals at various cost levels. All types of service are experienced.

Prerequisite: 131-132 or equivalent. One lecture. Three laboratories. Four credits. Fee \$15. Swift.

334. NUTRITION. Designed for students in the area of foods and nutrition and any other student who can meet the prerequisites of physiology and organic chemistry.

Offered in alternate years. Given 1950. Three lectures. Three credits. Fee \$3. Marsh.

357. COOKERY FOR MEN. A service course for men who desire to learn short cuts of cookery on the grill, in the camp, or on the range.

First semester. One lecture. Two laboratories. Three credits. Fee \$10. Marsh.

366. TAILORING AND ADVANCED CLOTHING. A study of tailoring techniques, construction of coats, suits, and dresses. Advanced problems in construction.

Second semester. One lecture. Two workshops. Three credits. Fee \$5. Pope.

367. THE FAMILY CLOTHING PROBLEMS. Study of wardrobe needs of the family and problems relating to purchase, care and construction of the family clothing.

First semester. One lecture. Two workshops. Three credits. Fee \$5. Pope.

368. COSTUMING. Application of color and design to creative costuming. Helpful to students in physical education and the elementary grade teacher.

Second semester. Two lectures. Two credits. Given alternate years. Offered 1950. Pope.

402. HOME ECONOMICS SEMINAR.

Hours and credits to be arranged. Staff.

436. DIET THERAPY. A study of the adaptation of diet in disease in which nutrition is a primary concern. Continued application of material in 334. For nutrition majors.

Second semester. Offered alternate year with 334. Two lectures. One laboratory. Three credits. Fee \$3. Marsh.

475. CHILD DEVELOPMENT. Preconceptional care, pregnancy, and childbirth; the factors which contribute to the physical and mental health of the mother, and the well-being of the family group. Growth and development of the child during the prenatal period and early infancy. Observations of children are arranged.

Prerequisite: Junior or senior standing, or consent of the instructor. First semester. Three lectures. Three credits. Carroll.

476. CHILD DEVELOPMENT. Growth and behavior characteristics of the preschool child, with principles for guidance. The home environment, and the relationships within the family, as significant factors in the child's development during the important foundational years.

Second semester. Three lectures. Three or four credits. Carroll.

477. CHILD GUIDANCE. Child guidance based on actual experience with the preschool group.

First semester. One lecture. One laboratory. Two-four credits. Fee \$3. Carroll.

478. CHILD GUIDANCE. Child guidance based on actual experience with the preschool group.

Second semester. One lecture. One laboratory. Two-four credits. Fee \$3. Carroll.

483-484. SPECIAL PROBLEMS IN FOODS. Field work for seniors or graduates.

Hours to be arranged. Three credits. Fee \$10. Swift.

486. HOME MANAGEMENT. This gives men and women an opportunity to study family goals and choices, the wise use of time, skills, and kitchen arrangement; the limitations and uses of family income; the scientific attitude for the present and future security.

Second semester. Three lectures. Three credits. Marsh.

487. HOME DECORATION. A study of house plans, suitable furnishings, with appreciation of art principles. Cost and care of furnishings and accessories. Field trips.

First semester. One lecture. Two laboratories. Three credits. Fee \$3. Pope.

488. HOUSEHOLD EQUIPMENT. Selection of household equipment. Points of construction, operation, cost, care and repair.

Given in alternate years. Offered 1950. Second semester. One lecture. One laboratory. Two credits. Fee \$3. Pope.

491. EDUCATION FOR FOODS AND NUTRITION MAJORS. This course meets the requirements of the American Dietetic Association.

Given alternate years. Offered 1950. First semester. Three lectures. Three credits. Swift.

494. EXPERIMENTAL COOKERY. Development of experimental methods; application to investigations in cookery. Preparation for independent investigation.

Prerequisites: Home Economics 131-132. Second semester. One lecture. One laboratory. Two credits. Fee \$18. Swift.

495. SPECIAL PROBLEMS IN CLOTHING. Field work for seniors or graduates.

Second semester. Hours to be arranged. Three credits. Fee \$5. Pope.

496. QUANTITY COOKERY. Meal planning, food production, purchasing and service for large groups.

Prerequisites: Home Economics 131-132. Offered 1950. Second semester. One lecture. Two laboratories. Three credits. Fee \$10. Marsh.

498. INSTITUTION ORGANIZATION AND MANAGEMENT. A study of equipment, furnishings, floor plans, cost control, personnel, labor and sanitation laws governing food preparation in institutions.

Offered 1950. Second semester. Three lectures. Three credits. Marsh.

499. DEMONSTRATION. Principles and techniques for commercial and classroom demonstrations. Audiences—campus and community.

First semester. One lecture. Two laboratories. (Given in alternate years.) Three credits. Fee \$15. Swift.

HORTICULTURE
(See Plant Industry)

ITALIAN
(See Foreign Languages)

JOURNALISM

Professor HIGGINBOTHAM (Chairman of Department); Assistant Professor JANULIS; Cooperating Newspapermen.

REQUIREMENTS FOR A FIELD OF CONCENTRATION
IN JOURNALISM

Major-interest subject (36 credits)—Journalism 101-102 (6 credits), 221-222 (6 credits), 351-352 (4 credits), 353 (3 credits), 367 (3 credits), 372 (2 credits), 379 (2 or 3 credits), 481-482 (4 credits), and five or six additional credits chosen with the approval of the adviser from among journalism courses numbered 300 and above. *Related subjects* (14 credits)—3 credit hours in English literature, 9 credit hours in the social sciences, and 2 credit hours in the humanities, all chosen with the counsel of the adviser, from the recommended supplementary courses listed under *The Course in Journalism* (pp. 143-145).

To complete the field of concentration in journalism or the four-year professional Course in Journalism, a student must earn an average of at least two grade points in his course in journalism.

General electives of students choosing a field of concentration in journalism should stress the social sciences and the humanities.

The Course in Journalism, leading to the degree *Bachelor of Arts in Journalism*, is the recognized professional education for the practice of journalism (page 143), and should be chosen by a student, whenever possible, in preference to a field of concentration in journalism.

101-102. INTERPRETING THE DAY'S NEWS. Study of the news of the day and the function of the newspaper, the news magazine, and news broadcasts in American life. A course both for students beginning the study of journalism and for those who wish an introduction to the intelligent following of the news as part of a general education. Open to all students. Course may be started with Journalism 101 or Journalism 102.

Three credits each semester. Staff.

221-222. 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 instructor. *Three credits each semester. Janulis.*

231-232, 361-362, 491-492. **ADVANCED INTERPRETATION OF THE DAY'S NEWS.** Study and interpretation, upon an advanced level, of the news of the day. Both for students intending to practice journalism and for those who wish to continue their study of the news as part of a liberal education.

Prerequisite: Journalism 101-102. *Both semesters. One or two credits each semester.* Higginbotham and Janulis.

351-352. **NEWS EDITING.** Copy reading, rewriting, headline writing, news evaluation, the mechanics of publishing and make-up, and similar duties of the newspaper copy editor.

Prerequisite: Journalism 221-222 and the consent of the instructor. *Two or three credits each semester.* Janulis.

353. **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. The men and the newspapers that created the traditions of modern journalism.

Open to juniors and seniors. *Three credits.* Higginbotham.

354. **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 221-222. *Three credits.* (Alternate years.) Higginbotham.

356-357. **ADVERTISING AND ADVERTISEMENT COPY WRITING.** Study of the principles of advertising (first semester) and their practical application in the writing of copy for newspapers, magazines, and radio stations (second semester).

Open to juniors and seniors. *Two credits each semester.* (Alternate years.) Janulis.

365-366. **COMMUNITY NEWSPAPER MANAGEMENT.** Principles of journalism peculiar to the country weekly and small city daily, especially in Nevada. Editorial, circulation, and advertising management.

Prerequisite: Journalism 221-222. *Two credits each semester.* (Alternate years.) Janulis.

367. **EDITORIAL WRITING.** Study of the interpretation of contemporary events through the newspaper and magazine editorial, coupled with extensive practice in writing.

Prerequisite: Journalism 221-222 or upperclass standing and the consent of the instructor. *Two or three credits.* (Alternate years.) Higginbotham.

368. **THE SPECIAL FEATURE ARTICLE.** Study, writing, and marketing of the special feature article for magazines and newspapers.

Prerequisite: Journalism 221-222, or upperclass standing and demonstrated skill in writing. *Two credits.* (Alternate years.) Staff.

370. AGRICULTURAL JOURNALISM. The writing of news stories and feature articles on agricultural and home economics subjects for newspapers and magazines. Open only to upperclass students in the College of Agriculture.

Not acceptable toward the requirements of the Course in Journalism or the field of concentration in journalism. *Two or three credits.* (Given in alternate years.) Janulis.

372. THE LAW OF THE PRESS. Study of state and federal laws affecting the reporting of news, the expression of opinion, advertising, the publication of newspapers and magazines, and radio broadcasting.

Prerequisite: Journalism 221-222. *One or two credits.* Higginbotham.

375. PICTORIAL JOURNALISM. 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 221-222. *Two credits.* (Alternate years.) Staff.

379. JOURNALISM AND SOCIETY. Sociological aspects of journalism, including public opinion, newspaper leadership and responsibility, ethics, censorship, propaganda, the world's press, and other contemporary problems.

Prerequisite: Journalism 221-222 or the consent of the instructor. *Two or three credits.* (Alternate years.) Higginbotham.

386. JOURNALISM ON THE AIR. The principles and practice of writing journalistic types—the news story, the column, features, advertising for broadcasting. Special emphasis is given to news processing.

Prerequisite: Journalism 221-222. *Two or three credits.* (Alternate years.) Janulis.

387. JOURNALISM IN THE HIGH SCHOOL. An introduction to the teaching of journalism in high school and to the supervision of high school newspapers, magazines, and year books. Offered especially for students in English preparing to teach in Nevada high schools.

Not acceptable for the field of concentration in journalism or the four-year Course in Journalism. *Two credits.* (Alternate years.) Janulis.

393-394, 395-396. INDEPENDENT STUDY. Aspects of journalism not covered by other courses.

Open only to juniors and seniors in the Course in Journalism or in the field of concentration 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.

481-482. JOURNALISM INTERNSHIP. 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, and the *Carson City Nevada Appeal*; advertising

work with Wilson Advertising Agency, the State's Advertising Agency, or the Reno newspapers; or news or advertising work with Radio Station KOH or Radio Station KWRN.

Prerequisite: Open only to seniors in the Course in Journalism and senior students in journalism. Students will be assigned to internships in fields for which their courses in journalism have prepared them. *One, two, or three credits each semester.* Higginbotham and cooperators in journalism.

LATIN

(See Foreign Languages.)

LIBRARY SCIENCE

Professor HILL (Director of Libraries).

335. USE OF THE LIBRARY. Open to sophomores, juniors, and seniors in the College of Arts and Science. Classification and arrangement of books in the University Library; general principles of cataloging and filing; major reference works in all fields of knowledge; simple forms of bibliography making; intelligent use of the library.

Either semester. Two credits. HILL.

MATHEMATICS AND MECHANICS

Professors HARRIS, WOOD; Associate Professor BEESLEY (Chairman of Department); Assistant Professor DAVIS; Mr. CHAMBERLIN, Mr. DEMERS, Mrs. VAN DYKE, Mrs. WILLIAMS.

REQUIREMENTS FOR A FIELD OF CONCENTRATION IN MATHEMATICS

1. MATHEMATICS. *Major-interest subject* (27-35 credits)—Mathematics 102, 110, 140, 231, 232, 325, and 13 to 21 credits in courses selected from the following list and including at least two courses in each of two of the three branches. Algebra: 371, 372; Analysis: 351, 352, 425, 451, 452, 501, and 502; Geometry: 391, 392, 395, 401, 402. Mathematics 251-252 may be substituted for 231-232 and 325. *Related subjects* (15-23 credits)—Courses to be selected in consultation with adviser. Especially recommended are: Physics 203, 204, 205-206, and any upper division courses in Physics; French 359-360; German 109-110, 359-360. Beginning and intermediate courses in French or German or both are recommended for those who do not have a reading knowledge of those languages.

2. APPLIED MATHEMATICS. *Major-interest subject* (34 credits)—Mathematics 102, 110, 140, 251, 252, 341, 342, 351, 352, 425, 451, and 452 or 501. Mathematics 151-152 may be substituted for 102, 110, and 140. *Related subjects* (16 credits)—Physics 203, 204, 205, 206, and 4 additional credits selected in consultation with the adviser. The comments regarding languages appearing under the field described above apply equally here.

Students selecting a field of concentration in mathematics who wish to qualify for a secondary teacher's certificate should consult the School of Education (see pp. 153-158) concerning requirements.

If two courses bear consecutive numbers and have a common description, the first is prerequisite to the second.

Placement Examination. During the orientation period preceding

each fall registration a placement examination will be given. All entering freshmen in the College of Engineering must take this examination. Other students who wish to evaluate their backgrounds in high school algebra may arrange to take the examination.

A knowledge of calculus is prerequisite to all courses numbered above 300 except 371, 372, and 391, 392. These courses are open to a student who has a good record in some college level mathematics and can obtain the consent of the instructor. Courses numbered above 400 are usually offered in the semester indicated in the description but may be available at other times. Students desiring to take these courses should consult the department at each registration concerning this matter.

A. REFRESHER ALGEBRA. A thorough review of algebra for students of the College of Engineering who fail to pass the placement examination. This course carries no university credit but may be used to remove entrance deficiencies.

Each semester. No credit. Van Dyke.

B. PLANE GEOMETRY. This course carries no university credit but may be used to remove entrance deficiencies.

Each semester. No credit. Van Dyke.

101. INTERMEDIATE ALGEBRA. A second course in algebra for students who have had one year of algebra in the high school. No college credit allowed for students in the College of Engineering.

Each semester. Two credits. Staff.

102. PLANE TRIGONOMETRY. A study of the trigonometric functions, identities, and the solution of triangles.

Prerequisites: Plane geometry and one year of high school algebra.
Each semester. Two credits. Staff.

110. COLLEGE ALGEBRA. Progressions, binomial theorem, logarithms, inequalities, systems of linear and quadratic equations, determinants, elementary theory of equations, permutations and combinations.

Prerequisite: Mathematics 101 or $1\frac{1}{2}$ years of high school algebra.
Each semester. Three credits. Staff.

140. 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 110, 102. *Second semester. Three credits.*

151-152. 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. A placement examination will be given during the orientation period. Students who fail

to pass this examination must complete Mathematics A before registering in Mathematics 151. Students who fail to carry Mathematics 151 will be transferred to Mathematics A. Mathematics 151, *first semester, five credits*. Mathematics 152, *second semester, five credits*. Staff.

202. 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.

Prerequisite: Mathematics 102. Given when requested by sufficient number of students. *Two credits*.

210. 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 110. *First semester. Three Credits*. Chamberlin.

220. 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 110. *Second semester. Three credits*. Given when requested by a sufficient number of students. Chamberlin.

231-232. DIFFERENTIAL AND INTEGRAL CALCULUS. The elements of the calculus with applications. Designed for students in the College of Arts and Science.

Prerequisites: Mathematics 110, 102, 140, or Mathematics 151, 152. Mathematics 231, *first semester, three credits*. Mathematics 232, *second semester, three credits*. Davis.

241-242. CALCULUS. A unified course in differential and integral calculus, with special emphasis upon the applications. Required of all students in the Mackay School of Mines.

Prerequisite: Mathematics 151-152. Mathematics 241, *first semester, three credits*. Mathematics 242, *second semester, three credits*. Chamberlin.

251-252. ENGINEERING CALCULUS. A more extensive course than 241-242. Required of all students of civil, electrical and mechanical engineering. Other engineering students who plan to take mathematics courses beyond Mathematics 342 should substitute this for 241-242.

Prerequisite: Mathematics 151-152. Mathematics 251, *first semester, four credits*. Mathematics 252, *second semester, four credits*. Beesley and Staff.

290. SURVEY. Assigned reading and reports on topics of mathematical interest not covered in the usual courses. The group will meet weekly for presentation and discussion of reports. Open to students who have a definite interest in mathematics and who, in the opinion of the Staff, possess sufficient background to undertake the work.

One-half credit each semester. May be repeated for credit as 290a, 290b, and 290c. Staff.

301. HISTORY OF MATHEMATICS. Lectures and assigned readings on the history of mathematical science. Recommended for students preparing to teach mathematics in high school. Cannot be used for graduate credit.

First semester. Two credits. Not to be given in 1950-1951.

325. INTERMEDIATE CALCULUS. Infinite series, solid analytic geometry, partial differentiation, and other topics necessary to complete the student's preparation for 425 and other advanced courses.

Prerequisite: Mathematics 232. First semester. Two credits.

331. TEACHING OF MATHEMATICS. See Education 331.

Not to be given in 1950-1951.

341-342. 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.

Prerequisites: Mathematics 241, 242; Physics 203. Mathematics 341, first semester, three credits. Mathematics 342, second semester, two credits. Demers, Harris.

351-352. DIFFERENTIAL EQUATIONS. The first semester is a study of techniques for the solution of ordinary differential equations with emphasis on geometrical and physical applications. The second semester emphasizes a deeper understanding of the theory of differential equations. It includes theorems on the existence of solutions of such equations, and the applications of the theory to topics in mathematics and physics.

Mathematics 351, first semester, two credits. Mathematics 352, second semester, two credits. Davis.

371. THE THEORY OF EQUATIONS. The course is concerned primarily with the classical elementary theory of equations. It includes also a discussion of determinants and a study of the Peano axioms for the natural numbers.

First semester, three credits. Given in alternate years. To be given in 1951-1952. Davis.

372. INTRODUCTION TO MODERN ALGEBRA. Various topics of modern algebra are considered including the elementary theory of groups, rings and fields.

Prerequisite: Mathematics 371. This requirement may be waived with the consent of the instructor. Second semester. Three credits. Given in alternate years. To be given in 1951-1952. Davis.

391-392. 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.

Mathematics 391, *first semester, two credits*. Mathematics 392, *second semester, two credits*. Given in alternate years. Not to be given in 1951-1952. Beesley.

401-402. 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.

Mathematics 401, *first semester, two credits*. Mathematics 402, *second semester, two credits*. Not to be given in 1951-1952.

425. ADVANCED CALCULUS. A more rigorous study of the differential and integral calculus, with extensive applications to geometrical and physical problems.

Prerequisite: Mathematics 325 or 252. *Second semester. Three credits.* Beesley.

451-452. ADVANCED MATHEMATICS FOR ENGINEERS. Vector analysis, partial differential equations, Fourier series, and other topics of importance in applied mathematics.

Prerequisite: Mathematics 425. *Three credits. Either semester.* Demers.

501. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE. Complex numbers, analytic functions, integration, infinite series, entire functions.

Prerequisite: Mathematics 425. *First semester. Three credits.* Given when requested by a sufficient number of students. Beesley.

502. THEORY OF FUNCTIONS OF A REAL VARIABLE. The real number system, elementary set theory, continuity, differentiability, integration and related topics.

Prerequisite: Mathematics 425. *Second semester. Three credits.* Given when requested by a sufficient number of students. Beesley.

550. SEMINAR. Library work and reports on various topics of mathematical interest.

Each semester. One to three credits each semester. May be repeated for credit as 550a, 550b, 550c. Except under special circumstances, total credits will be limited to four.

600. THESIS COURSE FOR GRADUATE STUDENTS.

Six credits. Staff.

COLLOQUIUM. Weekly meetings are held for the presentation of original work by members of the staff and by graduate students as well as for the study of known results taken from mathematical literature.

MECHANICAL ENGINEERING

Professors HARRIS, VAN DYKE (Chairman of Department); Mr. RYAN, Mr. SCHUMACHER, Mr. VAN TASSEL.

105. ENGINEERING DRAWING. Mechanical drawing, freehand lettering, orthographic projection, pictorial methods, and working drawings.

Prerequisite: Plane Geometry (Solid Geometry very desirable). Mathematics 151 to be taken concurrently with Mechanical Engineering 105. Required of all engineering students. *First semester. Two credits.*

106. DESCRIPTIVE GEOMETRY. Principles of descriptive geometry and their applications to problems of engineering. Includes auxiliary views, developments, intersections, double-curved and warped surfaces in addition to point, line, and plane problems.

Prerequisite: Completion of Mechanical Engineering 105 and Mathematics 152 to be taken concurrently. *Second semester. Two credits.*

351. KINEMATICS OF MACHINERY. A study of the laws of motion of machinery preliminary to machine design. Includes analytical and graphical analysis of the motion of linkages, cams, gears, rolling bodies, trains of mechanisms, etc., and the forms of gear teeth and cams.

Prerequisites: Mathematics 341 (completed or concurrently taken); Physics 203-204; Mathematics 251-252. *First semester. Three credits.*

353. FUNDAMENTALS OF THERMODYNAMICS. Similar to Mechanical Engineering 355 and 356, but abbreviated so that it can be covered in one semester.

Prerequisites: Physics 203 and 204 and Mathematics 251 and 252. *First semester. Three credits.*

355. 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 203 and 204, Mathematics 251 and 252. *First semester. Three credits.*

356. APPLIED THERMODYNAMICS. Additional work in thermodynamics; properties of vapors; thermodynamic processes of vapors; vapor cycles; steam engines; steam turbines.

Prerequisite: Mechanical Engineering 355. *Second semester. Three credits.*

457. MACHINE DESIGN. The application of the laws of kinematics, mechanics, and strength of materials to the design of various machine elements as bolts, belts, gears, flywheels, bearings, structural machine members, clutches, brakes, shafts, cylinders, cams, keys, couplings, etc.

Prerequisites: Mathematics 341-342; Civil Engineering 376; Mechanical Engineering 351. *First semester. Three credits.*

458. MACHINE DESIGN. A continuation of M. E. 457 with more advanced machine design problems involving the integration of various machine elements and more comprehensive analysis of stress, fabrication, economics, etc.

Prerequisite: Mechanical Engineering 457. *Second semester. Three credits.*

461. HEAT TRANSFER. A study of the basic laws of heat trans-

fer by conduction, convection, and radiation, and the application of heat transfer principles to engineering problems.

Prerequisite: Mechanical Engineering 356. *First semester. Three credits.*

462. MECHANICAL ENGINEERING LABORATORY. An abbreviation of Mechanical Engineering 464 and 465 for students who have taken Mechanical Engineering 353.

Prerequisite: Mechanical Engineering 353. *Second semester. Two credits. Fee \$15.*

464. MECHANICAL ENGINEERING LABORATORY. Use and calibration of instruments; study of oils; calorimetry; presentation of data and the writing of reports.

Prerequisite: Mechanical Engineering 355 and 356. Required of all Mechanical Engineering students. *First semester. Two credits. Fee \$15.*

465. MECHANICAL ENGINEERING LABORATORY. The study of experimental thermodynamics involving internal combustion engines, steam prime movers, refrigeration, and air compression; principles of heat transfer and air conditioning.

Prerequisite: Mechanical Engineering 464. Required of all Mechanical Engineering students. *Second semester. Two credits. Fee \$15.*

471. HEAT-POWER ENGINEERING. Power plants, fuels, combustion, steam generators, turbines, and steam generator accessories.

Prerequisite: Mechanical Engineering 356. *First semester. Two credits.*

472. AIR CONDITIONING AND REFRIGERATION. Air conditioning for human comfort and industrial purposes, including heating and refrigeration.

Prerequisite: Mechanical Engineering 356. *Second semester. Three credits.*

476. MECHANICAL VIBRATIONS. Theory of mechanical vibrations and practical engineering applications to problems involving critical speeds and torsional vibrations of rotating machinery; vibrations of beams and plates; vibration isolation and damping, vibration absorbers, dynamic balancing of machines, etc. Lectures, laboratory demonstrations, experiments and problems.

Prerequisites: Mathematics 341-342; Mathematics 351; Physics 203-204; Civil Engineering 376. *Second semester. Three credits.*

477. 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: Mechanical Engineering 356. *Second semester. Three credits.*

Mechanic Arts

203. 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.

First semester. Two credits. Fee \$10 per credit.

205. 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: Mechanic Arts 203 or equivalent. First semester. One or two credits. Fee \$10 per credit.

207. 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 203. 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. First semester. One or two credits. Fee \$10 per credit.

220. WELDING AND HEAT TREATING. Shop practice in oxy-acetylene and electric arc welding, stress relieving, annealing, and heat treating.

First semester. One credit. Fee \$15.

226. MANUFACTURING PROCESSES. A study of processes, machines, and tools used in manufacturing. Demonstrations and visual aids are used.

Second semester. One credit. Fee \$10.

METALLURGY

Professors W. S. PALMER (Chairman of Department), SMYTH; Assistant Professor SWIFT; Mr. HAMMOND.

204. INTRODUCTION TO METALLURGY. Fundamental principles relating to the properties, uses, and production of metals and alloys. Emphasis upon such topics as thermochemistry, combustion, heat transfer, calorimetry, pyrometry, refractories, slags, and the general application of scientific principles pertaining to the practices in the field of metallurgy.

Prerequisites: Chemistry 102 and 242; Physics 151 or 203. Second semester. Two credits. Swift.

206. ENGINEERING MATERIALS AND PROCESSES. For students of electrical and mechanical engineering. A general course stressing properties of metals, theory and use of alloys, heat treatment, corrosion, pyrometry, production of ferrous metals, and shaping metals.

Prerequisites: Chemistry 101, Physics 203. Second semester. Two credits. Smyth.

341 PYRO-METALLURGY LABORATORY. Lectures and laboratory work in theory and practice of fire assaying, fuels, combustion, roasting, and smelting.

Prerequisites: Geology 212, Chemistry 232. *First semester. Lectures, one hour; laboratory, three periods. Four credits. Fee \$20. Smyth and Hammond.* 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.

356. PRINCIPLES OF PHYSICAL METALLURGY. A study of the structure and properties of metals and alloys. The fundamentals of heat treatment, equilibrium diagrams, plastic deformation, and other subjects concerned with alloys and their properties. Metallographic techniques, corrosion, and the shaping and forming of metallic materials.

Prerequisite: Metallurgy 204. *Second semester. Two lectures. One laboratory. Fee \$5. Swift.*

358. 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 204. *First semester. Two credits. Smyth.*

366. ORE DRESSING. A course devoted to the theory and practice related to the principles of preparation and concentration of ores including crushing, grinding, classification, gravity and magnetic concentration, and flotation.

Prerequisites: Metallurgy 204, Geology 212 and 214. Course to be taken only with Metallurgy 368. *Second semester. Lectures, two hours. Two credits. Palmer.*

368. ORE DRESSING LABORATORY. A laboratory course to be taken with Metallurgy 366. General practice in the use of ore dressing equipment; test work including screen analysis, classification, gravity concentration, and flotation.

Prerequisites: Chemistry 232, Metallurgy 341. *Second semester. Laboratory, two periods. Two credits. Fee \$10. Smyth and Hammond.*

461. PYRO-METALLURGY. A course devoted to the theory and practice of extracting and refining common nonferrous metals by fire methods, including problems related to the operations. The chief metals covered will be copper, lead, zinc, mercury, and nickel.

Prerequisites: Geology 211 and Metallurgy 204 and 341. *First semester. Three credits. Palmer.*

462. METALLURGY OF THE MINOR AND RARE METALS. Metallurgy of minor and rare metals including the following: Antimony, arsenic, aluminum, bismuth, molybdenum, platinum, tin, and tungsten.

Prerequisites: Metallurgy 461 and 471. *Second semester. One credit. Palmer.*

471. HYDRO-METALLURGY. Course covers the various hydro-metallurgical methods used in the recovery and refining of the

metals gold, silver, copper, lead, and zinc, and problems connected with these operations.

Prerequisites: Metallurgy 341 and 366; Chemistry 232. *First semester. Lectures, two hours; laboratory, one period. Three credits. Fee \$5. Palmer and Hammond.*

472. ELECTROMETALLURGY. Lectures and problems dealing with the principles and practice of electric smelting and the electrolytic processes involved in the metallurgy of the common and precious metals.

Prerequisites: Metallurgy 461 and 471. *Second semester. Two credits. Palmer.*

473. HYDRO-METALLURGY LABORATORY. Laboratory exercises on the various hydro-metallurgical methods used in the recovery of gold, silver, copper, lead, and zinc from their ores.

Prerequisite: To be taken only with Metallurgy 471. *First semester. Laboratory, one period. One credit. Fee \$5. Hammond.*

476. PROBLEMS AND SEMINARS. Mathematical and economic study of metallurgical processes and plants and discussion of metallurgical literature.

Open only to students after they have completed metallurgical subjects to the second semester of the senior year. *Second semester. Two credits. Palmer or Smyth.*

479, 480, 481. 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 461 and 471. *Both semesters. Two credits. 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 Lt. Col. SMEE (Chairman of Department); Assistant Professor Capt. BASTA; M/Sgt. BYRD, M/Sgt. ELLIOTT, M/Sgt. GRADY, M/Sgt. JOHNSON; SFC DRIVER; Sgt. BRUNETTI.

101-102. FIRST YEAR BASIC INFANTRY. Two hours drill and two hours conference per week. Required of all first-year men not specifically exempted.

Military 101 is not a prerequisite for Military 102. Military 101, *first semester. One Credit.* Military 102, *second semester. One credit.* Deposit to insure texts and equipment, \$5; to insure military uniforms, \$15.

201-202. SECOND YEAR BASIC INFANTRY. Two hours drill and two hours conference per week.

Military 201 is not a prerequisite for Military 202. Military 201, *first semester. One credit.* Military 202, *second semester. One credit.* Deposit to insure texts and equipment, \$5; to insure military uniforms, \$15.

301-302. FIRST YEAR ADVANCED INFANTRY. Five hours conference per week. These are the first two numbers of an elective group consisting of 301, 302, 303, 401 and 402, which must be taken in that order. Each application for enrollment in this group must be approved by the PMS&T, subject to the limitation of annual quotas fixed by the Department of the Army. Initial enrollments at midyear are not accepted.

Prerequisites: Military 101, 102, 201 and 202, or their equivalent. Military 301, *first semester. Three credits.* Military 302, *second semester. Three credits.*

303. INFANTRY CAMP. All who take advanced Infantry training are required to attend a six-week summer camp immediately following 302. The place and date of attendance will be announced at a later date.

Prerequisites: Military 301-302. *Two credits.*

401-402. SECOND YEAR ADVANCED INFANTRY. Two hours drill and three hours conference per week.

Prerequisites: Military 301, 302, 303; except that selected veterans in their senior year and selected nonveterans in their senior year may enroll in 303, 401, 402, and be commissioned upon satisfactorily completing the course. Military 401, *first semester. Three credits.* Military 402, *second semester. Three credits.*

MILITARY BAND. The University Band functions as an ROTC Band by participating in ceremonies and other formations as needed. A student enrolled in Military 101, 102, 201, 202, may substitute band training for the two weekly drill periods for either one of the two years basic training provided prior approval is obtained from the department chairman. Band training is not acceptable as a substitute for any part of the work in advanced military courses. For each semester in which he substitutes band for drill, the student may receive one credit in military training and one-half credit in band.

MINERALOGY

(See Geology)

MINING

Professors CARPENTER (Chairman of Department), SMYTH; Assistant Professor SWIFT; Mr. COUCH.

A. PRACTICAL MINING. Practical work in mining, metallurgy or geology 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.

101. INTRODUCTORY MINING. Lectures describing the various fields of employment in the mineral industries and the corresponding preparatory college courses, along with orientation advice on student procedure to gain the greatest benefit from his college work and college life.

Freshman year. First semester. One credit. Carpenter.

351. EXCAVATION. Lectures and problems on the principles and practice of excavation, including earth excavation, rock drills and drilling practice, explosives and blasting practice, quarrying, tunneling, shaft sinking and boring. Stress is placed upon the underlying principles of physics and chemistry.

Prerequisites: Physics 203 and 204; Chemistry 101, 102, and 242. Junior year. First semester. Three credits. Smyth.

352. MINE PLANT. Lectures and problems 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.

Prerequisites: Physics 203 and 204; Mathematics 341. Junior year. Second semester. Three credits. Carpenter.

461. MINING METHODS. Lectures and problems on the prospecting, development, and exploitation of mineral deposits, including underground metal mining methods in detail.

Prerequisites: Mining 351 and 352. Senior year. First semester. Three credits. Carpenter.

472. MINE ADMINISTRATION. Lectures and problems 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.

Prerequisite: Mining 461. Senior year. Second semester. Three credits. Smyth.

474. MINERAL INDUSTRY ECONOMICS. Lectures and problems 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 cost of mining, milling, and marketing, and cost accounting methods.

Prerequisite: Mining 461. Senior year. Second semester. Three credits. Carpenter and Couch.

479, 480, 481. MINING PROJECT. Two laboratory periods weekly devoted to individual problems in mining with stress 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 351 and 352. *Both semesters. Two credits each semester.* A charge based on equipment and material used. Carpenter.

MUSIC

Professor POST (Chairman of Department); Assistant Professor HICKMAN.

101-102. MUSIC FUNDAMENTALS AND EAR TRAINING. Notation, terminology, intervals, major and minor scales. Learning to read music in unison and in four-part arrangements. The course is designed to furnish a foundation for musicianship and is recommended for all music students and teachers in the public schools.

One credit each semester. Hickman.

103-104. ELEMENTARY INSTRUMENTS. This course is set up primarily for students in education or music. Students will become acquainted with the fundamental techniques in teaching various instruments such as clarinet, cornet, trombone, percussion, and string instruments. This course will be helpful to students preparing to teach. Class instruction.

One credit each semester. Hickman.

105-106. UNIVERSITY CHAMBER MUSIC ENSEMBLE. The work of this course will include music written for chamber ensemble as well as material arranged especially for the needs of the group. Students will prepare for at least one concert and assist in the presentation of larger works such as Handel's "Messiah," or Reno Civic Orchestra concerts. Open to students who are able to play string or wood-wind instruments.

*One credit each semester.** Hickman.

107-108. ELEMENTARY PIANO. Fundamentals of keyboard technique and experience in playing simple accompaniments and materials for classroom use. Restricted to approved education and music students. Class instruction.

One credit each semester. Post.

111-112. UNIVERSITY SINGERS CLUB. Literature selected from the best choral works. The group will take part in the annual community presentation of the oratorio, "The Messiah," by Handel, accompanied by the orchestra. In addition, there will be one or more public concerts by the group, including an opera or operetta in concert form.

Open to all men and women students who pass the entrance tests.

*One credit each semester.** Post.

113-114. ELEMENTARY VOICE. Fundamentals of good tone production, practical technique in reading parts and the interpre-

*A maximum total of 12 credits shall be allowed any student for participation in the three musical organizations (band, chorus, and orchestra), to be distributed as the student prefers, with not more than 8 credits in any one organization.

tation of songs. Restricted to approved education and music students.

One credit each semester. Post.

115-116. RENO CIVIC ORCHESTRA. The orchestra assists in the performance of Handel's "Messiah" and other works for chorus and orchestra. In addition, one or more public concerts are given each year. Open to all men and women students who play orchestral instruments, subject to approval of the director.

*One credit each semester.** Hickman.

117-118. UNIVERSITY BAND. Band appearances include athletic events, rallies, civic and university parades, out-of-town trips with the football team, and one or more band concerts. Open to men and women students, subject to approval of the director.

*One credit each semester.** Hickman.

NOTE—A student enrolled in Military 101, 102, 201, 202, 211, 212, 215, or 216 may substitute band training for the two weekly drill periods for either of the two years of basic military training, if prior approval is secured from the chairman of the Department of Military Science and Tactics. For each semester in which he makes this substitution he may receive one credit in military training and one-half credit in band.

149. TEACHING OF MUSIC. 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. Music materials, rote songs, records, radio, and methods of approach for the listening period. Same as Education 149.

First semester. Two credits. Hickman.

203. EIGHTEENTH CENTURY MUSIC. Music as found in the pre-Bach and eighteenth century classic period. Recordings of Gregorian chant, minstrelsy, folk-songs, the Netherland School and Palestrina. Bach, Handel, Gluck, Hayden, Mozart, and Beethoven. Historical and biographical background. Illustrations from the Carnegie University Library of records and scores.

Open to all students and visitors. No previous experience necessary. *First semester. Two credits.* Hickman.

204. NINETEENTH CENTURY MUSIC. The music of the Romantic period. Schubert, Weber, Schumann, Mendelssohn, Berlioz, Liszt, Wagner, Brahms, Chopin, Grieg, Dvorak, Saint-Saens, and Franck. Period background, records, scores, lectures, and recitals provide material for observation and study.

Open to all students and visitors. No previous experience necessary. *Second semester. Two credits.* Hickman.

209. JAZZ AND SWING MUSIC. Origin and evolution of the American popular idiom. Analyses of styles. Influence of

*See footnote, page 276.

African and Latin-American rhythms and dance forms on jazz. The influence of our popular jazz and swing music on the contemporary classical music of today. Music of Morton, Carmichael, Gershwin, Gould, Kern, Rogers and others, with illustrations from recordings.

Open to all students and visitors. No previous experience necessary. *First semester. Two credits.* Hickman.

301-302. HARMONY. Fundamental triads, the Dominant seventh chord and inversions in both the major and minor modes. Ear training, keyboard drill, simple analysis, harmonization of melodies and modulation. Figured bass.

Prerequisite: Music 101-102. *Three credits each semester.* Post.

303. RUSSIAN MUSIC. A survey of the music of Glinka, Rimsky-Korsakoff and the Russian "Five," Tchaikowsky, Scriabin, Rachmaninoff, Stravinsky, Prokofieff, Shostakovich, Khachaturian, and others, with illustrations from the recordings. Some historical and biographical background.

Open to all students and visitors. No previous experience necessary. *First semester. Two credits.* Post.

304. MUSIC OF TODAY. Contemporary composers of all nations with special emphasis upon American music. Consideration of modern trends in both classical and popular fields. Music of Richard Strauss, Sibelius, Hindemith, Milhaud, Khachaturian, Williams, Holst, Schonberg, Chadwick, MacDowell, Carpenter, Copland, Harris, Gershwin and others, with illustrations from the recordings. Some historical and biographical background.

Open to all students and visitors. No previous experience necessary. *Second semester. Two credits.* Post.

305-306. UNIVERSITY CHAMBER MUSIC ENSEMBLE. For description see Music 105-106.

*One credit each semester.** Hickman.

310. BAND INSTRUMENTATION. Arranging for the various keyed instruments. Transpositions, voicing, limitations of instruments and score reading. Full band arrangements, from the piano score.

Prerequisite: Music 301-302. *Second semester. Three credits.* Hickman.

311-312. UNIVERSITY SINGERS CLUB. For description see Music 111-112.

*One credit each semester.** Post.

315-316. RENO CIVIC ORCHESTRA. For description see Music 115-116.

*One credit each semester.** Hickman.

317-318. UNIVERSITY BAND. For description see Music 117-118.

*One credit each semester.** Hickman.

*See footnote, page 276.

349. HIGH SCHOOL MUSIC. Practical consideration of problems involved in various phases of high school music. Assembly singing, conducting, choral groups, instrumental groups, etc. Applicant must be a junior or senior taking courses in music. Active participation in band, orchestra, or chorus required. Same as Education 349.

Second semester. Two credits. Hickman.

401-402. ADVANCED HARMONY. Study of secondary sevenths, irregular resolutions of the seventh, ninth, eleventh, and thirteenth chords, mixed and altered chords, suspensions and other embellishments and modulation. Some original work. Continued ear training.

Prerequisite: Music 301-302. Three credits each semester. Post.

PHILOSOPHY

Mr. ERICKSEN (Chairman of Department), Mr. HINMAN.

REQUIREMENTS FOR A FIELD OF CONCENTRATION IN PHILOSOPHY

Major-interest subject (30 credits)—Philosophy 101 or 102 (3 credits), Philosophy 107 or 108 (3 credits), Philosophy 351 and 352 (6 credits), and 18 additional credits in the department approved by the chairman of the department. *Related subjects* (20 credits)—To be selected in consultation with the chairman of the department. Especially recommended are: Psychology 201, 361; Political Science 101, 102, 369; Economics 201, 202; Sociology 201, 371; History 303, 305, 306; Art 115, 261, 362; English 131, 132.

101. 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. Hinman.

102. SOCIAL ETHICS. An introduction to the fundamental principles of social ethics, followed by a critical study of the moral standards of America's primary social institutions.

Three credits. Ericksen.

107. DEDUCTIVE LOGIC. Terms, definition, division, syllogism and fallacies. Text, lecture and exercises.

Open to freshmen. First semester. Three credits. Hinman.

108. 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. Hinman.

201. IDEOLOGICAL CONFLICTS. An introduction to ideal and value conflicts in contemporary world cultures. An analysis of

the differing ideological assumptions of the major peoples and cultures is made with a view toward the theoretical solution of these conflicts.

Open to Sophomores. *First semester. Two credits. Hinman.*

221. 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 and second semesters. Two credits.

351. 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. Three credits. Ericksen.*

352. 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. Three credits. Graduate credit given with consent of the instructor. Ericksen.*

354. PHILOSOPHICAL TENDENCIES OF THE PRESENT. Special attention is given to absolutism, pluralism, pragmatism, and the philosophy of James.

Prerequisite: One course in philosophy. *Second semester. Two credits. Graduate credit given with consent of instructor. Erickson.*

455. AESTHETICS. A philosophic analysis and appraisal of the aesthetic experience to determine the meaning 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. Graduate credit given with consent of the instructor. Not offered in 1950-1951. Hinman.*

462. PHILOSOPHY OF RELIGION. The meaning of validity of religious experience. Among the topics discussed will be the religious conception of God, the world, revelation, faith, prayer, evil, immortality.

Prerequisites: One course in philosophy and Psychology 201. *First semester. Two or three credits according to the work done. Graduate credit given with the consent of the instructor. Ericksen.*

482. 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.

Prerequisites: Junior standing and one course in philosophy. *Second semester. Two credits. Graduate credit given with the consent of the instructor. Hinman.*

483. ECONOMIC JUSTICE IN AMERICAN DEMOCRACY. A study of economic justice as it has developed through the cultural patterns of American democracy. Special attention will be given to the conflicts of economic and professional groups as factors in the formulation of the moral judgment.

Two credits. Ericksen.

484. METAPHYSICS. A constructive study of the problems of being, unity, order, and individuality, with practical applications of the theory developed.

Prerequisites: Two courses in philosophy and Psychology 201. *Second semester.* *Two credits.* Graduate credit given with consent of the instructor. Hinman.

499. RESEARCH COURSE. The thesis may be selected in any field of philosophy. For seniors only.

Prerequisite: Fifteen credits in philosophy. *Either semester.* *Two credits.* Graduate credit given with consent of the instructor. Ericksen.

PHYSICAL EDUCATION

Professor MARTIE (Chairman of Department); Associate Professor SCRANTON; Assistant Professors BROTEN, RUSSELL; Miss BRIGGS, Miss PRICE.

REQUIREMENTS FOR A FIELD OF CONCENTRATION IN PHYSICAL EDUCATION

1. MEN'S DIVISION. *Major-interest subject* (27 credits)—Physical Education 101, 102, 201, 202 (2 credits), 110, (1 credit), 210 (3 credits), 301 (1 credit), 310 (2 credits), 340 (2 credits), 390 (3 credits), 410 (2 credits), 441 (2 credits), 452 (3 credits), and 6 additional credits in courses numbered above 300. *Related subjects* (23 credits)—Physics 101-102 (4 credits), Zoology 101, 211, 346 (12 credits), Psychology 201 (3 credits), English 111, 112 (4 credits).

2. WOMEN'S DIVISION. *Major-interest subject* (31 credits)—Physical Education 161, 162, 261, 262 (3 credits), 163-164 (2 credits), 170 or 171 (1 credit), 361-362 (1 credit), 263 or 264 (1 credit), 111 (1 credit), 180 (2 credits), 281 or 440 (3 credits), 290 (2 credits), 372 or 471 (3 credits), 390 (3 credits), 452 (3 credits), and 6 additional credits in courses numbered above 300. *Related subjects* (19 credits)—Zoology 101, 211, 346 (12 credits); Psychology 201 (3 credits); English 111-112 (4 credits).

Students selecting a field of concentration in physical education who wish to qualify for a secondary teacher's certificate should consult the School of Education (see pp. 153-158) concerning requirements.

Men

101. DEVELOPMENTAL EXERCISES. Physical examinations are required at the beginning of the 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 periods per week.* *One-half credit.* Scranton.

102. DEVELOPMENTAL EXERCISES. Continuation of course 101 with addition of calisthenics and light apparatus.

Second semester. One-half credit. Scranton.

201. ADVANCED EXERCISES. Practical work consists in mat work, tumbling, heavy apparatus using long and short horse and buck.

Sophomore year (required). First semester. Two periods per week. One-half credit. Broten.

202. ADVANCED EXERCISES. Continuation of course 201. Heavy apparatus consisting of work with parallel bar, low and high bar, ladder and stall bars.

Second semester. One-half credit. Broten.

NOTE: By consent of the department chairman, a student may elect any of the following sports as a substitute for the practical work in courses 101, 102, 201, 202: Football, basketball, track, tennis, cross-country, boxing, wrestling, tumbling.

103-104, 203-204. SPECIAL CORRECTIVE EXERCISES. Corrective work for all whose physical examination shows they are unfitted to take the required physical education.

One-half credit each semester up to and including four semesters. Martie.

110. GENERAL HYGIENE. Principles of health promotion, individual hygiene, disease prevention and control.

Either semester. One credit.

210. FIRST AID AND TREATMENT OF ATHLETIC INJURIES. The first six weeks will be devoted to the Red Cross First Aid Course, successful completion of which will entitle the student to a Red Cross Certificate. The remainder of the course will deal with prevention and treatment of common athletic injuries.

First semester. Three credits. Martie.

301. APPARATUS AND TUMBLING. Advanced exercises for increasing skills on the mats, bars, horse, and springboard.

First semester. One credit. Broten.

310. INTRODUCTION TO PHYSICAL EDUCATION AND HEALTH. Consideration of aims and objectives of physical education and health; the principles underlying the curriculum, standards for selection of activities and criteria for judging the work.

Second semester. Two credits. Broten.

320. FOOTBALL IN THEORY AND PRACTICE. A course of lectures and practical demonstrations for those who may wish to coach, or for those who are interested in and wish a more intimate knowledge of the game.

First semester. One lecture and one laboratory per week. Two credits. Scranton.

321. BASKETBALL IN THEORY AND PRACTICE. A course of lectures and practical demonstrations.

Second semester. One lecture and one laboratory per week. Two credits. Martie.

322. TRACK AND FIELD ATHLETICS. Lectures and demonstrations of each track and field event.

Second semester. One lecture and one laboratory per week. Two credits. Scranton.

325. OFFICIATING MAJOR SPORTS. A careful study of the rules of football, basketball, and track with interpretations, methods of officiating, and characteristics of officials.

First semester. Two credits. Scranton.

340. PHYSICAL EDUCATION METHODS. A teachers' course in physical education. To develop squad leaders and to assist men to qualify for a State Certificate to teach physical education.

Second semester. One lecture and two laboratory periods per week. Two credits. Scranton.

410. SCHOOL AND COMMUNITY HEALTH. A study of school sanitation, health of the school child, community hygiene, and public health. Physical education and its relation to health.

First semester. Two credits. Broten.

430. PSYCHOLOGY OF COACHING. Emphasizes the application of practical psychology in all forms of athletic activities. Illustrations of applied psychology are collected and analyzed as to values in the relations to specific forms of athletics.

Second semester. Two credits. Martie.

431. 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 reference to the character training situations that arise in the physical education field.

Second semester. Two credits. Martie.

440. RECREATION LEADERSHIP AND PLAYGROUND ADMINISTRATION. A comprehensive study of recreation leadership and playground administration with special emphasis given to group games, and the organization of programs for all ages in the community center building and the playground. An analysis of municipal recreation needs.

Second semester. Three credits. Broten.

441. See Education 341.

450. PHYSICAL EDUCATION MEASUREMENTS. A survey of the field of physical measurements. Methods of measuring improvement in coordination, skills and strengths.

Second semester. Two credits. Martie.

451. PHYSICAL DIAGNOSIS AND CORRECTIVE GYMNASTICS. Methods of detecting defects in structural and organic development and function. Exercises for correction of these defects.

First semester. Three credits. Martie.

452. **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. Laboratory experiments deal with simple observations of respiration, circulatory, nervous and metabolic adjustments to physical exercise.

First semester. Three credits. Martie.

Women

111. **GENERAL HYGIENE.** Principles of health promotion, individual hygiene, disease prevention and control.

One period. Either semester. One credit.

161. **FRESHMAN ACTIVITIES (required).** Choice of two activities offered. During the freshman year each woman is required to take one team sport (basketball, volleyball, soccer, hockey, or softball), one individual or dual activity (archery, tennis, golf, bowling, swimming, badminton, or tumbling), and one rhythmic activity (modern, folk, or social dancing, gymnastics).

Three periods. First semester. One credit.

162. **FRESHMAN ACTIVITIES (required).** Continuation of 161.

Three periods. Second semester. One credit.

163. **PHYSICAL EDUCATION TECHNIQUES.** Techniques of activities.

Three periods. First semester. One credit.

164. **PHYSICAL EDUCATION TECHNIQUES.** Continuation of 163.

Three periods. Second semester. One credit.

170. **ACTIVITIES FOR PRIMARY GRADES.** Rhythms, stunts, and games suitable for kindergarten and first and second grades. May be substituted by special students for freshman requirement.

Two periods. First semester. One credit.

171. **ACTIVITIES FOR INTERMEDIATE GRADES.** Rhythmic activities and games of low organization for grades 3-8.

Two periods. Second semester. One credit.

180. **INTRODUCTION TO PHYSICAL EDUCATION FOR WOMEN.** An orientation and guidance course including a brief history with emphasis on current trends in physical education.

Two lectures. Second semester. Two credits.

261. **SOPHOMORE ACTIVITIES (required).** A choice of an individual, team, or rhythmic activity as offered.

Two periods. First semester. One-half credit.

262. **SOPHOMORE ACTIVITIES (required).** Continuation of 261.

Two periods. Second semester. One-half credit.

263. **TECHNIQUES.** Gymnastics, tumbling, and field and track.

Three periods. First semester. One credit.

264. TECHNIQUES OF MODERN DANCE. Intermediate modern dance techniques with emphasis on composition and production.

Prerequisite: Beginning dance or consent of instructor. *Three periods. Second semester. One credit.*

281. RECREATIONAL CRAFTS FOR HOME, SCHOOL, AND CAMP. Includes practical work in arts and crafts, party planning, story telling, dramatics, and camp craft.

Two laboratories, one lecture. Three credits.

290. HEALTH AND FIRST AID. A standard first-aid course (Red Cross) with additional study of health problems met in a women's physical education program.

Prerequisite: Physical Education 111. *Two credits.*

361. JUNIOR ACTIVITIES. Advanced work in individual and team sports for students who have completed their required physical education.

Two periods. First semester. One-half credit.

362. JUNIOR ACTIVITIES. Continuation of 361.

Two periods. Second semester. One-half credit.

371. TEACHING OF DANCE. Methods of teaching folk, modern, and social dance. Practical experience in teaching beginners in dance.

Prerequisite: Physical Education 264. *Two laboratories, one lecture. Two credits.*

372. COACHING AND OFFICIATING TEAM SPORTS. Rules, strategy, and techniques of basketball, softball, soccer, and volleyball.

Prerequisite: Practical experience in the above sports. *Two laboratories, two lectures. Three credits.*

380. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION. Methods of organizing and conducting a physical education program for high school or college women. (This course and Education 347 are the same.)

Prerequisite: Physical Education 180. *Two credits.*

390. KINESIOLOGY. The mechanical and anatomical analysis of motion as a basis for the teaching and adaptation of physical education activities.

Prerequisite: Zoology 101 and 211. *Three credits.*

391. CORRECTIVES AND ORTHOPEDIC EXAMINATION. Methods of giving a physical examination. The study of the causes of faulty posture and the detection and correction of these faults. Adaptation of activities for the handicapped.

One lecture, one laboratory. Two credits.

*461. SENIOR ACTIVITIES. Advanced work in activities offered for those who have completed required work in physical education.

Two periods. First semester. One-half credit.

*462. SENIOR LIFE SAVING. A standard Red Cross course.

Prerequisite: Consent of instructor. *Two periods. Second semester. One-half credit.*

*471. THEORY AND PRACTICE OF DIRECTING INDIVIDUAL AND DUAL ACTIVITIES. A study of the rules, techniques, and coaching methods of tennis, archery, badminton, golf, and bowling.

Prerequisite: Skill in a minimum of four of the above sports. *Two laboratories, two lectures. Three credits.*

480. HISTORY AND DEVELOPMENT OF THE DANCE. A study of dance forms of the past and present and their relationship to the other arts.

Prerequisite: Physical Education 264. *Two lectures. Two credits.*

490. TESTS AND MEASUREMENTS. A survey of tests used in physical education for women; methods of administering the testing program and of using the data collected.

One laboratory, one lecture. Two credits.

PHYSICS

Professor LEIFSON (Chairman of Department); Assistant Professors HANSEN, WORLEY; Mr. FRAZIER, Mr. INMAN, Mr. SHEPHERD, Mr. WHITTLESEY.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN PHYSICS

A student who is looking forward to a scientific career including research and university teaching should choose option 1. Option 2 provides good preparation for secondary school teaching and certain Civil Service positions.

1. *Major-interest subject* (27 credits)—Physics 203-204, 205-206 (12 credits), 471-472 (4 credits); and 11 additional credits in physics courses numbered above 300. *Related subjects* (32 credits)—Chemistry 101, 102, 122 (9 credits), Mathematics 151-152 (10 credits), 251-252 (8 credits), 341, 351 (5 credits). It is also recommended that German be used to fulfill the requirement in foreign languages.

2. *Major-interest* (27 credits)—Physics 151-152, 153-154 (8 credits), 357 (2 credits), 471-472 (4 credits), and 13 additional credits in physics, of which 9 must be courses numbered above 300. *Related subjects* (23 credits)—Chemistry 101, 102, 122 (9 credits); Mathematics 102, 110, 140 (8 credits), 231-232 (6 credits).

Students selecting a field of concentration in physics who wish to qualify for a secondary teacher's certificate should consult the School of Education (see pp. 153-158) concerning requirements.

Suggested outline of courses for the first year:

*Open to men.

<i>Option 1</i>			<i>Option 2</i>		
	<i>1st Sem.</i>	<i>2d Sem.</i>		<i>1st Sem.</i>	<i>2d Sem.</i>
Military 101-102.....	1	1	Military 101-102.....	1	1
Physical Educ. 101-102..	$\frac{1}{2}$	$\frac{1}{2}$	Physical Educ. 101-102..	$\frac{1}{2}$	$\frac{1}{2}$
English 101-102.....	3	3	English 101-102.....	3	3
Mathematics 151-152.....	5	5	Mathematics 102.....	2	..
Chemistry 101-102.....	4	2	Mathematics 110.....	3	..
Social Science.....	2	4	Mathematics 140.....	..	3
	—	—	Chemistry 101-102.....	4	2
	15 $\frac{1}{2}$	15 $\frac{1}{2}$	Social Science.....	2	6
				—	—
				15 $\frac{1}{2}$	15 $\frac{1}{2}$

101-102. INTRODUCTORY PHYSICS. A nonmathematical course designed to give the student an understanding of some of the basic principles of physics.

Two credits each semester. Hanson, Leifson.

103-104. INTRODUCTORY PHYSICS LABORATORY. Elementary laboratory exercises in mechanics, heat, sound, light, electricity and magnetism, designed to illustrate and supplement lectures in Physics 101-102.

One credit each semester. Fee \$3. Leifson.

107. 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. 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.

Three credits. Two scheduled periods and one evening hour to be arranged. Either semester. Frazier.

115-116. 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. *Three credits each semester.*

117-118. 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.

Three credits each semester. Shepherd.

119. HOUSEHOLD PHYSICS. A course in general physics for students in home economics, with special emphasis on practical applications in the home.

Two lectures and two laboratory periods per week. Four credits. Fee \$5. Frazier.

151-152. 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.

Prerequisite: Plane geometry. A knowledge of trigonometry is desirable. *Three credits each semester.* Frazier.

153-154. GENERAL PHYSICS LABORATORY. A laboratory course to make the student an intelligent observer of natural phenomena. To accompany Physics 151-152. 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.

Prerequisites: Plane geometry. A knowledge of trigonometry is desirable. *One credit each semester.* Fee \$3. Frazier.

203-204. 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.

Prerequisites: Plane, solid, and analytic geometry, and trigonometry. *Four credits each semester.* Hansen, Lefson, Worley.

205-206. 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.

Prerequisites: Plane, solid, and analytic geometry, and trigonometry. *One or two credits each semester.* Fee \$3 per credit hour. Hansen, Inman, Worley.

357-358. 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.

Prerequisites: General physics, differential and integral calculus. *Two credits each semester.* Fee \$5. Inman.

359-360. HEAT, THERMODYNAMICS, AND KINETIC THEORY. Lectures and recitations. Many of the more difficult subjects merely touched upon in general physics will be fully treated.

Prerequisites: General physics, differential and integral calculus. *Two credits each semester.* Graduate credit given with the consent of the instructor. Hansen.

361-362. LIGHT AND PHYSICAL OPTICS. Lectures and demonstrations: Survey of geometrical optics and of optical instruments. Selected topics in physical optics including interference, diffraction, and polarization with applications. The nature of light.

Prerequisites: General physics, calculus. *Two credits each semester.* Graduate credit given with the consent of the instructor. Worley.

365-366. HISTORY OF PHYSICS. Lectures and recitations. Preparation of reports and discussion of assigned topics by members of the class.

Prerequisites: General physics. *Two credits each semester.* Graduate credit given with the consent of the instructor. Lefson.

368. PHYSICAL OPTICS AND SPECTROSCOPY. Theory and use of prism and grating spectrometers and spectrographs. Excitation and recording of emission spectra. Wavelength determination and quantitative analysis. Elementary theory of spectra.

Prerequisites: General physics, general chemistry, and calculus. Physics 361-362 is desirable. *One lecture and one laboratory period per week.* *Two credits.* Fee \$5. Graduate credit given with the consent of the instructor. Worley.

375-376. GLASSBLOWING. A laboratory course of instruction in methods of making simple glass apparatus.

One credit. Fee \$10. Lefson.

377-378. 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.

Prerequisites: General physics, differential and integral calculus. *Two credits each semester.* Fee \$5. Graduate credit given with consent of instructor. Hansen.

401-402. 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. *One credit.* *One three-hour computing period per week.* Graduate credit given with the consent of the instructor.

471-472. 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.

Prerequisites: General physics, and calculus. *Two credits each semester.* Graduate credit given with the consent of the instructor. Leifson.

473-474. ELECTRICITY AND MAGNETISM. Introduction to the mathematical theory of electricity and magnetism. Solution of problems by exact reasoning from fundamental principles.

Prerequisites: General physics, differential and integral calculus. *Two credits each semester.* Graduate credit given with the consent of the instructor. Hansen.

483-484. MODERN PHYSICS LABORATORY. Laboratory exercises in connection with course 471-472.

Prerequisites: General physics and calculus. *One credit each semester.* Fee \$5. Graduate credit given with the consent of the instructor. Leifson.

493-494. SPECIAL PROBLEMS. Laboratory or research work not in courses listed above.

Credits to be arranged. Fee \$3 per credit. Graduate credit given with the consent of the instructor. Staff.

501-502. THEORETICAL PHYSICS. An introduction to the more advanced mathematical analysis as applied to general physical problems.

Prerequisites: General physics, differential and integral calculus and differential equations. *Two credits each semester.* Undergraduates may be admitted with the consent of the instructor. Hansen.

599. GRADUATE THESIS. Experimental or theoretical research. *Maximum credit six units.* Fee \$5 per credit for experimental thesis. Staff.

PLANT INDUSTRY

Professor TITUS (Chairman of Department); Associate Professors DUNN, ROBERTSON; Assistant Professor LITTLE.

Agronomy and Range Management

104. ELEMENTS OF AGRONOMY. Principles and practices in the production of the common field crops. Crop adaptation and distribution; cultural practices; harvesting and storage; protection and improvement and identification of grain crops and their seeds.

Second semester. Two lectures; one laboratory period. Three credits. Fee \$5. Dunn.

205. FORAGE CROPS. The establishment and utilization of annual and perennial forage crops; the conservation of native and tame meadows and pastures, with emphasis on alfalfa and wild hay. Laboratory and field study of the agronomic characteristics of forage plants.

Prerequisite: Agronomy 104. *First semester. Two lectures; one laboratory period. Three credits.* Fee \$5. Robertson.

346. WEEDS AND WEED CONTROL. Recognition and control of noxious and common competitive and poisonous weeds, their biological and economic effects on crops and livestock. Response of plants to herbicides in the laboratory and greenhouse. Practice in chemical methods of control on University Farm.

Prerequisites: Agronomy 104 and Chemistry 242. *Second semester. Two lectures; one laboratory period. Three credits. Fee \$5. Robertson.*

354. CEREAL CROPS. History, classification, morphological characteristics, and varieties and strains of cereal crops. Practices and problems involved in production. Judging, grading, and exhibition.

Prerequisite: Agronomy 104. *Second semester. Given in odd years. Two lectures; one laboratory period. Three credits. Fee \$5. Dunn.*

355. CROP ECOLOGY. Adaptation and environment of crop plants. A study of these aspects of the social and ecological environments which influence the production and determine the distribution of field crops.

Prerequisites: Agronomy 104, Botany 355, or concurrent; and Soils 203. *First semester. Given in odd years. Three lectures. Three credits. Robertson.*

359. PRINCIPLES OF RANGE AND PASTURE MANAGEMENT. A basic course in the management of ranges and pastures. History of range use in relation to present condition; the indicator concept, range improvements, grazing by game animals.

Prerequisites: Soils 203 and Agronomy 205 or Botany 222. *Two lectures; one laboratory period. Six to eight field trips. Three credits. Fee \$5. Robertson.*

362. POISONOUS RANGE PLANTS. Recognition of the more troublesome poisonous and mechanically injurious range and pasture plants; ways of handling problems caused by these plants.

Prerequisite: Agronomy 359. *One lecture or laboratory period. One or two field trips. One credit. Robertson.*

364. RANGE AND PASTURE FIELD TRIP. A one-week trip to study range and pasture problems and practices in Nevada. Observations on progressive ranches and government ranges and experiment stations. Transportation furnished. One week immediately following sophomore or junior year. Register at end of second semester.

Prerequisites: Agronomy 205 and Botany 222. *One or two credits. Fee \$10. Robertson.*

366. RANGE CONDITION CLASSIFICATION AND IMPROVEMENT. Use of indicators to determine range and pasture condition, vegetation analysis, utilization measurement; range improvements including revegetation, site selection, ground preparation, costs and benefits of range seeding.

Prerequisite: Agronomy 359. *One lecture and one laboratory period. Field trips. Two credits. Fee \$5. Robertson.*

456. CROP IMPROVEMENT. Application of genetics to the problems of crop improvement. Heredity and variation in crop plants. Principles and results of selection and hybridization in the improvement of crops. Demonstrations.

Prerequisite: Zoology 350. *Second semester.* Given in even years. *Three lectures. Three credits.* Dunn.

457. METHODS IN AGRONOMIC RESEARCH. Principles and methods of experimentation. Interpretation of results. Application of statistical methods.

Prerequisite: Junior standing. *First semester.* Given in even years. *Two lectures. Two credits.* Robertson.

468. ADVANCED RANGE MANAGEMENT. Administration and management of range land, range surveying and management planning practice in field techniques of range research.

Prerequisites: Agronomy 359 and 360, Zoology 337. *Second semester.* *Two lectures; one laboratory period. Three credits.* Fee \$5. Robertson.

469. RANGE AND PASTURE LITERATURE. Two or five hours reading of selected original papers, classic and current. One hour weekly for discussion and reports.

Prerequisites: Agronomy 205 and Agronomy 359 or concurrent. *First semester.* Given in odd years. *No lectures. Meeting time arranged. One or two credits.* Robertson.

513-514. THESIS COURSE IN PLANT INDUSTRY.

Either semester. Credit to be arranged. Staff.

Horticulture

102. ELEMENTS OF HORTICULTURE. A survey course of the field of horticulture; fruit growing, vegetable gardening, floriculture, and ornamental gardening.

Second semester. Three lectures. Three credits. Little.

201. ORNAMENTAL HORTICULTURE. The identification of and the fundamental principles involved in the culture of trees, shrubs, herbaceous perennials, and annuals, with application to the beautifying of the home grounds.

Prerequisite: Botany 103. *First semester, odd years. Two credits.* Little.

203. PLANT PROPAGATION. The principles involved in the multiplying of horticultural plants by seeds, cuttings, grafting, etc. The origin and development of new varieties.

Prerequisite: Horticulture 102. *First semester, in even years. Two credits.* Little.

353. FRUIT GROWING. The principles involved in the growing and care of fruit trees and of bearing-producing plants, applied primarily to the small home orchard and berry garden.

Prerequisite: Horticulture 102. *First semester, in odd years. Three credits.* Little.

355. DISEASE AND PEST CONTROL. The preventing and controlling of diseases and pests of horticultural plants. Spraying with insecticides and fungicides.

Prerequisite: Horticulture 102 or 201. *First semester, in even years.* Two credits. Fee \$5. Little.

356. VEGETABLE GROWING. Fundamental principles involved in the growing of vegetable plants.

Prerequisite: Horticulture 102 or 201. *Second semester. Three credits.* Little.

364. DISEASES OF HORTICULTURAL PLANTS. Same as Botany 364.

491-492. SPECIAL PROBLEMS. An intensive study of a special problem in the field of horticulture.

Prerequisite: Nine credits in horticulture or in a similar field. *Each semester. One to three credits.* Graduate credit given with the consent of the instructor. Little.

Soils

203. SOILS. An introductory course in soils. Nature and properties of soils. Soil and plant relations. Soil types and soil management.

Prerequisite: Chemistry 102. *First semester. Two lectures, one laboratory period. Three credits.* Fee \$5. Dunn.

312. SOIL CONSERVATION. The soil as a natural resource. A study of the nature of soil erosion and of factors influencing soil erosion and water loss. Management of soils for crop production and soil protection with emphasis given to soil acidity and alkali, soil water control, tillage, organic matter and fertilizers, and supporting soil and water conservation practices. The programs of Federal and State organizations which aid in soil conservation. Soil capability and farm plans. Field trips.

Prerequisites: Soils 203 and Agronomy 205 or Botany 222. *Second semester. Two lectures, one laboratory period. Three credits.* Fee \$5. Dunn.

317. SOIL FERTILITY. Nutrient requirements for field crops. Soil organisms and organic matter. A study of the various plant nutrients as applied to soils. Maintenance of soil fertility. Fertilizer materials.

Prerequisite: Soils 203. *First semester. Two lectures, one laboratory period. Three credits.* Fee \$5. Dunn.

318. SOIL ANALYSIS. Laboratory methods for the determination of total and available plant nutrients and other constituents in soils.

Prerequisites: Soils 317 and Chemistry 231. *Second semester. Given in even years. One lecture, one laboratory period. Two credits.* Fee \$5. Dunn.

323. SOILS PHYSICS. Characteristics of soils and soil colloids. Soil moisture, air, temperature and structure. The effects of til-

lage, fertilizers and other chemicals, and various cropping practices upon physical and chemical properties of soils.

Prerequisite: Soils 203. *First semester.* Given in odd years. *Two lectures; one laboratory period. Three credits. Fee \$5. Dunn.*

425. SOIL GENESIS AND CLASSIFICATION. Origin and development of soils. Soil classification and survey. The distribution, chemical and physical properties and uses of the major soil groups. Soils of Nevada. Field trips.

Prerequisite: Soils 203. *First semester.* Given in even years. *Two lectures; one laboratory period. Three credits. Fee \$5. Dunn.*

426. SOIL MANAGEMENT. An advanced course in soil fertility and management.

Prerequisite: Soils 317. *Second semester.* Given in odd years. *Two lectures. Two credits. Dunn.*

473. SOILS PROBLEM. An intensive study of a special problem in soils.

Prerequisite: Soils 212. *Either semester. One to three credits. Dunn.*

Agricultural Mechanics

210. FORGING. Instruction and laboratory practice in the heating, bending, shaping, and welding of mild steel. Forging and tempering of tool steel; general forging.

Second semester. Two credits. Fee \$5. Titus.

221. GENERAL MECHANICS. Tool sharpening and fitting, saw filing, ropework, blocks and tackle, belts, pulleys, pipe fitting, soldering, sheetmetal work, threading, taps and dies, abrasives.

First semester. One lecture, one laboratory. Two credits. Fee \$5. Titus.

312. WELDING. Instruction and practice in acetylene and arc welding as related to farm and ranch; with particular application to the common metals, iron, steel, cast iron, aluminum, etc. Practice in brazing, low temperature welding, and hard facing.

Prerequisite: Farm Mechanics 210. *Second semester. One lecture, one laboratory. Two credits. Fee \$10. Titus.*

331. FARM MACHINERY AND EQUIPMENT. A study of the construction, operation, care, and repair of farm machinery and equipment.

First semester. One lecture, one laboratory. Two credits. Fee \$5. Titus.

335. ADVANCED AGRICULTURAL MECHANICS. A continuation course in general mechanics covering pumps and their operation, domestic water supply, sewage, refrigeration, electrical equipment and appliances on the farm and in the home.

Prerequisite: Farm Mechanics 221. *First semester. One lecture, one laboratory. Two credits. Fee \$5. Titus.*

341. FARM STRUCTURES. Building materials and their use, con-

crete masonry, farming construction, elementary drafting, blueprint reading, cost estimating, lighting, heating, ventilation, painting.

First semester. One lecture, one laboratory. Two credits. Fee \$5. Titus.

354. 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.

Second semester. Two credits. Fee \$5. Titus.

356. IRRIGATION AND IRRIGATION STRUCTURES. A course designed to acquaint the student with the needs of irrigation and the mechanics of getting irrigation water onto the land. Measurements of water, sources of water supply, preparation of land, methods of irrigation, irrigation structures, water law, drainage.

Second semester. Two lectures, one laboratory. Three credits. Fee \$5. Titus.

444. 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.

Second semester. Two credits. Titus.

POLITICAL SCIENCE

(See History and Political Science)

PORTUGUESE

(See Foreign Languages)

POULTRY HUSBANDRY

(See Animal Industry)

PSYCHOLOGY

Professor IRWIN (Chairman of Department); Assistant Professors RICHARDSON, McGUIGAN.

REQUIREMENTS FOR FIELDS OF CONCENTRATION IN PSYCHOLOGY

Students interested in psychology as a field of concentration may choose either of two plans. Plan 1 is for prospective professional psychologists and for those interested in a systematic and representative study of psychology as a science. Plan 2 is for those students who do not expect to become psychologists. It emphasizes fields of application. Plan 2 might be undertaken by either of two groups of students, (1) those interested in personal and cultural values in psychology, useful, for example, in homemaking and community living, and (2) those who

would find practical uses for psychology in related occupations such as personnel management, business, teaching, law, counselling and guidance, social work, medicine, nursing, writing, journalism, public relations, government and politics, home economics, and any other field in which human behavior is of significance.

1. *Major-interest subject* (30 credits)—Psychology 201 (3 credits), 301 (3 credits), 310 (3 credits), 361 (3 credits), 408 or 415 (2 credits), 411 (3 credits), 441 (3 credits), and 10 credits in psychology to be chosen in consultation with the adviser. *Related subjects* (20 credits)—to be selected in consultation with the adviser, 15 from one of the 3 departments of zoology, sociology, or philosophy, and 5 credits from either or both of the other two.

2. *Major-interest subject* (30 credits)—Psychology 201 (3 credits), 205 (2 credits), 301 (3 credits), 361 (3 credits), 411 (3 credits), and 16 credits in psychology to be chosen in consultation with the adviser. *Related subjects* (20 credits)—To be selected in consultation with the adviser, 15 from one of the departments listed below and 5 from one of the other departments listed. The related departments are home economics, sociology, philosophy, zoology, art, history and political science, English and speech, journalism, economics and business administration, mathematics, education, military, music, and physical education.

121. HUMAN NATURE. A freshman course in personal and social efficiency. Topics included are psychological factors in effective study, social and emotional adjustment, the measurement of personality traits and aptitudes, vocational choice and leadership.

Either semester. Two credits. Irwin, Richardson.

201. GENERAL PSYCHOLOGY. An introductory course dealing with forms and laws of human behavior and consciousness. Open to any sophomore and to freshmen who rank in the upper one-fourth with their mental test scores.

Prerequisite to all other courses in the department except Psychology 121. *Either semester. Three credits.* Irwin, Richardson, McGuigan.

205. 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, education.

Prerequisite: Psychology 201. *Second semester. Two credits.* Richardson, McGuigan.

221. EDUCATIONAL PSYCHOLOGY. A consideration of the applications of psychology to educational problems.

Prerequisite: Psychology 201. *Either semester. Three credits.* Irwin.

231. 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 201. *Second semester. Two credits.* Richardson.

233. CHILD PSYCHOLOGY. The development of behavior patterns in the normal child from conception to twelve years of age.

Some consideration is given to the elimination of undesirable personality traits.

First semester. Two credits. McGuigan.

241. MENTAL HYGIENE. A consideration of the principles of psychology in their relationship to mental health and efficiency.

Prerequisite: Psychology 201. Either semester. Three credits. McGuigan.

301. EXPERIMENTAL PSYCHOLOGY. A laboratory course in the application of scientific methods to the study of behavior and mental processes. Lectures, assigned readings, and laboratory.

Prerequisite: Psychology 201. Either semester. Three credits. McGuigan.

310. INTERPRETATION OF PSYCHOLOGICAL AND EDUCATIONAL DATA. Study and practice with statistical methods especially useful in the presentation and interpretation of psychological and educational data.

Prerequisite: Psychology 201 or special permission of instructor based on training in education. Three credits. Richardson, McGuigan.

361. 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.

Prerequisite: Psychology 201. First semester. Three credits. Irwin.

362. PSYCHOLOGY OF PROPAGANDA AND PUBLIC OPINION. This is a socio-psychological study of (1) the psychological basis of public opinion, (2) the techniques of leadership, (3) the forces which mould public opinion, and (4) quantitative techniques in the measurement of attitudes and the effects of publicity campaigns.

Prerequisite: Psychology 201. Second semester. Two credits. Irwin.

371. 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 workers 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 201. First semester. Two credits. Irwin.

375. MARRIAGE, HOMEMAKING, AND DIVORCE. A presentation of the psychological principles involved in these three types of social adjustment.

Prerequisite: Psychology 201. Either semester. Two credits. Irwin.

381. PSYCHOLOGY OF ADVERTISING. An intensive study of the psychological principles basic to effective advertising. Emphasis

will be placed on the techniques of experimental investigation useful to advertisers in solving problems on the job for which psychology does not provide ready-made answers.

Prerequisite: Psychology 201. *First semester. Two credits.* Richardson.

382. 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 201. *First semester. Two credits.* Richardson.

391. PSYCHOLOGY OF PERSONNEL. Applications of psychology to public and private personnel administration, including (1) selection, merit-rating and in-service training, (2) supervision, leadership, incentives and industrial conflict, (3) fatigue, accident prevention and conditions of work, and (4) the emotional and social adjustment of the employee.

Prerequisite: Psychology 201. *Second semester. Two credits.* Irwin.

405. PSYCHOLOGY OF PERSONALITY. A consideration of the nature, development and evaluation of personality.

Prerequisite: Psychology 201. *First semester. Two credits.* McGuigan.

408. SYSTEMATIC PSYCHOLOGY. A study of the historical background of psychology and of the various schools of psychological thought.

Prerequisite: Psychology 201. *Second semester. Two credits.* McGuigan.

411. PSYCHOLOGICAL TESTS. Lectures, laboratory, practice, and 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, and social service work.

Prerequisite: Psychology 201. *First semester. Three credits. Fee \$3.* Richardson.

412. INDIVIDUAL TESTING. A professional course in the administration of the Stanford-Binet and Wechsler Bellevue intelligence tests. Students will be required to administer, score, and interpret about 40 individual tests during the semester. The critical evaluation of test results will be stressed.

Prerequisites: Psychology 201, Psychology 411, and permission of the instructor. *Second semester. Three credits.* Richardson.

415. COMPARATIVE PSYCHOLOGY. A study of behavior patterns throughout the phylogenetic scale in an effort to arrive at laws of human behavior. Some experimentation with animals.

Prerequisite: Psychology 201. *Second semester. Two credits.* McGuigan.

441. ABNORMAL PSYCHOLOGY. A study of the abnormal mind, aetiology of mental disorders, neuroses and psychoses, with some attention to therapeutic procedures.

Prerequisite: Psychology 201. *First semester. Three credits.* Irwin.

450. INTRODUCTION TO CLINICAL PSYCHOLOGY. A preprofessional course in the fundamental concepts of clinical testing, diagnosis, therapy, and research as performed by the psychologist either individually or as a member of the Psychiatric Team. For students in the fields of psychology, medicine, social work, nursing, and related fields.

Prerequisites: Psychology 201, a course in testing and/or permission of the instructor. A course in mental hygiene or abnormal psychology would be desirable. *Second semester. Three credits.* Richardson.

490. SEMINAR IN THEORETICAL PROBLEMS. A survey of the literature relevant to some major problems in psychology, in an effort to arrive at experimental designs as prospective solutions.

Prerequisites: Psychology 201 and advanced courses in psychology. *Second semester. Two credits.* McGuigan.

499-499A. SPECIAL PROBLEMS OF PSYCHOLOGY. Research is chosen from any field of psychology in which the student has had at least one advanced course. The course may be repeated with research on a new problem.

For graduate students and seniors. *Either semester. Two credits.* Staff.

501. MASTER'S THESIS.

Either semester. Staff.

SOCIOLOGY (See Economics, Business, and Sociology)

SOILS

(See Plant Industry)

SPANISH (See Foreign Languages)

SPEECH (See English)

VETERINARY SCIENCE

(See Animal Industry)

ZOOLOGY (See Biology)

SUMMER SESSIONS OF UNIVERSITY

FIRST TERM

June 16 through July 20, 1951

SECOND TERM

July 21 through August 24, 1951

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. 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.

Usually the student may enroll for a maximum of six credit hours of work in either of the five-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.

OUT-OF-STATE TEACHERS

Teachers from other States may fulfill requirements to validate certificates to teach in Nevada schools by attending either or both of 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 PLACEMENT

Teachers are eligible for teacher placement service after ten 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 \$5. For this fee, five sets of credentials are prepared, to be sent to school authorities. No commission is charged on the appointee's salary.

SUMMER SESSION FEES

The fee for each of the five-week sessions is \$23 for Nevada students, \$38 for out-of-State students. In addition, the ordinary laboratory fee will be charged to those students enrolling for courses requiring laboratory classes, and a health service fee of \$2 per session will be charged each student. A deposit of \$10 will be assessed each student. This deposit is refunded in full at the close of the session if no charge is made against it.

Public Services

THE NEVADA AGRICULTURAL EXPERIMENT STATION

STAFF

- MALCOLM A. LOVE, Ph.D., President of the University.
 PERRY E. HAYDEN, B.A., Comptroller and Treasurer.
 CHARLES E. FLEMING, B.S.A., Director of Agricultural Experiment Station.
- AGNES L. SCHMITZ, Administrative Secretary and Librarian.
 GLOBIA GHIGLIERI, Assistant Librarian and Clerk.
 MARK A. SHIPLEY, B.S., Chief in Range Management.
 WALTER NEILSON, Assistant in Range Management.
 *GRANT H. SMITH, JR., 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.
 HENRY JOHNSON, Assistant in Range Management.
 M. R. MILLER, M.S., Chemist.
 V. E. SPENCER, M.S., Head, Soils Department.
 WILLIAM A. GOODALE, B.S., Assistant in Soils Research.
 MICHAEL GALLI, B.S., Assistant in Soils Research.
 LOIS CAZIER, Clerk Technician in Soils Research.
 GEORGE HARDMAN, M.S., Chief in Irrigation and Agronomy.
 HOWARD G. MASON, B.S., Agricultural Economist.
 MABEL CONNOR HARTLEY, B.A., Assistant in Agricultural Economics.
 RAY K. PETERSEN, Horticulturist.
 J. E. CHURCH, Ph.D., Chief in Meteorology.
 *CARL ELGES, JR., M.S., Assistant in Meteorology.
 OLIVER F. SMITH, Ph.D., Pathologist. (In cooperation with the U. S. Department of Agriculture.)
 JOHN MCCORMICK, B.S., Chief in Farm Development.
 JOSEPH H. ROBERTSON, Ph.D., Associate in Range Management.
 *CLYDE E. HOUSTON, B.S., Irrigation Engineer.

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 1948-1949 it received \$3,190.40 from the Federal Bankhead-Jones Fund. From the Research and Marketing Act Fund created in 1946, it received \$21,738.58. The total of these Federal appropriations for the current fiscal year will be \$114,928.98. 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

*Absent on Leave.

investigation, by scientific methods, of problems in the agricultural industry.

The Nevada Experiment Station has chosen problems for study in nine 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.

VI. Production and marketing of tomato transplants.

VII. Soil fertility studies.

VIII. Problem of improving beef cattle through the application of breeding methods.

IX. The problem of increasing yields and improving the quality of hay produced on mountain meadow lands.

For 1950-1951 the active project list of the Station is as follows:

RANGE MANAGEMENT—

Project 22—Adams Fund. *Poisonous Range Plants—Halogeton glomeratus. A Desert Plant Poisonous to Sheep in Nevada.* 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 53—Bankhead-Jones Fund. *Adaptability of New Varieties of Grasses for Forage Production Under Irrigation in Northeastern and Southwestern Nevada.* 1949-continuous. Project Leader, Dr. J. H. Robertson, assisted by Mark A. Shipley.

Project 67—Purnell Fund. *The Feeding Value of Meadow Hay for Wintering Beef Cattle as Influenced by the Variation in Nutritive Content When Harvested at Different Stages of Plant Maturity.* 1947-continuous. Project Leader, Mark A. Shipley, assisted by Henry Johnson and M. R. Miller.

Project 74—Purnell Fund. *Effects of Cultivation and Management Practices of Native Hay Lands on Yield and Feeding Value of Forage.* 1948-continuous. Project Leader, Mark A. Shipley, assisted by V. E. Spencer, and Soil Conservation Service.

Project W-1—W-1 Fund. *The Improvement of Beef Cattle Through the Application of Breeding Methods.* 1949-continuous. Project Leader, Mark A. Shipley, assisted by E. W. Sheets. In cooperation with Bureau of Animal Industry, U. S. D. A.

Project 69—Research and Marketing Fund. *Possible Conservation of Range Forage as Based Upon Daily Gains of Cattle on Summer Range.* 1947-continuous. Project Leader, Mark A. Shipley, assisted by Henry Johnson and M. R. Miller.

CHEMISTRY—

- Project 59—Purnell Fund. *Chemical Studies of Nevada Range Plants, Forage Crops and Livestock Water Supplies.* 1940-continuous. Revised 1949. Project Leader, M. R. Miller, Departments of Range Management, Farm Development, and Veterinary Science. In cooperation with the U. S. Grazing Service.
- Project 23—Adams Fund. *The Occurrence of Accessory Food Substances of Range Forage and Forage Crops in Relation to the Nutrition and Health of Range and Farm Animals in Nevada.* 1949-continuous. Project Leader, M. R. Miller.

AGRONOMY—

- Project 75—Purnell Fund. *Productivity and Life of Alfalfa Stands as Related to Management.* 1948-continuous. Project Leader, Dr. Oliver F. Smith. In cooperation with Bureau of Plant Industry and Chemistry Department.

IRRIGATION—

- Project 72—Purnell Fund. *An Inventory of Lands Suitable for Irrigation by Pumping.* 1948-continuous. Project Leader, Howard Mason, assisted by George Hardman.

VETERINARY SCIENCE—

- Project 63—Adams Fund. *Artificial Cultivation of Anaplasma Marginale.* 1944-continuous. Project Leader, Dr. Edward Records, assisted by Dr. L. R. Vawter.
- Project 73—Purnell Fund. *Control of Internal Parasites of Sheep in Irrigated Pastures.* 1948-continuous. Project Leader, Dr. L. R. Vawter, assisted by Edward Records and M. R. Miller. Revised 1949.

FARM DEVELOPMENT—

- Project 32A—Purnell Fund. *Carrying Capacity of Pasture Grasses and Pasture Mixtures on the Newlands Field Station.* 1946-continuous. Project Leader, F. B. Headley, assisted by F. M. Willhite and M. R. Miller. In cooperation with Newlands Field Station, Fallon, Nevada.
- Project 41—Hatch Fund. *Effect of Cow Manure on Growth of Pigs.* 1930-continuous. Revised 1949. 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. *Study of Individual Turkeys in Respect to Feed Consumption, Rate and Economy of Gains.* 1933-continuous. Revised 1947 and 1949. Project Leader, F. B. Headley. In cooperation with Bureau of Plant Industry, U. S. D. A., Newlands Field Station, Fallon, Nevada.
- Project 76—Purnell Fund. *Feeding Experiments with Home-Mixed Calf Meals.* 1949-continuous. Project Leader, F. B. Headley.

SOIL FERTILITY—

Project 66—Purnell Fund. *Effect of Fertilizer Treatment on the Yield and Chemical Composition of Small Grains and Legumes Grown on the Light-Textured Soils of the Carson Valley.* 1946-continuous. Project Leader, V. E. Spencer.

AGRICULTURAL ECONOMICS—

Project WM-4—WM-4 Fund. *Marketing Livestock, Both Feeder and Slaughter, in the Western States.* Project Leader, Howard G. Mason.

Project WM-7—WM-7 Fund. *Marketing Poultry and Poultry Products, Including Turkeys.* Project Leader, Howard G. Mason.

Project 71—Research and Marketing Fund. *Adjustments in Marketing of Ranch and Range Cattle.* 1947-continuous. Project Leader, Howard G. Mason.

HORTICULTURE—

Project 70—Research and Marketing Fund. *Production and Marketing of Tomato Transplants in Southern Nevada.* 1947-continuous. Project Leader, M. R. Miller, assisted by V. E. Spencer.

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.

Boards of County Commissioners.

STAFF

MALCOLM A. LOVE, Ph.D., President of the University.

CECIL W. CREEL, Agr.D., Director of Agricultural Extension,

MARIE GROSSHOLZ, Chief Clerk, Extension Service.

JOHN PATTI, B.S., Financial Clerk, Extension Service.

GENE F. EMPEY, M.S., Extension Editor.

THOMAS E. BUCKMAN, M.S., Assistant Director for County Agent Work.

MARGARET M. GRIFFIN, B.S., Assistant Director for Home Demonstration Work.

PAUL L. MALONEY, B.S., Assistant Director for Junior Extension Work.

DON M. DRUMMOND, B.S., Extension Forester.

A. J. REED, B.S., Extension Animal Husbandman.

OTTO R. SCHULZ, B.S., Extension Soil Conservationist.

LEONARD A. ANKER, B.S., District Extension Agent, Douglas and Ormsby Counties.

WILLIAM N. HELPHINSTINE, B.S., District Extension Agent, White Pine and Eureka Counties.

J. KIRK DAY, B.S., District Extension Agent, Humboldt and North Lander Counties.

JAMES G. JENSEN, B.S., District Extension Agent, Esmeralda, Nye, and Southern Lander Counties.

ARCHIE R. ALBRIGHT, B.S., County Extension Agent, Washoe County.

FERREN W. BUNKER, B.S., County Extension Agent, Lincoln County.

- FRED C. BATCHELDER, B.S., County Extension Agent, Pershing County.
LOUIE A. GARDELLA, B.S., County Extension Agent, Lyon County.
MARK W. MENKE, B.S., County Extension Agent, Elko County.
JOHN H. WITWER, B.S., County Extension Agent, Clark County.
CHARLES R. YORK, B.S., County Extension Agent, Churchill County.
RAYMOND C. COX, B.S., Assistant County Extension Agent, Churchill County.
LYLE O. MCCARTNEY, B.S., Assistant County Extension Agent, Elko County.
ROBERT J. WHELAN, B.S., Assistant County Extension Agent, White Pine and Eureka Counties.
FRANCIS HAILAND, B.S., District Extension Agent, Douglas, Ormsby, and Storey Counties.
J. HAZEL ZIMMERMAN, B.S., District Extension Agent, Clark and Lincoln Counties.
MADGE ELDER, B.S., County Extension Agent, Lyon County.
LENA BERRY, B.S., County Extension Agent, Churchill County.
M. GERTRUDE HAYES, B.S., County Extension Agent, Washoe County.
ROSE M. SPEZIA, B.S., County Extension Agent, Elko 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 Bankhead-Flannagan Act, June 1945.

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 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 Community Centers, and Boys and Girls 4-H Clubs.

Besides the regular extension program outlined above, extension agents serve as executive secretaries of County Agricultural Conservation committees.

County 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 twenty county and district agents. All seventeen Nevada counties have county extension work now extended to them. Fifteen counties have cooperative agreements between the Agricultural Extension Service and the respective Boards of County Commissioners pursuant to Nevada Statutes, Chapter 94, Sections 1-9, approved March 20, 1947.

THE STATE ANALYTICAL LABORATORY

STAFF

MALCOLM A. LOVE, Ph.D., President of the University.

PERRY HAYDEN, B.A., Comptroller and Treasurer.

WALTER S. PALMER, F.M., Director.

VINCENT P. GIANELLA, Ph.D., Geologist.

CLAUDE W. HAMMOND, B.S., Chemist.

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

MALCOLM A. LOVE, Ph.D., President of the University.
 PERRY HAYDEN, B.A., Comptroller and Treasurer.
 VERNON E. SHELD, Ph.D., Director.
 FRED L. HUMPHREY, Geologist.
 VICTOR KRAL, Mining Engineer.
 B. F. COUCH, Secretary.

The Bureau of Mines of the State of Nevada was established by the Legislature of 1929. The Act places the supervision of the Bureau with the Board of Regents of the University of Nevada. Under this Act it is the duty of the Board of Regents to select a Director and, upon his nomination, such assistants and employees as necessary and to fix the compensation of these employees. The director and secretary serve both the Bureau and the Mackay School of Mines in similar positions.

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; and other various activities.

DEPARTMENTS OF FOOD AND DRUGS, WEIGHTS AND MEASURES, AND PETROLEUM PRODUCTS INSPECTION

(Sierra and Fifth Streets, Reno)

STAFF

MALCOLM A. LOVE, Ph.D., President of the University.
 PERRY W. HAYDEN, B.A., Comptroller.
 WAYNE B. ADAMS, B.S., Commissioner.
 EDWARD L. RANDALL, M.S., Chemist.
 STANLEY D. JOHNS, Assistant Chemist.
 PETER A. FERRETTO, Inspector.
 ROBERT B. MILLS, Inspector.
 A. J. RAFAEL, Resident Inspector, Las Vegas.
 JUANITA L. HOLMES, Clerk.

These three departments were created by separate specific Acts of the State Legislature. Since the enforcement of each of these laws has been delegated to the Commissioner of Food and Drugs, they have been consolidated under one department. The consolidation has proved to be of considerable benefit, because the laboratory control necessary in carrying out the provisions of these laws can be used to a great extent by the three departments, and because much of the work and many of the duties overlap.

An entirely new Food, Drugs and Cosmetic Law was enacted

in 1939. As this law is patterned very closely after the Federal Law of the same title, there is little conflict in the provisions of the two laws. Essentially this law prohibits the manufacture or sale of misbranded or adulterated food, drugs, and cosmetics. This includes commodities which constitute a danger to health, as well as an economic fraud. The laboratory of the department is completely equipped to examine practically all types of food, drugs, and cosmetics.

Under the provisions of the State Weights and Measures Act the department is required to keep a complete set of reference standards of weight, volume, and linear measure. The standards are calibrated for accuracy at intervals of not less than ten years by the Bureau of Standards in Washington. Field-testing equipment is calibrated against the office standards and is used in checking all weighing or measuring devices, regardless of type, throughout the state. Citizens of the state are privileged to submit measuring devices of any description for calibration with the office standards. Commodities sold by weight, measure, or numerical count are periodically checked by the Department for compliance with their declared weights.

To the Petroleum Products Inspection Department is delegated the duty of enforcing the state specifications and standards for gasoline and lubricating oils. Specifications for gasoline are incorporated in the law. Such standards insure that a product sold as gasoline is entirely suitable for internal combustion engines and is not a petroleum product of less volatile nature, such as kerosene, stove oil, or distillate. Lubricating oil must be of the same grade as advertised on the dispensing container.

In addition to the duties described above, prescribed by law, this department is pleased at any time to investigate cases in which the products involved constitute a public health menace or an economic fraud.

THE STATE VETERINARY CONTROL SERVICE

STAFF

MALCOLM A. LOVE, Ph.D., President of the University.

PERRY HAYDEN, B.A., Comptroller and Treasurer.

EDWARD RECORDS, V.M.D., Director.

AGNES HILDEN, B.S., Technician.

SHIRLEY M. AVANSINO, 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 laboratory diagnosis of communicable diseases of domesticated animals and poultry. 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

MINING BRANCH

The Mining Branch conducts engineering examinations of mineral deposits, explores and samples deposits, and studies new mining and milling methods. The Branch conducts experimental work on methods of exploration and mining, investigates the mining possibilities of individual districts as they relate to the minerals industry, and demonstrates the most effective methods for extracting previously unused ores. Operations are controlled through divisional field offices.

RENO BRANCH, MINING DIVISION

STAFF

A. C. JOHNSON, Chief.
WILLMAR T. BENSON, Mining Engineer.
GEORGE H. HOLMES, JR., Mining Engineer.
EDWARD J. MATSON, Mining Engineer.
RUSSELL R. TRENGROVE, Mining Engineer.
ANN MECHAM, Draftman.
GEORGIA E. HOOPER, Clerk.
DOROTHY C. TEASS, Secretarial Clerk.

Field Office, 507 Custom House, San Francisco, California.

STAFF

SPANGLER RICKER, Supervising Engineer.
FRANK J. WIEBELT, Mining Engineer.
R. V. LUNDQUIST, Metallurgist.
VIOLA M. HANNIGAN, Secretary.

METALLURGICAL BRANCH, RARE AND PRECIOUS METALS EXPERIMENT STATION

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 Metallurgical Branch conducts fundamental and applied research on the conservation, preparation, and utilization of metals and nonmetals, develops new metallurgical methods dealing with beneficiation processes, new techniques, and special equipment, and analyzes and tests ore samples. Operations are controlled through the Minerals Division, Washington, D. C.

STAFF

J. B. ZADRA, Supervising Engineer.

ANDREW C. RICE, Ph.D., Chemist.

CLYDE E. ARRINGTON, M.S., Analyst.

HOWARD L. HEINAN, Chemist.

JOHN M. BOYLAN, Chemical Analyst.

A. L. ENGEL, Metallurgist.

HARRY F. MCCRAY, Laboratory Mechanic.

CHARLES T. FOX, Chief Clerk.

THERESA V. CAPRIO, Clerk.

United States Geological Survey, Geophysical Section,

C. H. SANDBERG, *Geophysicist in Charge.*

Record For 1950-1951

RECIPIENTS OF SCHOLARSHIPS AND HONORS

1950-1951

THE JEWETT W. ADAMS SCHOLARSHIPS of \$100 each.

Betty T. Alauzet	Frank E. Hallsted
Patricia A. Annand	Barbara Hendrickson
Edwin K. Beauchamp	James M. Howard
George D. Bennett	Margaret Ann Tompleton
Vincent H. Burke	Lura Janet Ward
Maud-Kathrin Cull	

THE ARMANCO OFFICE SUPPLY SCHOLARSHIPS of \$100 each.

In Chemistry	Reilly Jensen
In Physics	Ronald Wood

THE ASSOCIATED WOMEN STUDENTS' SCHOLARSHIP of \$50.

Florence Yin	Margaret Yin
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THE JOSEPHINE BEAM SCHOLARSHIPS of \$250 to Reno or Sparks students; \$400 to a student not residing in Reno or Sparks.

Arthur Bachelor	Jon Huntsman
Dorothy Mae Bell	Harry Hussey
Donald Cfrac	James McPartland
Paul Clawson	Chester H. Pfluke, Jr.
Harland Goodwin	Billie Mae Polson
Bruce Hicks	

THE HORACE P. BOARDMAN SCHOLARSHIP IN CIVIL ENGINEERING. \$100.
Jasper Cooper

THE FRANK O. BROILI SCHOLARSHIP IN ELECTRICAL ENGINEERING, \$150 each.

Kenneth C. Stone, Jr.	George Becker
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THE RENO BUSINESS AND PROFESSIONAL WOMEN'S CLUB SCHOLARSHIP of \$50.

Margaret Yin

THE AZRO E. CHENEY SCHOLARSHIP IN ENGLISH of \$125.

Lois Bondley

THE CHARLES ELMER CLOUGH SCHOLARSHIPS IN ENGINEERING of \$100.

Plo Jaahl

THE DAUGHTERS OF THE AMERICAN REVOLUTION SCHOLARSHIP of \$50.

TheIn Ruth Ennor

THE DELTA DELTA DELTA SORORITY SCHOLARSHIP of \$150.

Margaret Joy Daniel

THE EMPORIUM OF MUSIC SCHOLARSHIP of \$100.

Robert J. Coughlin

THE MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS of \$200 each.

Raymond R. Alzola	Doris Ann Dyer
Robert L. Beamish	Fred D. Gibson, Jr.
Fred S. Boyd, Jr.	V. Carlyle Grafton
Velda Chesley Brown	Frederick R. Jensen
Guy Cardinali	Clair M. Kunkel
Thomas M. Carlson	Shirley A. Laurie
Glen H. Clark	Robert C. Ray

THE MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS of \$400 each.

Elaine Alldredge	Reilly C. Jensen
Mary Lou Brunton	Arthur A. Krieger
Harrie F. Hess	Chris Nolan

THE MAJOR MAX C. FLEISCHMANN SCHOLARSHIPS for entering Freshmen \$250 to Reno or Sparks students; \$400 to a student not residing in Reno or Sparks.

Marjean Friesen	Marie Nielson
Leah Gregory	Carol Ann Normandy
Rayner Kjeldsen	Shirley Ann Swift
Joanne Menu	Ruth Teel

THE GRAND ARMY OF THE REPUBLIC SCHOLARSHIP of \$100.

Betty J. Kling	Helen L. Mansfield
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THE HERD AND SHORT SCHOLARSHIP IN ECONOMICS, BUSINESS, SOCIOLOGY, \$100.

Frank D. Kiser, Jr.

THE MRS. CARL OTTO HERZ SCHOLARSHIP IN ELECTRICAL ENGINEERING, \$50.

Alfred Ashley

THE KENNECOTT COPPER CORPORATION SCHOLARSHIP of \$750.

William Flangas

THE KLUTE SCHOLARSHIPS IN FOREIGN LANGUAGES, \$100.

V. Carlyle Grafton, French	Juanita Rector, German
	Madge Wiley, Spanish

THE CARRIE BROOKS LAYMAN MEMORIAL SCHOLARSHIP of \$200.

Ruth Irwin	Lois G. Kattenhorn
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THE WILLIAM S. LUNSFORD SCHOLARSHIP IN JOURNALISM of \$100.

Mark Curtis, Jr.

THE HONORABLE WILLIAM O'HARA MARTIN AND LOUISE STADTMULLER MARTIN SCHOLARSHIP IN HISTORY AND POLITICAL SCIENCE of \$50.

Melva Hand	Georgia Lee Ward
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THE ROSE SIGLER MATHEWS SCHOLARSHIPS of \$100 each.

John M. Barry	Anne Helms
Edgar M. Bush	Patricia L. Kirksey
Wayne L. DeWees	Thomas G. McIntyre, Jr.
Thela Ruth Ennor	

THE NEVADA STATE PRESS ASSOCIATION SCHOLARSHIP IN JOURNALISM of \$100.

Robert E. Petrini

THE WOMEN'S CHRISTIAN TEMPERANCE UNION PRIZE of \$100.
Alice Arentz

Elected to PHI KAPPA PHI—

June 1950—

Lindesmith, George Gerald
Yorty, Robert B.
Yim, Robert Earl

November 1950—

Cardinalli, Guy Fredrick
Guio, Dexter Thayer
Hyde, Garold Ashel
Miller, Marnie Eldina
Schumacher, Robert Thornton
Ward, Georgia Houghton

HONOR ROLL OF THE SENIOR CLASS

(Listed according to rank.)

Maclin Summers	Robert Gibson
Ralph LeVitt	Andrea Smart
Alice Cliff	John Atkins
Ted Lusebrink	Kristian Tønning
Howard McKissick	Roger Olmsted
Norma Carruth	Richard Sieber
Grove Nooney	Richard Vandenburg, Jr.
Harry Swanson	William E. Whitehouse
Thomas Blackham	Mark Klein
Dorothy Halfacre	Charles E. Huck
Theodore Stanley	Constance Burkholder
George Cann	Elaine Abercrombie Horton
Albert Richardson	Emil J. Ott, III
Mark Bray	Phyllis Abery
Arlene Jensen	

HONOR ROLL FOR THE FOUR-YEAR COURSE

(Listed according to rank.)

Maclin Summers	Kristian Tønning
Norma Carruth	Otto Kraus
Elinore McCray	Charles H. Miles, Jr.
Lois Hitchens Stewart	Albert Richardson
Grove Nooney	Richard Sieber
Philip Whitmer	Mark Bray
Howard McKissick	Thomas Blackham
Gunter Gligas	

THE GOLD MEDAL

Maclin B. Summers

GRADUATES

Diplomas and degrees were awarded on Commencement Day,
June 12, 1950, as follows:

MASTER OF ARTS

Michael Graban	Velva Clare Trulove
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MASTER OF SCIENCE

Warren Howard Adams	Richard Earl Panzer
John Leslie Chamberlin	Wallace W. Schultz

COLLEGE OF ARTS AND SCIENCE

BACHELOR OF ARTS

- | | |
|----------------------------|----------------------------|
| Phyllis Abry | Margaret Fairchild |
| Alice Catherine Arentz | Rose Marie Faul |
| Blauche Rita Armstrong | Patricia Anne Fee |
| (Feb. 3, 1950) | John Patrick Foley |
| Herbert Curtis Baker | (Feb. 3, 1950) |
| (Feb. 3, 1950) | George William Franks |
| Julia Verna Baker | Raymond B. Free, Jr. |
| (Aug. 19, 1949) | (Feb. 3, 1950) |
| *Roger Wade Banta | Earl Chester Freemont |
| Ruth Louise Barakat | Fay Elaine Fryberger |
| (Feb. 3, 1950) | Theodore Allen Furchner |
| Alfred A. Barbagelata | (Feb. 3, 1950) |
| Juanita Leona Barrett | William Tracy Gaffey, Jr. |
| Philip Cotter Barry | Gedney Gallagher |
| Elio Alfred Barsanti | Buddy Alvin Garfunkle |
| (Feb. 3, 1950) | Robert Warren Gibson |
| Frances Batt | (Aug. 19, 1949) |
| George B. Beaman | Andrea V. Ginocchio |
| Shirley Jeanne Bell | Norma Smith Gregory |
| George D. Bennett | Gloria Grace Griffen |
| Lorne Summers Black | Marilyn Hansen Griswold |
| Moray Joan Black | (Aug. 19, 1949) |
| Hatherly Bliss | Jean R. Hagenbuch |
| Arthur Maurice Boardman | †Dorothy Frances Halfacre |
| William George Bowden | Melva Louise Hand |
| (Feb. 3, 1950) | Anna Lu Hansen |
| †Mark S. Bray, Jr. | Gordon Walter Harris |
| (Feb. 3, 1950) | Gordon Leslie Hawkins |
| Kathryn-Ann Brennan | (Aug. 19, 1949) |
| (Feb. 3, 1950) | Leslie E. Hawkins |
| Susan Broadbent | George M. Hill |
| Portia Bull | (Feb. 3, 1950) |
| Constance Dione Burkholder | John Arthur Holloway |
| (Feb. 3, 1950) | (Feb. 3, 1950) |
| †Norma Jean Carruth | Galen P. Hopkins |
| Lois Mae Charlesworth | (Aug. 19, 1949) |
| Earle P. Charlton, II | *Elaine Abercrombie Horton |
| Gerald L. Clay | William A. Horton |
| Alice Joyce Cliff | Charmaine M. Hubbard |
| Honor Engelke Cobb | M. Arlene Jensen |
| Thomas W. Collins | Melvin Bernard Johnsen |
| Geneve Conaway | †Noel William Johnson |
| Woodrow W. Cook | (Aug. 19, 1949) |
| (Aug. 19, 1949) | Venus Jolley |
| Neal Harvey Corbett | Patricia Louise Jones |
| Lowell J. Cox | Charles Lee Keever |
| (Feb. 3, 1950) | Robert H. Kennedy |
| Lenley Eugene Crocker | Matthew E. Klimaszewski |
| James Clark Davis | (Feb. 3, 1950) |
| Drake DeLanoy | Edward Klosterman |
| Emery Jerome De Rushia | Stanley William Kosakowski |
| (Aug. 19, 1949) | Wallace L. Kurtz |
| William R. Devlin | Ida Leer |
| Mary Katherine Pray Estes | (Aug. 19, 1949) |

Bachelor of Arts—Continued

Lionel George Leonard	Louis J. Popp
Alphonsine Marie Liotard (Aug. 19, 1949)	(Feb. 3, 1950)
Gerald Fred Lokke (Aug. 19, 1949)	Lois C. Post (Aug. 19, 1949)
Dolores Lee Lothrop	Nickolas Poulakidas
Helen Louise Mausfield	Leslie Lund Ray
Geneva May Marker	Marilyn Jane Ray
Charles Burgess Marriage	Richard Belknap Rowley
Ernest Martinielli (Feb. 3, 1950)	Betty Jo Rupp
William Laurence McCabe, Jr.	Charles S. Sancie (Feb. 3, 1950)
Stephen W. McCloskey, Jr.	Mary Louise Sewell
Ione Anderson McCollum	Patricia Ruth Shepard
†Elinore Mae McCray	†Richard Carey Sieber (Feb. 3, 1950)
Freda Kornmayer McCulloch	William M. Siler
Roger J. McGowan	Loran Gerald Sloan (Feb. 3, 1950)
Louis Steve Mendive	†Doris Andrea Smart
Robert Billard Merwin	LaMar Ralph Smith
Shirley June Merwin	Charles Edward Springer
Helen Montero	Gladys A. Steele
Edith M. Moore	Helen Kathryn Sterling
Shinji Joseph Morita	Maclin B. Summers (Feb. 3, 1950)
Charles E. Murdough, Jr. (Feb. 3, 1950)	Harry Brooks Swanson, Jr.
John Jay Murphy (Aug. 19, 1949)	Elizabeth Marie Sweeney
Bryant Frutchey Nagle	Marilyn Jeanne Tavernia
Angela Naveran	Delbert Thomsen (Feb. 3, 1950)
Marilyn June Neal	Jane Baty Tieslau (Feb. 3, 1950)
†Grove Crawford Nooney	William Richard Trathen (Aug. 19, 1949)
Daniel J. Olguin	Donald Q. Turner
Roger R. Olmsted (Feb. 3, 1950)	Robert Oren Vaughan
Samuel Maurice Osgood (Aug. 19, 1949)	Ibrahim Hilmi Voskay (Feb. 3, 1950)
†Philip Wallace Payne	James Wilson
Maurice P. Peyron	Raymond Wolford
Carolyn Jean Pickens	Robert Bell Yorty
Marvin E. Picollo (Aug. 19, 1949)	
Anthony B. Pontecorvo	

BACHELOR OF ARTS IN JOURNALISM

William M. Dolan	Billy Joe McFarland
William Thomas Doyle	Eugene Morgan McKenna
Harold Burton Hayes, III	Jon F. Milburn
Karl K. Karrasch (Feb. 3, 1950)	Peter Mygatt (Feb. 3, 1950)
Beverley Lehman	Barbara Irene Smith
John Robert Long	George Walter Umbenhaur

BACHELOR OF SCIENCE

James Russell Atkinson	Arthur James Bell
Benjamin Harrison Banta	(Aug. 19, 1949)

Bachelor of Science—Continued

Marino W. Bianchi	Richard Vernon Moore
John Brummelkamp	Jean Nash
(Feb. 3, 1950)	Emil J. N. Ott, III
George Rodney Cann	†James Marlow Peirson
Loring Frederick Chapman	Elizabeth Anna Rice
Glen C. Christensen	(Feb. 3, 1950)
Virginia Spencer Cottam	Carl Maurice Robinson
(Feb. 3, 1950)	(Aug. 19, 1949)
Frank G. Crescenzo	Bill C. Ryan
James Edmunds	†Lois Hitchens Stewart
Willard Duane Elder	(Aug. 19, 1949)
Eli Evasovic	Robert C. Sumner
(Aug. 19, 1949)	(Feb. 3, 1950)
†Gunter George Gigas	Robert L. Wells
Grace Cowgill Hart	(Feb. 3, 1950)
Joseph B. Libke	†Philip F. Whitmer
Robert Elliott Little	(Feb. 3, 1950)
(Feb. 3, 1950)	James Templeton Williams
George F. Mugee	†Joseph Edward Wirsching
Raymond A. McGuire	Robert Earl Yim
(Aug. 19, 1949)	

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

William Keith Argabright	Robert Roe Kent
Vincent J. Asta	L. Robert LeGoy
(Feb. 3, 1950)	Gerald John McBride
Dawna Lee Audrain	†Howard Frank McKissick, Jr.
Clifford W. Banta	Shirley Ann McDonough
Thomas Graham Bell	(Feb. 3, 1950)
James Jewett Bright	†Charles Henry Miles, Jr.
(Feb. 3, 1950)	Darrol H. Morrison
Eleanor F. Brown	(Feb. 3, 1950)
(Feb. 3, 1950)	Donald Leyod Mustard
Kenneth Cusick	Donald Bradford Ray
Jerry Lee Davis	†Robert Keith Read
(Feb. 3, 1950)	(Feb. 3, 1950)
Leland Keith DeLauer	Will Rogers
Murray Vincent Dolan	Harvey Noel Rose
Robert J. Drown, Jr.	Ida Bess Sanderson
(Feb. 3, 1950)	Carl J. Short
James Rodney Eason	Robert Alfred Smith
Richard L. Eason	(Aug. 19, 1949)
Arthur Matthew English	Theodore Geoffrey Stanley
Lea Jane Glaser	Boyd Edmund Tieslau
Fred Alexander Joice	George J. Vucanovich
(Aug. 19, 1949)	Robert J. Walker
Joseph Julian, Jr.	

BACHELOR OF SCIENCE IN CHEMISTRY

Don Doran Deming	Theodore R. Lusebrink
William Howard Johnson	†Albert Edward Richardson

NORMAL SCHOOL DIPLOMA

Eileen McLeod Bailey	Martha Trulove Goble
Patty Lou Brown	(Aug. 19, 1949)
	Carol Jean Thomas

COLLEGE OF AGRICULTURE

BACHELOR OF SCIENCE IN AGRICULTURE

John Henningsen	Donald Edwin Ramelli
†Richard J. Holland	Theodore Ward Ramelli
Robert Ernest Hulbert	Charles Wayne Sprague
Cordes P. Langley	Eugene Bernard Straka
Robert H. Linka	(Feb. 3, 1950)
Lyle O. McCartney	Warren James Welsh
(Aug. 19, 1949)	(Feb. 3, 1950)
Lester Angus McKenzie	George Zappettini
Daniel Campbell Melarkey	(Feb. 3, 1950)
(Feb. 3, 1950)	

BACHELOR OF SCIENCE IN HOME ECONOMICS

Loismary Boyles	Jane Ann Hendricks Sloan
*Jean Eleanor Howard	(Feb. 3, 1950)
Marjory Christine Kean	Beverly Marlon Morey

COLLEGE OF ENGINEERING

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Gordon Norrls Boyer	Ferris J. Mecham
(Aug. 19, 1949)	Vernon M. Meiser
John Webster Brown	Thomas Keith Meredith
Stewart F. Broyles	Wendell A. Miller
(Feb. 3, 1950)	Wallace John Rabenstine
Donald Cunningham	†Paul O. Reimer, Jr.
Clark G. Dillon	Ben Kroll Rippe
(Aug. 19, 1949)	Richard Ross Smith
William Maddaford Geraghty	Eugene Clifford Sprout
(Aug. 19, 1949)	†Kristian Tonning
Robert William Gillispie	(Aug. 19, 1949)
(Feb. 3, 1950)	†Richard Vandenberg, Jr.
Ralph Richard LeVitt	Ronald E. Wolford
Warren Edgar Meacham	Jack Goodman Wulff

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

†Thomas Jack Blackham	†Otto H. Krause
Dean C. Burgemeister	Adolph Roy Larson
Robert Neagle Connelly	Alfred John Larsson, Jr.
Walter Edward Coughlin	Thomas Roderic Macaulay
Stewart Grant Dawson	Charles S. Mayo
Douglas David Dodds	Conrad Wilfred McCloskey
Lewis Homer Fritch	Glen Eugene Menu
Thomas Roy Hagar	Jacob Leonhart Oberholzer, Jr.
†Charles Ellis Huck	Maynard D. Quackenbush
Thomas L. Jones	Timothy Paul Sullivan
L. David Kiley	Charles Ernest Tam
Walter E. King	Wilbur Robert Wallace

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Wallace Oliver Birdsall	Harold A. Meyers
(Feb. 3, 1950)	Giulio C. Panelli
George Lee Griffith	William David Phillips
Artson P. Hardison	James D. Sartor
Daniel G. Illerich	J. David Spoon
(Feb. 3, 1950)	Robert Jefferson Weber
Walter E. Long	William H. Zenklusen

BACHELOR OF SCIENCE IN GEOLOGICAL ENGINEERING

Harry Arak	Gerald Elgin Knowles
John T. Atkins	(Feb. 3, 1950)
Freeman H. Beach	Lucien N. Langan
(Feb. 3, 1950)	Edward Morrice, Jr.
Fred Smiley Boyd, Jr.	(Feb. 3, 1950)
Ronald W. Brubaker	Girdwood Craig Pope
George D. Brunton	David Whitman Shoemaker
John Choy	(Feb. 3, 1950)
John A. Feeger	John Joseph Sullivan
Robert Stephen Hoke	Robert Edward Thronson
Laurence William Johnson	

BACHELOR OF SCIENCE IN METALLURGICAL ENGINEERING

John Milton Gomes	David Andrew Kinneberg
Walter B. Johnson	

BACHELOR OF SCIENCE IN MINING ENGINEERING

Maurice Hugh Brady	Leopold Frederic Muller
Donald John Cunningham	Tetsuo Roy Nojima
Reginald A. Glahn	(Aug. 19, 1949)
James W. Hager	Donald Frederick Russler
Robert Blanchard Jones	James H. Smith, Jr.
(Aug. 19, 1949)	Ross Wilbert Smith
Mark Joseph Klein	William Edmund Whitehouse

*Receives also Teacher's Diploma of High School Grade.

†Elected member of Phi Kappa Phi.

ROSTER OF STUDENTS

FALL AND SPRING SEMESTERS

1950-1951

Explanation of Abbreviations

A&S.....	Arts and Science	Fr.....	Freshman
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
MM.....	Mackay School of Mines	Sp.....	Special
ME.....	School of Mechanical Engineering		

T-Fr.—Transfer student temporarily classified as a freshman.

Name, College, and Class	Home address
Abbott, Joseph I., A&S, T-Fr.....	Las Vegas
Abrahamson, Paul M., MM, Fr.....	Roseville, Calif.
Abrams, Marvin C., A&S, So.....	Reno
Adams, Gary J., A&S, Sr.....	Reno
Adams, George, Jr., MM, Fr.....	Pittsburg, Calif.
Adams, Wayne B., EE, So.....	Reno
Afflis, William F., A&S, T-Fr.....	Indianapolis, Ind.
Ahlsweide, Herbert F., A&S, T-Fr.....	Las Vegas
Aiello, Frank R., A&S, Fr.....	San Francisco, Calif.
Alan, Barbara Jean, A&S, Sr.....	Reno
Alauzet, Betty T., A&S, Sr.....	Twin Falls, Idaho
Alcorn, Joseph P., MM, T-Fr.....	Creston, Iowa
Aldrich, Alexander H. Jr., A&S, Jr.....	Fernley
Alldredge, Elaine, A&S, Sr.....	Las Vegas
Allen, Arlene J., A&S, Fr.....	Davis, Calif.
Allen, Jack H., A&S, Fr.....	Pasadena, Calif.
Allen, Robert R., A&S, Sr.....	Reno
Allum, Martha Mae, A&S, Fr.....	Yerington
Almour, Richard B., A&S, So.....	June Lake, Calif.
Alonso, Virginia M., A&S, T-Fr.....	Sunnyvale, Calif.
Alpers, Fred E., A&S, Fr.....	Smith
Alpers, George M., EE, Fr.....	Smith
Altenburg, Fred G., A&S, Fr.....	Carson City
Aikin, Brenton, A&S, So.....	Reno
Alzola, Raymond R., Ag., Sr.....	Elko
Ames, Georgia M., HE, Jr.....	Oakland, Calif.
Anchart, Andree L., A&S, Fr.....	Reno
Anderson, DeLoy H., Jr., A&S, Sr.....	Ely
Anderson, Gilbert A., A&S, So.....	Winnemucca
Anderson, Mary Alice, A&S, So.....	Denver, Colo.
Anderson, Shirley M., A&S, Fr.....	Reno
Andrae, Barbara Jean, A&S, So.....	Tuscarora
Andregg, Ernest R., EE, Fr.....	Carlin
Angelides, Constantinos, A&S, Sp.....	Reno
Annand, Patricia Ann, A&S, So.....	Reno
Antonelli, Vance A., A&S, Fr.....	Sparks
Aplin, Charles M., A&S, So.....	Las Vegas
Apodaca, Armida L., A&S, Fr.....	Henderson
Arata, Thomas J., A&S, Fr.....	Reno
Arciniega, Edward, A&S, Sr.....	Los Angeles, Calif.
Argeres, Paul, A&S, So.....	Sparks
Arlin, Zana E., MM, So.....	Los Angeles, Calif.

Name, College, and Class	Home address
Armstrong, Leonard A., A&S, Sr.	Vista, Calif.
Arneson, David A., CE, So.	Oakland, Calif.
Arnold, Stanley D., A&S, So.	Susanville, Calif.
Ashley, Alfred W., EE, Sr.	Reno
Assuras, George Gust, CE, So.	McGill
Atkins, Don F., A&S, Sr.	Nevada City, Calif.
Atkinson, Ann, A&S, Fr.	Reno
Austin, Kenneth B., CE, Fr.	Alturas, Calif.
Austin, Lloyd B., A&S, Fr.	Sparks
Avery, Louis, MM, T-Fr.	Plains, Mont.
Bachelor, A. Orrin, CE, Fr.	Lovelock
Backus, Thelma R., A&S, Fr.	Sparks
Bailey, William A., A&S, Sr.	Collingswood, N. J.
Baird, Robert C., A&S, So.	Reno
Baker, Harold W., Ag., Sr.	Yerington
Baker, James E., A&S, Fr.	Ruth
Baker, Lloyd A., A&S, Fr.	Reno
Baker, Richard F., Gr.	Reno
Balaam, Beverly Lou, A&S, Jr.	Sacramento, Calif.
Ball, Emmett B., Jr., MM, Jr.	Ontario, Calif.
Ballard, Robert B., A&S, So.	Sparks
Bandoni, Robert J., A&S, Jr.	Babbitt
Bangert, Lawrence D., A&S, So.	Reno
Banta, Benjamin H., Gr.	Reno
Barbash, Jo Ann, A&S, Sr.	Reno
Barbash, Roger S., A&S, Sr.	Reno
Barber, Howard, A&S, So.	Las Vegas
Barham, Allen T., Jr., A&S, Fr.	Reno
Barnard, Wallace R., A&S, Fr.	Richmond, Calif.
Barnes, James A., Jr., EE, Fr.	Reno
Barott, Barbara Ann, A&S, So.	Walnut Creek, Calif.
Barrett, Dorothy M., A&S, Fr.	Reno
Barrett, Frederick B., A&S, Sr.	Yerington
Barrett, Robert E., A&S, Fr.	Reno
Barry, John M., A&S, Jr.	Reno
Barry, Wesley E., CE, So.	Nevada City, Calif.
Bartolomei, Marjorie, A&S, Sr.	Pittsburg, Calif.
Barton, Thomas V., Jr., MM, Sr.	San Francisco, Calif.
Bassemier, Sally M., A&S, So.	Sparks
Bassett, Elizabeth C., Ag, Jr.	Reno
Bassett, Margaret M., HE, Jr.	Reno
Basta, Sam, Gr.	Reno
Bastian, Dorothy, A&S, Fr.	Reno
Bastian, Jarvis R., A&S, So.	Reno
Bates, Lois Ann, A&S, Sr.	Las Vegas
Batha, Robert G., Gr.	Quincy, Calif.
Batt, Donna D., A&S, Jr.	Carlin
Battaglia, Leonard L., A&S, Fr.	Reno
Bauer, Arthur W., Jr., A&S, So.	Las Vegas
Baughman, Frank F., Jr., EE, So.	Sparks
Baxter, Alfred C., A&S, Fr.	Berkeley, Calif.
Baxter, George M., A&S, So.	Carson City
Baxter, Kenneth E., A&S, Fr.	Ray, Ariz.
Bay, Carol R., A&S, Jr.	Reno
Beamish, Robert L., A&S, Jr.	Reno
Beard, Hazel J., A&S, So.	Sparks

Name, College, and Class	Home address
Beasley, Winfield S., A&S, Sr.	Sullivan, Ind.
Beauchamp, Edwin K., A&S, Jr.	Ely
Beaupre, Carolyn T., A&S, T-Fr.	Stockton, Calif.
Beaupre, Louis, Ag. So.	Washington, D. C.
Becker, Florence R., A&S, Fr.	Reno
Becker, George N., EE, Sr.	Hawaii
Becker, William E., A&S, So.	Reno
Bedolli, Sergio, A&S, Fr.	Los Angeles, Calif.
Beede, Herbert B., Gr.	Pawtucket, R. I.
Bell, Charles A., CE, Fr.	San Gabriel, Calif.
Bell, Donald D., A&S, Fr.	Reno
Bell, Dorothy Mae, A&S, Fr.	Boulder City
Bell, Enfield B., MM, Sr.	Elko
Bell, June, A&S, T-Fr.	Reno
Bell, Margaret, A&S, So.	Westport, Conn.
Bell, Margaret Ann, A&S, So.	Las Vegas
Bell, Roy A., CE, Fr.	Independence, Calif.
Belnap, Bruce E., EE, Jr.	Sparks
Belongie, Eugene A., CE, Fr.	Twenty-nine Palms, Calif.
Benedetto, Alton F., A&S, Sr.	Oakland, Calif.
Benedict, Carl S., A&S, Jr.	San Francisco, Calif.
Benna, Bruno, A&S, So.	Reno
Bennett, Elizabeth B., Gr.	Reno
Benson, John W., A&S, So.	Reno
Bergen, Ann, A&S, T-Fr.	Santa Barbara, Calif.
Berger, Dorothy Ann, A&S, Fr.	Carson City
Bergin, Richard J., Ag. So.	Sparks
Bergs, Vija, A&S, Sp.	Elyria, Ohio
Bergstrom, Leroy R., A&S, T-Fr.	Reno
Berman, Marlene Sue, A&S, Fr.	Reno
Bernard, William M., A&S, Fr.	Carson City
Bertrand, Margaret M., A&S, Fr.	Sparks
Biale, Claire M., A&S, So.	Eureka
Biegler, John P., EE, Fr.	Elko
Billings, Marian B., Gr.	Reno
Billman, Ervin L., A&S, Jr.	Twin Falls, Idaho
Bingham, Chauncey O., A&S, Fr.	Tonopah
Binns, James E., ME, Fr.	Reno
Bissett, J. Roger, A&S, Sr.	Reno
Black, Frank H., Gr.	Providence, R. I.
Black, John S., A&S, Fr.	Winnemucca
Blank, Robert C., Gr.	Oakland, Calif.
Boardman, Ralph E., CE, Fr.	Carson City
Boero, Theresa Ann, A&S, Fr.	Reno
Bogani, Arthur A., A&S, Fr.	Tonopah
Boies, Eyer, H., Ag. Sr.	Wells
Bondley, George, A&S, So.	Las Vegas
Bondley, Lois Shaver, A&S, Sr.	Las Vegas
Bondurant, Robert, A&S, Jr.	Ely
Bonell, John A., Gr.	Reno
Booker, Richard G., ME, Sr.	Sparks
Booth, Charles F., A&S, Fr.	Yerington
Bordin, Willard H., A&S, Sp.	Rockport, Ind.
Bosler, Edward J., A&S, Sr.	Reno
Boutillier, Gene R., A&S, T-Fr.	Hermosa Beach, Calif.
Bowman, Thomas D., A&S, So.	Las Vegas
Bowring, Russell V., A&S, Fr.	Reno

Name, College, and Class	Home address
Boyd, William S., A&S, So.....	Las Vegas
Boyle, Edward J., CE, Jr.....	Reno
Boyle, James J., A&S, T-Fr.....	Seattle, Wash.
Boyle, Kathryn E., A&S, Gr.....	Reno
Boyle, Peggy Jane, A&S, Gr.....	Reno
Boynton, John W., Jr., ME, Sr.....	Winnemucca
Brackett, William L., A&S, Jr.....	Reno
Bradbury, Theodore C., A&S, Fr.....	San Leandro, Calif.
Bradley, Ernest E., A&S, Fr.....	Sparks
Bradley, Kenneth H., A&S, Jr.....	Sparks
Bradshaw, Lila May, A&S, So.....	Reno
Brady, Patrick T., A&S, Fr.....	Seattle, Wash.
Bratmon, Fred M., ME, Jr.....	Long Beach, Calif.
Breese, Charles R., Gr.....	Reno
Brimmer, John G., MM, Sp.....	Reno
Briner, William S., A&S, Jr.....	Auburn, Calif.
Brinkerhoff, DeVoy, HE, Fr.....	Lovelock
Brooke, James R., A&S, Fr.....	Sparks
Brookes, Patricia R., A&S, Fr.....	Paradise, Calif.
Brooks, Douglas V., A&S, Fr.....	Anoka, Minn.
Brooks, Neil, A&S, Fr.....	Reno
Brown, Barbara Jean, A&S, T-Fr.....	Reno
Brown, Billy J., MM, Fr.....	Grass Valley, Calif.
Brown, Bruce L., CE, T-Fr.....	San Fernando, Calif.
Brown, Colleen M., A&S, So.....	Reno
Brown, Edwin John, A&S, Fr.....	Reno
Brown, Gene H., A&S, So.....	Hortense, Ga.
Brown, George J., A&S, So.....	Reno
Brown, Ralph B., A&S, Fr.....	Winnemucca
Brown, Richard R. D., A&S, So.....	Carson City
Brown, Vance E., EE, Sr.....	Boulder City
Browne, Howard E., Jr., A&S, Jr.....	Reno
Brownell, Lester G., ME, Fr.....	Sacramento, Calif.
Browning, LaVonne J., A&S, So.....	Sparks
Bruce, Irene Irma, A&S, Fr.....	Virginia City
Bruechner, Guenther W., A&S, Jr.....	Reno
Brumwell, Wanda K., A&S, Sp.....	Reno
Brunton, Arthur F., MM, Jr.....	McGill
Brunton, Mary L., A&S, Sr.....	McGill
Buccambuso, John C., A&S, So.....	Ely
Buchanan, John S., A&S, So.....	Reno
Buckman, David Lee, A&S, So.....	Reno
Bugica, Joe A., A&S, So.....	Sparks
Bundy, Gus, A&S, Sp.....	Carson City
Bunker, Owen S., A&S, Sr.....	Bunkerville
Buonamici, Rino, ME, So.....	Reno
Burke, Charles, A&S, So.....	Sparks
Burke, Vincent H., A&S, So.....	Reno
Burnett, Wallace F., A&S, So.....	Reno
Burns, Robert Lee, A&S, Jr.....	Reno
Burr, Helen L., HE, Sr.....	Las Vegas
Burton, Donna J., A&S, Jr.....	Portland, Oregon
Bush, Edgar M., Ag, So.....	Lamoille
Bussey, Barbara R., A&S, Fr.....	Minden
Butler, Barbara Joan, A&S, Fr.....	Reno
Butler, James T., A&S, Jr.....	Reno

Name, College, and Class	Home address
Butler, Opal B., A&S, So.....	Yerington
Butterfield, Ethelind M., A&S, T-Fr.....	Virginia City
Butz, Louis F., CE, Sr.....	Nevada City, Calif.
Byars, Howard M., CE, Jr.....	Reno
Byington, Douglas M., A&S, Fr.....	Sparks
Byrd, Merylyn Lee, A&S, So.....	Reno
Cafferata, Deane, A&S, Fr.....	Reno
Cahill, Cornelius J., Jr., A&S, So.....	New Haven, Conn.
Cain, John S., MM, So.....	Bridgeport, Calif.
Calder, James A., A&S, Fr.....	Winnemucca
Campbell, John L., A&S, Sr.....	Arroyo Grande, Calif.
Campbell, Robert E., A&S, Sr.....	Highlands, Calif.
Campbell, Ross A., A&S, Sr.....	Reno
Cann, George R., Gr.....	Reno
Cannon, Darell R., A&S, Fr.....	Reno
Cannon, Joel R., A&S, Fr.....	Reno
Cannon, Stephen F., A&S, Fr.....	Sacramento, Calif.
Cannon, Louis S., A&S, Fr.....	Reno
Canonic, Keith D., EE, Fr.....	Reno
Caprio, Annette K., A&S, Fr.....	Reno
Caprio, Florence, A&S, T-Fr.....	New Brunswick, N. J.
Carano, Donald L., A&S, T-Fr.....	Reno
Carbone, Joe J., A&S, T-Fr.....	Cleora, Ill.
Cardiff, Gerald T., A&S, T-Fr.....	Ventura, Calif.
Cardinalli, Guy F., A&S, Sr.....	Austin
Carl, Maud-Kathrin, A&S, So.....	Boulder City
Carl, William W., A&S, So.....	Manasquan, N. J.
Carlson, Jarl R., A&S, Fr.....	Eureka
Carlson, Thomas M., ME, Jr.....	Reno
Carnel, Norma G., A&S, Sr.....	Reno
Carpenter, Phyllis L., A&S, So.....	Ely
Carr, Edwin C., Ag, Sr.....	Fallon
Carrington, Carolyn J., A&S, Fr.....	Reno
Carroll, Fernando A., A&S, Sp.....	Reno
Carruth, Barbara, A&S, So.....	Las Vegas
Carson, Thomas C., A&S, So.....	Reno
Carter, Barbara J., A&S, Jr.....	Reno
Carter, Dyle M., A&S, So.....	Reno
Carter, James S., MM, T-Fr.....	Monrovia, Calif.
Cartlidge, Albert A., A&S, Fr.....	Reno
Caruso, Carmel, A&S, Sr.....	Dillner, Pa.
Casella, Peter J., Jr., Ag, Sr.....	San Mateo, Calif.
Castello, Louis Antone, A&S, Fr.....	Reno
Castillon, James V., A&S, Jr.....	San Benito, Calif.
Cave, Roberta A., A&S, T-Fr.....	Elko
Cayton, Edlth L., A&S, Jr.....	Janesville, Calif.
Chalmers, Thomas S., A&S, So.....	Grass Valley, Calif.
Chamberlain, Maurice K., A&S, Fr.....	Anderson, Ind.
Chandler, Marvella M., A&S, Fr.....	Reno
Chapman, Wayne, EE, T-Fr.....	San Francisco, Calif.
Charles, William B., Ag, Sr.....	Beverly Hills, Calif.
Charlesworth, William, A&S, T-Fr.....	Rio Vista, Calif.
Chatterton, Richard C., EE, Sr.....	Hawaii
Cherry, Jack C., A&S, Fr.....	Las Vegas
Chesley, Velda Ilene, A&S, Sr.....	Boulder City
Chin, Wing Tuck, A&S, So.....	Reno

Name, College, and Class	Home address
Choy, Dat Kim, A&S, Fr.....	Reno
Christensen, Ernest J., A&S, So.....	Carson City
Christensen, Glen, Gr.....	Sparks
Cirac, Don L.....	Tonopah
Chadianos, Pete P., A&S, So.....	Reno
Clark, Glen H., EE, Sr.....	McGill
Clark, Henry L., A&S, Fr.....	Reno
Clark, Paul D., Gr.....	San Diego, Calif.
Clark, William L., A&S, Fr.....	Sparks
Clarke, Robert G., A&S, Fr.....	Pasco, Wash.
Clawson, Paul A., ME, Fr.....	Las Vegas
Cleary, Charles, ME, Fr.....	Reno
Contes, Anita C., A&S, Sr.....	Sparks
Contes, Dorothy K., A&S, So.....	Reno
Contes, Myrtle A., A&S, Fr.....	Reno
Cochran, David L., ME, Sr.....	Genoa
Cochran, Rosemary S., A&S, Fr.....	Genoa
Cockrell, William K., Ag, Fr.....	Cedarville, Calif.
Cole, James W., MM, So.....	Pioche
Coleman, John F., A&S, T-Fr.....	Cambridge, Mass.
Coll, Bruno L., A&S, Sr.....	Verdi
Collings, David A., CE, Jr.....	Los Angeles, Calif.
Collins, James L., A&S, Sp.....	Reno
Collins, Joe James, A&S, T-Fr.....	Northridge, Calif.
Colonder, Fred E., Jr., A&S, Fr.....	Maplewood, Mo.
Combs, Chad P., A&S, Fr.....	Henderson
Conant, Bobbie Lee, A&S, Fr.....	Reno
Conelly, Frederick E., A&S, Jr.....	Hawthorne
Connett, David G., EE, Fr.....	Piedmont, Calif.
Connolly, Julia A., A&S, Sr.....	San Francisco, Calif.
Conover, Eugene J., A&S, So.....	Medford, Ore.
Conrad, Carolyn Jenn, A&S, Fr.....	Reno
Conway, Rosemary Ann, A&S, Fr.....	Sparks
Cooper, Jasper, CE, Sr.....	Arnold, Calif.
Cooper, William J., A&S, Fr.....	Wadsworth
Copp, George A., A&S, Fr.....	Virginia City
Corbett, Priscilla L., A&S, Sr.....	Ely
Corbett, Victor M., A&S, Sr.....	Reno
Cordes, Marian G., A&S, So.....	Burlingame, Calif.
Cossitt, Harold L., Ag, Fr.....	Menlo Park, Calif.
Costa, James P., A&S, Fr.....	Winnemucca
Couch, Francis E., A&S, Jr.....	Reno
Coughlin, Robert J., EE, Jr.....	Reno
Covington, Edward B., A&S, So.....	Holtville, Calif.
Cowley, John F., Jr., MM, So.....	Winnemucca
Cox, Nilda L., A&S, Sr.....	Reno
Cozzallo, Jean A., A&S, Jr.....	Reno
Cozzallo, Victor A., A&S, Fr.....	Reno
Craig, Robert R., Jr., Gr.....	Reno
Cranor, Joyce E., A&S, So.....	Reno
Craven, William P., MM, Jr.....	Lake Tahoe, Calif.
Crest, Dale R., MM, Sp.....	Minneapolis, Minn.
Cribbins, Joseph P., Ag, Fr.....	Reno
Cristani, Betty V., A&S, So.....	Reno
Cronick, Margaret C., A&S, So.....	Las Vegas
Cross, Charles B., A&S, Sp.....	Tahoe City, Calif.
Crow, Patricia H., A&S, Fr.....	Reno

Name, College, and Class	Home address
Crowell, Benny L., A&S, So.....	Boulder City
Crowell, Jack I., MM, So.....	Beatty
Cuddy, William T., CE, Sp.....	Las Vegas
Cuffe, Marshall J., CE, So.....	Sacramento, Calif.
Cummins, Roberta J., A&S, So.....	Henderson
Curley, John L., A&S, Fr.....	Reno
Currie, Edith C., A&S, Fr.....	Tonopah
Currie, Fern L., A&S, Sp.....	Reno
Curti, Michael E., A&S, T-Fr.....	Reno
Curtis, Mark, Jr., A&S, Sr.....	Phoenix, Ariz.
Curtis, Natalie L., A&S, Jr.....	Reno
Cutler, Everett, A&S, Sr.....	Sacramento, Calif.
Cutler, Gordon (Don), A&S, Fr.....	Reno
Cutter, Carol, A&S, Fr.....	Oakland, Calif.
Dalbey, James D., A&S, So.....	Fallon
Dalbok, Walter P., Gr.....	Reno
Dalton, Janet R., A&S, Fr.....	Reno
Daly, John M., A&S, Sr.....	Montello
Damron, Lucille, A&S, Sr.....	Ruth
Daniel, Margaret J., A&S, So.....	Reno
Dark, Gloria M., Ag, Jr.....	Reno
Darling, John B., A&S, T-Fr.....	Carson City
Darney, Lois, A&S, So.....	Reno
Darney, Ronald B., A&S, Sr.....	Reno
Davies, Arthur, A&S, Fr.....	Reno
Davies, James M., A&S, Fr.....	Burlingame, Calif.
Davis, Darlene, HE, Fr.....	Reno
Davis, Frederick A., Jr., A&S, Jr.....	Reno
Davis, James H., ME, Sr.....	Boulder City
Davis, Malcolm R., EE, T-Fr.....	Montezuma, Ind.
Davis, Willis Lee, A&S, Jr.....	Boulder City
Dawley, Kenneth F., A&S, Sr.....	Las Gatos, Calif.
Dawson, Donald R., EE, Sp.....	Las Vegas
Daz, Lily M., A&S, So.....	Montello
Deal, William A., A&S, So.....	Reno
Dean, Clifford, Gr.....	San Francisco, Calif.
Debold, Robert E., A&S, T-Fr.....	San Jose, Calif.
Dempsey, Earle V., MM, So.....	Reno
Dennis, John J., A&S, Fr.....	San Francisco, Calif.
Denton, Alvah Ann, A&S, Fr.....	Corona del Mar, Calif.
DePaoli, Reggie, A&S, Fr.....	Eureka
DePree, Hassel A., EE, Jr.....	Paterson, N. J.
Derbil, S. Ayfer, Gr.....	Ankara, Turkey
Dericco, Elmo L., A&S, Sr.....	Lovelock
DeRuff, Robert L., CE, So.....	Reno
DeFarr, Vincent B., CE, Fr.....	Berkeley, Calif.
DeVore, Maurice, CE, Fr.....	Alturas, Calif.
DeWalt, Patricia M., A&S, Sr.....	Babbitt
DeWees, Marjorie L., A&S, Fr.....	Reno
DeWees, Wayne L., A&S, Sr.....	Reno
DeWeese, Janet K., A&S, Fr.....	Menlo Park, Calif.
Dibitonto, Sam, ME, Fr.....	Reno
DiChiara, Alphonse, A&S, Sr.....	Newark, N. J.
Dickey, Donald R., ME, So.....	San Francisco, Calif.
Dingeman, Gaye M., A&S, Sp.....	San Francisco, Calif.
Dini, Joseph E., Jr., A&S, Sr.....	Yerington

Name, College, and Class	Home address
Dixon, Richard F., MM, So.....	Oakland, Calif.
Dodds, Betsy K., A&S, T-Fr.....	Hermiston, Oregon
Dohr, Raymond P., A&S, Fr.....	Reno
Donati, Eleanor A., A&S, Fr.....	Sparks
Dondero, Alan G., A&S, Sr.....	Carson City
Dormody, Michael H., A&S, Fr.....	Carmel, Calif.
Dotson, Robert B., Ag, Fr.....	Panaca
Douglass, Douglas A., A&S, Jr.....	Tonopah
Douglass, Mary Ann, A&S, Sr.....	Reno
Downer, Alice Gottschalk, A&S, Jr.....	Reno
Doyle, John T., A&S, So.....	Susanville, Calif.
Doyle, Philip C., A&S, Fr.....	Susanville, Calif.
Drakulich, Stanley J., A&S, So.....	Kimberly
Drescher, Waddy L., A&S, Fr.....	Reno
Drewette, Frederick M., A&S, Sr.....	Reno
Drown, Charles M., A&S, So.....	Lovelock
Dubbins, Yvonne D., A&S, Fr.....	Reno
Duck, Kenneth C., A&S, Fr.....	Elko
Ducote, Ewell L., Gr.....	Marksville, Ia.
Dulion, Alice L., A&S, Sr.....	Carson City
Dunbar, Dorothy A., A&S, Fr.....	San Francisco, Calif.
Dunlop, Denis V., A&S, Fr.....	Redwood, Calif.
DuPlantis, Joe G., A&S, Fr.....	Reno
Durbin, Dan, Ag, Fr.....	Pittsburg, Calif.
Dyer, Doris Ann, A&S, Sr.....	Reno
Eachus, Ruth V., A&S, Fr.....	Las Vegas
Eads, Delbert R., A&S, Fr.....	Reno
Eastes, Leni L., MM, Fr.....	Van Nuys, Calif.
Ebel, Wesley J., A&S, T-Fr.....	Pickerel, Wis.
Ebert, William H., III, Gr.....	Sutton, Neb.
Eccles, Samuel F., A&S, Jr.....	Reno
Eckhardt, Ronald D., A&S, Fr.....	Reno
Eckles, Donald R., A&S, So.....	Los Angeles, Calif.
Eddy, Gloria G., A&S, Sr.....	Winnemucca
Eder, John M., Ag, So.....	Grass Valley, Calif.
Edgecomb, John M., A&S, Sp.....	Reno
Einstoss, Ronald H., A&S, So.....	Reno
Eisenberg, Ivan L., A&S, Jr.....	Las Vegas
Ekel, Thomas M., A&S, So.....	Reno
Elder, Willard D., Gr.....	Nichols, Iowa
Eliades, James, EE, Jr.....	McGill
Ellis, Donald W., A&S, Fr.....	Sparks
Ellis, Norman L., A&S, Fr.....	Auburn, Ala.
Emory, Claire L., A&S, Sp.....	Reno
Engel, William F., A&S, So.....	Reno
Engle, Mary, A&S, Jr.....	Las Vegas
Ennor, Thela R., A&S, So.....	Reno
Escobar, Marion, A&S, Fr.....	Battle Mountain
Esplin, Willard B., A&S, So.....	Mill Valley, Calif.
Esser, Caroline A., A&S, Fr.....	Reno
Etchegoyhen, Jerome E., Jr., A&S, So.....	Winnemucca
Etchegoyhen, Norma G., A&S, Fr.....	Winnemucca
Etcheto, James J., A&S, Jr.....	Reno
Etcheto, John, A&S, So.....	Reno

Name, College, and Class	Home address
Eustachy, George M., A&S, Sr.....	Oakland, Calif.
Evans, Dwaine H., A&S, Fr.....	Sparks
Evans, G. Miriam, A&S, T-Fr.....	Reno
Evasovic, Mike, MM, Fr.....	Reno
Facha, Alice Ann, HE, Fr.....	Fallon
Facha, Joseph V., ME, Sr.....	Newcastle, Calif.
Fairfield, Diane, A&S, So.....	Richmond, Calif.
Fee, Patricia Anne, Gr.....	Ft. Bidwell, Calif.
Fenkell, Jack, A&S, Jr.....	Mina
Fiasconaro, Martin S., A&S, T-Fr.....	New York City, N. Y.
Fields, Harold C., A&S, So.....	Elko
Finley, Judge D., MM, Sp.....	Los Angeles, Calif.
Fiscus, Joyce, A&S, So.....	Reno
Fisher, Herman E., A&S, Sr.....	Las Vegas
Fisher, William J., A&S, Fr.....	Reno
Fisk, Elwin Lee, MM, Sr.....	Weimar, Calif.
Fitz, Marion R., A&S, Fr.....	Fallon
Flagg, Shirley Z., HE, Fr.....	Tahoe City, Calif.
Flangas, Gus A., MM, Fr.....	Ely
Flangas, William G., MM, Sr.....	Ely
Florence, Donna L., A&S, Sr.....	Sacramento, Calif.
Flournoy, M. Joyce, A&S, So.....	Likely, Calif.
Flynn, Jean M., A&S, Fr.....	Sparks
Foote, Gordon L., A&S, Fr.....	Sparks
Foote, Margie E., A&S, Sr.....	Sparks
Forbes, Carlton E., CE, Jr.....	Stockton, Calif.
Ford, Charles W., Jr., MM, So.....	Riverside, Calif.
Ford, Leland M., CE, So.....	Elko
Forman, William N., A&S, Jr.....	Reno
Forson, Lois R., A&S, So.....	Reno
Forsyth, Robyn L., HE, So.....	Oakland, Calif.
Foster, Joan L., A&S, So.....	Sparks
Fountain, Jack B., A&S, Fr.....	Sparks
Fox, Elvira P., A&S, Sp.....	Reno
Fox, Kenneth S., MM, Sr.....	Reno
Fox, Paul F., EE, Fr.....	Reno
Francellini, Patrick F., A&S, So.....	Reno
Francy, Henry J., MM, T-Fr.....	Reno
Frank, Jack D., MM, Sr.....	Reno
Franklin, Glenn S., MM, So.....	Reno
Frantz, Ted C., A&S, Sr.....	Reno
Fratini, Remo, A&S, Fr.....	Reno
Frazer, Guernsey D., Jr., Ag, T-Fr.....	Las Vegas
Freedman, Arlene J., A&S, Fr.....	Reno
Freeger, Barbara Ann, A&S, Fr.....	Reno
French, Donald E., A&S, Sr.....	Wendell, Idaho
Friesen, Marjean, A&S, Fr.....	Reno
Fritz, Dixie Lee, HE, Fr.....	Fallon
Frost, Odile L., A&S, Jr.....	Reno
Fuhrmann, Anneliese (Miller), A&S, Sr.....	Reno
Fujii, Buddy H., Ag, Fr.....	Reno
Fulstone, Eleanor, A&S, Sr.....	Smith
Fulstone, Jeanne, A&S, Sr.....	Smith
Fulton, Fred J., MM, Sr.....	Reno
Funck, Robert V., CE, Jr.....	Reno

Name, College, and Class	Home address
Gaffey, Thomas T., A&S, Sr.....	Reno
Gallagher, Michael J., Jr., MM, Fr.....	Reno
Gallagher, Robert J., MM, Fr.....	Las Vegas
Galletti, Gerald, A&S, Sr.....	Sparks
Gardner, Elbert W., Ag, Fr.....	Land
Garner, George W., A&S, T-Fr.....	Las Vegas
Gerrard, LaMoin E., A&S, Fr.....	Sparks
Garrett, Alan N., A&S, T-Fr.....	Sutcliffe
Garrett, Marion J., HE, Fr.....	Reno
Garriott, Gene G., A&S, So.....	Berkeley, Calif.
Garro, Nick G., A&S, Fr.....	Eureka
Gartler, Seymour, A&S, Sr.....	N. Hollywood, Calif.
Garwood, Jo Anne, A&S, So.....	Reno
Gasho, Jeanne D., A&S, Fr.....	Reno
Gerrey, Thelma A., A&S, So.....	Reno
Gessner, Robert H., MM, T-Fr.....	San Bernardino, Calif.
Getto, Mary C., HE, Jr.....	Fallon
Gialy, Andrew N., A&S, Sr.....	Elko
Giannotti, Edwin, A&S, Jr.....	Sparks
Gianotti, John S., A&S, Sr.....	Scotia, Calif.
Gibbs, Irene B., A&S, Fr.....	Las Vegas
Gibbs, Mary E., A&S, Fr.....	San Gabriel, Calif.
Gibby, Patricia M., Gr.....	Reno
Gibson, Charles C., Gr.....	Reno
Gibson, Fred D., Jr., MM, Sr.....	Las Vegas
Gibson, Jennilee, A&S, So.....	Las Vegas
Gibson, Maisie L., A&S, Sr.....	Las Vegas
Gieselmann, Paul E., ME, T-Fr.....	Vallejo, Calif.
Gifford, William T., Jr., A&S, Sp.....	Babbitt
Gilbert, Colleen F., A&S, Sr.....	Hawthorne
Gildner, Will W., MM, So.....	Las Vegas
Gill, Walter W., MM, So.....	Sacramento, Calif.
Gilmore, Earl P., CE, Sr.....	Boulder City
Ginsburg, Janice A., A&S, Fr.....	Reno
Giovacchini, Olga M., HE, Fr.....	Smith
Glass, Robert, MM, Fr.....	Reno
Glisczinski, Novella R., A&S, Sp.....	Reno
Gloster, Dean F., A&S, Jr.....	Alturas, Calif.
Godber, Walter L., A&S, T-Fr.....	Los Angeles, Calif.
Goble, Max E., A&S, Fr.....	Henderson
Godbey, James M., A&S, Fr.....	Boulder City
Goff, Horace R., A&S, Jr.....	Reno
Goldsworthy, Myron J., Ag, Sr.....	Lovelock
Gonda, John A., A&S, Sr.....	Grindstone, Pa.
Gonfiantini, Nello, Jr., Ag, Sr.....	Reno
Goni, Lorraine T., A&S, So.....	Reno
Gonsalves, Raymond L., A&S, Fr.....	Hawaii
Gonzalaz, Alexander, EE, So.....	Carlin
Goodwin, Harland D., A&S, Fr.....	Panaca
Gorman, Richard H., EE, Sr.....	Reno
Gough, Jack R., EE, Sr.....	Salt Lake City, Utah
Gould, Harry K., A&S, Sr.....	Reno
Gould, Richard B., CE, T-Fr.....	Ross, Calif.
Graf, Walter M., A&S, So.....	Elgin, Ill.
Grafton, Virginia C., A&S, So.....	Reno
Graham, George D., A&S, T-Fr.....	Santa Rosa, Calif.
Grant, Vanna C., A&S, Fr.....	Reno

Name, College, and Class	Home address
Graul, Albert, CE, Jr.	Jersey City, N. J.
Graves, Orsie, Gr.	Reno
Gravitt, James W., Jr., A&S, Fr.	Reno
Greeno, Ted R., A&S, So.	Memphis, Mo.
Gregory, Barbara J., A&S, Fr.	Las Vegas
Gregory, Edna M., A&S, Jr.	Elko
Gregory, Ernest G., CE, Sr.	Elko
Gregory, Leah L., A&S, Fr.	Elko
Grell, Claus H., EE, Sr.	Chula Vista, Calif.
Grice, Thomas A., A&S, Fr.	Redwood City, Calif.
Griffen, Gloria G., Gr.	Reno
Griffith, Don L., A&S, Fr.	Reno
Griggs, William S., MM, Fr.	Babbitt
Grodrian, Janis N., A&S, Fr.	Reno
Gronning, Ralph L., MM, So.	Las Vegas
Grows, Eugene A., CE, So.	Boulder City
Grows, Irene Waterman, A&S, Sr.	Reno
Grows, Walter H., Ag, Fr.	Boulder City
Guerrera, Melvin P., A&S, So.	Reno
Gulo, Dexter T., A&S, Sr.	Reno
Haas, Carl V., Jr., A&S, So.	Tonopah
Hubereom, Guy E., Jr., A&S, Fr.	Washington, D. C.
Hubereom, Lois Smith, A&S, Fr.	Washington, D. C.
Hackett, Everest I., Ag, Sr.	Ploche
Hagerty, Mary P., A&S, So.	Oakland, Calif.
Haggerty, Elwood P., A&S, Fr.	Reno
Haggerty, Nancy P., A&S, So.	Reno
Haines, Eleanor E., Gr.	Ventnor City, N. J.
Haines, Eugene, A&S, Sp.	Reno
Haines, Homer P., A&S, So.	Reno
Hairston, Lawrence N., A&S, Fr.	Clairton, Pa.
Hale, Robert V., Gr.	San Francisco, Calif.
Hales, Edward E., A&S, Fr.	Vandergrift, Pa.
Hall, Charles H., A&S, Fr.	Sparks
Hall, Joy Anne, A&S, Fr.	Mountain City
Hall, Lee V., MM, So.	Kimberly
Hall, Norman S., CE, So.	Klamath Falls, Oregon
Hall, Robert F., A&S, Fr.	Reno
Hallsted, Frank E., ME, So.	Reno
Halvorson, Harold P., A&S, T-Fr.	Wolf Point, Mont.
Hamilton, David E., EE, Sr.	Hagaman, N. Y.
Hamlyn, Gwendolyn T., A&S, So.	Reno
Hammill, Harold R., CE, Sr.	Piedmont, Calif.
Hammon, John L., Ag, Fr.	San Francisco, Calif.
Hancock, Ed L., A&S, Jr.	Reno
Hancock, Ronald H., A&S, Jr.	Sparks
Hand, Arlene C., HE, Fr.	Reno
Hanifan, Joan P., A&S, So.	Fallon
Hanna, Dale, A&S, Sr.	Reno
Hansen, Alfred W., Ag, Jr.	Hiko
Hansen, Beverly Simon, A&S, Sr.	Jean
Hansen, Edward L., ME, Fr.	Minden
Hansen, James D., Ag, Sr.	Hiko
Hansen, Stanley, CE, Sr.	Boulder City
Haque, Talib, Gr.	Karachi, Pakistan
Harden, John E., ME, T-Fr.	Golconda

Name, College, and Class	Home address
Harding, Jo-Ann, A&S, Fr.	Orange, Calif.
Hardy, Buddy R., A&S, Fr.	Las Vegas
Hardy, Glen D., Ag, So.	Logandale
Hardy, Hazel F. Inman, HE, Jr.	Reno
Harford, Boyd E., MM, Sp.	Ely
Harmon, Dorothy I., HE, So.	Gardnerville
Harmon, John R., MM, Sr.	Inlay
Harper, David C., ME, Fr.	Palm Springs, Calif.
Harper, Muray E., A&S, Jr.	Mesquite
Harper, William M., Jr., A&S, So.	Virginia City
Harrell, Jerry D., A&S, Fr.	San Francisco, Calif.
Harrigan, Neal J., A&S, Fr.	Reno
Harris, Beverly A., A&S, So.	Ruby Valley
Harris, Donald A., A&S, Jr.	Los Angeles, Calif.
Harris, Elizabeth E., A&S, So.	Concord, Calif.
Harris, Evan L., A&S, Jr.	China Lake, Calif.
Harris, John B., CE, Fr.	Reno
Harrison, Barbara J., A&S, T-Fr.	Reno
Hart, Virgil L., A&S, Sr.	Reno
Hartsfeld, Howard C., A&S, So.	Chicago, Ill.
Harvalos, George J., ME, T-Fr.	Oroville, Calif.
Harvey, Clinton V., A&S, Fr.	Paradise, Calif.
Harvey, Silas C., A&S, Sr.	Ontario, Calif.
Hasler, Milton H., CE, Fr.	Laguna Beach, Calif.
Hastings, Jessie M., A&S, Fr.	Hawthorne
Hathaway, Robert E., Ag, Fr.	Hempstead, N. Y.
Havens, Mable L. Armstrong, Gr.	Reno
Hawkins, Irene M. Beck, A&S, Sr.	Newcastle, Calif.
Hawley, Portia, A&S, Sr.	Belmont, Calif.
Hayden, Ann Sourwine, Gr.	Reno
Hayes, Gordon L., A&S, So.	Las Vegas
Heaney, Milton C., MM, T-Fr.	Auburn, Calif.
Heckethorn, Howard, A&S, Sr.	Las Vegas
Hedges, Weldon L., EE, Sr.	Reno
Heher, Herbert M., A&S, Fr.	Henderson
Helfert, Erich A., A&S, Sp.	Neuburg, Germany
Henderson, Doris L., A&S, So.	Tonopah
Hendrickson, Barbara, A&S, So.	Henderson
Henningsen, Carsten M., A&S, Fr.	Gardnerville
Henrikson, Keith, A&S, Fr.	Reno
Herbert, Beryl A., HE, So.	Fallon
Herman, John P., A&S, Fr.	Berkeley, Calif.
Herrera, Carl M., A&S, Fr.	Eureka
Herz, Marcelle Barkley, Gr.	Reno
Herz, Wilton F., A&S, Jr.	Reno
Hess, Beverly Jones, A&S, So.	Las Vegas
Hess, Harrie F., A&S, Jr.	Las Vegas
Hettinger, James R., Ag, Fr.	Fallon
Heyman, Sue A., A&S, T-Fr.	Atherton, Calif.
Hickman, Jacqueline J., A&S, Sr.	Reno
Hicks, Bruce G., CE, Fr.	Sparks
Hicks, Charles R., A&S, Fr.	Reno
Higginbotham, John W., A&S, Fr.	Taft, Calif.
Hight, Richard F., ME, T-Fr.	Palos Verdes, Calif.
Hill, Bruce, A&S, Sr.	Reno
Hill, Charles E., A&S, Sr.	Reno

Name, College, and Class	Home address
Hill, Richard M., CE, Sr.	Napa, Calif.
Hickley, Ward W., A&S, Sr.	Reno
Hineline, James L., A&S, So.	Las Vegas
Hinkey, Ted A., MM, Fr.	Reno
Hodge, Shirley F., A&S, So.	Fernley
Hoeper, Ralph E., EE, Sr.	Auburn, Calif.
Holland, Ethel J., A&S, Fr.	Fresno, Calif.
Hollingsworth, Edgar A., MM, Jr.	Lovelock
Hollister, Margaret W., A&S, Fr.	Genoa
Holmes, Georgia, A&S, Fr.	Lovelock
Holmes, June V., A&S, Sr.	Bingham Canyon, Utah
Holmes, Richard D., CE, Sr.	Reno
Holsinger, Hellen O., A&S, Fr.	Provo, Utah
Holt, Wonda, A&S, Fr.	Hawaii
Hood, Eunice, A&S, Fr.	Reno
Hooper, William H., EE, Sr.	Reno
Horner, Norma Lynn, A&S, So.	Las Vegas
Horsley, Wilma D., Gadda, HE, Sr.	Reno
Houck, Thomas, A&S, Fr.	Tiffin, Ohio
Houghton, Alvin A., EE, Sr.	Susanville, Calif.
Houghton, Nancy J., A&S, So.	Las Vegas
Houston, Edward R., Jr., A&S, Sr.	Reno
Howard, James M., ME, Sr.	Reno
Howell, Frederick L., A&S, Fr.	Reno
Howell, Mary M., A&S, So.	Reno
Hubbell, Richard C., A&S, T-Fr.	W. Los Angeles, Calif.
Hug, Procter R., Jr., A&S, So.	Sparks
Hughes, Jacquelyn B., A&S, Fr.	Reno
Hughes, Jay S., A&S, Fr.	Woodland, Calif.
Hughes, Margaret E., A&S, Fr.	Foresthill, Calif.
Hulse, James W., A&S, Jr.	Pioche
Humphreys, Barbara J., A&S, Fr.	Carson City
Humphreys, Marilyn, A&S, Jr.	Sparks
Humphreys, Marshall H. K., A&S, Fr.	Reno
Hunt, Dorothy M., A&S, Sp.	Reno
Hunt, Robert L., A&S, Jr.	Winnemucca
Hunter, Raymond D., A&S, So.	Reno
Huntsman, Jon A., CE, Fr.	Elko
Hurd, Joanne W., A&S, T-Fr.	Mill Valley, Calif.
Hursh, Charles H., A&S, Fr.	Sparks
Hussey, Harry, CE, Fr.	Wells
Hutchings, Bobby D., Gr.	Lund
Hutchison, Hugh F., A&S, Fr.	Vallejo, Calif.
Hyde, Gerald A., Ag, Sr.	Rowland
Iacovelli, Darrel Durham, A&S, Sr.	Reno
Iacovelli, John A., A&S, Jr.	Las Vegas
Ianni, Anna M., A&S, So.	Fernley
Ianni, Pio W., ME, Sr.	Reno
Imperatrice, Nan, A&S, T-Fr.	Sanger, Calif.
Ingram, Wendelyn Ruth, A&S, So.	San Mateo, Calif.
Inman, Frank E., Gr.	Reno
Ireland, Mary Farrell, A&S, Sp.	Brooklyn, N. Y.
Ireland, Willis J., A&S, So.	McGill
Irish, Rolon C., A&S, So.	Reno
Irwin, Elsie R., A&S, Sr.	Reno

Name, College, and Class	Home address
Irwin, Mary K., A&S, Fr.....	Las Vegas
Itza, Marion, A&S, Jr.....	Winnemucca
Iverson, Roger O., A&S, Fr.....	Reno
Jack, Mary E., A&S, Fr.....	Reno
Jackson, Barbara K., A&S, Fr.....	East Ely
Jackson, James K., A&S, Fr.....	Sparks
Jackson, Thelma D., A&S, Sp.....	Reno
Jacobs, Raymond G., CE, Sr.....	Reno
Jacobson, Harold L., MM, T-Fr.....	Morton, Minn.
Jager, Wilbur B., A&S, Jr.....	Hollywood, Calif.
Jahn, Theodore, EE, Sr.....	Vallermo, Calif.
James, William R., A&S, T-Fr.....	Los Gatos, Calif.
Jansen, Wilfred E., A&S, Fr.....	Auburn, Calif.
Jarrett, Earl L., A&S, So.....	Las Vegas
Jee, Stanley Bon, A&S, So.....	Reno
Jefferson, Blanch Guthrie, A&S, Jr.....	Reno
Jefferson, Patricia A., A&S, So.....	Reno
Jensen, Erna Slighter, A&S, T-Fr.....	Reno
Jensen, Esther L., HE, Sr.....	Sparks
Jensen, Frederick R., A&S, Sr.....	Gardnerville
Jensen, Minnie Springmeyer, A&S, So.....	Gardnerville
Jensen, Reilly C., A&S, Sr.....	Logandale
Jepsen, Hans R., Jr., A&S, Sr.....	Minden
Johns, Stanley D., A&S, Jr.....	Oxnard, Calif.
Johnson, Arthur J., ME, Jr.....	Reno
Johnson, Charlotte B., A&S, Jr.....	Lovelock
Johnson, Dean, Gr.....	Brawley, Calif.
Johnson, Edward A., A&S, Fr.....	Elko
Johnson, Edward M., A&S, Sr.....	Reno
Johnson, Frank H., A&S, So.....	Reno
Johnson, Joyce McElwain, A&S, So.....	Reno
Johnson, Katherene Cladianos, A&S, Fr.....	Reno
Johnson, Ned K., A&S, Fr.....	Reno
Johnson, Noel W., Gr.....	Reno
Johnson, Roy H., A&S, Fr.....	Reno
Johnson, Verlita L., A&S, So.....	Reno
Johnson, Virgil K., A&S, Sr.....	Reno
Johnston, Don R., A&S, Fr.....	Sparks
Johnston, Jeraldine, A&S, Fr.....	Reno
Johnston, William A., A&S, Fr.....	Carlin
Jolly, Salle Ann, A&S, Fr.....	Reno
Jones, Donald P., A&S, T-Fr.....	San Diego, Calif.
Jones, Edmund A., A&S, Sr.....	Reno
Jones, Robert H., ME, Fr.....	Carlin
Jones, Stanley E., A&S, So.....	Pioche
Jorgensen, Corrine M., A&S, So.....	San Francisco, Calif.
Joy, Lyle A., CE, T-Fr.....	Sacramento, Calif.
Judd, Evelyn G., HE, Fr.....	Yerington
Kalmanir, Andy A., A&S, Fr.....	Jerome, Pa.
Kane, Roger M., MM, Fr.....	Portsmouth, Va.
Kaplowitz, Richard E., A&S, T-Fr.....	Perth Amboy, N. J.
Karacabey, Tahsin, Gr.....	Turkey
Karrasch, Robert R., Ag, So.....	Saint Joseph, Mo.
Karren, Thomas J., A&S, So.....	Fallon
Kattenhorn, Lois G., A&S, So.....	Battle Mountain

Name, College, and Class	Home address
Kay, Alton R., Engr., T-Fr.....	Eureka, Calif.
Kean, Alice W., A&S, So.....	Carson City
Keddie, Helen M., A&S, Sr.....	San Francisco, Calif.
Keddie, Jean A., A&S, Fr.....	San Francisco, Calif.
Keefer, William W., A&S, Fr.....	Las Vegas
Keely, Daniel A., A&S, Fr.....	Imlay
Keen, Jack L., A&S, Fr.....	Reno
Keller, Stuart Y., A&S, Fr.....	Algonquin, Ill.
Kemp, Barbara H., A&S, Jr.....	Clovis, Calif.
Kennedy, Harry D., Gr.....	Palo Alto, Calif.
Kent, Mary Lou, A&S, Fr.....	Fallon
Kepler, David E., A&S, Sr.....	Walnut Creek, Calif.
Kerman, Jane J., A&S, Fr.....	Reno
Kerr, Keith H., A&S, So.....	Lodi, Calif.
Kershner, Shirley V., A&S, So.....	Elko
Kerstetter, Sylvia Hanson, A&S, So.....	Reno
Kerstetter, Theodore H., A&S, So.....	Reno
Kewley, Bruce R., A&S, Sr.....	Lovelock
Kilgore, Reese W., A&S, T-Fr.....	Grimes, Calif.
Kimber, Merrill G., Ag, Fr.....	Elko
King, Edith Anne, A&S, Fr.....	Reno
Kinner, Richard E., EE, Sr.....	Reno
Kirkeby, Kaye Alfred, Ag, Fr.....	Ely
Kirksey, Patricia L., A&S, Sr.....	San Francisco, Calif.
Klito, Eml, A&S, Jr.....	Fallon
Kjeldsen, James R., A&S, Fr.....	Lovelock
Klenes, James, A&S, So.....	Uniontown, Pa.
Klimaszewski, Theodore S., A&S, Sr.....	Garfield, N. J.
Kling, Betty Jean, A&S, So.....	Carlin
Knecht, Richard H., A&S, T-Fr.....	Bishop, Calif.
Knezevich, George, Ag, Sp.....	Winnemucca
Knezevich, John, A&S, Sp.....	Winnemucca
Knight, Richard G., Ag, So.....	Concord, Calif.
Knudson, Elmer R., A&S, Sr.....	Reno
Ko, A. Joyce, Ag, Jr.....	Reno
Kocka, Vera V., A&S, So.....	Reno
Kofoed, Leslie V., A&S, So.....	Reno
Koizumi, Tommy, A&S, Fr.....	Sparks
Kokx, Russell D., Ag, Fr.....	Long Beach, Calif.
Korb, Robert W., A&S, Sr.....	Reno
Kornmayer, Mardelle L., A&S, Jr.....	Reno
Kortschak, German F., A&S, Sr.....	Austria
Kottinger, William B., A&S, Fr.....	Reno
Kovinick, Mark G., A&S, T-Fr.....	Venice, Calif.
Kovinick, Philip P., Jr., A&S, T-Fr.....	Venice, Calif.
Krater, Bruce A., CB, Fr.....	Independence, Calif.
Krieger, Arthur A., MM, Sr.....	N. Sacramento, Calif.
Kunkel, Clair M., MM, Sr.....	Goldfield
Kurtis, Thomasine T., A&S, Jr.....	Reno
LaBounty, Janice B., A&S, So.....	Hawthorne
Laird, Louise R., A&S, So.....	Stewart
Laird, Nancy E., A&S, Jr.....	Reno
Lake, Robert N., A&S, Sp.....	Greenwich, Conn.
Lamberson, Ellis E., A&S, Sr.....	Sparks
Lambrecht, Charles E., ME, Fr.....	Grass Valley, Calif.
Lamson, Wayne J., A&S, Fr.....	Oakland, Calif.

Name, College, and Class	Home address
Lanahan, William J., A&S, So.....	Reno
Lancaster, Catherine H., A&S, So.....	Quincy, Calif.
Lang, Joan H., A&S, So.....	Lansdowne, Pa.
lange, Lois M., A&S, Fr.....	Gardnerville
lange, Ronald V., A&S, Sr.....	Gardnerville
Larkins, Burt J., A&S, Jr.....	San Francisco, Calif.
Larsen, Rex M., A&S, Fr.....	Reno
Larsen, Robert T., A&S, Jr.....	Reno
Larson, Valdemar F., MM, Sr.....	Whittier, Calif.
Lartey, Germaine G., A&S, Fr.....	Reno
Lartey, Norine J., A&S, So.....	Reno
Lash, Joe R., A&S, Fr.....	Colton, Calif.
Latta, Clarence, A&S, Sp.....	Reno
Laubach, Duane G., A&S, T-Fr.....	Henderson
Laughlin, Luame, A&S, T-Fr.....	Ely
Laurie, Shirley Anne, A&S, Jr.....	Sparks
Lavega, Vincent P., A&S, Fr.....	Sparks
Law, William B., A&S, Fr.....	Reno
Lazzari, George, A&S, Fr.....	Reno
Leavitt, Gail H., A&S, Fr.....	Bunkerville
Leavitt, Myron E., Jr., A&S, Jr.....	Las Vegas
Lecumberry, Fermin, Gr.....	Winnemucca
Ledford, Anna F., A&S, Fr.....	Reno
LeDuc, Marc R., A&S, Fr.....	Walnut Creek, Calif.
Lee, Constance J., A&S, Fr.....	Boulder City
Lee, Eleanor C., Gr.....	Reno
Lee, Edward E., Jr., A&S, Sr.....	Marshall, Tex.
Lee, Fred R., Jr., MM, So.....	San Diego, Calif.
Lee, James M., A&S, So.....	Henderson
Lee, John B., A&S, Sp.....	Sparks
Lee, Keith, Gr.....	Reno
Lee, M. Florence, A&S, Fr.....	Panaca
Leinherr, Adeline H., A&S, Fr.....	Stewart
LeMaire, Edward, MM, Jr.....	Minden
Lemmon, Ronald D., CE, So.....	Boulder City
Leonard, Arthur C., Jr., A&S, So.....	Reno
Leonard, Lawrence C., A&S, Sr.....	Reno
Leonard, Robert S., A&S, Fr.....	Las Vegas
Leonesio, Miriam M., A&S, Fr.....	Reno
Levinson, Howard E., Gr.....	Seattle, Wash.
Lewers, Diane P., A&S, Fr.....	Reno
Lewis, James B., A&S, So.....	Berkeley, Calif.
Lewis, James K., A&S, T-Fr.....	Ontario, Calif.
Lewis, Julius J., Jr., A&S, Sp.....	Philadelphia, Pa.
Lewis, Mark E., Gr.....	Reno
Lindsay, Robert O., A&S, Fr.....	Sparks
Lindsey, Robert L., A&S, Fr.....	Champaign, Ill.
Linfesty, Lyman D., Gr.....	Bakersfield, Calif.
Lingenfelter, Cornelius W., Ag, So.....	Gerlach
Linn, Samuel J., Jr., CE, Fr.....	Redding, Calif.
Linscott, Jack B., Ag, Fr.....	Reno
Liskum, Kenneth R., A&S, Fr.....	Las Vegas
Little, Otto J., Jr., CE, Fr.....	Boulder City
Llop, Louis Pasqual, Gr.....	Reno
Lobaugh, Kurt J., A&S, Fr.....	Lodi, Calif.
Logue, Daniel L., A&S, T-Fr.....	Sebastopol, Calif.
Lohse, Emma M., A&S, So.....	Paradise Valley

Name, College, and Class	Home address
Lojas, Catherine H., A&S, Fr.....	Sparks
Lokke, Theodore H., A&S, Sr.....	Sparks
Long, Arthur, Jr., A&S, So.....	Ravenna, Ky.
Louis, George A., A&S, Sr.....	New York City, N. Y.
Love, Joan, A&S, Fr.....	Reno
Loveall, Patsy J., A&S, Fr.....	Reno
Loveless, Donald K., A&S, Fr.....	Reno
Lowe, Robert M., Jr., CE, T-Fr.....	San Francisco, Calif.
Lowry, Darlene B., A&S, So.....	Winnemucca
Lowry, Kenneth B., A&S, So.....	Piedmont, Calif.
Luce, William E., A&S, So.....	Reno
Luis, William H., A&S, Fr.....	Reno
Lund, Clarence A., A&S, Sr.....	Virginia City
Lund, Richard, A&S, Sr.....	Reno
Lundby, William, MM, Sr.....	McGill
Lundergreen, Franklin J., A&S, Fr.....	Gardnerville
Lundgren, James L., A&S, Fr.....	Babbitt
Lundy, Joan, HE, Jr.....	Winnemucca
Lusebrink, Mary R., A&S, T-Fr.....	Reno
Lusebrink, Ted R., Gr.....	Reno
Lusebrink, William N., A&S, Sr.....	Concord, Calif.
Lusich, George J., Jr., CE, Sr.....	Sparks
Lusich, Nick L., A&S, Fr.....	Reno
Lusty, Edward F., A&S, Fr.....	Reno
Luwe, Jack F., A&S, So.....	Reno
Lynch, James F., Jr., CE, Sr.....	Elko
Lyon, Hilma W., A&S, Jr.....	Reno
Lyons, Geraldine E., A&S, Jr.....	Reno
Lyons, Mark S., MM, So.....	Brentwood, Calif.
Lytle, Edward M., Jr., MM, So.....	Pasadena, Calif.
Macaulay, Thomas R., CE, Gr.....	Reno
MacDiarmid, Robert A., Ag, Sr.....	Sini, Calif.
MacDonald, George W., A&S, Fr.....	Reno
Macdonald, Roger W., A&S, Fr.....	Reno
MacIver, Carol E., HE, Sr.....	Marsing, Idaho
MacKenzie, Albert E., A&S, So.....	Yerington
MacKenzie, Walter E., A&S, Jr.....	San Mateo, Calif.
Mackey, John D., A&S, T-Fr.....	Reno
Mackie, Alick J., A&S, Fr.....	Henderson
Mackie, Robert W., A&S, Fr.....	Henderson
Maclean, George, A&S, So.....	Reno
MacPhee, Dorris C., A&S, So.....	Reno
Madsen, Robert A., Ag, Fr.....	Fallon
Maestretti, Don, A&S, Jr.....	Battle Mountain
Magee, Maureen E., A&S, Jr.....	Reno
Magruder, Nina G., A&S, So.....	Tungsten
Maher, William C., Jr., MM, Fr.....	Homer, N. Y.
Malcolm, Constance L., A&S, Jr.....	Henderson
Malcolm, Marcia Ann, A&S, Fr.....	Henderson
Manford, Ardiss L., A&S, Fr.....	Reno
Manson, Darlene Lynn, A&S, Fr.....	Reno
Mantle, Evelyn, Gr.....	Reno
Manucia, Herbert L., A&S, Sr.....	Alexandria, Va.
Marker, Robert H., A&S, So.....	Reno
Marks, Jerome F., A&S, Sr.....	Reno

Name, College, and Class	Home address
Marks, Raymond E., A&S, So.....	Reno
Marks, Selby H., MM, Sr.....	Pittsburg, Calif.
Marshall, Doris C., HE, Sp.....	Reno
Marshall, Holman T., Jr., A&S, So.....	Ely
Marshall, Lynne A., A&S, T-Fr.....	Sacramento, Calif.
Marshall, Reid A., ME, Fr.....	Reno
Martelle, Gloria, A&S, So.....	Reno
Martin, Anna Thorp, A&S, T-Fr.....	Stewart
Martin, Conrad, Gr.....	Reno
Martin, George E., A&S, Jr.....	Newark, N. J.
Martin, Gerald B., Ag, Fr.....	Winnemucca
Martin, Norman L., MM, T-Fr.....	Watsonville, Calif.
Martin, Robert E., A&S, So.....	Tucson, Ariz.
Martinez, Dolores, A&S, Fr.....	Winnemucca
Marvel, John W., A&S, Sr.....	Battle Mountain
Masier, John W., CE, So.....	North Sacramento, Calif.
Mason, Marla M., Ag, So.....	Lodi, Calif.
Mason, Stella M., A&S, Jr.....	Las Vegas
Massey, Tom M., A&S, Fr.....	Gary, Ind.
Mathews, Frank D., A&S, Sr.....	Wilmington, Calif
Mathis, David H., A&S, So.....	Kimberly
Matranga, Paul P., A&S, Sp.....	Montebello, Calif.
Matteucci, Albert, A&S, Jr.....	Las Vegas
Matteucci, Malcolm G., A&S, Jr.....	Las Vegas
Maxwell, Robert C., A&S, T-Fr.....	Milwaukee, Wis.
Mayfield, Chester J., A&S, So.....	Reno
McAuliffe, Jack I., A&S, So.....	Las Vegas
McCabe, Joan I., A&S, Sr.....	Los Angeles, Calif.
McCarthy, Lovis J., A&S, Fr.....	Reno
McClure, Blanche, A&S, Jr.....	Battle Mountain
McClure, Lorin E., A&S, Fr.....	Piedmont, Calif.
McCormack, Robert M., ME, Sr.....	Kentfield, Calif.
McCrae, Robert G., MM, Sr.....	Reno
McCray, Berlien L., A&S, Jr.....	Reno
McCulloch, John S., A&S, Sr.....	Elko
McDaniel, James B., MM, T-Fr.....	Las Vegas
McDonald, Edith G., A&S, Jr.....	Lovelock
McDonald, Gloria E.....	Reno
McDowell, Verla Champagne, A&S, Gr.....	Sparks
McEachern, Elizabeth J., A&S, So.....	Lovelock
McElrath, Thomas W., ME, So.....	Wells
McElwain, Dorothy R., A&S, Fr.....	Reno
McFadden, Albert J., A&S, Jr.....	Las Vegas
McFarland, Barbara J., A&S, Fr.....	Reno
McGarry, Nola M., Gr.....	Reno
McGoodwin, John W., A&S, So.....	Henderson
McGoodwin, Margaret Hansen, A&S, Sr.....	Needles, Calif.
McGowan, Donna R., A&S, So.....	Lovelock
McGuigan, Lillian C., Gr.....	Reno
McGuire, Dorothy R., Gr.....	Fort Bragg, Calif.
McKissick, Sally L., A&S, T-Fr.....	Reno
McKnight, Margery, A&S, Sr.....	Reno
McLaughlin, Leonard J., A&S, Sr.....	Fallon
McNabney, James, A&S, Sr.....	Reno
McNally, Francis J., A&S, Gr.....	Dover, N. H.
McPartland, Charles V., A&S, Fr.....	Reno
McPartland, James O., EE, Fr.....	Sparks

Name, College, and Class	Home address
McPartland, Robert E., Ag, Fr.....	Sparks
McPartland, Sharon K., A&S, Fr.....	Reno
McVey, Phillip B., Ag, Sr.....	Reno
Means, Jack A., CE, Sr.....	Reno
Means, Lawrence G., A&S, Sr.....	Reno
Meckes, John O., A&S, Fr.....	Reno
Melcher, Joe F., Jr., A&S, So.....	Reno
Melendy, Alice Mae, HE, Fr.....	Reno
Melendy, Patricia A., HE, Sr.....	Reno
Melner, Joan H., A&S, So.....	Reno
Melton, Rollan D., A&S, Fr.....	Fallon
Mendiola, Louis H., A&S, Fr.....	Winnemucca
Menicucci, John L., Jr., A&S, Fr.....	Reno
Menicucci, Joseph M., A&S, Sr.....	Reno
Menu, Joanne, A&S, Fr.....	Reno
Merwin, Robert B., Gr.....	Reno
Metzger, Donald L., A&S, Fr.....	Twenty Nine Palms, Calif.
Metzger, Joan L., A&S, So.....	Reno
Meyer, Billy I., ME, Jr.....	Carson City
Meyer, Katherine, A&S, So.....	Sparks
Michelsen, Virginia, Gr.....	Sparks
Micheo, Joseph D., Jr., A&S, So.....	Gardnerville
Micheo, Mary G., A&S, Sr.....	Gardnerville
Michienzi, James A., A&S, Sr.....	St. Paul, Minn.
Miles, Richard L., A&S, Sr.....	Fallon
Miller, Clarence L., A&S, Jr.....	Henderson
Miller, Elizabeth H., A&S, Jr.....	Sacramento, Calif.
Miller, Ethel L., A&S, Sr.....	Reno
Miller, James H., MM, Fr.....	Pocatello, Idaho
Miller, Joan, A&S, Fr.....	Henderson
Miller, Lister K., CE, Fr.....	Virginia City
Miller, Marnie E., A&S, Sr.....	Winnemucca
Miller, Oliver Ray, A&S, So.....	Reno
Miller, Robert W., CE, Jr.....	Virginia City
Miller, Stanley K., A&S, Jr.....	Winnemucca
Miller, William G., A&S, Fr.....	Reno
Mills, Marilyn, A&S, Fr.....	Logandale
Mills, Russell G., A&S, So.....	Reno
Minkel, Carol Ann, A&S, Fr.....	San Francisco, Calif.
Minola, Norman A., A&S, So.....	Carlin
Mirabelli, Michael A., A&S, Sr.....	Las Vegas
Miramón, Alfred, CE, Jr.....	Reno
Mishaud, Edna, A&S, Sp.....	Reno
Mitchell, Arthur R., A&S, T-Fr.....	Las Vegas
Mitchell, Lewis N., Jr., A&S, Fr.....	San Francisco, Calif.
Miyashiro, Shinji, A&S, T-Fr.....	Hawaii
Mokler, Corwin M., Gr.....	Pueblo, Colo.
Mokler, Margaret Costello, A&S, T-Fr.....	Cambridge, Mass.
Monroe, Gail Moana, A&S, T-Fr.....	Reno
Montero, Laurence, A&S, Fr.....	Winnemucca
Moore, Bebe Ann, A&S, Sr.....	Gabbs
Moore, Charles, Gr.....	Quincy, Calif.
Moore, Edith, Gr.....	Winnemucca
Moore, Maryhelen M., A&S, Fr.....	Winnemucca
Moore, Robert H., A&S, Jr.....	Reno
Moore, Ruth E., A&S, So.....	Winnemucca
Moose, Joe D., EE, Fr.....	Reno

Name, College, and Class	Home address
Moran, Robert E., A&S, So.....	Santa Monica, Calif.
Morey, Beverly M., Gr.....	Long Beach, Calif.
Morettini, Donald J., A&S, T-Fr.....	San Francisco, Calif.
Morrice, Edward, Jr., Gr.....	San Francisco, Calif.
Morris, Beverly L., A&S, Fr.....	Reno
Morrison, Gary C., Ag, Fr.....	Reno
Morrison, James S., A&S, Jr.....	San Francisco, Calif.
Morrison, Judy, HE, So.....	San Francisco, Calif.
Mortensen, John H., A&S, Fr.....	Reno
Mortimer, LeRoy W., A&S, Fr.....	Gardnerville
Moss, Eliza B., A&S, Fr.....	Reno
Moss, Marian D., A&S, Fr.....	Reno
Moss, Marvin L., A&S, Jr.....	Sparks
Mount, Nancy Lee, A&S, Fr.....	Hawthorne
Mowbray, John T., A&S, So.....	Reno
Moyer, Harlan E., CE, So.....	Alturas, Calif.
Mueller, Karl, A&S, So.....	Philadelphia, Pa.
Mulcahy, Sharon, A&S, T-Fr.....	Los Angeles, Calif.
Mulgrew, James F., MM, Fr.....	Carlisle, Pa.
Mullen, Alberta, A&S, T-Fr.....	Reno
Munk, Jerry L., EE, Fr.....	Lovelock
Munson, Bert Q., A&S, Fr.....	Ely
Murnane, Daniel J., A&S, Fr.....	Tonopah
Murray, Mary Schwindel, A&S, So.....	Reno
Murray, Sheila M., HE, Fr.....	Sherman Oaks, Calif.
Myers, Ronald G., A&S, Fr.....	Reno
Myles, Beverly J., A&S, So.....	Austin
Myles, George A., Ag, Fr.....	Austin
Myles, Vale P., EE, Jr.....	Austin
Nagel, William L., CE, Jr.....	Carson City
Nannini, Florindo, Gr.....	Reno
Nannini, Louis G., ME, Sr.....	Wells
Nannini, Richard I., A&S, So.....	Reno
Nason, Marian Piccinini, A&S, Sr.....	Carlin
Naylor, David M., CE, T-Fr.....	Sacramento, Calif.
Neal, John A., A&S, Fr.....	Reno
Neff, Frank, MM, Sr.....	Vallejo, Calif.
Neill, Viola Mae, A&S, So.....	Wellington
Nelson, Jake A., Ag, Fr.....	Alamo
Newman, Ronald D., A&S, Fr.....	Spokane, Wash.
Nichols, Claude W., Jr., A&S, Jr.....	Reno
Nielsen, Conrad A., A&S, Fr.....	Reno
Nielsen, Helen M., A&S, Fr.....	Sparks
Nightingale, Richard, A&S, T-Fr.....	Los Angeles, Calif.
Nightingale, Robert B., A&S, Fr.....	Reno
Noble, Rocco V., A&S, So.....	Reno
Nocciolo, Albert C., A&S, Sr.....	Belleville, N. J.
Notan, Chris, A&S, Jr.....	Caliente
Norlen, Mary Anne, A&S, Fr.....	Reno
Normandy, Carol Ann, A&S, Fr.....	Reno
Norseth, Donald C., MM, Fr.....	Ogden, Utah
Norton, Patrick M., A&S, Fr.....	Reno
Novak, Warren J., A&S, Fr.....	Provo, Utah
Nussbaum, Gerge J., EE, Fr.....	Reno
Nyberg, Marlene J., A&S, So.....	Reno

Name, College, and Class	Home address
O'Brien, Leo M., A&S, Sr.	Reno
O'Donnell, John P., A&S, Fr.	Babbitt
Oehler, Charles F., A&S, Fr.	Reno
Oelsner, Don G., A&S, T-Fr.	Yerington
Ogilvie, Rufus, Jr., EE, Sr.	Azusa, Calif.
O'Halloran, Patrick L., A&S, Fr.	Reno
Oldfield, Shirley R., A&S, Fr.	Ely
Oldham, Carol Ann, A&S, So.	Silver City
Olinghouse, Kenneth R., ME, Sr.	Pioche
Olmsted, Roger R., Gr.	Pacific Grove, Calif.
Olson, Darlene L., A&S, Sp.	Reno
Olson, Howard S., EE, Sr.	Santa Rosa, Calif.
Omoto, Clarence Y., A&S, Sr.	Hawaii
O'Neill, John K., A&S, So.	Reno
Ormsby, Thomas F., A&S, Fr.	Ely
Ornas, George J., A&S, So.	San Francisco, Calif.
Orr, Helen F., A&S, So.	Pioche
Orton, Roberta, A&S, Fr.	Boulder City
Osborne, Lloyd B., Ag, Fr.	Reno
Osborne, Vivienne A., A&S, Fr.	Reno
Osmuu, James W., Jr., EE, So.	Reno
Ouimet, Dan, EE, Fr.	Las Vegas
Oviatt, Martha, A&S, T-Fr.	San Mateo, Calif.
Oxborrow, Elma D., A&S, Jr.	Ely
Oyarbide, Rose, A&S, Sr.	Battle Mountain
Packard, Bruce A., CE, Fr.	Sacramento, Calif.
Parkard, William D., MM, Sr.	Sacramento, Calif.
Pacini, Silvano J., A&S, Jr.	Carlin
Panicari, Carlo F., A&S, Jr.	Reno
Panicari, Mary L., A&S, T-Fr.	Reno
Pardi, Martha J., A&S, Jr.	Dixon, Calif.
Pardi, Robert N., A&S, Jr.	Dixon, Calif.
Park, Robert G., EE, So.	Henderson
Parke, Harriet V., A&S, So.	Reno
Parker, Ernest J., MM, Fr.	Bridgeport, Conn.
Parker, Laurel L., A&S, So.	Reno
Parks, Lucile Snider, Gr.	Reno
Parks, Samuel Y., Jr., A&S, T-Fr.	Long Beach, Calif.
Parman, Helen L., A&S, T-Fr.	Lake City, Calif.
Parrish, Ann, A&S, So.	Carson City
Parsons, Beck, Gr.	Quincy, Calif.
Pasquale, Inez C., A&S, Fr.	Winnemucca
Paterson, James A., A&S, Fr.	Reno
Patrick, Robert L., ME, Sr.	Reno
Patterson, Ruth W., Gr.	Reno
Paulson, Jean Ann, A&S, Fr.	Henderson
Pavlakis, Lazo A., A&S, So.	Ely
Pearson, Wayne O., A&S, Jr.	McGill
Pederson, Janice M. Yeakey, A&S, Sr.	Reno
Pederson, Roger J., EE, Fr.	Reno
Pelter, William, A&S, Fr.	Reno
Pence, George E., Jr., MM, Sr.	Reno
Pendleton, George M., A&S, So.	Reno
Penman, Jack A., A&S, Fr.	Reno
Pennintgon, Knute D., A&S, Fr.	Ruth

Name, College, and Class	Home address
Perez, Lionel, A&S, T-Fr.....	No. Hollywood, Calif.
Perry, Mona L., A&S, Jr.....	Las Vegas
Perry, Richard C., MM, Fr.....	Carlin
Pershall, Dawn Fae, A&S, Jr.....	Las Vegas
Persigehl, Richard L., CE, So.....	Tonopah
Petermann, Joan E., A&S, T-Fr.....	San Gabriel, Calif.
Peters, Yvonne D., A&S, Sp.....	Sparks
Petersen, Carol Ann, A&S, Fr.....	Reno
Petersen, John C., CE, Jr.....	Mason
Peterson, Arthur D., A&S, So.....	Babbitt
Peterson, Don Lee, A&S, So.....	Reno
Peterson, Donald M., A&S, Fr.....	Hawthorne
Peterson, Dwight W., A&S, Sr.....	Babbitt
Peterson, John V., EE, T-Fr.....	Reno
Peterson, Vivian P., A&S, So.....	Reno
Petre, Maurice M., A&S, Fr.....	Reno
Petrini, Robert E., A&S, So.....	Sparks
Petroni, Donald V., A&S, So.....	Reno
Pflug, Alma Scott, A&S, Sp.....	Reno
Pflug, Gordon E., MM, Jr.....	Chico, Calif.
Pfluke, Chester H., EE, Fr.....	Reno
Phillips, Gwen, A&S, Jr.....	Reno
Piazzo, Robert L., A&S, Fr.....	Reno
Picchi, Anna Marie, A&S, Sr.....	Sparks
Picchi, Blanche D., A&S, Fr.....	Sparks
Piccinini, Marian C. (Nason), A&S, Sr.....	Carlin
Piccinini, Richard B., A&S, Sr.....	Carlin
Pico, Robert J., A&S, Jr.....	Las Vegas
Pico, Walter G., A&S, So.....	Las Vegas
Pieretti, Tosca M., A&S, So.....	Carlin
Pike, Patricia E., A&S, Fr.....	Reno
Plummer, Walter W., A&S, Jr.....	Reno
Poe, Beverly J., A&S, So.....	Sparks
Poehmann, Clement V., Ag, Fr.....	San Francisco, Calif.
Polikalas, Takis A., A&S, Fr.....	Greece
Polson, Billie Mae, A&S, Fr.....	Las Vegas
Porter, Bruce W., A&S, T-Fr.....	Los Angeles, Calif
Porter, Louis K., EE, Sr.....	Las Vegas
Porter, R. Wade, EE, Fr.....	Bethel Island, Calif.
Potter, Helen M., A&S, Fr.....	Reno
Potter, Robert J., A&S, So.....	Reno
Powell, Elaine R., A&S, So.....	Las Vegas
Powell, Joan Ann, A&S, Sr.....	Reno
Powell, Maureen J., A&S, Fr.....	Henderson
Powell, Roger Lee, MM, So.....	Reno
Powell, Shirley Ann, A&S, Jr.....	Henderson
Pratt, David S., A&S, So.....	Reno
Price, Michael, MM, So.....	Detroit, Mich.
Pringle, Robert S., ME, Jr.....	Reno
Prugh, Walter H., A&S, Sr.....	San Francisco, Calif.
Pulsipher, Charles K., A&S, Sr.....	Logandale
Pulsipher, Elwin D., Ag, So.....	Logandale
Pursel, Melvin E., Ag, Fr.....	Yerington
Purtill, Frederic L., A&S, Sr.....	Watsonville, Calif.
Puryear, James E., A&S, Sr.....	Ruth
Pyper, Stanley D., A&S, Sr.....	Wells

Name, College, and Class	Home address
Quilici, Leo P., A&S, Fr.....	Winnemucca
Quintana, John J., CE, So.....	Grand Jet, Colo.
Raker, Donnel R., Ag, Jr.....	Henderson
Ramesa, Stephen, A&S, T-Fr.....	San Pedro, Calif.
Ramsey, Allan A., CE, Fr.....	Reno
Ramsey, Robert T., CE, Jr.....	Reno
Rankin, Robert J., A&S, Sr.....	Reno
Rauhut, Michael, A&S, So.....	Reno
Ray, Robert C., ME, Jr.....	Reno
Reading, George E., A&S, So.....	Carson City
Reading, Jac B., A&S, Fr.....	Reno
Reagor, Vincent W., A&S, Fr.....	Reno
Rector, Juanita J., A&S, So.....	Reno
Redelius, Doris L., HE, Fr.....	Reno
Regnell, Janet K., A&S, Fr.....	Reno
Reid, Richard A., Ag, So.....	Lund
Reinken, William A., MM, Jr.....	Elko
Reuter, Gretchen L., A&S, Jr.....	Reno
Revene, Joseph G., A&S, Jr.....	Reno
Rhodehamel, Evelyn M., A&S, So.....	Boulder City
Rhodehamel, Jean C., A&S, Sr.....	Boulder City
Ricci, Olinto A., Gr.....	Dayton
Rice, Gertrude H. Sanford, HE, Sr.....	Reno
Rice, Kenneth T., Jr., ME, Sr.....	Reno
Rich, Joann P., A&S, Jr.....	Sacramento, Calif.
Richards, Donnell C., Ag, Fr.....	Reno
Richards, Shirley M. Chapman, A&S, Sr.....	Las Vegas
Richards, William Everts, A&S, So.....	Las Vegas
Richey, Glenn Tod, ME, T-Fr.....	Santa Rosa, Calif.
Riddle, Dale J., A&S, So.....	Lovelock
Rider, Janice, A&S, So.....	Wells
Riehm, Jack R., A&S, Fr.....	Lovelock
Rizzi, Shirley R., A&S, Fr.....	Mountain City
Robear, Sally L., A&S, Fr.....	Golconda
Robertson, John M., MM, So.....	Brooklyn, N. Y.
Robertson, Mortimer D., Ag, Fr.....	Lee
Robison, Roger L., MM, T-Fr.....	Phoenix, Ariz.
Roggenkamp, Bethel, A&S, Sr.....	Reno
Rohlfing, Barbara L., A&S, Fr.....	Reno
Rohlfing, Jane B., A&S, Fr.....	Reno
Rolph, Nancy J., A&S, So.....	Redwood City, Calif.
Romero, Neil, A&S, Fr.....	Las Vegas
Roscoe, Betty B., HE, Fr.....	Sierraville, Calif.
Rosene, John, CE, T-Fr.....	Vancouver, Canada
Ross, Charles R., MM, T-Fr.....	Oakland, Calif.
Ross, John T., A&S, Sr.....	Carson City
Routledge, Marilyn M., A&S, So.....	Dillon, Mont.
Rovetti, Harry D., A&S, So.....	Reno
Rovetti, Mary J., A&S, So.....	Reno
Rowe, Wilburta Sh., A&S, Sr.....	Reno
Rowntree, Thomasine, HE, Fr.....	Smith
Rowson, Leila J., A&S, So.....	Reno
Roylance, Robert M., MM, Sp.....	Reno
Royle, Patricia M., A&S, Sr.....	Reno
Royle, William G., A&S, Fr.....	Reno

Name, College, and Class	Home address
Rule, Jeanne E., A&S, Sr.	Reno
Rupp, J. Edward, A&S, Fr.	Reno
Russell, Stewart H., A&S, Fr.	Reno
Ryan, Charlene Ann, A&S, Fr.	Reno
Ryerse, Charles C., A&S, So.	Las Vegas
Rykken, Jack A., MM, T-Fr.	Bellingham, Wash.
Sabini, Raymond, CE, Jr.	Reno
Sala, Frank J., Jr., A&S, Fr.	Reno
Saling, Milo P., A&S, Fr.	Reno
Sanders, Earl M., A&S, T-Fr.	Los Gatos, Calif.
Sandorf, John L., A&S, So.	Reno
Sandow, Warren K., A&S, So.	Ely
Sanford, Robert C., A&S, Fr.	Reno
Sauer, Laura May, Ag, So.	Carson City
Saunders, Jack M., Gr.	Sacramento, Calif.
Savage, Leonard J., A&S, Jr.	Reno
Savini, Sam, A&S, Sr.	Yerington
Saxton, Gordon I., A&S, So.	Las Vegas
Schadrack, Franklin C., Ag, Fr.	Reno
Schafer, Gerard H., ME, Jr.	Reno
Schank, Stan C., Ag, Fr.	Fallon
Schaumburg, Dale P., A&S, So.	Reno
Schindler, George E., A&S, Fr.	Reno
Schleich, Wolfgang E., A&S, Sp.	Germany
Schmaling, Frances N., A&S, So.	Smith
Schmitt, Sherry C., A&S, Fr.	Fallon
Schooley, Russell T., A&S, Fr.	Reno
Schreiner, Barbara, A&S, Sr.	Las Vegas
Schroder, Lee R., A&S, Fr.	Yerington
Schultz, Joan C., A&S, So.	Las Vegas
Schulz, Margaret T., A&S, Jr.	Reno
Schumacher, Robert T., A&S, Sr.	Reno
Schwamb, Fred W., A&S, Fr.	Reno
Schwarz, George, Ag, So.	Elko
Scoffield, Ray F., CE, So.	Oakland, Calif.
Scott, James B., MM, Sr.	Reno
Scripps, Edward W., A&S, Jr.	Miramar, Calif.
Seruggs, Ernest N., Ag, Fr.	Roanoke, Va.
Seaberry, Geraldine I., A&S, Fr.	Sparks
Seacrist, Wayne C., EE, So.	Reno
Setterquist, Lee R., ME, So.	Vallejo, Calif.
Sewell, Margaret A., A&S, Fr.	Reno
Shackelford, Henry S., A&S, Fr.	Harlan, Ky.
Sharp, Melvin J., Ag, So.	Tonopah
Sharp, Milton L., CE, Fr.	Wells
Shaver, Elsie J., A&S, So.	Las Vegas
Shaw, Helen C., Gr.	Reno
Shaw, William G., A&S, Fr.	San Francisco, Calif.
Shaw, William W., Jr., ME, Fr.	Wadsworth
Shawe, Fred R., MM, Jr.	Gardnerville
Sheckles, Theo M., A&S, Fr.	Reno
Shelly, Barbara A., A&S, Jr.	Reno
Shelton, Warren H., A&S, So.	Boulder City
Shepard, William E., A&S, Sr.	Henderson
Sheperth, William, A&S, Fr.	Pocatello, Idaho
Sherman, Roger F., A&S, Fr.	Ordell, N. J.

Name, College, and Class	Home address
Shevlin, John E., A&S, So.....	Reno
Shields, Charles L., A&S, Jr.....	Tonopah
Shontz, George L., EE., Jr.....	Winnemucca
Short, Malcolm W., A&S, So.....	Reno
Showalter, Donald G., CE, T-Fr.....	Lone Pine, Calif.
Shreve, Gerald L., A&S, So.....	Bishop, Calif.
Simpson, Jo Ann, A&S, Fr.....	San Francisco, Calif.
Simpson, Norma Jean, A&S, Fr.....	Wells
Sirkogian, Jacqueline D., A&S, Sr.....	Reno
Skinner, James E., A&S, So.....	Reno
Skinner, Louis L., A&S, So.....	Reno
Slover, Robert M., Gr.....	Las Vegas
Smallwood, James W., A&S, T-Fr.....	Los Angeles
Smigle, Francis C., CE, Sr.....	Arcata, Calif.
Smith, Argyle L., Gr.....	Paso Robles, Calif.
Smith, Barbara Ann, A&S, Fr.....	Reno
Smith, Charles H., A&S, Sr.....	Reno
Smith, Daphne E., HE, Fr.....	Reno
Smith, Donald F., A&S, So.....	Reno
Smith, Douglas R., A&S, Jr.....	Riverside, Calif.
Smith, Harriett E., HE, So.....	Winnemucca
Smith, James T., A&S, Jr.....	Palo Alto, Calif.
Smith, Mary M., A&S, So.....	Reno
Smith, Paula Anne, A&S, Fr.....	Reno
Smith, Raymond I., II, A&S, Fr.....	Reno
Smith, Val D., A&S, Fr.....	Las Vegas
Smith, William F., A&S, So.....	Las Vegas
Smith, William J., A&S, T-Fr.....	Milwaukee, Wis.
Smith, William R., A&S, T-Fr.....	Auburn, Wash.
Smitten, Theo Ann, A&S, Jr.....	Fallon
Snyder, John A., EE, Sr.....	Hawthorne
Sollars, Donna JoAnn, A&S, Sr.....	Stockton, Calif.
Sommer, Arthur E., EE, So.....	Reno
Soos, Lawrence J., Gr.....	New York City, N. Y.
Sparling, Patricia C., HE, Fr.....	Hawthorne
Spath, Donald E., A&S, Fr.....	Alturas, Calif.
Spear, James V., Gr.....	Akron, Ohio
Spell, Jacqueline P., A&S, So.....	McGill
Spence, Mildred N., A&S, Fr.....	Sparks
Spencer, Harry, A&S, Sr.....	Ft. Lauderdale, Fla.
Spencer, Herbert G., A&S, Fr.....	Las Vegas
Spencer, John S., A&S, T-Fr.....	Reno
Spencer, Wallace D., A&S, Jr.....	Ruth
Spina, Charles, A&S, T-Fr.....	Reno
Sprague, Paul M., A&S, Jr.....	Las Vegas
Springmeyer, Albert A., A&S, So.....	Minden
Stafford, Victor H., MM, Sp.....	Reno
Stanley, Joan T., A&S, T-Fr.....	Atherton, Calif.
Stanford, Jerry A., A&S, So.....	Las Vegas
Stark, Lloyd, ME, Sp.....	Reno
Stathes, Mary R., A&S, Fr.....	McGill
Stay, Clinton E., MM, Sp.....	North Las Vegas
Stead, William, A&S, So.....	Reno
Stedman, Joan Hill, HE, So.....	Palo Alto, Calif.
Steel, Miles, ME, Sr.....	Palo Alto, Calif.
Stefani, Joseph, A&S, So.....	Sparks
Stephens, Edward C., A&S, Fr.....	Sparks

Name, College, and Class	Home address
Stephens, Ialo D., Jr., MM, Sr.	Roseburg, Ore.
Sterling, H. Kathryn, Gr.	Lovelock
Sterud, Valerie M., A&S, Fr.	Reno
Stewart, Mark A., Gr.	San Luis Obispo, Calif.
Still, Kim, A&S, So.	Reno
Stimac, Paul J., Gr.	Mt. Iron, Minn.
Stimus, Susan M. Webster, A&S, T-Fr.	Lansdowne, Pa.
Stone, Kenneth C., Jr., EE, Sr.	Raleigh, N. C.
Story, George W., EE, Sr.	Esparto, Calif.
Straight, James W., MM, Fr.	Sparks
Strang, Robert C., A&S, Sr.	Reno
Stratton, Edgar J., Ag, Jr.	Reno
Street, Mary D., Ag, T-Fr.	Reno
Streng, George E., A&S, So.	Reno
Stubbins, James F., A&S, So.	Las Vegas
Stucki, Darlene, Ag, Sr.	East Ely
Suchy, Ray C., A&S, Fr.	Algonquin, Ill.
Sullivan, George F., A&S, So.	Las Vegas
Sullivan, Nancy, Gr.	Lovelock
Summers, John L., Ag, Fr.	Gardnerville
Sumner, Wilfred A., Ag, Jr.	Hayward, Calif.
Sundberg, Barbara E., A&S, Fr.	Ely
Surber, Gordon E., A&S, So.	Elgin, Ill.
Sutton, Kay Parker, CE, Fr.	Reno
Swift, Richard L., A&S, Fr.	Boulder City
Swift, Shirley Ann, A&S, Fr.	Henderson
Swope, Chester Coe, A&S, So.	Reno
Swope, Nancy L., IIE, Fr.	Reno
Swope, Richard J., MM, T-Fr.	Sacramento, Calif.
Tanner, Michael N., EE, So.	Stockton, Calif.
Tate, James W., A&S, Sr.	Minneapolis, Minn.
Taylor, Barbara J., A&S, Fr.	Reno
Taylor, Cecile, A&S, Fr.	Reno
Taylor, Daniel M., MM, Fr.	Reno
Taylor, Donald B., A&S, Jr.	Bayard, N. M.
Taylor, Richard, A&S, Sr.	Carson City
Taylor, William D., A&S, Fr.	Carson City
Teegarden, Chester O., Gr.	Quincy, Calif.
Teel, R. Elaine, A&S, Fr.	Fallon
Tempinski, Edward W., MM, Fr.	Reno
Templeton, Margaret A., A&S, Fr.	McGill
Terry, Margaret K., A&S, Fr.	Elko
Tervort, Jack Lee, Gr.	McGill
Tett, Mark P., ME, Fr.	Reno
Thiercof, Drury J., A&S, Fr.	Reno
Thomas, Helen J., A&S, Fr.	Sparks
Thomas, James, A&S, Sp.	Reno
Thomas, Richard L., A&S, So.	Ely
Thompson, Craig D., MM, Sr.	Cumberland, Md.
Thompson, Donald S., A&S, Sr.	Reno
Thompson, Ellen, Gr.	Reno
Thompson, Lucille M., A&S, Fr.	Hawthorne
Thompson, Merlynn N., Gr.	Reno
Thompson, Sharon L., A&S, Fr.	Reno
Thornburg, Robert E., Jr., MM, Fr.	St. John, Ind.
Thorne, Gayl L., A&S, Fr.	Reno

Name, College, and Class	Home address
Thorp, Burney V., A&S, Sp.....	Sparks
Thran, Leslie W., EE, So.....	Minden
Tibbals, Donald C., MM, So.....	Sacramento, Calif.
Tieber, Stephen V., A&S, Fr.....	Pittsburgh, Pa.
Tietje, Louanna, A&S, Sr.....	Gardnerville
Timberlake, Alice G., A&S, Sr.....	Reno
Tippin, Donald J., A&S, Fr.....	Hawthorne
Titus, Sara E., A&S, Fr.....	Ely
Toczyłowski, Edward, A&S, Jr.....	Reno
Torassa, George J., A&S, Sr.....	Oceanside, Calif.
Torvinen, Roy Lee, A&S, So.....	Reno
Tout, Carl S., MM, Fr.....	Reno
Tovey, Philip H., Gr.....	Los Angeles, Calif.
Tower, Franklyn J., A&S, Sr.....	Reno
Towner, Gerald N., A&S, Fr.....	Reno
Townsend, Richard P., Gr.....	San Jose, Calif.
Trainor, Lawrence W., MM, Sr.....	Waterloo, Iowa
Triest, Toni Lelani, A&S, Fr.....	Reno
Trigero, Kenneth K., A&S, Fr.....	Reno
Trimbell, James L., A&S, Fr.....	Reno
Trinaystich, Paul L., CE, Fr.....	Las Vegas
Trowbridge, Robert G., A&S, Fr.....	Yerington
Truman, Grant S., Ag, Fr.....	Logandale
Truman, Richard, A&S, Sr.....	Logandale
Turner, Donald Q., Gr.....	Reno
Turner, Mabel L., A&S, So.....	Santa Paula, Calif.
Twitchell, Glenn R., EE, Jr.....	Arroyo Grande, Calif.
Tyler, Brent, A&S, T-Fr.....	Glendale, Calif.
Uecker, Robert P., A&S, Sr.....	Reno
Umbenhaur, George W., Gr.....	Reno
Upton, Weldon C., A&S, Jr.....	Reno
Uriarte, Richard, Ag, Fr.....	Mountain City
Valenta, Leta R., A&S, T-Fr.....	Reno
Valentine, Elise, A&S, Fr.....	Reno
Van Den Berg, William J., Jr., EE, Fr.....	Sacramento, Calif.
Vander Laan, John S., A&S, Fr.....	Boulder City
Vanderlay, William, A&S, Fr.....	Kingston, N. Y.
Vandervelden, Donald J., Ag, Jr.....	Reno
Van Dyke, Charles W., Jr., A&S, Fr.....	New York City, N. Y.
Van Lydegraf, Mary Ellen, Gr.....	Reno
Van Meter, Barbara E., A&S, Fr.....	Sparks
Van Tassell, Janice, A&S, Fr.....	Reno
Van Wagenen, Bernard P., A&S, Sr.....	Reno
Varischetti, Harry, MM, So.....	Virginia City
Vassar, Roscoe K., MM, So.....	Genoa
Ventura, William R., A&S, T-Fr.....	Fresno, Calif.
Vice, Floyd E., EE, Fr.....	Reno
Victor, Richard A., EE, Sr.....	Wendell, Idaho
Vidovich, Daniel, A&S, T-Fr.....	Reno
Vierra, Valera V., A&S, Fr.....	Eureka, Calif.
Vieta, Corinne M., A&S, Fr.....	Lovelock
Vietti, Paul J., Jr., A&S, Fr.....	Reno
Virag, Leland J., Ag, T-Fr.....	Redwood, Calif.
Voorhees, Norma J., A&S, Fr.....	Schurz, Ill.

Name, College, and Class	Home address
Wager, Carol, Gr.....	Reno
Wagner, Bernice A., A&S, T-Fr.....	Reno
Wait, Eugene J., Jr., A&S, Sr.....	Reno
Wake, Robert E., Ag, Sr.....	Northridge, Calif.
Walker, Ramona M., HE, Sr.....	Sparks
Wall, Claude L., Gr.....	Stewart
Wallace, Anna B., HE, Jr.....	Battle Mountain
Wallace, Carl W., A&S, T-Fr.....	Eureka, Calif.
Walldin, Roy Jonas.....	Tulelake, Calif.
Walsh, James L., A&S, So.....	Las Vegas
Walsh, Norma Anne, A&S, So.....	San Francisco, Calif.
Waltenspiel, George W., A&S, So.....	Beverly Hills, Calif.
Warburton, Patricia Ann, A&S, Fr.....	Reno
Ward, Georgia L. Houghton, A&S, Sr.....	Las Vegas
Ward, Harry J., A&S, Sr.....	Reno
Ward, Joseph L., A&S, Jr.....	Fallon
Ward, Laura J., A&S, So.....	Reno
Warren, Robert W., A&S, Fr.....	Sparks
Washburn, Lois, Gr.....	Fallon
Watkins, Dallas L., A&S, Fr.....	Reno
Watts, Elspeth, HE, So.....	Boulder City
Waxham, George E., A&S, Fr.....	Hayward, Calif.
Weaver, Rollie A., Ag, Fr.....	Fallon
Weber, Barbara Parker, HE, Sr.....	Carson City
Weller, Rodney G., A&S, Fr.....	Boulder City
Welch, Alice, A&S, Fr.....	Tonopah
Welin, Jacques E., A&S, Sr.....	Boone, Iowa
Wells, Buckeley, Jr., A&S, Sr.....	Battle Mountain
Welty, Patricia T., A&S, So.....	Reno
Wengert, Robert E., EE, Sr.....	Las Vegas
Wennerberg, Ernest W., A&S, Sr.....	Pasadena, Calif.
Wennhold, William F., ME, Fr.....	Minden
West, Donald F., A&S, Fr.....	Reno
West, John T., CE, Fr.....	Las Vegas
West, Nancy E., A&S, Fr.....	Sparks
Westall, Alfred H., Ag, Fr.....	Virginia City
Wester, Walter G., A&S, So.....	Sebastopol, Calif.
Westergard, Audrey G., A&S, Fr.....	Lovelock
Westgaard, Dean "J," A&S, Fr.....	Milwaukee, Wis.
Whalen, Buddie, A&S, So.....	Reno
Wheeler, David G., A&S, Fr.....	San Leandro, Calif.
Wheeler, Eugene W., MM, T-Fr.....	San Bernardino, Calif.
Wheeler, Phyllis M., A&S, Fr.....	Los Altos, Calif.
Whitaker, Raymond L., CE, Sr.....	Gardnerville
White, Fred L., Jr., A&S, Fr.....	Reno
Whiteford, Rilla S., A&S, Sp.....	Reno
Whittlesey, John R. B., A&S, Sp.....	Reno
Whorton, Mildred J., A&S, T-Fr.....	Denver, Colo.
Widing, Joan A., A&S, Fr.....	Emigrant Gap, Calif.
Wigg, Arthur E., ME, Jr.....	Yerington
Wilcox, Doris L., A&S, Fr.....	Leevining, Calif.
Wilcox, Richard W., A&S, So.....	Caliente
Wiley, Madge, A&S, Sr.....	Wells
Wiley, Samuel M., MM, T-Fr.....	Santa Paula, Calif.
Williams, George L., A&S, Fr.....	Winnemucca
Williams, John G., Ag, Fr.....	San Francisco, Calif.

Name, College, and Class	Home address
Williams, Leonard C., A&S, Sp.....	Placerville, Calif.
Williams, Mary Emma, A&S, So.....	Gardnerville
Williams, Richard E., A&S, Jr.....	Carson City
Williamson, Richard E., MM, T-Fr.....	Los Angeles, Calif.
Williamson, William E., MM, T-Fr.....	Los Angeles, Calif.
Willis, Clara B., A&S, T-Fr.....	Las Vegas
Wilson, Frank W., A&S, Sr.....	Reno
Wilson, Jacquelyn, A&S, Sr.....	Ely
Wilson, James A., CE, Fr.....	Elkhart, Ind.
Wilson, James E., A&S, Fr.....	Fallon
Wilson, Joanne A., A&S, So.....	Reno
Wilson, Kenneth C., Ag, Sr.....	Reno
Wilson, Thomas J.....	Elko
Wilton, Jean, A&S, So.....	Los Angeles, Calif.
Winchester, Lynn, A&S, So.....	Santa Barbara, Calif.
Winer, Suzanne, A&S, Jr.....	Yerington
Winkel, Chester G., A&S, Jr.....	Reno
Winkel, Robert A., A&S, Jr.....	Reno
Winton, Raymond A., CE, Fr.....	Newcastle, Calif.
Wirsching, Joseph E., Gr.....	Reno
Wiseman, Richard, A&S, Fr.....	Reno
Wittenberg, Helen C., Gr.....	Reno
Wittwer, Gerald M., A&S, Fr.....	Bunkerville
Wittwer, Marilyn, A&S, Fr.....	Reno
Wolowicz, John A., Jr., A&S, Fr.....	Orange, N. J.
Wolin, Harvey I., A&S, Fr.....	New York City, N. Y.
Wood, Donald E., A&S, Sr.....	Reno
Wood, Fred O., A&S, Sp.....	Lund
Wood, Norman M., A&S, Fr.....	Tallapoosa, Ga.
Wood, William B., MM, Jr.....	San Francisco, Calif.
Woodbury, Willis V., A&S, So.....	Reno
Wooster, Clinton E., A&S, Fr.....	Reno
Works, Byron W., Gr.....	Fallon
Worthington, Margaret, A&S, Sp.....	Reno
Wrede, Florence A., A&S, Fr.....	Reno
Wyckoff, Richard D., A&S, Fr.....	Reno
Wyness, Gerald B., A&S, So.....	Boulder City
Yates, Floyd M., Jr., EE, Jr.....	Reno
Yee, Layton, EE, Sr.....	Santa Barbara, Calif.
Yenter, Kenneth E., Ag, Fr.....	Fernley
Yim, Florence, A&S, Sr.....	Minden
Yori, George, Gr.....	Washoe
Young, Barbara C., A&S, So.....	Reno
Young, Chris M., A&S, Fr.....	Marion, N. D.
Young, Daniel L., A&S, So.....	Bishop, Calif.
Young, Ervin J., A&S, So.....	Reno
Young, William F., A&S, T-Fr.....	Braintree, Mass.
Young, William L., A&S, So.....	Reno
Yrueta, Elleen J., A&S, Fr.....	Winnemucca
Zahm, Patricia M., A&S, So.....	Henderson
Zettler, Lyal C., CE, Fr.....	Milford, Calif.
Zelayeta, Jeanne F., A&S, So.....	Lovelock
Ziegler, Harold A., A&S, So.....	Long Island, N. Y.
Zilkey, Robert J., A&S, Fr.....	Fallon

Name, College, and Class	Home address
Zippmann, William, A&S, So.....	Chicago, Ill.
Zive, William, A&S, T-Fr.....	Reno
Zmak, Merle A., A&S, Fr.....	Reno
Zorio, Louis, A&S, Sr.....	Winnemucca
Zunino, Mary J., A&S, Fr.....	Reno
Zurfluh, Leslie Olds, A&S, So.....	Reno

SUMMER SESSIONS, 1950

Abrahamson, Paul M. .....Roseville, Calif.	Benson, George H. ....Reno
Adams, Beula Jane.....Las Vegas	Berry, Olive.....Sparks
Adams, Gary Kay.....Reno	Berthiaume, Agnes G. ....Lee
Adams, Vinn L.....Reno	Berthiaume, Henry L.....Lee
Affleck, Harold W.....Reno	Bessau, Florence.....Herlong, Calif.
Aiazzi, Raymond G.....Carlin	Best, Robert .....Hawthorne
Alan, Barbara Jean.....Reno	Betterton, Pauline.....Stewart
Albir, Jaime.....St. Marys, Calif.	Biegler, John .....Elko
Aldrich, Alexander H., Jr.....Fernley	Billings, Marion B. ....Reno
Allen, Arlene Jane.....Roseville, Calif.	Birks, Wilma .....Reno
Allen, Lois Thompson.....Sparks	Bissett, Benita.....Reno
Allen, Robert R.....Reno	Bissett, John Roger.....Reno
Alonso, Virginia.....Sunnyvale, Calif.	Black, Donald K. ....Winnemucca
Anderson, Bernice M.....Reno	Blake, John L.....Reno
Anderson, Deloy H., Jr.....Reno	Bliss, Grace U. ....Carmel, Calif.
Angus, Ina M.....Reno	Block, Fred G.....Reno
Appleford, Alan McKay.....Berkeley, Calif.	Boardman, Arthur M. .....Virginia City
Arant, William B.....Reno	Bobbroff, Winnifred S. ....Reno
Arciniega, Edward.....Los Angeles, Calif.	Boese, Robert P.....Reno
Arentz, Alice C.....Reno	Boldt, Uerta E. .....San Francisco, Calif.
Armstrong, Ruth Mae.....Reno	Bonar, Roy T.....Lordsburg, N. M.
Arture, Ethel M.....Hawthorne	Bond, Elizabeth I.....Reno
Artuso, Alfred A.....Reno	Bondley, George B. ....Reno
Artuso, Eleanor R.....Reno	Bondley, Lois Shaver.....Reno
Ashley, Alfred.....Reno	Booker, Richard G., Jr.....Reno
Atkinson, James R.....Reno	Booth, Charles.....Yerington
Aubin, Ruby.....Sonoma, Calif.	Borghi, Lillian L.....Sparks
Azbell, Winn S.....Santa Cruz, Calif.	Bovee, Mary Ella.....Bronxville, N. Y.
Badt, Gertrude N.....Carson City	Bowen, Robert B.....Reno
Bailey, Eileen.....Yerington	Boman, Loretta T.....Hollister, Calif.
Bailey, Harold A.....Reno	Boyd, William S.....Las Vegas
Bailey, William A.....Reno	Boyle, Kathryn E.....Reno
Baker, Richard .....Mina	Boyle, Peggy Jane.....Reno
Ball, Emmett B., Jr.....Reno	Bradley, Kenneth H. ....Sparks
Ballard, Robert B.....Sparks	Brady, Alice J.....Kenmore, N. Y.
Barbash, Jo-Ann .....Reno	Breese, Charles R.....Reno
Barham, Allen T., Jr.....Reno	Britt, Lynda C.....Verdi
Barnes, James A., Jr.....Reno	Brooks, Dudley W. ....Sparks
Barry, John M.....Reno	Brown, Estella Hicks.....Sparks
Bashista, Joseph .....Reno	Brown, Lalia.....Oakland, Calif.
Bastian, Dorothy.....Reno	Brown, Velda.....Boulder City
Bastian, Jarvis R.....Reno	Brownell, Lester G. .....Sacramento, Calif.
Bastian, J. Rulon .....Reno	Brueckner, Guenther W.....Reno
Baughman, Frank F., Jr.....Sparks	Brumwell, Jack.....Reno
Beaman, Edna .....Yerington	Brumwell, Wanda.....Reno
Beck, Wilda M.....Draper, Utah	Brunton, Arthur F.....McGill
Beezer, Jack.....Reno	Brush, William.....Carson City
Bell, Enfield B.....Elko	Buchanan, Jessie.....Winnemucca
Bell, June .....Reno	Buonamicci, Rino .....Reno
Bell, Martin L.....Westport, Conn.	Burke, Robert A.....Reno
Benjamin, Dayton.....Las Vegas	Burke, Vincent H. ....Reno
Benjamin, Ruth.....Las Vegas	Burnett, Wallace F.....Reno

- Burr, Rosalee B.....Las Vegas
 Butler, Carole Meng.....Reno
 Butler, Dorothy M.....Reno
 Byrd, Clarence L.....Reno
 Byrd, Gwenneth J.....Reno
 Callahan, Irene E.....Fernley
 Campbell, Robert E.
 Highlands, Calif.
 Cannon, Stephen F.
 Sacramento, Calif.
 Canonic, Keith D.....Reno
 Cantillon, Henry C.....Reno
 Caprio, Josephine R.....Reno
 Carll, Louise.....Sparks
 Carlson, Blanche M.
 San Pedro, Calif.
 Carmody, Luella S.....Sparks
 Carter, Dyle M.....Reno
 Caruso, Carmel.....Dillinger, Pa.
 Castillou, James V.
 Tres Pinos, Calif.
 Cavanagh, Vera R.....Quincy, Calif.
 Cayton, Edith.....Janesville, Calif.
 Chapman, Delight
 Kybar Pass, Bermuda
 Chatterton, Richard C.
 Quiakou, Maui, T. H.
 Checchi, Albert L.....Babbitt
 Chico, Hazel W.....Fallon
 Christopherson, Marche.....Kimberley
 Clark, Glen H.....McGill
 Clark, Mildred R.....Sparks
 Clarkson, James T.....Reno
 Clayton, Henry L.....Yerington
 Clemens, Thomas
 Sacramento, Calif.
 Clements, Harriet.....Henderson
 Coates, Dorothy K.....Reno
 Coe, Zina E.....Boulder City
 Coleman, Morris R.....Reno
 Coleman, Nathalie W.
 Dedham, Mass.
 Collett, Robert D.....Clearfield, Utah
 Collis, Alice.....McGill
 Comer, Dorothea.....Reno
 Coners, Clement W.....Reno
 Connolly, Julia A.....Reno
 Conover, Eugene J.....Reno
 Cooper, William J.....Wadsworth
 Copenhaver, Roxie
 Redlands, Calif.
 Corrado, Alice.....Reno
 Couch, Francis E.....Reno
 Covell, Jon C.....Yonkers, N. Y.
 Cox, Lowell.....Winnemucca
 Cox, Nilda.....Reno
 Cox, Rosemary J.....Winnemucca
 Cozzalia, Jean A.....Reno
 Craig, Robert R.....Reno
 Crane, Mary.....Goldfield
 Crawford, Kenneth S.....Owyhee
 Crawford, Merwin W.....Reno
 Cribbins, Joseph P.....Reno
 Crider, Elizabeth D.....Reno
 Cross, Charles B., Jr.....Reno
 Crossland, Dean T.....Reno
 Cudinski, Anthony J.....Reno
 Culbert, Edward L.....Carson City
 Cummins, Roberta J.....Henderson
 Currie, Fern L.....Reno
 Cutler, Carol.....Oakland, Calif.
 Dalbey, James D.....Fallon
 Dameron, Lucille.....Reno
 Daniels, Rex G.....Reno
 Davis, June E.....Henderson
 Davis, Kenneth.....Reno
 Davis, Mildred.....Herlong, Calif.
 Daz, Lily.....Montello
 Dean, Clifford
 San Francisco, Calif.
 Deane, Marie A.....Webster, Iowa
 Dees, Beryl I.....Sparks
 DeHart, Gordon.....Westend, Calif.
 Deimel, Lois E.....Fallon
 Dellinger, Robert G.....Quincy, Calif.
 Demorest, Rebecca H.....Reno
 Derbil, Ayfer.....Ankara, Turkey
 DeRuff, Alene R.....Reno
 Dewey, Ruth B.....Las Vegas
 DeWhitt, Dorothy.....Reno
 DiChiara, Alphonse.....Reno
 Diekman, Sally H.....Lodi, Calif.
 Dilts, Margaret W.....Carson City
 Diltz, Gretchen C.....Elkhart, Ind.
 Dixon, Floyd F.....Reno
 Dolan, William M.....Carson City
 Donaldson, Gene W.....Reno
 Dondero, Alan G.....Reno
 Doty, Bertha C.....Reno
 Drakulich, Stanley J.....Reno
 Drewette, Frederick M.....Reno
 Duffie, Wilma P.....Niles, Calif.
 Dullion, Alice L.....Carson City
 Dunn, Helen M.....Reno
 Dunn, Katherine G.....Sparks
 Dyer, Doris Ann.....Reno
 Early, Laura A.
 Santa Barbara, Calif.
 Eckerstrom, Joyce V.....Babbitt
 Eddy, Gloria G.....Winnemucca
 Ehlen, Berneice B.....Sparks
 Ekhardt, Ronald D.....Reno
 Elder, Willard D.....Nichols, Iowa
 Ellis, Norman L.....Reno

Ellison, Dora T.....	Reno	Gibbs, Anne.....	Fallon
Emidy, Theodore E.		Gibbs, Constance N.	Reno
.....	Worcester, Mass.	Gibbs, Eugene F.	
Engel, William F.....	Reno	.....	Rock Springs, Mont.
Ensslin, Theodore G.		Giblin, Joy.....	Mill Valley, Calif.
.....	Battle Mountain	Gibson, Charles C.....	Reno
Erwin, Charline D.....	Benicia, Calif.	Gibson, Janet.....	Eureka
Estes, George A.....	Reno	Gibson, Warren F.	
Estes, Ida-Marie.....	Reno	.....	San Francisco, Calif.
Estridge, Norma L.....	Reno	Gilchrist, W. Patricia	
Etchegoyhen, Jerome, Jr.		.....	Seattle, Wash.
.....	Winnemucca	Gillies, Inez.....	Sparks
Etcheto, John.....	Reno	Gilmore, Earl P.....	Boulder City
Evans, Miriam L.....	Reno	Ginsborg, Janice.....	Reno
Evasovic, Mike.....	Reno	Gliszczinski, Novella R.....	Reno
Facha, Joseph V.....	Reno	Goddard, Mary.....	Reno
Fairchild, Mahlon D.....	Reno	Godwin, Frank.....	Ferney
Fairfield, Diane.....	Richmond, Calif.	Goff, Charles W.....	Reno
Fairn, Patricia.....	Sparks	Gomm, Roy H.....	Sparks
Falconeri, Gennaro.....	Reno	Gonda, John A.	
Farrell, B. Patricia		.....	Grindstone, Pa.
.....	San Jose, Calif.	Goni, Lorraine T.....	Reno
Farrington, Esther B.....	Reno	Gonsales, Julio E.	
Fee, Pat.....	Ft. Bidwell, Calif.	.....	Washington, D. C.
Fenkell, Jack.....	Mina	Goodale, Patsy R.....	Reno
Ferguson, Lewis.....	Reno	Goodrich, Kenneth E.....	Henderson
Fikes, James A.....	Britton, Okla.	Gordon, Betty M.....	Reno
Fiscus, Joyce.....	Reno	Gordon, Ernest G.....	Reno
Fish, Seymour P.....	Overton	Gori, Floyd E.....	Reno
Fisher, William J.....	Reno	Goss, Tillie G.....	Ely
Fisk, Elwin Lee.....	Weimar, Calif.	Gough, Jack R.....	Verdi
Folsom, Doris W.....	Reno	Gould, Harry K.....	Reno
Foote, Margie E.....	Sparks	Grafton, V. Carlyle.....	Reno
Forman, William N.....	Reno	Graves, Orsie S.....	Sparks
Foster, Joan L.....	Sparks	Green, Chester A.....	Reno
Fox, Elvira P.....	Reno	Green, Phyllis B.....	Sparks
Franey, Henry J.....	Reno	Greer, Lyla B.....	El Campo, Texas
Frank, Jack.....	Reno	Gregory, Ernest G.....	Reno
Frantz, Ted C.....	Reno	Griffen, Gloria G.....	Reno
Fraser, M. Douglas		Gronning, Ralph L.....	Reno
.....	Jefferson, N. Y.	Grows, Eugene A.....	Boulder City
French, Donald E.....	Reno	Guerrera, Melvin P.....	Reno
French, William B.		Gunderson, Carol A.....	Reno
.....	Show Low, Ariz.	Haglund, E. A.....	Carson City
Furchner, Theodore.....	Reno	Haglund, Marie E.....	Hurley, Wis.
Gaffey, Thomas T.....	Reno	Haines, Charles R.....	Reno
Gallagher, Hugh.....	Virginia City	Hale, Hazel.....	Vallejo, Calif.
Gallagher, Karl W.....	Reno	Hall, Lee Vern.....	Kimberly
Gallagher, Michael, Jr.....	Reno	Hammon, John Lee	
Galletti, Gerald.....	Sparks	.....	San Francisco, Calif.
Gartler, Barbara E.		Hanifan, Joan P.....	Fallon
.....	Newport Beach, Calif.	Hansen, Doris A.....	Virginia City
Gartler, Seymour.....	Reno	Hanssen, Doris Agnes.....	Reno
Garwood, Jo Anne.....	Reno	Hardy, Ardyce.....	Bunkerville
Geach, Robert.....	Butte, Mont.	Hardy, Edna.....	Ferney
Geitner, Ada Jane.....	Hickory, N. C.	Hardy, Hazel I.....	Reno
Getto, Mary C.....	Fallon	Harmon, Dorothy I.....	Gardnerville
Giannotti, Edwin.....	Sparks	Harmon, John R.....	Sparks

- Harmon, Peggy Jo.....Sparks
 Harnar, Nellie S.....Stewart
 Harriman, Alice P.....Lovelyock
 Harris, Evan LaMar.....Reno
 Harris, George E.....Las Vegas
 Harris, William A.
 New Orleans, La.
 Hartman, Maragret E.....Reno
 Harvey, S. Carl.....Reno
 Harwood, Dewey, Jr...Virginia City
 Hasler, Milton H., Jr.
 Laguna Beach, Calif.
 Hatfield, S. Ward
 Markleeville, Calif.
 Hawkins, Douglas.....Ely
 Hawkins, Irene B.....Reno
 Haworth, Mary B.....Reno
 Hayden, Don E.....McGill
 Hayes, John Paul...Oakland, Calif.
 Hecker, Nancy.....Reno
 Heckethorn, Howard E.....Reno
 Helmick, Mary.....Reno
 Henderson, Beulah M.....Reno
 Henningsen, Carsten M.....Minden
 Herner, Thelma.....Red House
 Hersey, Anna G.....Carson City
 Hickman, Jackie.....Reno
 Hill, Richard M.....Reno
 Hillhouse, Marjorie..Delleker, Calif.
 Hodge, Shirley.....Fernley
 Hollingshad, Golden.....Caliente
 Holm, Orley R.....Carmel, Calif.
 Hooper, William H.....Reno
 Hopkins, Galen.....Yerington
 Hopkins, Ruby.....Babbitt
 Horn, August J.
 Williston Park, N. Y.
 Howard, James M.....Reno
 Howard, Landon.....Reno
 Howard, Leonard T.....Reno
 Hubbard, Leon R.....Reno
 Hug, Procter R.....Sparks
 Hug, Procter R., Jr.....Sparks
 Humphrey, Frances.....Reno
 Huntley, Florence..Loyalton, Calif.
 Hutchings, Bobby Dean.....Lund
 Hutchinson, Hugh F.....Reno
 Irish, Charles L.....Cleveland, Ohio
 Jackson, Donald R.....Sparks
 Janet, Aubrey W.
 St. Petersburg, Fla.
 Jenkins, Donald D.....Reno
 Jensen, Elinor.....Reno
 Jensen, Frederick R....Gardnerville
 Jensen, Kenneth M.....Reno
 Jewett, Donald K.....Reno
 Jewkes, Treva.....Wells
 Johnson, Anna B..Loyalton, Calif.
 Johnson, Arthur J.....Reno
 Johnson, Charles S., Jr.
 Lansdowne, Pa.
 Johnson, Dean.....Brawley, Calif.
 Johnson, Frank H.....Reno
 Johnson, Harold D.
 Socorro, N. Mex.
 Johnson, Noel W.....Reno
 Johnson, Verlita Lee.....Reno
 Johnson, Walter D.....Las Vegas
 Jolly, Harvey P.....Reno
 Jones, Beatrice.....Winnemucca
 Jones, Beulah Ann..Shelton, Wash.
 Jones, Edmund A.....Reno
 Jones, Nell Jane.....Boulder City
 Jones, Patricia L.....McGill
 Jones, W. Emrys.....Pioche
 Joseph, Barbara R.....Reno
 Kalmanir, Andy.....Jerome, Pa.
 Kaminaka, Eunice.....Reno
 Karacabey, Tahsin.....Reno
 Keddie, Helen Marie
 San Francisco, Calif.
 Keele, Vincent S.....Sparks
 Kellogg, Chrissie.....Reno
 Kent, Mary Lou.....Fallon
 Kepler, David E.
 Walnut Creek, Calif.
 Kerstetter, Sylvia.....Reno
 Kiser, Frank D., Jr.....Reno
 Kito, Emi.....Fallon
 Kleinman, Mabel.....Ely
 Klise, Robert O.....Reno
 Klosterman, Edward.....Reno
 Kneller, Esthernae.....Reno
 Knudsen, Julia Smith
 Paradise Valley
 Kocka, Vera V.....Reno
 Kondel, Ted...E. Rutherford, N. J.
 Korb, Leighton R.....Brazil, S. A.
 Kornmayer, Mardelle L.....Reno
 Kosakowski, Stanley
 Housatonic, Mass.
 Krist, Ida.....Reno
 Kunkel, Clair M.....Sparks
 Kunzler, Edna M...Greenville, Calif.
 Kurtis, Thomasine T.....Reno
 Lamberson, Ellis E.....Reno
 Lancaster, Catherine.....Reno
 Lane, Margaret B.....Reno
 Lane, Naoma M.....Hawthorne
 Lapp, Paul W....Sacramento, Calif.
 Larsen, Raymond H.....Reno
 Larson, Robert H.....Reno
 LaSan, Frank Sanches
 Sacramento, Calif.

- Laugherty, Arlyn L.....Boulder City
 Laurie, ShirleySparks
 Laveaga, Vincent P.....Sparks
 Laxalt, Joyce N.....Reno
 Lear, Maude.....Las Vegas
 Ledbetter, Raymond E.
 Lawndale, Calif.
 Ledford, FayeReno
 Lee, Edward E., Jr.....Reno
 Lee, John B.....Sparks
 Lee, Keith L.....Reno
 Lehnherr, AdelineStewart
 Leonard, Lawrence C.Reno
 Letcher, Alfred.....College, Alaska
 Leupold, Ralph P.....Reno
 Lewis, James K.....Bishop, Calif.
 Lindsey, Robert L.....Champaign, Ill.
 Linn, Samuel J., Jr.....Redding, Calif.
 Linscott, Jack B.....Reno
 Linsea, Dorris Lee.....Ely
 Liston, Douglas I.....Calliente
 Little, Robert E.Winnemucca
 Lohse, Emma.....Paradise Valley
 Lohse, Hans.....Paradise Valley
 Lokke, Freda B.....Sparks
 Long, Arthur, Jr.....Reno
 Lovstedt, LillianPyramid
 Lowrey, Kenneth B.
 Piedmont, Calif.
 Lusty, Edward F.....Reno
 Luwe, JackReno
 Lyon, Merle W.Reno
 Lyle, Edward M.....Reno
 Lyle, WaynePioche
 MacDonald, ElizabethReno
 Macfarlane, Corrine.....Portola, Calif.
 MacPhee, Robert D.
 Sacramento, Calif.
 Madson, Alice.....Harlan, Iowa
 Magee, MaureenReno
 Magley, Mavis.....Las Vegas
 Mahan, Mildred P.....Fresno, Calif.
 Malcolm, ConstanceHenderson
 Manning, AglalaOverton
 Manning, Beth R.....Davis Dam
 Manning, Rulon H.....Overton
 Manucia, H. L.....Sparks
 Marburger, Mabel S.....Nutley, N. J.
 Marean, John H.....Reno
 Marks, Jerome F.....Reno
 Marrotte, Paul A.
 Chapel Hill, N. C.
 Martin, Anna T.....Stewart
 Martin, BaxterReno
 Martin, ConradReno
 Mathes, Harold E.....Reno
 Mathews, Amy D.....Panaca
 Mathews, Frank D.....Boulder City
 Matteoni, SilvanoSparks
 Maxwell, John E.....Auburn, Calif.
 McBride, Donald F.....Reno
 McCabe, Joan I.....Los Angeles, Calif.
 McClellan, MarybelleReno
 McCrac, RobertReno
 McCulloch, John S.....Elko
 McDonald, Hadie C.....Herlong, Calif.
 McEwen, Clarence J., Jr.....Reno
 McEwen, Mary E.....Reno
 McGarry, Nola M.....Reno
 McGoodwin, Margaret H.
 Needles, Calif.
 McGowan, Roger J.....Reno
 McGuire, Dorothy R.
 Ft. Bragg, Calif.
 McIntyre, Howard.....Mammoth, Utah
 McMullen, Donie C.....Forsyth, Ga.
 McKnight, MargeryReno
 McNab, Lester E.....Spokane, Wash.
 McNaughton, Mary
 Paradise Valley
 Medigovich, AnneReno
 Merlyn Samuel A.
 Grass Valley, Calif.
 Meredith, Rose N.....Reno
 Merritt, Alberta E.....Fallon
 Merwin, Robert B.....Reno
 Metzger, Don
 Twenty Nine Palms, Calif.
 Meyer, KatherineSparks
 Michienzi, James A.....Reno
 Mickelson, Merton M.....Reno
 Miller, Betty C.....Sparks
 Miller, EleanorReno
 Miller, Elizabeth L.....Reno
 Miller, John R.....Sparks
 Miller, L. Ethel.....Reno
 Miller, LauraleeSmith
 Millinger, JackSparks
 Mills, Laura E.....Fallon
 Minahan, Alice.....Vallejo, Calif.
 Mirabelli, Michael A.....Reno
 Moberry, Marion.....Los Gatos, Calif.
 Montgomery, RachelGolconda
 Moore, ErtGabbs
 Moore, Joseph E.....Winnemucca
 Moose, JoeReno
 Morgan, Margaret.....Lincoln, Nebr.
 Morganroth, GoldaCarlin
 Morrison, Barbara J.....Reno
 Morrison, Judy
 San Francisco, Calif.
 Mortensen, John H.....Reno
 Mulgrew, James F.....Carlisle, Pa.
 Mulvihill, John J.....McGill

- Munter, Weldon R.....Carson City
 Murphy, James F.....Marion, Ind.
 Murphy, Ken.....Sacramento, Calif.
 Murray, BeulahReno
 Myles, ValeAustin
 Nagel, William L.....Carson City
 Nelson, Henry C.....Gardnerville
 Newton, Raby J.....Carson City
 Nicora, Elizabeth.....White River, Vt.
 Nightingale, Dorothea M.....Reno
 Nocciolo, Albert D.....Reno
 Nord, Earnest W.....Reno
 Norman, David E.....Lovelock
 Norris, Donna E.....Imlay
 Norris, Medley E.....Verdi
 Norseth, Donald C.....Ogden, Utah
 Nyberg, Marlene J.....Reno
 Nygren, Maie A.Fallon
 Nygren, Myrl A.....Fallon
 O'Brien, Leo M., Jr.....Reno
 Oelsner, DonaldYerington
 Olmsted, Roger R.
Pacific Grove, Calif.
 Olsen, Greta Jean.....Berkeley, Calif.
 Olsen, Norman O.....Reno
 Olson, DarleneReno
 Ornas, George J.
San Francisco, Calif.
 Ostrander, Patricia P.
Smith Valley
 Otley, GladysNye
 Owens, Olga L.....Truckee, Calif.
 Page, DavidReno
 Paille, Harry D.....Las Vegas
 Palmer, Marian G.....Reno
 Palmer, Neille G.....New York
 Panicari, Carlo F.....Reno
 Parker, James O.....Hawthorne
 Parker, LaurelReno
 Parker, Mary L.....Reno
 Parrish, AnnCarson City
 Paterson, Robert A.....Reno
 Patterson, John W.....Webb City
 Pearson, Mary B.....Jacksonville, Ill.
 Pederson, Roger J.....Reno
 Pence, George E., Jr.....Reno
 Perry, Donald K.....Ely
 Persigehl, Richard L.....Tonopah
 Petersen, ConstanceReno
 Petersen, Margaret W.
King City, Calif.
 Peterson, Dwight W.....Reno
 Peterson, Florance A.....Las Vegas
 Peterson, Myrtle.....Boulder City
 Pettis, Alice L.....Reno
 Pico, Walter G.....Las Vegas
 Picollo, Marvin E.....Reno
 Picollo, Merrie Jo.....Reno
 Plummer, William.....Carson City
 Plunkett, Effie M.....Henderson
 Potter, Helen.....Oakland, Calif.
 Powell, Joan Ann.....Reno
 Powell, Shirley Ann.....Henderson
 Poznanovich, Donald F.
Santa Rosa, Calif.
 Priest, Bette K.....Napa, Calif.
 Puddington, Georgianna
Carson City
 Pulsipher, Charles K.....Logandale
 Purtil, Frederic I.
Watsonville, Calif.
 Puryear, JamesReno
 Putman, Vernon G.....Reno
 Quillici, A. Basil.....Yerington
 Rankin, Robert J.....Reno
 Rase, Carl W.....Cleveland, Ohio
 Reading, George E.....Carson City
 Reading, JacReno
 Reagor, Vincent W.....Reno
 Reed, FloElko
 Reil, LouiseWinnemucca
 Reinero, EdithYerington
 Reinken, William A.....Reno
 Renfro, Janet S.....Lakeport, Calif.
 Reuter, Gretchen L.....Reno
 Revene, JosephReno
 Ricci, Olinto A.....Dayton
 Rice, Gertrude S.....Reno
 Rich, Esther.....Lake Tahoe, Calif.
 Rich, Myrtle Sorensen.....Reno
 Ricketts, Doris B.
Westwood, Calif.
 Rider, VirginiaWells
 Riley, Sarah.....Herlong, Calif.
 Ripson, LauraTuscarora
 Risard, Martin H., Jr.....Reno
 Robb, JohnSparks
 Robertson, Donald A.....Carson City
 Robertson, John M.....Reno
 Robinson, H. Sidney.....Reno
 Rosenquist, JaneStewart
 Routledge, Marilyn.....Dillon, Mont.
 Rovetti, Mary Joanne.....Reno
 Rowe, WilburtaReno
 Rowson, Leila J.....Reno
 Royels, Clarence T.
Kingsburg, Calif.
 Rudholm, ThelmaReno
 Rundell, Eleanor.....Herlong, Calif.
 Rukkila, Reino A.....Tucson, Ariz.
 Rupp, Louise M.....Reno
 Rutherford, Margaret.....Duckwater
 Ryan, John E.....Yakima, Wash.
 Salemi, Paul J.....Reno

- Sanford, Elizabeth B.....Reno
 Sassenberry, Homer G.....Reno
 Sauer, Laura May.....Carson City
 Saulisberry, Charles N.....Reno
 Scarselli, Gene L.....Sparks
 Schindler, Ross A.....Reno
 Schmaling, Frances N.....Smith
 Schmalz, Wayne.....Reno
 Schooley, Gladys.....Reno
 Scott, Bertha C.....Dayton
 Scott, James B.....Reno
 Scripps, Edward W.
 Miramar, Calif.
 Scruggs, Ernest N.....Reno
 Seeliger, Albert.....Fallon
 Segur, Lillian.....Portola, Calif.
 Sellers, Gladys.....Reno
 Sewell, Mary Lou.....Reno
 Shaner, Dorothy W.....Reno
 Shaver, Doris.....Sparks
 Shea, Helen.....Pinole, Calif.
 Shelby, Eugenia.....Reno
 Shelton, Warren H.....Boulder City
 Shepard, William E.....Reno
 Sherman, Martha G.....Reno
 Sherman, Teo. S.....Fallon
 Shinn, Reginald.....Reno
 Shoemaker, Jeanne
 Pasadena, Calif.
 Shontz, George L.....Winnemucca
 Short, Ted.....Reno
 Sieber, Richard.....Reno
 Silliman, Floyd.....Reno
 Simmons, Susanne.....Stewart
 Simonson, Elizabeth.....Huron, S. D.
 Simpson, Edward B.
 San Bernardino, Calif.
 Sirkegian, Jacqueline D.....Reno
 Skinner, James E.....Reno
 Smalley, Floyd.....Hawthorne
 Smart, Donald C.....Reno
 Smith, Ana Marie.....Reno
 Smith, Donald F.....Sparks
 Smith, Frances A.....Reno
 Smith, LaMar R.....Fallon
 Smith, Mansfield.....Pasadena, Calif.
 Smith, Robert.....Lake Tahoe, Calif.
 Smith, Roberta B.....Reno
 Smith, Wallace.....Fallon
 Smith, Wells C.....Reno
 Snyder, Gertrude.....Loyalton, Calif.
 Sollars, Donna J.....Stockton, Calif.
 Solt, Rosalie.....Reno
 Sorensen, Agnes.....Elko
 Southerland, Elizabeth
 Delano, Calif.
 Southerland, Ernest E.....Reno
 Spence, Elizabeth F.
 Branscomb, Calif.
 Spencer, Constance.....Reno
 Spencer, Wallace D.....Reno
 Spohr, Winifred M.....Bishop, Calif.
 Sprague, Paul M.....Las Vegas
 Springmeyer, Albert A.....Reno
 Springmeyer, Juanita.....Reno
 Stafford, Victor H.....Reno
 Stanford, A. Jerry.....Las Vegas
 Stanford, Roy C.....Reno
 Staples, Suzette R.....Reno
 Steel, Miles F.....Reno
 Stell, Patricia.....Claremont, Calif.
 Stephens, Ialo D.....Reno
 Stetler, Byron F.....Elko
 Stewart, Frank W.....Reno
 Stone, Anne.....Lovelock
 Stone, Kenneth C., Jr.....Reno
 Strahan, Ruth.....Chicago, Ill.
 Strang, Robert C.....Reno
 Strayer, Selma A.....Portola, Calif.
 Strickler, Edwin C.....Girard, Kans.
 Struve, Rachel L.....Reno
 Sturman, Clara E.....Pahrump
 Subda, John E.
 E. Rutherford, N. J.
 Sutton, Mr. Kay Parker.....Reno
 Sutton, Sylvia
 Jackson Heights, N. Y.
 Swartz, Marilyn C.....Benicia, Calif.
 Swobe, John W.....Reno
 Swope, Anna L.....Reno
 Swope, Nancy.....Reno
 Sylva, Lucille E.....San Pedro, Calif.
 Tennant, Raymond E.....Tonopah
 Tett, Mark.....Reno
 Theriac, James M.....Socorro, N. M.
 Therkelsen, Edward R.....Reno
 Thiercof, Drury.....Reno
 Thomas, Margaret B.
 Westport, Conn.
 Thompson, Craig D.
 Cumberland, Md.
 Thompson, Lucille M.....Reno
 Thompson, Merlynn N.....Reno
 Thorp, Burney V.....Sparks
 Thran, June B.....Gardnerville
 Tietje, Louanna.....Gardnerville
 Tiffée, Olla.....Tahoe City, Calif.
 Toszyłowski, Edward.....Reno
 Torassa, George.....Reno
 Tovey, Philip H.
 Los Angeles, Calif.
 Tower, Franklyn J.....Reno
 Towles, Mamie.....Reno

- Towner, David W.....Reno
 Tremmel, Helen T.....Verdi
 Trimble, Dorothy C.....Reno
 Triolo, John.....Stockton, Calif.
 Tulps, John.....Swan Lake, N. Y.
 Turnblad, Joan.....San Mateo, Calif.
 Turner, Blanche.....Reno
 Uecker, Robert P.....Reno
 Umbenhaur, George W.....Reno
 Ussery, Monte Ray
 San Fernando, Calif.
 VanDerHoeven, Eugene
 Richardton, N. Dak.
 VanDerHoeven, Zelma
 Richardton, N. Dak.
 VanWagenen, Bernard.....Reno
 Varnes, Myra.....Winnemucca
 Velasco, Carlos A.....St. Marys, Calif.
 Ventura, William R.....Reno
 Waddell, Emily M.....Reno
 Wagner, Ruth H.....Reno
 Wait, Eugene J.....Reno
 Wait, Lois.....Canyonville, Ore.
 Wake, Robert E.....Reno
 Waldorf, Ruth M.
 Long Beach, Calif.
 Walker, Ramona M.....Sparks
 Walker, Robert.....Reno
 Wall, Claude L.....Stewart
 Wallace, Anne S.....Barnesboro, Pa.
 Walsh, James L.....Las Vegas
 Ward, Georgia Lee H.....Reno
 Ward, Joseph L.....Reno
 Wardle, Austin R., Jr.....Tonopah
 Warner, Judith.....Las Vegas
 Warner, Winnie V.....Houston, Tex.
 Warren, Vera Z.....Reno
 Washburn, Lois E.....Fallon
 Waterman, Irene F.....Reno
 Watson, Dorothy H.
 Roseville, Calif.
 Watson, Louise M.
 San Andreas, Calif.
 Watson, Mary Helen.....Elko
 Weidman, Elizabeth.....Chester, Calif.
 Weidman, John C.....Chester, Calif.
 Weir, La Verne.....Sparks
 Welty, Edward J.....Reno
 Welty, Pat.....Reno
 Wennerberg, Ernest
 Pasadena, Calif.
 Wheeler, Eugene W.
 San Bernardino, Calif.
 White, Mrs. Roy.....Loyalton, Calif.
 White, Ruby Ellen.....Carson City
 Whitehair, Genny
 Bronxville, N. Y.
 Whitehair, Marilyn
 Bronxville, N. Y.
 Whitehear, Edwin F.....Sparks
 Wigg, Arthur E.....Yerington
 Wilkerson, Eva.....Smith
 Wilkins, Marie K.....Hampton, Iowa
 Williams, Barbara.....Sparks
 Williams, Chartie M.
 Garwood, Texas
 Williams, Claire A.....Elko
 Williams, John W.....Berkeley, Calif.
 Williams, Joyce.....Reno
 Williams, Richard E.....Carson City
 Williamson, Richard E.
 Los Angeles, Calif.
 Williamson, Ruth.....Mantea, Calif.
 Williamson, William E.
 Los Angeles, Calif.
 Wilson, Joanne A.....Reno
 Wilson, Juanita.....Herlong, Calif.
 Wilson, Kenneth C.....Reno
 Wilson, Lenore J.....Nelson
 Winkel, Chester G.....Reno
 Wittemyer, George.....Wells
 Wittwer, Donna.....Reno
 Works, Byron W.....Reno
 Wray, Mae B.....Fallon
 Wright, Frank S.....Edinburg, Texas
 Wright, Leon V.....Reno
 Wright, Marie L.....Goldfield
 Yellis, Henry H.....Reno
 Yim, Florence.....Minden
 Yparraguirre, Lorin
 Bridgeport, Calif.
 Zaehring, Dorris M.....Sparks
 Zalund, Eva D.....Porterville, Calif.
 Ziegler, Harold A.....Reno
 Zippmann, William M.....Reno
 Zorio, Louis.....Winnemucca
 Zurfluh, Leslie O.....Reno

ENROLLMENT SUMMARY 1950-1951

Graduate Students.....	90	
COLLEGE OF ARTS AND SCIENCE		
Seniors.....	154	
Juniors.....	137	
Sophomores.....	282	
Freshmen.....	499	
Specials.....	43	
	1,115	
COLLEGE OF ENGINEERING		
<i>School of Civil Engineering—</i>		
Seniors.....	4	
Juniors.....	18	
Sophomores.....	13	
Freshmen.....	37	
Specials.....	1	
	78	
<i>School of Electrical Engineering—</i>		
Seniors.....	18	
Juniors.....	11	
Sophomores.....	10	
Freshmen.....	23	
Specials.....	1	
	63	
<i>School of Mechanical Engineering—</i>		
Seniors.....	11	
Juniors.....	8	
Sophomores.....	8	
Freshmen.....	18	
Specials.....	1	
	46	
MACKAY SCHOOL OF MINES		
Seniors.....	10	
Juniors.....	18	
Sophomores.....	24	
Freshmen.....	42	
Specials.....	7	
	101	
COLLEGE OF AGRICULTURE		
<i>School of Agriculture—</i>		
Seniors.....	10	
Juniors.....	11	
Sophomores.....	15	
Freshmen.....	40	
Specials.....	1	
	77	
<i>School of Home Economics—</i>		
Seniors.....	8	
Juniors.....	7	
Sophomores.....	9	
Freshmen.....	13	
Specials.....	1	
	38	
Total University.....		1,608
Enrollment of men.....	1,096	
Enrollment of women.....	512	
Total Summer School, 1950.....		1,083
		2,691
Less names counted twice.....		683
Grand total enrollment.....		2,008

FORM FOR GENERAL BEQUEST

Statutes of Nevada authorize the Board of Regents "To accept and take in the name of the University of Nevada, by grant, gift, devise, or bequest any property for the use of the university, or of any college thereof."

The following forms are printed here as suggestions only:

1. *Form of General Bequest—*

I hereby give and bequeath to the Board of Regents, University of Nevada, situated at Reno, Nevada, and to their successors forever, for the use of said institution in fulfillment of its general corporate purpose.....

(State here the sum of money desired to be given or describe the property or securities constituting the bequest.)

2. *Form of Bequest for a Particular Purpose, Designated by the Testator—*

I hereby give and bequeath to the Board of Regents, University of Nevada, situated at Reno, Nevada, and to their successors forever, in trust the sum of.....

(State here the sum of money desired to be given or describe the property or securities constituting the bequest.)

as an endowment to be known as the.....

Endowment Fund, the same to be invested and the income used for

(Indicate here the particular use for which the income from the bequest is to be used, or the particular interest or phase of the work of the institution which it is desired to assist.)

3. *Testamentary Trust—Bank or Trust Company, as Trustee—*

In pursuance of the resolution and declaration of trust known as The Uniform Trust for Public Uses adopted by the

(Here insert the name of the bank or trust company to act as trustee.)

on the.....day of.....19.....

(The correct date must be inserted.)

and upon the terms and conditions therein expressed I give (devise) and bequeath to said corporation and its successors forever the sum of.....dollars

(or otherwise describe the gift)

to be held and administered as a charitable trust (If desired add: in memory of.....

by whose name the fund shall be known) to collect and pay over or apply the income arising therefrom to the Board of Regents, University of Nevada, situated at Reno, Nevada, for the general corporate purposes of that institution (or name a particular corporate purpose).

NOTE: If the trust is not to be perpetual, continue after the words "for its general corporate purposes" with the following words or some modification thereof having approval of counsel as for example: "until in the opinion of its governing board, after.....years from the date of my death (or other date) its best interest shall require an expenditure of some part of the capital of the trust and then to apply or expend such portion (not to exceed.....percent) thereof in such sums and for such corporate purposes as said governing board shall from time to time direct."

4. *Living Trust—Bank or Trust Company, as Trustee—*

This indenture made this.....day of.....
19....., by and between.....
hereinafter referred to as the donor and.....

(Here insert the name of the bank or trust company to act as trustee.)

hereinafter referred to as the trustee.

WITNESSETH:

That said donor desiring to dedicate certain funds to public usefulness has this day given and in consideration of the covenants and agreements herein contained hereby gives, grants, conveys and delivers to said trustee and its successors forever, and the said trustee for itself and its successors accepts the following securities, money and property with proper supplemental transfers where necessary to pass title, viz:.....

(Here enumerate or refer to schedule attached.)

and agrees to accept approved additions thereto and to hold and administer such gift or gifts as a charitable trust under the resolution and declaration of trust known as The Uniform Trust for Public Uses adopted by said trustee on the.....day of....., 19..... to collect and pay over or apply the income arising therefrom to the Board of Regents, University of Nevada, situated at Reno, Nevada, for the general corporate purposes of that institution (or name a particular corporate purpose). (See note on preceding page.)

Here may follow a reservation of income for life, a power to revoke, or other clause having approval of counsel.

In Witness Whereof, The donor aforesaid has subscribed and

delivered these presents and the said trustee has by its proper officer executed the same and received the same money, securities and property the day and year first above mentioned.

IN PRESENCE OF :

....., Donor.

....., Trustee.

(Bank or Trust Company)

By

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