

1-1-1917

1917-1918 Course Catalog

University of Montana--Missoula. Office of the Registrar

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UNIVERSITY OF MONTANA BULLETIN

STATE UNIVERSITY SERIES

NO. 207

STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES
SCHOOLS OF FORESTRY, JOURNALISM, LAW
MUSIC AND PHARMACY

TWENTY-THIRD ANNUAL CATALOGUE

1917-1918

ANNOUNCEMENTS FOR
1918-1919

MISSOULA, MONTANA
APRIL, 1918

Entered at Missoula, Montana, as second-class matter under Act of
Congress, August 24, 1912

THE UNIVERSITY OF MONTANA

EDWARD C. ELLIOTT, Chancellor of the University

The University of Montana is constituted under the provisions of Chapter 92 of the Laws of the Thirteenth Legislative Assembly, approved March 14, 1913, (effective July 1, 1913).

The general control and supervision of the University are vested in the State Board of Education. The Chancellor of the University is the chief executive officer. For each of the component institutions there is a local executive board.

Montana State Board of Education

S. V. STEWART, Governor.....	Ex-officio, President
S. C. FORD, Attorney General.....	Ex-officio
MAY TRUMPER, Supt. of Public Instruction.....	Ex-officio, Secretary
C. H. HALL.....(1918)	W. S. HARTMAN.....(1920)
J. BRUCE KREMER.....(1918)	C. E. K. VIDAL.....(1920)
LEO H. FAUST.....(1919)	JOHN DIETRICH.....(1921)
W. H. NYE.....(1919)	A. LOUIS STONE.....(1921)

The University comprises the following institutions, schools and departments:

The State University, Missoula

Established February 17, 1893, and consisting of

The College of Arts and Sciences	The Biological Station
The School of Law	(Flathead Lake)
The School of Pharmacy	The Public Service Division
The School of Forestry	Special War Courses
The School of Journalism	Military Service Course (1 yr.)
The School of Music	Nurses' Preparatory Course (1 yr.)
The Summer Quarter	Office Training Course (1 yr.)
	The Graduate Division

Edward O. Sisson, President

The State College of Agriculture and Mechanic Arts, Bozeman

Established February 16, 1893, and consisting of

The College of Agriculture	The Agricultural Extension Service
The College of Engineering	The Secondary Schools
The College of Applied Science	Home Economics
The College of Household and Industrial Arts	Mechanic Arts
Courses for Vocational Teachers	Agriculture
The School of Music	Special War Courses
The Summer Quarter	Military Service Course (1 yr.)
The Agricultural Experiment Station	Nurses' Preparatory Course (1 yr.)
	Office Training Course (1 yr.)

James M. Hamilton, President

The State School of Mines, Butte

Established February 17, 1893.

Charles H. Bowman, President

The State Normal College, Dillon

Established February 23, 1893, and consisting of

The Teachers' Certificate Course	The Four-years Course
The Three-years Course	The Rural Teachers' Course
	The Course for Supervisors

Joseph E. Monroe, President

For publications and detailed information concerning the different schools and colleges address the President of the particular institution concerned. Communications intended for the Chancellor of the University should be addressed to the State Capitol, Helena, Montana.

In accordance with the order of the State Council of Defense there will be no instruction in German during the year 1918-19.

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STATE UNIVERSITY SERIES

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TWENTY-THIRD ANNUAL CATALOGUE

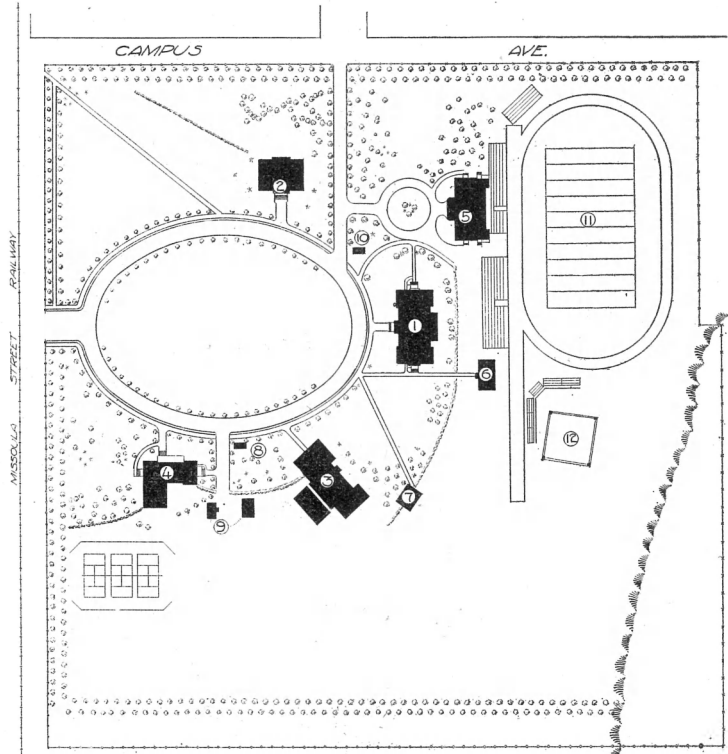
1917-1918

ANNOUNCEMENTS FOR
1918-1919

MISSOULA, MONTANA
APRIL, 1918

Entered at Missoula, Montana, as second-class matter under Act of
Congress, August 24, 1912

MAP OF CAMPUS
STATE UNIVERSITY
 MISSOULA, MONTANA



~ LEGEND ~

- | | |
|----------------------|----------------------|
| 1... UNIVERSITY HALL | 7... JOURNALISM |
| 2... LIBRARY | 8... MUSIC |
| 3... SCIENCE HALL | 9... MUSIC |
| 4... CRAIG HALL | 10... Y.M.C.A. STORE |
| 5... GYMNASIUM | 11... FOOTBALL FIELD |
| 6... FORESTRY | 12... BASEBALL FIELD |

TABLE OF CONTENTS

	Page
Organization.....	Inside Front Cover
Map of Campus.....	2
Calendars.....	4, 5, 6
Official Directory.....	7
Faculty Committees.....	11, 12
University of Montana.....	14
General Information.....	15
Admission Requirements.....	16
Graduation Requirements.....	18
Expenses.....	22
Scholarships.....	27
War Activities.....	31
College of Arts and Sciences:	
Department of Biology.....	38
Department of Botany.....	41
Department of Business Administration.....	42
Department of Chemistry.....	45
Department of Economics.....	47
Department of Education.....	50
Department of English.....	52
Department of Fine Arts.....	55
Department of Geology.....	56
Department of History and Political Science.....	57
Department of Home Economics.....	59
Department of Latin and Greek.....	62
Department of Library Science.....	63
Department of Mathematics.....	64
Department of Astronomy.....	65
Department of Military Science.....	65
Department of Modern Languages.....	66
Department of Physical Education.....	67
Department of Physics.....	70
Department of Psychology and Philosophy.....	72
Public-Service Division.....	74
Graduate Study.....	78
School of Forestry.....	80
School of Journalism.....	90
School of Law.....	94
Pre-Medical Course.....	102
School of Music.....	104
School of Pharmacy.....	108
Summer Quarter.....	111
Biological Station.....	115
Register of Students.....	117
Register of Alumni.....	136
Index.....	147
University Publications.....	Inside Back Cover

1918

JANUARY							JULY							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
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1919

JANUARY							JULY								
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MARCH							SEPTEMBER								
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APRIL							OCTOBER								
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JUNE							DECEMBER								
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15	16	17	18	19	20	21	15	16	17	18	19	20	21		
22	23	24	25	26	27	28	22	23	24	25	26	27	28		
29	30						29	30							

Calendar 1918-1919

Note—Until the end of the academic year 1916-17, the calendars of the State University and the State College of Agriculture and Mechanic Arts had provided for two semesters of eighteen weeks each, followed by a six weeks' summer session. At the State Normal College, however, the four quarters plan has been in operation beginning with the year 1911-12.

In pursuance of the suggestion of the Council of National Defense for economy of time of students and maximum utilization of the resources of higher educational institutions, the calendars of the State University and the State College of Agriculture and Mechanic Arts were reorganized, beginning October 1, 1917, on the basis of a year made up of four quarters of approximately twelve weeks each. This adjustment enables students whose work is interrupted by emergencies to resume attendance whenever they are free, and will make it possible for those who are able to continue in attendance throughout four quarters to complete their courses at an earlier date than under the former plan.

In adapting the program of courses to the four-quarters calendar, changes have been made which tend to concentrate a student's time and energy on fewer subjects during any one quarter. Also a longer period of instruction is afforded during the summer, the season when school teachers can most readily avail themselves of the opportunities for study.

1918

Spring Quarter

Mar. 25, Monday.....	Instruction begins
May 8-11, Wednesday-Saturday.....	Interscholastic Meet
May 30, Thursday.....	Memorial Day, holiday
June 9, Sunday.....	Baccalaureate Address
June 10, Monday.....	Annual Recital of the School of Music
June 11, Tuesday, 10 :30 a. m.....	Class Day Exercises
June 11, Tuesday, 7 :00 p. m.....	Annual Alumni Dinner
June 12, Wednesday, 10 :30 a. m.....	Commencement
June 12-14, Wednesday-Friday.....	Examinations

Summer Quarter

June 17, Monday.....	First Term begins
July 4, Thursday.....	Independence Day, holiday
July 26, Friday.....	First Term ends
July 29, Monday.....	Second Term begins
Aug. 30, Friday.....	Second Term ends

Autumn Quarter

Sept. 27, 28, Friday, Saturday.....	Registration Days
Sept. 30, Monday.....	Instruction begins
Oct. 12, Saturday.....	Columbus Day
Nov. 28, Thursday.....	Thanksgiving Day, holiday
Dec. 18-20, Wednesday-Friday.....	Examinations
Dec. 20, Friday.....	Registration for Second Quarter
Dec. 20, Friday, 4 :30 p. m.....	Quarter ends, Christmas Recess begins

1919

Winter Quarter

Jan. 4, Saturday.....Registration of New Students
Jan. 6, Monday.....Christmas Recess ends, Instruction begins
Feb. 12, Wednesday.....Lincoln's Birthday, Special Convocation
Feb. 17, Monday.....Charter Day, Special Convocation
Feb. 22, Saturday.....Washington's Birthday, holiday
Mar. 26-28, Wednesday-Friday.....Examinations

Spring Quarter

Mar. 29, Saturday.....Registration of New Students
Mar. 31, Monday.....Instruction begins
May 14-17, Wednesday-Saturday.....Interscholastic Meet
May 30, Friday.....Memorial Day, holiday
June 15, Sunday.....Baccalaureate Address
June 16, Monday.....Annual Recital of the School of Music
June 17, Tuesday, 10:30 a. m.....Class Day Exercises
June 17, Tuesday, 7:00 p. m.....Annual Alumni Dinner
June 18, Wednesday, 10:30 a. m.....Commencement
June 18-20, Wednesday-Friday.....Examinations

Summer Quarter

June 23, Monday.....First Term begins
July 4, Friday.....Independence Day, holiday
Aug. 1, Friday.....First Term ends
Aug. 4, Monday.....Second Term begins
Sept. 5, Friday.....Second Term ends

Autumn Quarter

Sept. 26, 27, Friday, Saturday.....Registration Days
Sept. 29, Monday.....Instruction begins
Oct. 12, Sunday.....Columbus Day
Nov. 27, Thursday.....Thanksgiving Day, holiday
Dec. 17-19, Wednesday-Friday.....Examinations
Dec. 19, Friday, 4:30 p. m.....Quarter ends, Christmas Recess begins

Official Directory

EXECUTIVE BOARD

EDWARD O. SISSON (ex-officio), Chairman.....	Missoula
J. H. T. RYMAN (term expires 1921), Treasurer.....	Missoula
J. M. KEITH (term expires 1919).....	Missoula
HARRY EDWIN SMITH, Secretary.....	Missoula

ADMINISTRATIVE OFFICERS

EDWARD C. ELLIOTT, Ph. D.....	Chancellor, University of Montana
EDWARD O SISSON, Ph. D.....	President
K. W. JAMESON, Ph. D.....	Dean of Women
R. H. JESSE, JR., Ph. D.....	Dean of Men
JESSE P. ROWE, Ph. D.....	Director of Summer Quarter
DORR SKEELS, B. S.....	Dean of Forestry
A. L. STONE, B. S.....	Dean of Journalism and University Editor
A. N. WHITLOCK, A. M., LL. B.....	Dean of Law
DELOSS SMITH.....	Dean of Music
C. E. MOLLET, Ph. C.....	Dean of Pharmacy
HARRY EDWIN SMITH, Ph. D.....	Business Manager
JAMES H. BONNER, B. S.....	Superintendent of Buildings and Grounds
J. B. SPEER, B. A., LL. B.....	Registrar
STELLA STILWELL.....	Secretary of the Faculty

THE FACULTY

Professors

- ABER, WILLIAM M., A. B., 1878 (Yale)
Professor of Greek and Latin.
- BONNER, JAMES H., B. S., 1907 (State University of Montana)
Acting Dean of the School of Forestry; Professor of Forestry, and
Superintendent of Buildings and Grounds.
- BURLEIGH, CECIL
Professor of Violin.
- CLEARY, GEORGE E., A. B., 1911 (University of Wisconsin)
LL. B. 1914, *ibid*
Professor of Law.
- COFFMAN, GEORGE R., A. B., 1903 (Drake University)
A. M. 1909 (Harvard University)
Ph. D. 1913 (University of Chicago)
Professor of English.
- CORBIN, FRANCES, B. L. 1902 (Ohio College)
Professor of English.
- DAUGHTERS, FREEMAN, B. A., 1896 (Kansas State Normal College)
T. B. 1903 (Philadelphia Divinity School)
M. A. 1915 (Columbia University)
Professor of Education.
- DRAKE, WILLARD M., A. B. 1902 (Bates College)
M. S. F. 1906 (University of Michigan)
Professor of Forestry.
- ELROD, MORTON J., B. A. 1887 (Simpson College)
M. A. 1890 *ibid*
M. S. 1902, *ibid*
Ph. D. 1905 (Illinois Wesleyan)
Professor of Biology and Director Biological Station.

JESSE, RICHARD HENRY, JR., A. B. 1902 (University of Missouri)
A. M. 1907 (Harvard University)
Ph. D. 1909, *ibid*

Professor of Chemistry.

KIRKWOOD, JOSEPH EDWARD, A. B. 1898 (Pacific University)
A. M. 1902 (Princeton)
Ph. D. 1903 (Columbia University)

Professor of Botany.

LENNES, N. J., B. S. 1898 (University of Chicago)
M. S. 1903, *ibid*
Ph. D. 1907, *ibid*

Professor of Mathematics and Acting Director of Public Service
Division.

LEVINE, LOUIS, B. S. 1903 (Classical College, Cherkassi, Russia),
Ph. D. 1911 (Columbia University)

Professor of Economics.

MOLLET, CHARLES E., Ph. C. 1904 (Kansas University)
Dean of the School of Pharmacy and Professor of Pharmacy.
NEFF, CHARLES M., Ph. B. 1899 (University of Rochester)
LL. B. 1902 (Columbia University)

Professor of Law.

*PHILLIPS, PAUL C., A. B. 1906 (Indiana University)
A. M. 1909 *ibid*
Ph. D. 1911 (University of Illinois).

Professor of History.

POPE, WALTER L., A. B. 1909 (University of Nebraska)
J. D. 1912 (University of Chicago)

Professor of Law.

ROWE, JESSE, P., B. S. 1897 (University of Nebraska)
M. A. 1903 *ibid*
Ph. D. 1906 *ibid*

Professor of Geology.

SCHEUCH, FREDERICK, C., M. E., 1893 (Purdue University)
A. C. 1894 *ibid*

Professor of Modern Languages.

SCHREIBER, WILLIAM E., A. B. 1906 (University of Wisconsin)
Professor of Physical Education.

SISSON, EDWARD O., B. S. 1886 (Kansas State Agricultural College)
A. B. 1893 (University of Chicago)
Ph. D. 1905 (Harvard University)

President and Professor of Education.

*SKEELS, DORR, B. S., 1904 (Michigan Agricultural College)
Dean of School of Forestry and Professor of Forestry.

SMITH, DELOSS

Dean of the School of Music and Professor of Music.

SMITH, FRANKLIN O., B. A. 1906 (University of Iowa)
M. A. 1907 *ibid*
Ph. D. 1912 *ibid*

Professor of Psychology.

SMITH, HARRY EDWIN, A. B. 1906 (DePauw University)
Ph. D. 1912 (Cornell University)

Business Manager and Professor of Business Administration.

*SPAULDING, THOMAS C., B. S. 1906 (State University of Montana)
M. S. 1909 (University of Michigan)

Professor of Forestry.

STONE, ARTHUR L., B. S. 1884 (Worcester Polytechnic)
Dean of the School of Journalism and Professor of Journalism.

SWENSON, JOSEPHINE

Professor of Piano.

*On Leave.

- UNDERWOOD, J. H., A. B. 1902 (Western College)
 A. M. 1904 (University of Iowa)
 Ph. D. 1907 (Columbia University)
 Professor of Economics.
- WHITLOCK, ALBERT N., A. B. 1906 (University of Kentucky)
 A. M. 1908 *ibid*
 LL. B. 1911 (Harvard University)
 Dean of the School of Law and Professor of Law.

Assistant Professors

- BANGS, E. ORLO, B. S. 1909 (Iowa State Teachers' College)
 Assistant Professor of Voice.
- BATEMAN, W. G., B. A. 1907 (Stanford University)
 M. A. 1909 *ibid*
 Ph. D. 1916 (Yale)
 Assistant Professor of Chemistry.
- *BRAY, ARCHIE W. L., B. A. 1909 (Cambridge University, England)
 Assistant Professor Biology.
- CAREY, EUGENE F. A., B. S. 1905 (University of California)
 M. S. 1914 *ibid*
 Assistant Professor Mathematics.
- CASEY, RALPH D., A. B. 1913 (University of Washington)
 Assistant Professor of Journalism.
- DICE, LEE R., A. B. 1911 (Stanford University)
 M. S. 1914 (University of California)
 Ph. D. 1915 *ibid*
 Assistant Professor of Biology.
- FARMER, CHARLES F., B. S. 1909 (State University of Montana)
 Assistant Professor of Forestry.
- FENSKA, RICHARD R., B. S. 1911 (Beloit College)
 M. F. 1913 (Yale University)
 Assistant Professor of Forestry.
- GITTINGS, INA E., A. B. 1906 (University of Nebraska)
 Assistant Professor, Director of Physical Education for Women.
- HAXO, HENRY, A. B. 1910 (Stanford University)
 A. M. 1911 *ibid*
 Ph. D. 1913 (University of Chicago)
 Assistant Professor of Modern Languages.
- JAMESON, KATE W. (Mrs.) B. A. 1905 (Ohio Wesleyan)
 M. A. 1914 (University of Wisconsin)
 Ph. D. 1916 *ibid*
 Dean of Women and Assistant Professor of Modern Languages.
- JONES, HOWARD M., A. B. 1914 (University of Wisconsin)
 M. A. 1916 (University of Chicago)
 Assistant Professor of English.
- JONES, WEBSTER N., A. B. 1908 (University of Missouri)
 A. M. 1909 *ibid*
 Assistant Professor of Chemistry.
- MERRILL, ARCHIBALD S., A. B. 1911 (Colgate University)
 A. M. 1914 *ibid*
 Ph. D. 1916 (University of Chicago)
 Assistant Professor of Mathematics.
- SCHWALM, FREDERICK D.
 Assistant Professor of Fine Arts.
- SPAULDING, ALBERT E., M. C. S. 1910 (Highland Park College, Des Moines, Iowa)
 B. A. 1915 (University of Michigan)
 Assistant Professor of Business Administration.
- THOMPSON, ROBERT N., B. S. 1905 (Peabody College)
 Assistant Professor of Physics.

*On Leave.

TREXLER, HARRISON A., Ph. B. 1906 (Bellevue College)
 Ph. D. 1914 (Johns Hopkins University)
 Assistant Professor of History.

Instructors

BUCKHOUS, GERTRUDE M., B. S. 1900 (State University of Montana)
 Librarian and Instructor in Library Science.

COLEMAN, RUFUS, A., A. B. 1909 (Whitman College)
 A. M. 1914 (Columbia University)
 Instructor in English.

DENFELD, GEORGE A., B. A. 1917 (University of Wisconsin)
 Instructor in Business Administration.

FAUST, HILDA, B. A. 1915 (State University of Montana)
 Instructor in Home Economics.

GRAFF, PAUL W., B. S. 1907 (Connecticut Agricultural College)
 A. M. 1916 (Columbia University)
 Instructor in Botany.

HOWARD, JOSEPH W., A. B. 1912 (Shurtleff College)
 A. M. 1913 (University of Illinois)
 Ph. D. 1915 *ibid*
 Instructor in Chemistry.

HUGHES, HELEN S., Ph. B. Ed. B. 1910 (University of Chicago)
 A. M. 1911 *ibid*
 Ph. D. 1917 *ibid*
 Instructor in English.

LUSSKY, GEORGE F., A. B. 1907 (University of Chicago)
 A. M. 1911 (University of Wisconsin)
 Ph. D. 1915 *ibid*
 Instructor in Modern Languages.

MCCORMICK, W. J., A. B. 1906 (Harvard University)
 LL.B. 1910 (Columbia University)
 Commandant and Instructor in Military Science.

ORBECK, ANDERS, B. A. 1913 (University of Minnesota)
 M. A. 1914 *ibid*
 Instructor in English.

PAXTON, GERTRUDE C., B. S. 1904 (Iowa State College)
 Instructor in Home Economics.

SWAIN, JOSEPH WARD, A. B. 1912 (Columbia University)
 A. M. 1913 (Harvard University)
 Ph. D. 1917 (Columbia University)
 Instructor in History and Modern Languages.

*SWARTOUT, W. N.,
 Commandant and Instructor in Military Science and Physical Education for Men.

VALENTINE, CHARLES P., Ph. C. 1910 (Montana College Agriculture and
 Mechanic Arts)
 B. S. 1917 (State University of Montana)
 Instructor in Pharmacy.

WOODS, ELLA, B. S. 1911 (University of Idaho)
 B. S. (H. Ec.) 1915 *ibid*
 Instructor in Home Economics.

Assistants

KING, OLLIE MAY,
 Assistant in Fine Arts.

NISSSEN, J. N.,
 Assistant in Physical Education and Coach of Athletics.

Special Lecturers in Forestry

RUTLEDGE, R. H., Acting District Forester
 Lecturer in Forest Claims, Agricultural Settlements, Land Valuations and Classifications.

*Resigned.

- PRESTON, J. R., A. B., Assistant District Forester
Lecturer in Silviculture.
- ADAMS, C. H., E. M., Assistant District Forester
Lecturer in Grazing.
- URBANOWICZ, J. A., Fiscal Agent
Lecturer in Forest Accounts and Cost Keeping.
- ADAMS, R. B., Superintendent of Telephone Construction
Lecturer in Forest Improvements.
- KRAMER, E. W. C. E., District Engineer
Lecturer in Forest Engineering.
- WEIR, JAMES R., Ph. D., Consulting Pathologist
Lecturer in Forest Protection and Forest Pathology.
- WHITE, Edgar F., M. F., Forest Examiner
Lecturer in Forest Extension and Planting.
- KNOUF, C. E., Expert Lumberman
Lecturer and Instructor in Forest Mensuration and Log Scaling.
- WHITE, W. W., M. S. F., Forest Supervisor
Lecturer in the Practice of Forestry.
- McLAUGHLIN, R. P., Forest Supervisor
Lecturer in the Practice of Forestry.
- PARKER, RUTLEDGE, Forest Supervisor
Lecturer in the Practice of Forestry.
- KENNEDY, HON. J. M.
Lecturer in Industrial and Community Development.
- KOCH, ELMERS, M. F., Forest Supervisor
Specialist in Forest Protection.
- CLARK, FAY G., M. S. F., Forest Supervisor
Specialist in Forest Improvements.
- BUTLER, J. W., D. V. S., State Veterinarian
Lecturer in Veterinary Science.

Special Lecturers in Law.

- F. A. ANGEVINE, Practice Court.
W. L. MURPHY, Public-Service Corporations.
F. C. WEBSTER, Wills.

Librarians.

- GERTRUDE BUCKHOUS, B. S. 1900 (State University of Montana)
Librarian.
- M. WINIFRED FEIGNER, B. A., 1908 (State University of Montana)
S. B. 1909 (Simmons College)
Assistant Librarian.
- A. MARIE LAMONT, S. B. 1915 (Simmons College)
Loan Desk Assistant in Library.
- BESSIE SESTAK, B. A. 1916 (State University of Montana)
Assistant in Library.
- ALICE LONGSHORE
Assistant in Library.
- FRANCES GARRIGUS
Assistant in Law Library.
- PAYNE TEMPLETON, B. A. 1916, (State University of Montana)
Assistant in Law Library.

Standing Committees of the Faculty.

ADMISSION AND REGISTRATION :

Rowe, Carey, Mollet, Speer, Whitlock.

ADVISERS :

Scheuch, Carey, Corbin, Elrod, Faust, Howard, Kirkwood, Levine,
F. O. Smith, Thompson.

ARCHIVES :

Aber, Feighner, Scheuch.

ATHLETICS :

Sisson, McCormick, Rowe, Scheuch, H. E. Smith.

CONVOCATION :

Casey, Aber, Coleman, Corbin, DeLoss Smith.

CURRICULUM :

Underwood, Daughters, Gittings, Hughes, Jameson, W. N. Jones,
Kirkwood.

DISTRIBUTING :

Bateman, Merrill, Pope.

FACULTY AFFAIRS :

Elrod, Carey, Corbin.

GRADUATE WORK :

Jesse, Graff, Haxo, Lennes, F. O. Smith.

HOUSING STUDENTS—MEN :

W. N. Jones, Fenska, Merrill.

HOUSING STUDENTS—WOMEN :

Jameson, Faust, Wilson.

INTERSCHOLASTIC :

Pope, Casey, Denfeld, Elrod, Jameson, McCormick, Thompson.

MILITARY TRAINING AND PHYSICAL EDUCATION FOR MEN :

McCormick, Fenska, Merrill, Neff, Valentine.

PHYSICAL EDUCATION FOR WOMEN :

Gittings, Hughes, Jameson.

PHYSICAL PLANT :

Farmer, Aber, Elrod, Mollet, H. E. Smith.

PUBLIC ACCOUNTANCY :

H. E. Smith, Spaulding, Denfeld.

PUBLICITY :

Stone, Casey, H. M. Jones.

PUBLIC SERVICE :

Lennes, Buckhous, Coffman, Levine, Trexler.

RECOMMENDATIONS :

Daughters, and major professors concerned.

SCHEDULE :

Carey, Cleary, Fenska, Orbeck, Trexler.

SCHOLARSHIP :

Kirkwood, Bateman, Coffman, Jameson, Jesse, Speer, Thompson.

SELF-HELP FOR MEN :

Elrod, Aber, Bonner, W. N. Jones, H. E. Smith.

SELF-HELP FOR WOMEN :

Jameson, Faust, H. E. Smith, Wilson.

STATE FAIR EXHIBITS :

Schwalm, Cleary, Farmer, Woods.

STUDENT AFFAIRS :

Whitlock, Bangs, Jameson, Jesse, Stone.

STUDENT LOAN :

H. E. Smith, Burleigh, Elrod, Jameson, Levine.

SUMMER SESSION :

Rowe, Carey, Daughters, Paxton, Stone.

WELFARE COMMITTEE :

Scheuch, Jesse, Rowe.

Chairmen of Departments.

BIOLOGY, Professor M. J. Elrod.

BOTANY, Professor J. E. Kirkwood.

BUSINESS ADMINISTRATION, Professor Harry Edwin Smith.

CHEMISTRY, Professor Richard H. Jesse, Jr.

ECONOMICS, Professor Joseph H. Underwood.

EDUCATION, Professor Edward O. Sisson.

ENGLISH, Professor George R. Coffman.

FINE ARTS, Assistant Professor Frederick D. Schwalm.

GEOLOGY, Professor Jesse P. Rowe.

GREEK AND LATIN, Professor Wm. M. Aber.

HISTORY AND POLITICAL SCIENCE, Professor Paul C. Phillips.

HOME ECONOMICS, Instructor Mrs. Gertrude C. Paxton.

LIBRARY SCIENCE, Instructor Miss Gertrude Buckhous.

MATHEMATICS, Professor N. J. Lennes.

MODERN LANGUAGES, Professor F. C. Scheuch.

PHYSICAL EDUCATION, Assistant Professor Ina E. Gittings.

PSYCHOLOGY, Professor F. O. Smith.

Examiners in Public Accounting

FOR THE UNIVERSITY—Professor H. E. Smith, Assistant Professor
A. E. Spaulding, Instructor George A. Denfeld.

FOR THE STATE—J. C. Phillips, W. D. Mangam, Donald Arthur
(Secretary) of Butte.

University of Montana

An act of congress approved February 18, 1881, dedicated for university purposes in Montana seventy-two sections of the public domain. The enabling act, providing for the organization of the State of Montana and its admission to the Union, February 22, 1889, confirmed this grant to the state and added 100,000 acres for a school of mines, 100,000 acres for normal schools, and 140,000 acres for an agricultural college.

The Third Legislative Assembly of the State of Montana, in February, 1893, enacted laws providing for the establishment of all these institutions, and locating the State University at Missoula, the State School of Mines at Butte, the State Normal School at Dillon, and the State Agricultural College at Bozeman.

As the lands granted for higher educational purposes, together with timber or stone thereon, have been sold, the proceeds have gone into permanent funds invested for the various institutions, and the interest on these funds, together with the rentals of unsold lands, has been used for the support of the respective institutions. These maintenance resources have been supplemented with appropriations made each subsequent biennium by the legislative assembly, which has also provided for the erection of buildings at the expense of the state.

These institutions were administered independently by the local executive boards for some years under the general supervision of the State Board of Education; by a law of 1909 the powers of the local boards were more closely defined and the direction of the State Board of Education made more effective. By the enactment of Chapter 92 of the laws of the Thirteenth Legislative Assembly in 1913, the four institutions were combined into the University of Montana under the executive control of an officer whose title is Chancellor. In October, 1915, the State Board of Education appointed Edward C. Elliott, then of the University of Wisconsin, as the first Chancellor of the University of Montana. He assumed his duties February 1, 1916.

State University

The State University, located in Missoula, was formally opened in 1895. For four years the institution occupied temporary quarters. Oscar J. Craig was the first president. The local executive board, named by the governor, was made up of J. H. T. Ryman, Hiram Knowles and Thomas C. Marshall. The first faculty consisted of the president and four associates.

In 1897, the legislature authorized the issuance of bonds, in amount of \$100,000, for the construction of two buildings. The campus site was donated to the state by Edward L. Bonner and Francis G. Higgins of Missoula. In 1899 the university occupied its permanent quarters.

President Craig remained at the head of the University until 1908, when failing health compelled his resignation. He was succeeded by Clyde A. Duniway, who came to Montana from Leland Stanford university. During the administration of President Duniway, the summer session was inaugurated and the School of Law established. In 1912, Edwin Boone Craighead of Tulane university, succeeded President Duniway. He continued in office until 1915. Under his presidency the Schools of Forestry and of Journalism were established; the School of Pharmacy re-organized; the departments of Business Administration and of Domestic Science were added to the College of Arts and Sciences.

In 1915, Professor Frederick C. Scheuch was appointed acting president and continued in that capacity until the summer of 1917.

Edward O. Sisson was appointed president of the university in 1917, coming to Montana from Idaho, where he had held the office of State Commissioner of Education.

THE CAMPUS.

The university campus comprises 60 acres. It lies southeast of Missoula at the head of the Missoula valley. The entrance to the campus is on the west side, from University avenue. Trees, lawns, shrubbery and flowers, interspersed among the walks and drives, make an attractive setting for the buildings. Directly east of the campus is Mount Sentinel, 2,000 feet high, upon whose slope the university owns 520 acres, extending to the summit.

BUILDINGS.

The buildings of the State University are: University hall, Science hall, Craig hall, Library hall, the Gymnasium, Forestry building, Journalism building, Music building and the Infirmary.

University hall is the administration building. Here also are the

assembly hall of the university and classrooms, lecture rooms and laboratories.

Science hall is occupied by the School of Pharmacy and the departments of Chemistry and of Home Economics.

Craig hall is the woman's dormitory, entirely given up to the housing and feeding of the women students of the institution.

The gymnasium is equipped for the physical education of all students. Adjoining it is Montana field, the athletic ground, with its bleachers and tracks.

Library hall contains the university library, the law library, the classrooms of the School of Law and other lecture and classrooms.

The Forestry, Journalism and Music buildings are frame structures, affording temporary quarters for these schools.

The infirmary is a cottage, designed for the isolation of students who may be suffering from contagious or infectious diseases.

A new science building is in course of construction.

SURROUNDINGS.

Missoula, the seat of the State University, is the principal city in western Montana. It is reached by the main lines of the Northern Pacific and the Chicago, Milwaukee & St. Paul railways and by the Bitter Root, Flathead and Coeur d'Alene branches of the Northern Pacific.

Missoula is a pleasant residence city. Its climatic and sanitary conditions are excellent. The scenery of western Montana is beautiful. As a place for college residence, Missoula offers special advantages.

REQUIREMENTS FOR ADMISSION

Applicants for admission must be at least sixteen years of age and must present evidence of good moral character.

The completion of a high school or preparatory course of four years is the standard for regular entrance to the freshman class. This must include at least fifteen units of work. The term unit means one subject pursued for at least thirty-six weeks with not fewer than five recitations a week of forty-five or more minutes each. Two periods of laboratory, shop or drawing work count the same as one recitation.

Applicants for admission without condition to the freshman class must have three (3) units in English composition and literature, and are advised to include among the required 15 units at least the following:

- Mathematics, 2 units
- Science, 1 unit
- History, 1 unit.

ADMISSION ON CERTIFICATES

Graduates of the accredited high schools of Montana obtain admission by presenting certificates of principals stating subjects taken, time given for each, and grades obtained.

Blanks for such certificates are furnished by the registrar. These should be filed in the registrar's office on or before the first day of registration.

ACCREDITED HIGH SCHOOLS.

1917—1918

District High Schools: Alberton, Anaconda, Baker, Belgrade, Belt, Billings, Bridger, Butte, Camas Praire, Chinook, Columbia Falls, Conrad, Corvallis, Culbertson, Cut Bank, Forsyth, Fromberg, Glasgow, Great Falls, Hamilton, Hardin, Harlowton, Havre, Helena, Hysham, Joliet, Laurel, Lavina, Libby, Malta, Manhattan, Moore, Plains, Plentywood, Polson, Pony, Ravalli, Roundup, Ryegate, Shelby, Sheridan, Sidney, Stanford, Stevensville, Terry, Thompson Falls, Three Forks, Valier, Victor, Virginia City, Whitefish, Whitehall, White Sulphur Springs, Worden.

County High Schools: Beaverhead, (Dillon); Broadwater, (Townsend); Carbon, (Red Lodge); Chouteau, (Fort Benton); Custer, (Miles City); Dawson, (Glendive); Fergus, (Lewistown); Flathead, (Kalispell); Gallatin, (Bozeman); Granite, (Phillipsburg); Jefferson, (Boulder); Lincoln, (Eureka); Missoula, (Missoula); Park, (Livingston); Powell, (Deer Lodge); Sweet Grass, (Big Timber); Teton, (Choteau); Wibaux (Wibaux).

Private Schools: Academy of Montana Wesleyan University, (Helena); Academy of Mount St. Charles College, (Helena); Butte Business College, (Butte); Central High School, (Butte); Loyola High School, (Missoula); Mount Angela Ursuline Academy, (Great Falls); Polytechnic Institute, (Billings); Sacred Heart Academy, (Missoula); St. Vincent's Academy, (Helena.)

Preparatory work done in other schools than those accredited may receive credit. Applicants from such schools should present certificates stating the same points as those given from accredited schools. Blanks for this purpose are furnished by the registrar. When the evidence of certificate is not clear and satisfactory, examinations will be given.

Graduates of high schools not in Montana are admitted on certificates without examination, if such high schools are accredited to their own state universities.

ADMISSION ON EXAMINATION

Applicants wishing to receive entrance credits on subjects for which they do not present satisfactory certificates are required to take examinations on days prescribed in the calendar. For the academic year 1918-19 these days are September 27-28, January 4 and March 9.

Those who are preparing to take entrance examinations should correspond with the registrar for suggestions in regard to such preparation.

CONDITIONAL ADMISSION

The entrance requirement of the completion of a four-years preparatory course with at least fifteen units of credit may be modified in indi-

vidual cases by permitting the conditional admission of students otherwise qualified if they are entitled to at least thirteen admission units.

Entrance conditions must be removed within one year from the time of admission. This may be accomplished by private study or tutoring and the passing of entrance examinations; by arranging to take the requisite courses in the regular classes of the Missoula County High school; or by transferring certain college credit hours and counting them toward entrance standing instead of toward graduation.

ADMISSION OF SPECIAL STUDENTS

Students twenty-one years of age or older, not candidates for degrees, may be admitted without the usual entrance units, as special students, if they give satisfactory evidence that they are prepared to pursue successfully the special courses desired.

Special students may acquire status as regular students and become candidates for degrees upon complying with the rules applicable to such cases.

ADMISSION TO ADVANCED STANDING

Students entering from collegiate departments or other colleges and universities must bring certificates of honorable dismissal. Upon presentation of the proper certificates they will receive advanced credit for courses taken in institutions of approved standards.

REQUIREMENTS FOR GRADUATION

For graduation a student must complete 186 credit hours of work. One credit hour represents three hours of time each week throughout one quarter, occupied in lectures or recitations and in preparation. Time given to laboratory work is credited on the same basis for valuation, three hours for one credit.

REQUIRED OF ALL

English Composition.....	9 hours
2 years Military Science and Physical Education (Men).....	12 hours
2 years Physical Education (Women).....	6 hours

RESTRICTED ELECTIVES

Science or Mathematics.....	9 to 15 hours
Language other than English.....	18 to 30 hours
History or Economics.....	9 to 15 hours
Literature or Philosophy.....	9 to 15 hours

For the special requirements for candidates for the University Certificate to teach, see page 20.

MAJOR-DEPARTMENT ELECTIVES

Not later than the junior year, every student must choose a major department. This department may command from 45 to 60 hours, including whatever hours may have been earned in the restricted-elective list above. Professors in the major departments define their prescriptions for each student.

FREE ELECTIVES

The remainder of the 186 required hours are entirely free electives. Until choice of a major department is made, a student's electives are subject to the advice of an appointed faculty adviser; after this choice, the head of the department selected becomes the adviser.

Requirements beyond English Composition and Physical Education do not apply to students in professional schools, since the faculties of these schools definitely prescribe their work.

DEGREES

The State University confers the degrees of Bachelor of Arts, Bachelor of Science and, to advanced students, the master's degree.

Baccalaureate Degrees

Requirements for these degrees are given in detail under the chapter heading, "Requirements for Graduation." In all departments of the College of Arts and Sciences the work of the University is so arranged that each student has wide latitude in determining his course. In the professional schools, the work is more closely prescribed.

Advanced Degrees

Work of advanced character, involving research, may be pursued at the University after graduation. Detailed information as to the graduate work offered by the University will be found in the description of courses, under the heading, "Graduate Work."

Certified Public Accountancy

Chapter 39 of the Session Laws of Montana of 1909 provides for the regulation of the practice of public accounting in the state. The State University administers this law and issues certificates of competency. The provisions of the law are carried out by:

(a) A University Committee of Accountancy, consisting of Professor H. E. Smith, chairman; A. E. Spaulding, secretary, and George A. Denfeld.

(b) A Board of Examiners, consisting of three certified public accountants of the state of Montana, appointed by the Chancellor of the University. The members of the present board are: J. C. Phillips, W. D. Mangam and Donald Arthur, secretary, of Butte. The registrar

of the State University will send, upon application, a bulletin containing the particular of the law and its administration.

University Certificate of Qualification to Teach

The following regulations covering special and general professional training are in force:

Required—

English	9 to 10 hours
Physical Culture	4 hours

Restricted Electives—

Modern Languages	21 hours
Mathematics or Science.....	9 to 10 hours
History or Economics.....	9 to 10 hours
Literature or Philosophy.....	9 to 10 hours
Total required and restricted electives.....	61 to 65 hours

Two minors 42 hours	} or {	Major work 54 hours
Major work 37 hours		One minor 27 hours

Total major and minor subjects.....	79 hours
Education	20 to 21 hours
Psychology prerequisite	10 hours
Free Electives	15 hours

Observation and Teaching, 6 quarter hours, but no credit except on certificate. Total 186 hours.

The course in Observation and Teaching is given under the supervision of the Department of Education which will be the equivalent of not more than 3 hours a week for two quarters.

By agreement with the Missoula County High School Board opportunities for observation and teaching with the assistance of the faculty of the high school will be given in the second and third quarters of the senior year to students who are recommended as candidates for the Certificate of Qualification to Teach.

Major work should include a course in Special Method of the subject, of the value of at least 1 credit hour.

In no case shall a candidate for this certificate be required to take more than 54 hours in the major department.

All general questions relating to each student's professional work are under the supervision of a special committee, of which the head of the Department of Education is the chairman. All recommendations for teacher's certificate are made to the faculty through this committee.

All candidates for the certificate should confer with the professor of education not later than the beginning of their second year.

SCHOLARSHIP AND CONDUCT

The University requires all its students to conform to the usual standards of society and law-abiding citizenship and to manifest a serious purpose by maintaining satisfactory standing in the courses which they undertake. No student will be permitted to continue his connection with the university who shows persistent unwillingness or inability to comply with these requirements.

If a student is absent from classes 12 times during one quarter, one credit is deducted from the total of his credits acquired and an additional credit is deducted for each additional 12 absences or major fraction thereof. Absences are not counted when a student is absent on departmental work or representing the university in extra-curricular activities.

The State University is a member of the Pacific Northwest Intercollegiate conference, whose rules govern all athletic contests. These rules are: (1) Students must be regularly enrolled in the university; (2) they must hold passing grade in at least 12 hours of regular university work; (3) they must have passed in at least 12 hours of the work of the previous semester; (4) they must not have total delinquencies in their previous records, amounting to more than 12 hours; (5) they must register not later than two weeks after the opening of the quarter.

These activities, in addition to athletics, come under the university's eligibility rules: Intercollegiate debate, intercollegiate oratory, managership of the University Sentinel, managership of The Kaimin, managership of the Associated Students of the University of Montana, contests for university prizes, carrying a leading part in a university play.

SCHOLARSHIP GRADES

Grades are given in the State University according to the following system of marking:

"A"—Work of the best grade.

"B"—Work better than average.

"C"—Average work.

"D"—Work below average, but of passing grade.

"E"—Failure.

If all the work in a course has not been done and there is sufficient reason for this, the mark "I" is given. This incomplete work must be completed not later than the time of the next repetition of the course, but arrangements may be made with the instructor for its earlier completion.

In credits counted toward graduation, a student may not have more than 25 per cent of such credits of grade "D."

A student may withdraw from a course in which he has registered: During the first week of a quarter, with the consent of his adviser; during the second week, with the consent of adviser and instructor; during the period from the third to the ninth week, with the consent

of adviser and instructor and the formal permission of the committee on registration and admission. In these cases, the student is given a mark, "W", which carries no credit. After the ninth week, the student who withdraws receives a grade, usually "I". All withdrawals must be formal and must be recorded by the student with the registrar.

HONOR ROLL

After the close of each quarter's work, an honor list is published of all students whose work has all been of grade A or B.

EXPENSES

Women students who do not make their homes with their families are expected to live in Craig Hall, unless permission to live elsewhere is obtained. The university conducts Craig hall and makes a charge of \$26 to \$28 a month for room and board. Each room in the hall must have two occupants. The dormitory will house 72 students. Rooms are fully furnished, except that each student is expected to supply necessary sheets, pillow cases, towels, curtains and napkins. The university reserves the right to raise the charge for board in case there is further increase in the prices of foodstuffs.

Men students may find room and board in private families or by combining in clubhouses, either as fraternities or otherwise, they may live at reasonable rates. Men may obtain board at Craig hall at \$20 a month.

Students will be permitted to live only in such places as have the approval of the university officers.

RAILWAY FARE REFUND

In accordance with the provisions of Chapter 123, Session Laws of 1917, and under regulations established by the State Board of Education, railway fare in excess of five dollars actually paid by any student for a round trip between his Montana home and any institution of the University of Montana, once each year, will be refunded. Students must present receipts for the fare thus paid. No war tax that has been paid by any student will be refunded under any condition whatever; but if students, whose fare is five dollars or more, apply in advance to the Registrar, they can obtain blanks by use of which they may receive exemptions from the war tax on transportation.

GENERAL UNIVERSITY STUDENT LOAN FUNDS

The Montana Bankers' Association, and the alumni of the University of Nebraska residing in Montana, have each established loan funds which are available for students in the junior and senior classes of any of the institutions of the University of Montana, who are unable to continue their studies without financial aid, and are satisfactorily recommended as to character and scholarship by the dean or director, or the head of

the department in which the applicant's major work is done. The loan to any one student is limited to two hundred dollars during his course, and not more than one hundred dollars in any one year. Loans must be repaid within one year from the time of borrowing, or, in exceptional cases, one year after graduation. Loans bear two per cent interest.

Application blanks and a statement of detailed regulations governing these loans may be obtained from the registrar.

EMPLOYMENT AND AID FOR STUDENTS

A large number of students of the university earn either the whole or part of their expenses while in college. Students intending to work their way can usually do so if they come with sufficient means to support themselves for the first half year, though many have made all their expenses from the beginning.

The university cannot guarantee work for students, but those who are strong and willing to do any work that offers will not lack opportunities. A number of students find work about the university, as stenographers, assistants in the laboratories, in the library, in Craig Hall, as carpenters, janitors, gardeners, and in other capacities. Others find employment in town as draftsmen, bookkeepers, clerks, reporters, janitors, newsboys, or helpers in homes.

While nothing is more efficient in obtaining work than the personal endeavors of the student, a committee of the faculty will give every aid possible. Particular attention will be paid to the needs of new students. Those wishing employment during the coming year, and new students wishing information, should send their names together with an account of the work they have done, the character of the work they wish to do, and the kind of positions they would be willing to fill, to the registrar.

During summer vacations, students readily find profitable employment in many occupations.

SCHEDULE OF FEES AND DEPOSITS

A fee is a fixed charge, no part of which is returnable, except as specified under Refunds. A deposit is intended to serve as a security against losses or breakage; any unused balances are returnable.

General Fees.

Registration Fee	\$10
Payable annually in advance by each student in attendance during the autumn, winter or spring quarter. In no case will any part of this fee be refunded.	
Registration Fee, Summer Quarter.....	\$10
Payable in advance by all students attending one or both terms of the summer quarter. In no case will any part of this fee be refunded.	
Associated Student Activity Fee.....	\$10
Payable annually in advance by all students entering the autumn	

quarter. Students entering the winter quarter pay \$7; those entering the spring quarter, \$4.

Late Registration Fee.....	\$2
Payable by students registering after the prescribed registration days of any quarter, except students registering for the first time.	
Changed Registration Fee.....	\$1
Payable by any student for changes in the study list made after the second week of any quarter.	
Limited Registration Fee, each course, each quarter.....	\$2
Payable by special students, registering for not more than two courses.	
Special Attendance Fee, each course, each quarter.....	\$2
Payable by adults not regularly registered but attending classes as listeners.	
Library Deposit	\$3
Payable by all students.	
Key Deposit	\$.50
Payable by all students and staff members receiving and holding keys to university buildings, rooms or gymnasium lockers.	

Course Deposits and Fees

Biology:	Fees	Deposits
11. Elementary Biology	\$2.50 per Q.	
13. Animal Ecology	2.50 per Q.	
16. Protozoology	2.50 per Q.	
17. Entomology	2.50 per Q.	
19. Bacteriology	5.00 per Q.	
21. Histology	2.50 per Q.	
22. Embryology	2.50 per Q.	
23. Comparative Anatomy	2.50 per Q.	
24. Physiology	2.50 per Q.	
118. Entomology, Advanced.....	2.50 per Q.	
122. Histology, Advanced.....	2.50 per Q.	
120. Bacteriology, Advanced.....	2.50 per Q.	

Biological Station:

Tent Rent	\$5.00 per session
Tent Rent for less than session.....	1.00 per week
Camp Fee	5.00 per week
Board	6.00 per week

Botany:

11. General Botany	\$1.00 per Q.
21. Histology	3.00 per Q.
22. Histology	3.00 per Q.
25. Rural Botany	2.00 per Q.
31. Forest Pathology	3.00 per Q.
41. Comparative Morphology.....	3.00 per Q.
51. Ecology	2.00 per Q.
61. Systematic Botany	1.00 per Q.
63. Systematic Dendrology.....	1.50 per Q.
65. Systematic Mycology	3.00 per Q.
F1. Forestry Botany.....	1.00 per Q.
F2. Range Plants.....	1.00 per Q.

Chemistry:

11. General Chemistry.....	\$3.00 per Q.	\$2.00 per Q.
13. Inorganic Chemistry and Qualitative	3.00 per Q.	2.00 per Q.

15A. Qualitative Analysis.....	4.00 per Q.	3.00 per Q.
15B. Qualitative Analysis.....	4.00 per Q.	3.00 per Q.
17. Quantitative Analysis.....	4.00 per Q.	3.00 per Q.
18. Fire Assaying.....	6.00 per Q.	
19. Organic Chemistry.....	4.00 per Q.	3.00 per Q.
101. Carbon Compounds.....	4.00 per Q.	3.00 per Q.
102. Organic Qualitative Analysis.....	4.00 per Q.	3.00 per Q.
103. Physiological Chemistry.....	4.00 per Q.	3.00 per Q.
104. Chemistry and Analysis of Foods.....	4.00 per Q.	3.00 per Q.
105. Textile Chemistry.....	4.00 per Q.	
106. Physical Chemistry.....	4.00 per Q.	3.00 per Q.
111. Technical Analysis.....	4.00 per Q.	3.00 per Q.
200. Advanced Courses and Research.....	4.00 per Q.	3.00 per Q.

Note: When the same individual elects simultaneously two or more courses in Chemistry, he must pay in full for the course with the highest fee and deposit, but only one-half the fee and one-half the deposit for the other courses.

Geology:

11. General Geology.....	\$1.00 per year
17. Physical Mineralogy.....	3.00 per Q.
22. Blowpipe Analysis.....	2.00 per Q.
Forestry Geology.....	1.00 per Q.

Home Economics:

11. or 11a. Clothing	\$1.00 per Q.
13. Foods	7.00 per Q.
15. General Food Study	7.00 per Q.
17. Dress	1.00 per Q.
21. Problems in the Preparation and Service of Food.....	7.00 per Q.
22. Dietetics	7.00 per Q.

Music: Voice, Piano and Violin.

1 lesson per week.....	\$15.00 per quarter
2 lessons per week.....	28.00 per quarter
Students registering for less than a full quarter will be charged at the rate of \$1.50 per lesson.	
Harmony	\$ 3.00 per quarter
Piano Rent.	
Use of piano one hour per day.....	\$ 3.00 per quarter
Each additional hour per day.....	2.00 per quarter
Piano rent must be paid for full quarter.	

Pharmacy:

11. Introductory Pharmacy.....	\$2.00 per yr.	\$2.00 per yr.
12. Manufacturing Pharmacy	6.00 per yr.	4.00 per yr.
13. Pharmacognosy	4.00 per yr.	
22. Drug Analysis	6.00 per yr.	2.00 per yr.
23. Dispensing	4.00 per yr.	2.00 per yr.

Physics:

A. Elementary Physics	\$1.00 per Q.	\$1.00 per Q.
M. Military Physics	1.00 per Q.	1.00 per Q.
11. Mechanics, Molecular Physics & Heat	2 00 per Q.	1.00 per Q.
12. Electricity, Sound, & Light.....	2.00 per Q.	1.00 per Q.
14. Electrical Measurements		3.00 per Q.
31. Junior Laboratory	3.00 per Q.	
32. Junior Laboratory	3.00 per Q.	
33. Junior Laboratory	3.00 per Q.	

Correspondence Work:

Regular Courses	\$2.50 per credit
In excess of 5 cr. hours registered for at the same time	2.00 per credit

Room and Board:

Dormitory Room and Board, a month.....	\$26.00 or \$28.00
Depending upon size of room.	
Dormitory Board	\$20 per mo. for 3 meals per day
	\$17 per mo. for 2 meals per day

Payment of Fees

At the beginning of the autumn quarter, all fees and course deposits must be paid at the time of registration, and students will not be permitted to attend classes until they have taken care of their fees. At the beginning of the winter and spring quarters all fees and deposits must be paid within ten days of the opening of the quarter, and students will be required to leave classes at this time if their fees are not paid.

Refunds to Students Who Withdraw During a Quarter

In case a student withdraws from the University, refund shall be made of fees as follows:

During the first week following the last day of registration, a refund of 90%, the university to keep 10%.

During the second and third weeks.....refund 80%, keep 20%

During the fourth and fifth weeks.....refund 60%, keep 40%

During the sixth and seventh weeks.....refund 40%, keep 60%

During the eighth week.....refund 20%, keep 80%

Thereafter, no refunds will be made.

In the case of course deposits, refunds will be made at any time that a student withdraws, on the basis of the amount which the department indicates should be returned to him.

There will be no refunds of fees for late registration, nor for change of registration.

In any case where a student withdraws from a course in voice, piano, or violin, the university will retain \$1.50 per lesson for each lesson which has been taken and refund any balance. No refunds will be made on piano rent.

Refund of the A. S. U. M. fee will be made as follows:

If students withdraw at any time during the autumn quarter, \$6.00 will be refunded.

If they withdraw at any time during the winter or spring quarter, \$3.00 will be refunded.

SCHOLARSHIPS AND PRIZES

HONOR SCHOLARSHIPS

In order to promote the attendance of students of ability and promise upon the several institutions of the University of Montana it is the declared policy of the State Board of Education to provide for the awarding of scholarships to be known as "High School Honor Scholarships" to graduates of the accredited public high schools of the state.

In the administration of this policy the number of scholarships awarded each year in any accredited high school will depend upon the number of graduates, as hereinafter specified. In no case, however, will more than two such scholarships be awarded each year in any high school for any one of the institutions of the university. High School Honor Scholarships may be awarded only to students who belong to the highest one-fourth of the graduating class in scholarship.

The following general regulations govern the awarding of High School Honor Scholarships:

1. Upon the presentation of the required certificate from the principal, the Chancellor of the University will authorize the award, each year, to graduates of each of the accredited public high schools of the state, of High School Honor Scholarships for the component institutions of the University of Montana.

2. To be eligible for a High School Honor Scholarship the individual must be certified by the principal:

- (a) To be a graduate of an accredited high school of the state;
- (b) To belong to the highest one-fourth of his class in scholarship;
- (c) To be a student of ability and promise of success in college or professional school; and

- (d) To be the highest in scholarship of those members of the graduating class desiring to attend the university institution for which the honor scholarship is to be awarded.

3. No more than one honor scholarship may be awarded to the membership of any graduating class having seven or fewer graduates; no more than two scholarships may be awarded to the membership of any graduating class having eight to eleven graduates; no more than three scholarships may be awarded to the membership of any graduating class having twelve to fifteen graduates; no more than four scholarships may be awarded to the membership of any graduating class having sixteen or more graduates.

4. No more than two High School Honor Scholarships may be awarded each year in any high school for **any one** of the institutions of the university.

5. The holders of High School Honor Scholarships shall be exempted from the payment of all customary fees except the student activity fees and the special fees in the School and Music. All holders of High School Honor Scholarships will be expected to make the required course deposits.

6. Any High School Honor Scholarship will become void unless the holder enters one of the institutions of the university within eighteen months after graduation from the high school. The holder of a High School Honor Scholarship must give notice to the registrar of the in-

stitution of his intention to utilize the scholarship, not later than September 1 of the year in which he intends to enter the institution.

7. Any High School Honor Scholarship will be valid only as long as the holder is in attendance upon some regular course leading to graduation; provided, however, that no High School Honor Scholarship shall be valid for a period longer than five years.

8. In case any individual to whom has been awarded a High School Honor Scholarship relinquishes the scholarship without entering the institution, or for any reason fails to enter the institution in compliance with section 6 of these regulations, the high school principal may certify the next ranking eligible member of the same graduating class desiring to enter the particular institution.

9. The privileges of a High School Honor Scholarship may be retained only so long as the holder maintains a standard of scholarship and regularity of attendance satisfactory to the faculty of the institution at which he is in attendance.

BONNER SCHOLARSHIP

Mrs. E. L. Bonner of Missoula has generously endowed the Bonner scholarship in honor of her husband, Mr. E. L. Bonner. It is awarded once in three years to that student who has most distinguished himself in scholarship during the freshman year. The holder receives \$300 annually for the remaining three years of his course in the university.

This scholarship is now held by William Morse Hoiles of Dixon, Montana.

CLARIBEL LEGGAT COUSE SCHOLARSHIP

The Claribel Leggat Couse Scholarship established and supported by the College Club of Butte and endowed in 1914 by Mr. M. B. Couse of Butte, in memory of his wife, is a fund of \$1,000 of which \$250 may be lent each year to a woman student who is a graduate of the Butte High School and is recommended to the College Club of Butte by three teachers of that high school. Ample time is given for the repayment of this loan and no interest is charged during the four years of college residence. It was obtained in 1917 by Sadie Erickson of Butte.

STATE FEDERATION OF WOMAN'S CLUBS SCHOLARSHIP

Upon the nomination of the officers of the Montana Federation of Woman's Clubs, the State Board of Education has authorized the award of one scholarship each year in each of the institutions of the University of Montana. The holders of such scholarships are exempted from the payment of all customary fees, except the student activity fees and the special tuition fees in music. They are expected to make the required course deposits. The Federation of Woman's Clubs assumes the payment of expenses for board, room-rent and necessary books. The present holders of this scholarship are Beatrice Ruiter of Red Lodge and Ruth Cavin of Missoula.

MILITARY SERVICE SCHOLARSHIPS

Upon the proper certification of the president of the university that a student has rendered military or naval service to the nation and has been honorably discharged, the Chancellor of the University of Montana will authorize the award of a Military Service Scholarship to such student. The holders of such scholarships, throughout their course, will be exempt from the payment of all regular fees, but not laboratory deposits or special course tuitions. The 1916-17 holders of military scholarships were Alexander Swaney, Howard J. Hunt, C. Owen Smithers and Ellsworth Mosby, all of Kalispell, Montana, and Alfred W. Wakefield of Forsyth, Montana. No awards in 1917-18.

KEITH PRIZE

By the gift of John M. Keith of Missoula a scholarship in the university amounting to \$50, is to be given annually to one of the high school debaters selected from the 12 divisions of the four district championship teams of the Montana High School Debating League. The income of the scholarship will be paid to the student for one year, in two installments; one at the beginning of the first semester; the other, at the beginning of the second semester of his enrollment in the university.

Applications for the scholarship, directed to the president of the university, should be accompanied by credentials showing the amount and quality of high school work done by the student, and by recommendations showing promise of the applicant's future usefulness. The scholarship can be granted only to a student who was a member of a high school class graduating in the year in which it is awarded.

The present holders of the Keith prize are Gladys Kimball of Hysam and Lawrence Berg of Missoula.

THE ANNIE LEWIS JOYCE MEMORIAL MEDAL

This prize, resulting from the interest on the sum of \$200, was founded by Mr. M. M. Joyce, a former attorney of Missoula, in memory of his wife, Annie Lewis Joyce, and is awarded every year for the best essay, thesis or poem by an undergraduate. In 1917 the prize was won by Edwin Blinn of Butte, whose subject was "The Mining Industry in Montana." The subject for 1918 is verse contribution that has as its subject some phase of Montana life.

THE BENNETT ESSAY PRIZE

Mr. Philo S. Bennett of Bridgeport, Connecticut, set aside by will \$10,000 to be distributed among twenty-five colleges or universities to be selected by Hon. W. J. Bryan of Lincoln, Nebraska. The University of Montana received \$400 in trust, the annual proceeds of which will be given as a prize (in money or in a medal of equivalent value, at the option of the successful contestant) for the best essay by any regular undergraduate student of the State University, on some topic pertaining

to good government. No prize is awarded, however, in case the judges decide that none of the essays are good enough to receive recognition. The contest itself is under the direction of the department of History and Political Science.

In 1917 the prize was won by William Jameson of Missoula, Montana, who wrote on "A Commission Form of State Government." The subject for 1918 is "The Wisdom of the Adoption by the United States of the Belgian System of Compulsory Voting."

THE 1904 CLASS PRIZE

The endowment fund for this prize was donated by the members of the class of 1904, who, in rotation, name the particular excellence for which the prize shall be given. For the year 1904-05 it was awarded to the student holding the highest rank in the first year college class in Latin, and was won by Miss Cora Averill; for the year 1905-06 to the student representing the university in the State Oratorical Contest, and was won by Miss Olive Hall; for the year 1906-07 to the student making the greatest progress in chemistry and was won by Dean King; for the year 1907-08 to the student having the highest standing in economics, and was won by Frederick Greenwood; in 1909-10 to the student making greatest progress in Greek and was won by Miss Viola Golder; for 1910-11 to the student doing the best in geology and was won by E. A. Winstanley; for 1911-12 to the best student in elementary chemistry and was won by Raleigh Gilchrist; for 1912-13 to the best student in engineering, and was won by Royal D. Sloan; it was not awarded in 1913-14. For 1914-15 it was awarded to Louise Sinclair, the best student in the department of German and Harold Urey, the best student in the department of biology. For 1916-17 it was won by James Friauf in the department of Mathematics. Not awarded in 1917-18.

MUSIC MEDALS

A medal is given annually in the School of Music by Mrs. E. L. Bonner of Missoula for advanced piano technique. It was awarded in 1916 to Miss Bernice Berry.

THE C. A. DUNIWAY SCHOLARSHIP BOOKS

A fund of \$400 established by former President Duniway provides standard books within the various fields of knowledge to be awarded annually to students distinguishing themselves by scholarship in the various departments.

THE RIDER ART PRIZE

Dr. T. T. Rider of Missoula offers a prize of \$10 to the first-year student in the Department of Fine Arts who shows the greatest advancement in art work during the year. This prize was won in 1917 by Alma Anderson of Helena.

MISCELLANEOUS

WAR ACTIVITIES

Three faculty members and more than 200 students of the State University are in the military service of the United States. Two of the students are women who withdrew from their work in the School of Journalism to enter the clerical service of the war department in Washington. One State University student was among the victims of the Tuscania disaster. One former student has been killed in action in France.

From the outset of the great war the university has directed its energies to the fullest extent to promoting the principles of good citizenship and to fostering the government activities directly connected with the country's participation in the conflict. Special courses have been given which had for their direct purpose the preparation of men and women for personal participation in the country's work. The laboratories and their equipment have been placed at the disposal of the federal government; much special work has been done here. Faculty members and students have joined in support of the various "drives" for the benefit of war works. There have been lecture courses given in the state's principal cities by members of the faculty, educational and inspirational in their relation to the war. Wherever it has been possible, the State University has sought to do its bit.

COUNCIL OF DEFENSE

War work and war interest at the university are under the general direction of the Council of Defense, which includes in its membership representatives of both Faculty and Student Body.

UNIVERSITY PUBLICATIONS

A series of bulletins is published by the university, partly as official announcements and records, partly as contributions to science by various members of the faculty. The university issues the usual bulletin of information concerning the university. A circular is issued at irregular intervals and contains various special announcements. University studies is issued quarterly, and contains the contributions resulting from the investigation and research in the several departments and sub-divisions of the university. Syllabi contain outlines of certain courses of instruction. The News-Bulletin, issued weekly, contains news stories of university events, and is sent to the principal newspapers of the state, press associations and others.

SOCIETIES

The whole body of students is organized in one society entitled the Associated Students of the State University of Montana. This society, through appropriate committees, manages such general interests as athletics, oratory, debates and entertainments.

A literary society, the Hawthorne, is open to both men and women.

Students will find membership in this society helpful and pleasant.

Branches of the Y. M. C. A. and Y. W. C. A. are organized in affiliation with intercollegiate associations. These associations and the Catholic Students' Association carry on work for the religious and social life of the university.

Seven musical organizations are in existence, the University Glee Club, composed of young men; the Girls' Glee Club, the Girls' Quartette, the Choral Society, composed of men and women, the University Orchestra, the String Quartette and the University Band. These organizations provide music for university events during the year, and furnish an opportunity for all students who have musical talent to cultivate it as well as to participate in the social pleasures pertaining to such organizations.

The Penetralia Society is an honor organization of women students, a non-secret society, devoted to advancing the interests of the university in every feasible way.

The Forestry Club has an active membership of 70 students and teachers in the School of Forestry. Meetings are held fortnightly and are open to the public. Much interest is taken in the meetings by forestry students and students in science departments of the university and by the professional foresters in the headquarters of the district forester in Missoula. The purpose of the organization is to promote interest in forestry and forest engineering, and to encourage fellowship and professional spirit among the members of the club.

The Art League, organized in 1917, has an enrollment of all the students registered in courses in the department of Fine Arts. In organization, the league follows the plan of the leagues in Chicago and New York.

The Masquers Club, an undergraduate dramatic organization; the Press Club, the Pharmaceutical Society, and the Rifle Club, which is affiliated with the National Rifle Association, perform functions indicated by their titles.

HONORARY PROFESSIONAL FRATERNITIES

In addition to the social fraternities, there are chapters of national and local honorary professional fraternities at the university.

Sigma Delta Chi is a national professional journalism fraternity with membership limited to men majoring in journalism who show marked ability in their work.

Theta Sigma Phi is the women's journalism fraternity with requirements for admission similar to those of Sigma Delta Chi.

Tau Kappa Alpha is a national honorary fraternity of men who have shown themselves gifted in oratory and debate.

Alpha Kappa Psi is a national commercial fraternity with a membership of 20 students majoring in business administration.

Ye Mermaid Inn is the local chapter of Sigma Upsilon, national literary fraternity.

Pi Delta Alpha is a local legal fraternity organized to maintain high ideals in ethics and scholarship, to promote dignity, fraternalism and

good fellowship among its membership and the student body of the School of Law. Candidates for membership must have consistently maintained a high degree of scholarship and must declare their intention of engaging in the active practice of law.

Phi Chi is a local pharmaceutical fraternity organized in 1916.

DEBATING CONTEST

The university maintained debating relations with the University of Idaho and the University of Utah in 1918. On account of war conditions, debate activities were limited. Seven debaters represented the university.

PUBLICATIONS BY STUDENTS

The Associated Students of the University publishes a semi-weekly newspaper, the *Montana Kaimin*. The paper, through the effective effort of its corps of editors, has become a permanent factor in the university life.

The junior class of each current year issues an annual entitled *The Sentinel*. This book is a valuable record of the activities of each year.

WOMEN IN THE UNIVERSITY

The academic and social welfare of the women students is under direct supervision of the dean of women.

All young women whose homes are outside of Missoula live in the university hall of residence, in chapter houses or in approved residences. Exceptions are made only by permission of the dean of women.

The university maintains one large hall of residence, Craig Hall, which accommodates about seventy-two students. Mrs. Lucy E. Wilson is the matron in charge. The women who live in this hall have adopted a form of self-government with officers chosen from the members. These officers, together with the matron, form a house committee to whom all matters of importance are referred.

For the benefit of those women who are not accommodated in Craig Hall, the dean of women has prepared a list of addresses where rooms for young women may be obtained and will be sent upon request. All houses have been inspected by her, and although responsibility cannot be assumed by the university, they are believed to be suitable homes for women students. The discipline of such houses is controlled by the students themselves under the supervision of the Women's League and the dean of women. Arrangements for such rooms must be made directly with the women in charge of the houses, and should be made early by those who desire a choice of rooms.

All women students are required to report to the dean of women in order that they may register their addresses and may be directed, if rooms have not been obtained. All changes of address should be reported promptly.

For the benefit of a number of students who wish to live as economically as possible, the dean of women is planning to arrange for a cottage which is to be conducted on the co-operative plan. All women students who wish to take advantage of this opportunity are requested to signify their desires as early as possible.

Mrs. K. W. Jameson, the dean of women, invites correspondence with parents and guardians and gladly co-operates with them regarding the welfare of students.

Organizations

The Women's League is an organization for the women of the university only. Every woman student is a member of this organization, the object of which is: to regulate all matters pertaining to the student life of its members which do not fall under the jurisdiction of the faculty; to further in every way the spirit of women of the university, to increase their sense of responsibility toward each other and to be a medium by which the social standard of the university can be made and kept high.

The executive board of the Women's League is composed of representatives from Craig Hall, each sorority house, each lodging house where six or more girls reside, and from the girls who live in Missoula.

The Town Girls' Association is an organization composed of girls who do not live in Craig Hall or in chapter houses.

Mortar Board is an organization of senior girls.

The Young Women's Christian Association is an organization whose avowed purpose is, "to unite the women students in common loyalty to Jesus Christ." It holds regular bi-monthly services on Tuesday afternoons at 4:30 in the parlors of Craig Hall.

Theta Sigma Phi is a chapter of the honorary national journalist sorority and was established in Montana in 1916.

ATHLETICS

The faculty committee on Athletics has general oversight of athletic sports. The details of management are in the hands of the executive committee of the Associated Students, subject to approval by the faculty committee.

The gymnasium is well equipped with dressing rooms and shower baths. There is also a good equipment of apparatus and special developing appliances. The main exercise hall is floored with narrow maple flooring, giving an excellent surface for general exercise and basketball. The athletic field is located conveniently to the gymnasium in the northeast corner of the campus. There is a quarter-mile cinder track, 20 feet broad and a straightaway 240 yards long and broad enough for eight lanes of hurdles. The football field is located within the circular track and its turf surface makes it one of the best fields in the country. The baseball diamond is located to the south of the football field, outside the running track. Bleachers line the straightaway and are 12 tiers high, offering an excellent view of the center athletic field. Tennis courts are provided.

ANNUAL INTERSCHOLASTIC GAMES

For fourteen years the university has held annual interscholastic invitation meets for track and field contests on Montana field. Invitations to participants are extended to all high schools in the state.

In determining and administering rules of eligibility for contestants the university has the aid of the Montana High School Athletic Association. This is a league of accredited high schools of the state, organized for the promotion and control of athletics.

Interscholastic week is by no means devoted entirely to athletics, however. The girls' declamatory and the boys' declamatory contest, the interscholastic debate to decide the state championship—these events attract students from all parts of the state.

Interscholastic Week at the State University of Montana has come to be one of Montana's institutions. The meet is one of the largest interscholastic track and field contests held in the country.

HIGH SCHOOL DEBATING LEAGUE

A Debating League having for its object improvement in debate among students in high schools of the state was organized by high school principals and superintendents at a meeting held at the university on May 17, 1906. Among the provisions of the constitution is that the president shall be a member of the faculty of the university. Another is that the final contest shall take place at or before the time of the interscholastic meet.

THE LIBRARY

The General Library, consisting of about 40,000 volumes and 18,000 pamphlets, occupies the main floor of the Library building.

Admission to the shelves is restricted to the faculty, administrative officers and graduate students; other students may be admitted upon recommendation of their instructors. Students are allowed to withdraw books from the Library under reasonable regulations.

The Library receives over 400 periodicals, the current numbers of which are available in the reading room, as are newspapers and college exchanges. Through the courtesy of the editors a large number of the city and county newspapers of Montana are sent to the reading room for the use of students.

The Library is a designated depository of documents issued by the United States government.

The Library is open from 8:15 a. m. to 5:30 p. m., and from 7:00 to 9:30 p. m. except on Saturday, when the hours are from 8:15 a. m. to 12:30 p. m., and from 1:30 to 5:00 p. m. Persons not connected with the university are free to use the books.

As a part of the educational system of the state, the University Library is glad to extend all possible assistance to the high schools of the state. Under reasonable regulations, books and pamphlets will be loaned upon request, and where it is impossible to loan material, reference lists or suggestions as to sources of information are gladly given.

Gifts are always gratefully received, and any one who is about to destroy pamphlets or periodicals is reminded that a library can preserve and make good use of much that is useless in a household. Material relating to Montana, by Montanans, or published in the state, is particularly solicited; also files of state papers, especially early issues, and early catalogues of the university.

THE MUSEUM

The university has an excellent scientific and historical museum. Its scientific sections are much used in the instructional work of the physical sciences and its historic features are yearly becoming more numerous and more valuable. In brief summary the museum collections are:

A collection of more than 1,000 bird skins almost entirely from the state; several thousand shells, including an almost complete collection from the state so far as known; several thousand insects, including those collected in the state during many years, those received by exchange and those purchased; a collection of fishes, partly from the United States Bureau of Fisheries, the remainder collected in the state or purchased; the Wiley collection of more than 1,000 species of lepidoptera; a collection of plants embracing several thousand species including the private collection donated by Professor M. J. Elrod, many additions through collection in the state during many seasons, large additions, through exchange, and many by purchase. A collection of fossils, almost entirely from the state, partly donated, the remainder collected; a collection embracing coals, rocks, concentrate samples, building stones, brick, tile and pottery, developed and produced in the state; a set of the series of educational rocks prepared by the United States Geological survey; a collection embracing money, historical relics, souvenirs and miscellaneous articles.

It is most earnestly requested that all who are interested in the university, and especially in the preservation of valuable material for scientific work, should take special pains to contribute to the museum. Time and circumstances are fatal to nearly all specimens, but proper care in the museum will secure their preservation. Correspondence is solicited concerning material which may be donated. All donations will be acknowledged, and the articles properly labeled and the donor's name recorded.

The plans for the new science building, now in course of construction, call for space for the proper display of the collections now in the museum and for the preservation of important and valuable specimens which are now stored.

Organization of Instruction

1.—COLLEGE OF ARTS AND SCIENCES.

- a—Biology.
- b—Botany.
- c—Business Administration.
- d—Chemistry.
- e—Economics.
- f—Education.
- g—English.
- h—Fine Arts.
- i—Geology.
- j—History and Political Science.
- k—Home Economics.
- l—Latin and Greek.
- m—Library Science.
- n—Mathematics.
- o—Military Science.
- p—Modern Languages.
- q—Physical Education.
- r—Physics.
- s—Psychology and Philosophy.

2.—SCHOOL OF FORESTRY.

3.—SCHOOL OF JOURNALISM.

4.—SCHOOL OF LAW.

5.—SCHOOL OF MUSIC.

6.—SCHOOL OF PHARMACY.

7.—GRADUATE STUDY.

8.—SUMMER QUARTER.

9.—PUBLIC-SERVICE DIVISION.

College of Arts and Sciences

COURSES OF INSTRUCTION

Note—In the following outline of courses, the length of a course and the quarter or quarters in which it is given are indicated immediately after its title. Courses numbered from 11 to 99 are offered to undergraduates only; those numbered from 101 to 199 are offered to both undergraduates and graduates; those numbered from 201 to 299 are offered to graduates only. Courses which are repeated in the summer quarter are so marked. There are, however, special summer-quarter courses which do not appear in this outline. These will be found listed in the summer quarter bulletin. This outline is as nearly complete as it is possible to make it and it affords the student information which is necessary in arranging his course. When the student has decided upon his major course, he is expected to follow closely the work which is outlined as the required course in that line of study or research. Except where otherwise noted, the ranking professor in each department is chairman of that department.

BIOLOGY

PROFESSOR, MORTON J. ELROD. ASSISTANT PROFESSORS, A. W. L. BRAY (on leave), LEE R. DICE.

Students who do major work in biology must take courses in the department to the extent of 45 credit hours. They must have a reading knowledge of German or French, or preferably, of both. They must complete one year of botany and one year of chemistry, and must have historical and dynamic geology.

See page 102 for suggested courses for students preparing to study medicine.

For Undergraduates

11. Elementary Zoology. 3 Q. Autumn, winter and spring. 12 cr. Fee \$2.50. Open to all students, and filling the science requirement for graduation. Introduction to the study of animals, dealing with their anatomy, distribution and habits. Textbooks, lectures, library references and laboratory work, the latter requiring one-half of the time. Field excursions. Attention to local fauna. Mr. Elrod, Mr. Bray, Mr. Dice.

13. Animal Ecology. 1 Q. Spring; summer. 5 cr. Prerequisite, Zoology 11. Fee \$2.50. Animals as affected by environment; adaptability of structure to modes of life. Special reference to local fauna. Mr. Dice.

16. Protozoology. 1 Q. Winter. 4 cr. Prerequisite, one year of Botany or Zoology. Fee \$2.50. A study of the life histories of various protozoans, their structure, habits, reproduction, distribution, their relation to animals and man as producing diseases. Mr. Elrod.

17. Entomology. 1 Q. Spring; summer. 5 cr. Fee \$2.50. Open to all students. Insects, including their structure, classification, distribution, benefits and injuries, and their relation to animals and man through diseases. Mr. Elrod.

19. General Bacteriology. 1 Q. Autumn. 4 cr. Prerequisite, General Chemistry, and either Botany or Zoology. Fee \$5.00.

This course is planned specially to meet the wants of the students in the School of Pharmacy and the department of Home Economics. It includes both laboratory and class work. Mr. Elrod.

21. Histology. 1 Q. Autumn. 4 cr. Fee \$2.50. Prerequisite, Zoology 11. Practical course in the technique of sectioning, staining and mounting organisms and tissues. Two lectures or recitations and two laboratory periods. Mr. Bray, Mr. Dice.

Alternates with Embryology 22. Embryology will be given in 1918.

22. Embryology. 1 Q. Autumn. 4 cr. Fee \$2.50. Prerequisite, Zoology 11. The course deals with the early development of animals, with special reference to the chick. Two lectures and recitations and two laboratory periods. Mr. Bray, Mr. Dice.

Alternates with Histology 21. Embryology will be given in 1918.

23. Comparative Anatomy. 2 Q. Winter and spring. 8 cr. Fee \$2.50. Prerequisite, Zoology 11. Planned for students in Physical Education, and for those who wish to enter Medicine. One-half the work is in the laboratory, or two periods a week for the two quarters. Mr. Bray, Mr. Dice.

24. Physiology of the Human Body. 1 Q. Spring. 5 cr. Open to all students, but a year of elementary Botany or Zoology is desirable in preparation. Fee \$2.50. Advanced. Dealing with the structure and function of the parts and organs of the human body. Planned to meet the requirements of teachers, students of Physical Education, Home Economics and Pharmacy, and those wishing a course of general information. Three lectures or recitations and two laboratory periods. Mr. Bray, Mr. Dice, Mr. Elrod.

25. Teaching Biology. 1 Q. Winter. 3 cr. Lectures and discussions dealing with the various methods of presenting the subject, selection of apparatus, preparing a laboratory, selecting a library, and the various topics that come to the teacher for solution. Mr. Elrod.

26. General Hygiene. 1 Q. Winter. 3 cr. An informational course for all students, dealing with the subject as related to the individual, the community and the state. The lectures and discussions relate to such subjects as bacterial and protozoan diseases, food, exercise, sleep, ventilation, drainage, disinfectants, and quarantine. Mr. Elrod.

For Undergraduates and Graduates

115. Theoretical Biology. 1 Q. Autumn quarter. 3 cr. Prerequisite: One year of Botany or Zoology. Lectures and assigned readings. Deals with the facts supporting the doctrine of Evolution, and touches upon the various ideas and theories advanced at different times, by different men. Mr. Bray, Mr. Dice.

118. Entomology, Advanced. 1 Q to 4 Q. Autumn, winter, spring and summer. Credit to be arranged. Fee \$2.50. Prerequisite: Entomology 17. Intended for those who may wish to make advanced study in insects. Individual work will predominate, the student taking special groups of insects or special insect problems. Mr. Elrod.

122. Histology, Advanced. 1 Q. Winter. 4 cr. Fee \$2.50. Follows Histology 21, with special reference to tissue structure and

to pathology. Special work and special problems may be taken up by students individually. Mr. Bray, Mr. Dice.

120. Bacteriology, Advanced. 1 Q. Winter; spring. 5 or more cr. Prerequisite, Bacteriology 19. Fee \$5. Investigations of the bacteria of milk, milk products, air, water, the bacterial diseases of plants and animals, and kindred topics. Individual work. Laboratory study with library references. Mr. Elrod.

129. Biological Seminar. 3 Q. Autumn, winter and spring. 3 cr. Required of students majoring in Biology, and open to others of approved ability. Reviews of current literature for the purpose of giving a comprehensive survey of the trend of thought and study in biological fields. Special investigations in special work, with reports. Mr. Elrod, Mr. Bray, Mr. Dice.

131. Research. 1 Q. to 4 Q. Autumn, winter, spring or summer. Opportunity will be given graduate students and others of sufficient fitness to pursue original investigations within the facilities of the department as to laboratories and material. Details will be arranged with individual students. Credit and time to be arranged. Mr. Elrod, Mr. Bray, Mr. Dice.

For Graduates.

201. Research. 4 Q. Autumn, winter, spring and summer quarters. Credits variable. Courses for students will be outlined to meet individual needs and requirements. The Biological Station at Flathead Lake affords exceptional opportunity for investigations.

Biological Station

The station is located on the east shore of Flathead Lake and is open for work during the summer quarter, or for a definite period, announced in special circular. The courses given at the station are for both undergraduates and graduates. University credit is given for the amount of equivalent work satisfactorily completed. The station presents to the student seeking problems for investigation, and to the student seeking practical field work a field and an opportunity rarely equalled.

BOTANY

PROFESSOR, J. E. KIRKWOOD. INSTRUCTOR, PAUL W. GRAFF.

The department of Botany offers both cultural and professional courses of study. The cultural aspects of botany are presented in several subjects which provide a general treatment of botany in its relation to human welfare. For those who contemplate teaching in the primary and secondary schools, some of the following subjects are recommended, and such as desire to lay the foundation for advanced study in botany, as a profession, will find adequate opportunity in the work offered. The following subjects include also certain required and elective courses for students of forestry and pharmacy.

Those who do major work in botany must take courses 11, 21, 22, and 61, and enough additional credits in other courses in botany to total from 40 to 50 hours. In addition the following subjects are recommended: Chemistry, zoology, and geology, in general courses, and at least one year each of German and French. For students who do minor work in botany, courses 11, 21, 22 and 61 are suggested.

For Undergraduates

11. General Botany. 2 or 3 Q. Autumn, winter and spring. 8 or 12 cr. In summer quarter, 5 cr. Open to all students. Field work in spring quarter. Fee \$1 a quarter.

Note: Students satisfactorily completing the first two quarters of General Botany have the option in the third quarter of (a) continuing the same course or (b) electing Plant Histology (21) or (c) Rural Botany (25). Mr. Kirkwood, Mr. Graff.

15. History of Botany. 1 Q. Winter. 2 cr. Lectures on the development of botanical science. Mr. Graff.

21. Plant Histology. 1 Q. Spring. 4 cr. Prerequisite, 11, (Autumn and winter). Fee \$3. A special study of the organs and tissues of plants from the physiological standpoint. Introduction to the methods of making microscopical slides and of general microtechnique. Mr. Kirkwood, Mr. Graff.

22. Plant Physiology. 1 Q. Autumn. 5 cr. Prerequisite, 11, 21 or 25. Fee \$3. An experimental study of living plants. Special attention is devoted to the relations of plants to soil, light, air, etc., and their reactions to various influences which affect them in nature. Mr. Kirkwood, Mr. Graff.

25. Rural Botany. 1 Q. Spring. 4 cr. In summer quarter 5 cr. Prerequisite, 11 (autumn and winter). Fee \$2. A course dealing with the botanical aspects of agriculture, for those who expect to teach the subject in the high schools of Montana. Mr. Graff.

31. Forest Pathology. 1 Q. Spring. 3 cr. Prerequisite, 21. Fee \$3. A study of the agencies of diseases and decay of trees and structural timbers. Lectures, laboratory and field work. Mr. Graff.

41. Comparative Morphology. 2 Q. Winter and spring. 10 crs. Prerequisites, 21 and 22. Fee \$3 a quarter. Devoted especially to the study of life histories of typical plants of the larger natural groups. Mr. Kirkwood.

51. Ecology. 1 Q. Autumn. 5 cr. Prerequisites 11, 21 or 25. Fee \$2. The relation of vegetation to soil, climate, etc., and the biological relations of the principal species of given areas. Mr. Kirkwood, Mr. Graff.

61. Systematic Botany. Given in any quarter of the year separately or continuously. Cr. variable. Prerequisite, 11. Fee \$1 a quarter. Classification of the flowering plants, especially of Montana. Field trips in season are a large and important part of the work. Instruction also in the methods of collecting, preserving and mounting plants. Mr. Kirkwood, Mr. Graff.

63. Systematic Dendrology. 1 Q. Spring. 3 cr. Prerequisite, 11. Fee \$1.50 a quarter. A study of the classification and distribution of the principal forest trees of the United States and Canada. Mr. Kirkwood, Mr. Graff.

65. Systematic Mycology. 2 Q. Autumn and winter. 6 cr. Prerequisite, 11. Fee \$3 a quarter. A study of the classification and habits of Fungi and Algae. Lectures, laboratory and field work. Mr. Graff.

71. Botanical Seminar. 3 Q. Autumn, winter and spring. 9 cr. Open only to senior major students in botany. Reviews of the current literature of botany; introduction to the journals and methods of bibliographical research. Mr. Kirkwood.

F1. Forest Botany. 1 Q. Winter. No cr. Fee \$1. Botany of forest plants for short course students in the Ranger School. Mr. Graff.

F2. Range Plants. 1 Q. Winter. No cr. Fee \$1. For short course students in the Ranger School. Mr. Graff.

For Graduates

201. Research. Any quarter. Credits variable. Work on selected problems under direction. Mr. Kirkwood.

BUSINESS ADMINISTRATION

DIRECTOR, HARRY EDWIN SMITH.

As the world in general has come to recognize the importance of special preparation for any particular kind of work, the business world has begun to realize the necessity for special training for men who expect to assume positions of prominence and responsibility. The Department of Business Administration, therefore, proposes to give such training as will best fit men for positions as executives and experts in industrial establishments or in the public service. While specialization is needed, there is recognized the importance of a broad, liberal training and an attempt has been made to obtain a proper combination of liberal culture and professional studies.

As the policy of the State University is to allow a considerable degree of elective work, this department has outlined required work only to such an extent as seems necessary in order to secure the best results. It has prepared courses of required subjects for part of the first and second year with suggestions for further courses for the student who

desires to fit himself for a special line of service. Training in certain theoretical subjects is given but with emphasis put upon the relation of the theoretical to the practical.

The subjects required are as follows:

First Year

	First Quarter	Second Quarter	Third Quarter
English	3	3	3
Science	4	4	4
Language	3	3	3
Economic Resources	5	---	---
Economic History	---	5	---
Economics	---	---	5
Drill	1	1	1
Physical Education	1	1	1

Second Year

First Quarter—Accounting, Language, History (European or United States), Elective.

Second Quarter—Accounting, Language, History (European or United States), Elective.

Third Quarter—Commercial Law, Language, History (European or United States), Elective.

Additional courses required before graduation are: Philosophy, Geology and Geography of Montana; Political Science; Journalism (The Newspaper).

For a major at least forty hours work in courses listed under the head of economics, are required. Only such subjects will be accepted as fulfilling the major requirements as have the approval of the director.

No outline of courses is given here for preparation for a specific field of work because it is thought that a course can be best fitted to the needs of the student, by consultation with the director. The attempt will be made to suggest lines of work best suited for the man who knows quite definitely what he expects to do after completing his university course and also for the man who desires a general business training. The purpose in mind at all times will be to fit the student for places of real responsibility and authority, and not for ordinary clerkships, book-keepers, or stenographers. Special attention will be given to preparation for the theoretical part of the Certified Public Accountant examination.

For courses formerly listed under the department of Business Administration see the Department of Economics and Sociology.

TWO-YEAR COURSES

In order to suit the needs of certain students of mature years, who find it impossible to spend four years in the university, it is planned to give a two-year course, where practically all the time is spent on specialized business subjects. On the completion of this two-year course the student will be given a certificate stating that he has completed the two-year course in the Department of Business Administration, but will not be given a diploma, nor a degree.

A student will be permitted to register in this course only on special permission from the director of the department providing he is not less

than 21 years of age and can give indications of being able to carry the work. The courses as outlined will, in most cases, correspond to junior and senior work and it is thought that a student will be able to pass in the subjects without taking the freshman and sophomore work because he has had practical experience which gives him the necessary preparation. It is recommended that no student take the two-year course who can possibly spend four years in the university. Practically all the work in this department in this two-year course will be required.

The outline for the course is as follows:

First Year

First Quarter—English, Accounting, Money and Banking, Economics.

Second Quarter—English, Accounting, Money and Banking, Economics.

Third Quarter—English, Commercial Law, Money and Banking, Elective.

Second Year

First Quarter—Advanced Accounting, Insurance—Life, Corporation Finance, Elective.

Second Quarter—Advanced Accounting, Insurance—Property, Commerce and Commercial Policy, Elective.

Third Quarter—Advanced Accounting, Public Utilities, Investment, Elective.

Variations from this prescribed course may be made with consent of director.

ONE-YEAR COURSE IN OFFICE TRAINING

The large demand for office employes made it seem wise to offer during the year 1917-18 a one-year course in office training, which will be repeated in the year 1918-19. Students to register in this course must fulfill the same requirements as for entering the regular university course, having either 15 Carnegie units or entering as special students, being 21 years of age. They will be required to carry the work as outlined as follows:

First Quarter—Freshman English, Accounting, Shorthand, Typewriting.

Second Quarter—Freshman English, Accounting, Shorthand, Typewriting.

Third Quarter—Freshman English, Commercial Law, Shorthand, Typewriting.

CHEMISTRY

PROFESSOR, R. H. JESSE, JR. ASSISTANT PROFESSORS, W. G. BATEMAN AND W. N. JONES. INSTRUCTOR, J. W. HOWARD.

The major requirements in Chemistry demand a minimum of 54 credits in chemistry, which must include: General Chemistry, 12 credits; Qualitative Analysis, 10 credits; Quantitative Analysis, 7 to 10 credits; Organic Chemistry, 10 credits; Physical Chemistry, 10 credits. In addition a major student in chemistry should have acquired by the time of his graduation a reading knowledge of French and German and a working knowledge of English composition, college physics, algebra, trigonometry, analytic geometry, calculus, and elementary mineralogy.

When an individual elects simultaneously two or more courses in chemistry, he must pay in full for the course with the highest fee and deposit, but only one-half the fee and one-half the deposit for the other courses.

For Undergraduates

11. General Chemistry. 3 Q. Autumn, winter and spring. Continuous. 12 cr. Fee, \$3 a quarter; breakage deposit, \$2 a quarter. The fundamental laws of chemistry; the properties and relations of the more common elements and of their compounds. Open to all students. Mr. Jesse, Mr. Jones, Mr. Bateman, and three assistants.

13. Inorganic Chemistry and Qualitative Analysis. 3 Q. Autumn, winter and spring. Continuous. 15 cr. Fee, \$3 a quarter; breakage deposit, \$2 a quarter. The fundamental laws of chemistry; the properties and relations of the non-metallic and metallic elements; theory and methods of inorganic qualitative analysis. Students who are deficient may be dropped at any time, at the judgment of the instructor, into Chemistry 11. Open only to those who have studied chemistry for one year in high school. Mr. Jones and an assistant.

15a. Qualitative Analysis. 1 Q. Autumn. 5 cr. Fee, \$4; breakage deposit, \$3. The theory of, and the methods for the detection and separation of the principal inorganic basic and acidic ions. Prerequisite, Chemistry 11. Mr. Bateman.

15b. Qualitative Analysis. 1 Q. Winter. 5 cr. Fee, \$4; breakage deposit, \$3. A continuation of course 15a. Prerequisite, Chemistry 13, or 15a. Mr. Bateman.

17. Quantitative Analysis. 1 Q. Autumn; spring. 5 cr. Fee, \$4; breakage deposit, \$3. Introduction to quantitative gravimetric and volumetric methods. Prerequisite, Chemistry 13 or 15a. Mr. Jesse.

18. Fire Assaying. 1 Q. Spring. 3 cr. Fee \$6. Sampling and grinding of ores; fire assay for gold, silver, and lead. Prerequisite, Chemistry 15a. Mr. Jesse.

19. Organic Chemistry. 1 Q. Winter. 5 cr. Fee, \$4; breakage deposit, \$3. Briefer survey of the field of organic chemistry. Intended for students of Pharmacy, Medicine, and Home Economics. Prerequisite, Chemistry 11. Mr. Howard.

23. Elements of Nutrition. 1 Q. Autumn. 1 cr. Arranged for the curriculum for nurses. Open to all students. Mr. Bateman.

For Undergraduates and Graduates

101. The Carbon Compounds. 2 Q. Autumn and winter. Continuous. 10 cr. Fee, \$4 a quarter; breakage deposit, \$3 a quarter. A detailed and systematic study of organic chemistry. Intended for students who elect chemistry as a major. Prerequisites, Chemistry 11. Mr. Jones and Mr. Howard.

102. Organic Qualitative Analysis. 1 Q. Spring. 2 cr. Fee, \$4; breakage deposit, \$3. Systematic methods of identification of pure organic compounds and mixtures; general class reactions of organic chemistry. Prerequisite, Chemistry 101. Mr. Howard.

103. Physiological Chemistry. 1 Q. Spring. 5 or 6 cr. Fee, \$4; breakage deposit, \$3. Chemistry of the human body; blood, bile, urine, feces, milk, etc. Prerequisite, Chemistry 19. Mr. Bateman.

104 Chemistry and Analysis of Foods. 1 Q. Autumn. 3 cr. Fee, \$4; breakage deposit, \$3. Chemical aspects of foods; their manufacture, value, preservation and adulteration; analysis and testing of food stuffs for quality and purity. Prerequisite, Chemistry 17 and 19. Mr. Howard.

105. Textile Chemistry. 1 Q. Spring. 3 cr. Fee, \$4. Microscopic study of textile fibers; chemical analysis of fabrics; dyeing and laundering. Prerequisite, Chemistry 19. Mr. Bateman.

106. Physical Chemistry. 2 Q. Autumn and winter. Continuous. 10 cr. Fee, \$4 a quarter; breakage deposit, \$3 a quarter. The more important methods, results, and problems of theoretical chemistry. Prerequisite, Chemistry 17, 101, college physics. A knowledge of calculus is very desirable. Mr. Jesse.

107. History of Chemical Theories. 2 Q. Autumn and winter. Continuous. 6 cr. Present status and value of chemical theories through an examination of their origin and development. Prerequisites, Chemistry 11, and 101 and a reading knowledge of German. Messrs. Bateman, Jesse, Jones, and Howard.

108. Electrochemistry. 1 Q. Spring. 3 cr. Lectures on theoretical and applied electrochemistry. Prerequisite, Chemistry 106. Mr. Jesse.

109. Industrial Chemistry. 2 Q. Winter and spring. 10 cr. The chemistry of industrial and engineering materials and the discussion of technical chemical processes. Prerequisite, Chemistry 17 and 101. Mr. Howard.

111. Technical Analysis. 1 Q. Autumn; winter; spring. 2 to 4 cr. Fee, \$4 a quarter; breakage deposit, \$3 a quarter. Analysis of various materials of commercial importance. The work is varied according to the needs and tastes of the individual. Mr. Jesse.

113. Journal Club. 3 Q. Autumn, winter, and spring. 3 cr. Presentation and discussion of current journal literature by upper classmen and the departmental staff. This course may again be elected for credit in a following year. Prerequisite, Chemistry 17, 101, and a reading knowledge of German and French. Messrs. Jesse, Bateman, Jones, and Howard.

For Graduates

200. Advanced Courses and Research. The department is prepared to arrange for properly qualified students advanced and research

courses in: Inorganic, analytical, organic, physical, or industrial chemistry and in biochemistry.

The following courses have been given under this group in the past two years:

200a. Nutrition. Chemical and physiological aspects of nutrition and nutritional problems. Mr. Bateman.

200b. Advanced Biochemistry. Mr. Bateman, Mr. Howard.

200c. Organic Research. Mr. Jones.

ECONOMICS

PROFESSORS, LOUIS LEVINE, H. E. SMITH, J. H. UNDERWOOD (CHAIRMAN). ASSISTANT PROFESSOR, A. E. SPAULDING. INSTRUCTOR, G. A. DENFELD.

Those who do major work in this department are required to have a minimum of 45 hours, the distribution to be determined with reference to the needs of the individual student. Minor work is advised in History, Modern Languages and Mathematics. Biology and Psychology are advised as preliminary to studies in Sociology.

For Undergraduates

11. Economic Resources. 1 Q. Autumn. 5 cr. Open to freshmen. Natural resources and economic geography of the United States and other countries. Mr. Levine.

12. Economic History of the United States. 1 Q. Winter. 5 cr. Open to freshmen. The industrial development and financial policies of the United States from the Colonial period to the present time. Mr. Denfeld.

13. Elementary Economics. 1 Q. Spring; summer. 5 cr. Open to freshmen. For students in the business course. Mr. Underwood.

14. Introduction to Economics. 2 Q. Autumn; winter. 8 cr. Not open to freshmen. Mr. Underwood.

21. Elementary Accounting. 2 Q. Autumn and winter. Probably repeated winter and spring. 10 cr. Must be taken two quarters to receive credit. Theory and practice of single and double entry books and the preparation of financial statements. Three lectures and two laboratory periods a week. Mr. Smith and Mr. Denfeld.

23. Advanced Accounting and Auditing. 3 Q. Autumn, winter and spring. 9 cr. Prerequisite, Elementary Accounting. Must be taken three quarters to receive credit. Principles of higher accounting, including valuation of balance sheet items; cost accounting; auditing. Mr. Denfeld.

25. Commercial Law. 1 Q. Spring. 5 cr.

Principles of contracts, agency, partnership, corporations, negotiable instruments, bailments, sales, mortgages, bankruptcy, copyrights, patents and insurance. Mr. Denfeld.

31. Typewriting. 3 Q. Autumn, winter and spring. Without credit. Mr. Spaulding.

33. Shorthand. 3 Q. Autumn, winter and spring. Without credit. Mr. Spaulding.

The Gregg system of shorthand is taught.

35. Court Reporting. 2 Q. Autumn and winter. 6 cr. Must be taken two quarters to receive credit. Not given in 1918-19. Mr. Spaulding.

41. Business Organization. 1 Q. Autumn. 3 cr. Open to Juniors and Seniors. Prerequisite, Economics 13 or 14. Organization of the modern business enterprise, including legal requirements, privileges, and restrictions. Mr. Spaulding.

43. Business Management. 1 Q. Winter. 3 cr. Open to Juniors and Seniors. Prerequisite, Business Organization. Office methods and scientific management as applied to the office and industrial plants. Mr. Spaulding.

45. Advertising and Selling. 1 Q. Spring. 3 cr. Open to Juniors and Seniors. Prerequisite, Economics 13 or 14. Financing of advertising campaign and various methods and media of display. Principles of salesmanship, method of analyzing territory and organizing selling forces. Mr. Spaulding.

47. Credits and Collections. 1 Q. Spring. 3 cr. Prerequisite, Economics 13. Open to Juniors and Seniors. Given in alternate years. Not given in 1918-19.

49. Real Estate. 1 Q. Spring. 3 cr. Prerequisite, Economics 13. Open to Juniors and Seniors. Given in alternate years. Not given in 1918-19. Legal and business problems connected with the sale, purchase and management of real property. The law and practice relating to titles, mortgages and ground rents and the consideration of particular classes of real estate. Mr. Denfeld.

51. Life Insurance. 1 Q. Autumn. 3 cr. Prerequisite, Economics 13 or 14. Alternating with the course in Money, Banking, and Exchange. Given in alternate years. Not given in 1918-19. Theory and practice of life insurance, mortality tables, rates, kinds of policies and companies, finance and premiums. Mr. Smith.

53. Property Insurance. 1 Q. Winter. 3 cr. Prerequisite, Economics 13 or 14. Alternating with the course in Money, Banking and Exchange. Given in alternate years. Not given in 1918-19. Fire, marine and title insurance and corporate suretyship, rates and rate making. Kinds of companies and policies. Mr. Smith.

61. Business for Women. 1 Q. Autumn. Probably repeated in spring. 3 cr. No prerequisite. Open to women only. Mr. Smith.

For Undergraduates and Graduates

101. Money, Banking and Exchange. 3 Q. Autumn, winter and spring. 9 cr. Prerequisite, Economics 13 or 14. Given in alternate years. Given in 1918-19. Theory and history of money and banking; banking methods and legislation affecting banking; domestic and foreign exchange. Mr. Smith.

103. C. P. A. Problems. 3 Q. 3 to 9 cr. Prerequisite, Advanced Accounting and Commercial Law. The study of problems used in C. P. A. examinations in the several states to give preparation for taking the C. P. A. examination. Mr. Smith.

105. Economics of Conservation. 1 Q. Spring; summer. 3 cr. The conditions of war economy and of permanent national prosperity. Mr. Levine.

111. Public Finance. 2 Q. Autumn; winter. 6 cr. Prerequisite, Economics 14. Public expenditures, principles and systems of taxation, public credit, and problems of tax administration. Mr. Levine.

113. Montana Taxation. 1 Q. Spring. 3 cr. Prerequisite, Economics 14 and 111. The tax system of Montana; problems of tax reform. Mr. Levine.

121. Corporation Finance. 1 Q. Autumn. 5 cr. Prerequisite, Economics 13 or 14. Corporation as a form of business organization primarily with reference to its financial management. Mr. Denfeld.

123. Investment and Speculation. 1 Q. Spring. 3 cr. Alternate years. Not given in 1918-19. Prerequisite, Economics 111 and 121. Government and municipal bonds, railway and industrial securities; institutions through which investment and speculation is carried on. Mr. Levine.

125. The Trust Problem. 1 Q. Winter. 3 cr. Open to Juniors. Alternate years. Not given 1918-19. The growth of industrial combinations; advantages and dangers; methods of control; governmental policies. Mr. Levine.

127. Railroad Problems. 1 Q. Spring. 5 cr. Prerequisite, Economics 13 or 14. Growth of transportation; highways; canals; the development of the railway system of the United States; rate making; regulation by state and interstate commissions. Mr. Denfeld.

129. Public Utilities. 1 Q. Spring. 5 cr. Open to Juniors and Seniors. Given in alternate years. Not given in 1918-19. Prerequisite, Economics 13 or 14. The social significance of quasi-public business; the methods of organization and finance of public service enterprise; practices of rate determination and service regulation. Special attention given to municipal utilities, waterpower and irrigation. Mr. Denfeld.

131. The Labor Problem. 1 Q. Spring. 3 cr. Open to Juniors. The factory system and the growth of a wage-earning class; problems of wages, hours of labor, unemployment, etc.; labor unions and their policies; labor legislation. Mr. Levine.

141. Advanced Economic Theory. 1 Q. Spring. 3 cr. Prerequisite, Economics 14. Alternate years. Given 1917-18. Theories of value and of distribution. Mr. Levine.

151. Commerce and Commercial Policy. 1 Q. Winter. 3 cr. Prerequisite, Economics 11 and 14. The conditions of modern trade with particular reference to the commercial problems of the United States; evolution of commercial organization and policies; mercantilism, free trade, protectionism. Mr. Levine.

153. International Relations. 2 Q. Autumn and winter. 6 cr. 1 Q. Summer. 5 cr. Open to Juniors. Present international situation and its historic background. Evolution of foreign policies and problems of world politics. World organization and international government. Diplomatic relations and problems of the United States. Mr. Levine.

161. Sociology. 2 Q. Autumn; winter. 6 cr. 1 Q. Summer. 5 cr. Open to Juniors. Evolution of social interests and institutions; social control; social policy and progress. Mr. Underwood.

163. Social Theories. 1 Q. Spring. 3 cr. Open to Juniors. Relation of the more important sociological writers to social and political history. Mr. Underwood.

171. Economics Reconstruction. 1 Q. Autumn. 3 cr. Prerequisite, Economics 14. Application of economic and sociological principles to the proposals of social and industrial betterment. Mr. Underwood.

173. Co-operation and Marketing. 1 Q. Winter. 3 cr. Prerequisite, Economics 14. Analysis of the contemporary movements for the co-operative production and exchange and distribution of goods. Mr. Underwood.

175. Property and Distribution. 1 Q. Spring. 3 cr. Prerequisite, Economics 14. Application of economic principles to the study of the property system; social distribution of wealth. Mr. Underwood.

177. History of Economic Institutions. 2 Q. Autumn and winter. 6 cr. Open to Juniors. Alternate years. Not given in 1918-19. Origins and evolution of the industrial and property systems of England and the United States. Mr. Underwood.

For Graduates.

201. Research in Finance. 3 Q. 3 to 5 cr. a quarter. Mr. Smith.

203. Current Economic Problems. 3 Q. 3 to 5 cr. a quarter. Mr. Underwood and Mr. Smith.

EDUCATION

PROFESSORS, FREEMAN DAUGHTERS, EDWARD O. SISSON (CHAIRMAN),
INSTRUCTOR, _____.

Students desiring to prepare for Educational Administration as principals and superintendents should do major work in Education. Those desiring to become teachers of special subjects should do major work in the department offering such special subjects. Major students in Education, in addition to the requirements for the University Certificate of Qualification to Teach, will be required to take courses 134, 150, 158, and 162.

The course in General Psychology or its equivalent is a prerequisite to all courses in Education.

Courses marked with an asterisk (*) are required for the Certificate of Qualification to Teach.

10. College Education. 1 Q. Autumn. 1 cr. Required of all freshmen. Mr. Sisson and other members of the Faculty.

For Undergraduates and Graduates.

***114. History of Education.** 1 Q. Autumn. 6 cr. Open to junior and senior students. Mr. Daughters.

***118. Principles of Education.** 1 Q. Winter. 3 cr. Open to juniors and seniors. Mr. Sisson.

***119. Educational Psychology.** 1 Q. Spring. 3 cr. Open to junior and senior students.

***122. The High School.** 1 Q. Autumn. 5 cr. For seniors.

History, organization, management, and problems of the high school; the psychology of adolescence and the formation of character. Mr. Daughters.

***126. Observation and Teaching.** 2 Q. Winter and spring. 6 cr. on Certificate only. Time to be arranged. Prerequisite, twenty-one hours in Education.

Systematic observation of classroom work; weekly conferences; preparation of lesson plans and teaching under the supervision of the department of Education and critic teachers, carried on in co-operation with the Missoula County High School. Mr. Daughters.

***130. School Hygiene.** 1 Q. Winter. 3 crs. For juniors, seniors, and advanced students.

Hygienic aspects of school architecture and equipment, of instruction, and of the physical and mental life of the school child. Mr. Daughters.

134. School Supervision. 1 Q. Winter or Spring. 3 cr. Open to juniors and seniors. Prerequisite, Education 118 and 119.

Instruction—its quality, technique, rating, and the improvement of teachers. Also discipline, classroom management, supervised study, and the measurement of educational products. Mr. ———.

150. Educational Administration. 2 Q. Autumn and winter. 6 cr. Primarily for graduate and advanced students. Mr. Daughters.

154. Pedagogical Seminar. 2 Q. Autumn and winter. Credit and time to be arranged. Designed for graduate and advanced students of education.

Topics will be selected for original investigation and due consideration will be given to current technical literature. Conducted by Messrs. Sisson, Daughters, and F. O. Smith.

158. Educational Sociology. 1 Q. Spring. 3 cr. Open to all juniors and seniors.

Elementary course dealing with the social aspects of education, the relation of the school and society, institutional adjustment and change, and the curriculum. Mr. Daughters.

162. Problems in Elementary Education. 1 Q. Winter. 5 cr. Open to all students in Education.

The elementary school, its history, organization, management, curriculum and types of teaching; its special problems; the kindergarten and such other features as should be familiar to an administrator or supervisor. Mr. Daughters.

166. History of American Education. 1 Q. Autumn or spring. 5 cr. Open only to graduate or advanced students. Mr. ———.

For Graduates.

270. Educational Psychology. 3 Q. Autumn, winter, spring. 9 cr. Open only to graduate and advanced students. Prerequisites, the courses in General Psychology and Education 119.

This course is more advanced and will cover a wide range of literature, much of it technical, in the field of Educational Psychology. Mr. ———.

275. History of Education. Advanced Course. 3 Q. Autumn, winter, spring. 12 cr. Open only to graduate and advanced students. Prerequisite, Education 114.

The History of Education, with emphasis upon sources. It will supplement, and, at the same time, be far more thorough than Education 114. Mr. _____.

Education courses offered in the summer quarter will be announced in the summer-quarter bulletin.

ENGLISH

PROFESSORS, GEORGE R. COFFMAN (CHAIRMAN), FRANCES CORBIN. ASSISTANT PROFESSOR, HOWARD M. JONES. INSTRUCTORS, R. A. COLEMAN, HELEN S. HUGHES, ANDERS ORBECK.

Courses in English are designed to meet the needs of two groups of students: those who desire general knowledge of literature or practice in composition, and those who desire to do either major or minor work in English.

For the general student courses 13 or 15, 20ab, 22ab, 24ab, 127, 140b, 30, 31, 33 are recommended.

(a) Beginning 1918-19 students who major in English are required to take 36 credits in the department, in addition to courses 11abc or 12ab. The following are strongly recommended: Courses 13, 23ab.

(b) Students who elected English as their major subject prior to 1918-19 are required to take courses 11abc, 13, 23ab, and nine hours from courses 22ab, 125-133b, 140ab.

(c) Beginning 1918-19 students who desire to secure the teachers' certificate in English are required to elect 36 hours in the department, in addition to courses 11abc or 12ab. The following must be elected: Courses 13, 21, 25, 161a. Course 23ab is strongly recommended.

(d) Students who elected English as their major subject prior to 1918-19 and who desire to secure the teachers' certificate are required to take the courses outlined in section (b) above, and, in addition, courses 25, 160a or 161ab.

(e) Students who wish to minor in English are required to take, in addition to courses 11abc or 12ab, course 20ab, and ten hours of elective work.

(f) Students who wish to minor in English and to secure the teachers' certificate are required to take, in addition to courses 11abc or 12ab, courses 13, 20ab, 25, and four hours of elective work.

Composition.

F. Forestry English. 1 Q. Winter. No cr.

For short-course Forestry students. Practice in writing elementary English. Mr. Coleman.

A. Sub-Freshman English. 1 Q. Autumn. No cr.

For students who have failed to pass entrance examinations in English; and for those whose work is consistently below standard of Freshman English. Mr. Orbeck.

11a. Freshman English. 1 Q. Autumn; winter; summer. 3 cr. Mr. Coffman, Miss Corbin, Mr. Coleman, Miss Hughes, Mr. Jones, Mr. Orbeck.

11b. Freshman English. 1 Q. Winter; spring. 3 cr. Mr. Coffman, Miss Corbin, Mr. Coleman, Miss Hughes, Mr. Orbeck.

11c. Freshman English. 1 Q. Spring; autumn. 3 cr. Mr. Coffman, Miss Corbin, Mr. Coleman, Miss Hughes, Mr. Jones, Mr. Orbeck.

English 11abc required of all freshmen. Students showing exceptional ability will be placed in English 12ab, and may absolve their requirement in two quarters instead of three.

Freshman English is not required from students in the two- and three-year Pharmacy courses, but they are required to take the entrance examinations and, if deficient, English A.

12a. Advanced Freshman English. 1 Q. Autumn. 3 cr. Mr. Jones.

12b. Advanced Freshman English. 1 Q. Winter. 3 cr. English 12ab is for especially well prepared students. Mr. Jones.

13. Advanced Composition. 1 Q. Autumn. 4 cr. For juniors and seniors. For sophomores with consent of instructor. Required of English majors who desire the teachers' certificate. Mr. Orbeck.

14. Narrative Writing. 1 Q. Spring. 4 cr. For juniors and seniors. Mr. Orbeck.

15. Business English. 1 Q. Spring. 4 cr. Open to sophomores. An advanced course in composition designed to meet the special needs of students in professional courses. Mr. Orbeck.

Language and Literature

20a. Introduction to Literature. 1 Q. Autumn; summer. 4 cr. Open to sophomores. Required of English majors. Intended to develop the student's literary enjoyment and appreciation. The approach to literature. The reading and study of selected examples of the novel and drama. Miss Corbin.

20b. Introduction to Literature. 1 Q. Winter. 4 cr. Prerequisite, English 20a. Required of English majors. Methods of literary study. Poetry and the essay. A series of lectures on the history of the English language. Miss Hughes, Mr. Coffman.

21. Historical Survey of English Literature. 1 Q. 5 cr. Not offered 1918-19.

22a. American Literature. 1 Q. Winter; summer. 4 cr. Open to sophomores. A study of literature in America from the colonial period to 1850. Miss Corbin.

22b. American Literature. 1 Q. Spring. 4 cr. Open to sophomores. American literature from 1850 to the present day. Miss Corbin.

23a. Shakespeare. 1 Q. Winter. 5 cr. Open to sophomores. A chronological study of Shakespeare's plays. Two hours a week devoted to the staging of plays. Mr. Coffman, Mr. Jones.

23b. Shakespeare. 1 Q. Spring. 5 cr. See above. Miss Hughes, Mr. Jones.

24a. Contemporary Literature. 1 Q. Autumn. 4 cr. Required of Journalism students. Elective otherwise for juniors and seniors. A study of contemporary ideas in significant modern literature. Mr. Jones.

24b. Contemporary Literature. 1 Q. Winter. 4 cr. Prerequisite, English 24a. See above. Mr. Jones.

25. Problems in Teaching of English. 1 Q. Spring; summer. 2 cr. Required of English majors who desire the teachers' certificate. Mr. Coleman, Mr. Coffman, Mr. Orbeck.

125. English Drama to 1642. 1 Q. 4 cr. Not offered 1918-19.

126. English Drama (1642-1891). 1 Q. Autumn. 4 cr. Open to juniors and seniors. Mr. Coffman.

127. Modern Drama. 1 Q. Spring. 4 cr. Open to juniors and seniors. A study of representative plays by Ibsen, Hauptmann, Brieux, Shaw, Galsworthy, etc. The organization of the modern theater. Modern theories of staging. Mr. Coffman.

130. Age of Dryden and Pope (1660-1744). 1 Q. Winter. 4 cr. Open to sophomores. Mr. Orbeck.

131. Age of Johnson (1744-1798). 1 Q. Spring. 4 cr. Open to sophomores. Miss Hughes.

132. Chief Romantic Poets (1798-1832). 1 Q. Autumn. 4 cr. Open to sophomores. Miss Corbin.

133a. Tennyson and Browning. 1 Q. Winter. 4 cr. Open to sophomores. Miss Corbin.

133b. Late Victorian Literature. 1 Q. Spring. 4 cr. Open to sophomores. Mr. Jones.

140a. English Novel (1579-1800). 1 Q. Autumn. 4 cr. Open to juniors and seniors. Miss Hughes.

140b. English Novel (1800-1900). 1 Q. Winter; summer. 4 cr. Open to juniors and seniors. Miss Hughes, Miss Corbin.

150. Studies in Major Poets and Prose Writers. 1 Q. Spring. 4 cr. Open to juniors and seniors. Subject varies from year to year. For 1918-19, the novels of Eliot, Hardy, Meredith. Miss Corbin.

151. Seminar. 1 Q. Autumn; winter; spring. 3 cr. Open to seniors. Subject for 1918-19: English Essayists. Mr. Coffman, Mr. Jones.

152. Dante in English. 1 Q. Summer. (First term). 3 cr. Intensive reading of the Divine Comedy in translation. Mr. Jones.

160ab. Old English. 2 Q. 10 cr. Not offered, 1918-19.

161a. Chaucer. 1 Q. Autumn. 5 cr. Required of English majors who desire the teachers' certificate. Open to juniors and seniors. Intensive reading of Prologue and a few of the Canterbury Tales; rapid reading of others and of Chaucer's earlier work. Mr. Coffman.

161b. Middle English Literature. 1 Q. Winter. 4 cr. Open to juniors and seniors. Mr. Coffman.

Public Speaking.

30. Essentials of Public Speaking. 1 Q. Autumn. 5 cr. Open to freshmen. Mr. Coleman.

31. Advanced Public Speaking. 1 Q. Winter. 3 cr. Prerequisite, English 30. Mr. Coleman.

32a. Debate. 1 Q. Autumn. 2 cr. Open to sophomores, to freshmen with consent of instructor, and to Law students. Mr. Coleman.

32b. Debate. 1 Q. Winter. 2 cr. Prerequisite, English 31a. Mr. Coleman.

32c. Debate. 1 Q. Spring. 2 cr. Prerequisite, English 32b. Mr. Coleman.

33. Dramatic Personation. 1 Q. Autumn; summer. 3 cr. Prerequisite, English 30, or consent of instructor. A course in the staging of plays. Mr. Jones.

FINE ARTS

ASSISTANT PROFESSOR, F. D. SCHWALM (CHAIRMAN). ASSISTANT,
O. M. KING.

Students majoring in Fine Arts are required to complete 39 hours. Required courses: History of Art, 4 cr.; Elementary Drawing, 6 cr.; Advanced Drawing, 10 cr.; Advertising, 4 cr.; Teachers' Course, 4 cr.; Design, 4 cr.; Handicraft, 4 cr.

11. History and Appreciation of Art. 1 Q. Autumn; winter. 5 cr. A general survey of the development of painting, sculpture and architectural from the beginning to the present time. The course is intended to develop the understanding and appreciation of art. Miss King.

17. Advertising. 1 Q. Autumn; winter. 2 cr. Presenting the theory and methods of applying art in a practical way; originating posters, folders and booklets for commercial purposes; explaining the technical problems of photographic plate work of color and line for production. The work is closely associated with the School of Journalism. Mr. Schwalm.

19. Artistic Anatomy. 1 Q. Winter; spring. 6 cr. Prerequisite, courses 21-22. For those who propose to take advanced work in art, such as illustrating, mural decoration and painting of the figures. Given every other year. Mr. Schwalm.

21. Elementary Drawing. Study in charcoal of cast and still life; outdoor sketching and work from the model. Given in the summer quarter. Miss King.

23. Advanced Drawing and Painting. 3 Q. Autumn, winter, spring. 2-3 cr. Prerequisite, courses 21-22. Process and principles of drawing and painting in oils and water color; work from model and outdoor sketching. Given in the summer quarter. Mr. Schwalm.

25. Illustration. 1 Q. 2 cr. Prerequisite, courses 21-22. Students do practical illustrations for books, newspapers and magazines; special attention will be given to pictorial composition and methods of reproduction. Mr. Schwalm.

27. Cartooning. 1 Q. Autumn. 2 cr. Prerequisite, courses 23-4. A course in practical training; work is identical with that done by artists on a daily newspaper. The work is closely associated with the School of Journalism. Mr. Schwalm.

30. Teachers' Course. 1 Q. Winter; spring. 5 cr. Open to advanced students only. Primarily intended for students who wish to teach or supervise drawing in public schools. The course takes up construction work, design, color, clay modeling, object and nature drawing and methods as applied in public school art work. Miss King.

31. Design. 2 Q. Autumn, winter. 2 cr. A study of the natural

flowers with theory and practice in the principle of artistic arrangement. Course is arranged so that the designs may be applied in Handicraft courses. Given in the summer quarter. Mr. Schwalm.

33. Beginning Handicraft. 3 Q. Autumn, winter, spring. 2-3 cr. Prerequisite, courses 31-32. This course offers instruction in etching, saw piercing, hammered and raised work in copper and brass; work in cut, tooled and colored leather, and simple jewelry. Given in the summer quarter. Miss King.

35. Advanced Handicraft. 3 Q. Autumn, winter, spring. 2-3 cr. Prerequisite, courses 31-32-33-34. Advanced problems in handicraft work in copper, brass, leather, silver and jewelry. Given in the summer quarter. Miss King.

GEOLOGY

PROFESSOR, J. P. ROWE. INSTRUCTOR, MR. _____.

Those who do major work in General Geology must take Mineralogy 17, Chemistry 11, Zoology 11, General and Systematic Botany one year, Physics 11 and should have at least two year's work in German and one year in French.

For Undergraduates

Geology:

11. General Geology. 3 Q. Autumn, winter and spring. Continuous. 12 cr. Fee \$1.00. Open to all students. Mr. Rowe and Mr. _____.

13. Geologic Processes. 1 Q. Autumn. 5 cr. Prerequisite, Geology 11. Mr. Rowe and Mr. _____.

14. Historical Geology. 2 Q. Winter and spring. 10 cr. Prerequisite, Geology 13. Mr. Rowe and Mr. _____.

15. Physiography. 1 Q. Winter; summer. 3 cr. Open to all students. Mr. Rowe and Mr. _____.

16. Geography and Geology of Montana. 1 Q. Repeated each quarter. 3 cr. Open to all students. Mr. Rowe.

18. Invertebrate Paleontology. 2 Q. Winter and spring. 10 cr. Prerequisite, Invertebrate Zoology and Geology 11. Mr. _____.

Mineralogy and Economic Geology:

Those who do major work in Mineralogy or Economic Geology should take Mathematics 11, 12, 13, 16 and Chemistry 13, 15, 17, together with two years of German and one year of French.

17. Physical Mineralogy. 1 Q. Repeated each quarter. 5 cr. Prerequisite, General Chemistry. Mr. Rowe and Mr. _____.

20. Advanced Mineralogy. 1 Q. Winter. Cr. to be arranged. Prerequisite, Mineralogy 17. Mr. _____.

21. Petrology. 1 Q. Autumn. 3 cr. Mr. Rowe and Mr. _____.

22. Blowpipe Analysis. 1 Q. Winter. 3 cr. Prerequisite, Mineralogy 17. Mr. Rowe and Mr. _____.

24. Economic Geology. 1 Q. Spring. 3 cr. Prerequisite, Geology 11 and Mineralogy 17. Mr. Rowe.

For Undergraduates and Graduates

128. **History of Geology.** 1 Q. Spring. 3 cr. Mr. Rowe.

130. **Genesis of Ore Deposits.** 1 Q. Autumn; winter. 4 to 6 cr.
Mr. Rowe.

For Graduates

202. **Research.** Individual work upon selected subjects.

HISTORY AND POLITICAL SCIENCE

PROFESSOR, PAUL C. PHILLIPS (on leave). ASSISTANT PROFESSOR,
H. A. TREXLER. INSTRUCTOR, JOSEPH WARD SWAIN.

Those who do major work in History and Political Science may specialize in American History, European History, or Political Science. To those who are especially interested in Political Science attention is called to the courses in the departments of Economics and Law.

The courses in the European history are intended primarily for freshmen and American history and Greek and Roman history are especially designed for sophomores. The general course in United States history is prerequisite to all advanced courses in American history.

Students who elect History and Political Science as a major subject should get as soon as possible a reading knowledge of either French or German.

Those who expect to teach history in the secondary schools should take the general courses and if possible two or three of the advanced courses in history. Students who expect to teach Civics should have at least one course in Political Science. No student who has less than 27 hours' credit in college history will be recommended for departmental work in History in the high school.

A. General History. 1 Q. Summer. 5 cr. For entrance credit.
Mr. Trexler.

10a. Elementary American History. 1 Q. Summer. 5 cr. Open only to freshmen and sophomores who do not offer entrance credit in American history. Mr. Phillips.

11a. Renaissance and Reformation. 1 Q. Autumn. 3 cr. Open to all students. Mr. Trexler. (Not offered in 1918-19.)

11b. Modern European State System and French Revolution. 1 Q. Winter. 3 cr. A continuation of 11a. Mr. Trexler.

11c. The Nineteenth Century and the Great War. 1 Q. Spring, 1919; summer, 1918. 3 cr. A continuation of 11b. Mr. Trexler.

12. Mediaeval History. 1 Q. Spring. 5 cr. Open to all students.
Mr. Trexler.

13. English History to 1603. 1 Q. Autumn. 5 cr. Open to all students. Mr. Phillips.

14. English History (1603-1918). 1 Q. Winter. 5 cr. Open to all students. Mr. Phillips.

15. Greek History. 1 Q. 3 cr. (Not offered in 1918-19.)

16. Roman History. 1 Q. 3 cr. (Not offered in 1918-19.)

21a. Formation of the United States (1750-1830). 1 Q. Autumn. 3 cr. Prerequisite, sophomore standing. Mr. Phillips.

21b. The Slavery Controversy and Secession Movement. 1 Q. Winter. 3 cr. Prerequisite, sophomore standing. A continuation of 21a. Mr. Phillips.

21c. Recent United States History. 1 Q. Spring. 3 cr. Prerequisite, sophomore standing. A continuation of 21b. Mr. Phillips.

22. Montana History and Government. 1 Q. Spring. 3 cr. Open to all students. Mr. Phillips.

23. The Teaching of History. 1 Q. Spring; summer, 1918. 2 cr. Mr. Phillips.

24. The United States and the World War. 1 Q. Autumn. 1 cr. A series of twelve lectures on matters of popular interest connected with the relations of the United States to the war in Europe. Mr. Phillips, Mr. Trexler, Mr. Levine, Mr. Underwood and others.

101. Studies in Montana History. 1 Q. Spring. 2 cr. Prerequisite, History 21. Mr. Trexler.

102. History of the Far West. 2 Q. Autumn; winter. 4 cr. Prerequisite, History 21. Mr. Phillips.

106. Materials of History. 1 Q. Autumn. 2 cr. For majors of the department. Mr. Trexler.

107. Historical Methods. 1 Q. Winter. 2 cr. Mr. Trexler.

Courses in Political Science.

B. Elementary National and Montana Government. 1 Q. Summer. 5 cr. For entrance credit. Mr. Phillips.

17. American National Government. 1 Q. Autumn. 3 cr. Prerequisite, 9 hours of history. Mr. Phillips.

18. State and Local Government. 1 Q. Winter. 3 cr. Prerequisite, 9 hours of history. Mr. Phillips.

19. Elements of Political Science. 1 Q. Autumn. 3 cr. Prerequisite, 9 hours of history. Mr. Trexler.

20. National Governments. 1 Q. Winter. 3 cr. Prerequisite, 9 hours of history. Mr. Trexler.

103. International Law. 2 Q. Autumn; winter. 4 cr. Prerequisite, 15 hours in History, Economics or Law. Mr. Phillips.

HOME ECONOMICS

INSTRUCTORS, GERTRUDE PAXTON (CHAIRMAN), ELLA WOOD, HILDA FAUST.

The courses in this department are planned to give training in the economic and scientific administration of the household, to present the place of the household in society as a cultural unit, and to prepare teachers of Home Economics.

Courses in related subjects are given by other departments of the university, a number of which are prerequisite to work offered in Home Economics. Students are able to complete all the work offered in Domestic Science and Domestic Art by a careful selection of courses. Upon

completion of four years of regular university work the degree of Bachelor of Arts is given.

Students who wish to pursue courses in Home Economics but who are not majoring in the department may elect courses 11, 11a, 11b, 15, 18, and 19, or any others for which the prerequisite requirements have been met.

COURSES IN HOME ECONOMICS

FIRST YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
English	3	3	3
Modern Language	3-4	3-4	3-4
Chemistry	4	4	4
Physical Ed.	1	1	1
Home Economics (11b)	5	5	5
Home Economics (11 or 11a)	---	5	5

SECOND YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Home Economics (13)	---	5	5
Zoology or Botany	4	4	---
Psychology	5	5	---
Modern Language	4	4	---
Physical Ed.	1	1	1

*Electives

Note: Students who wish to specialize in Domestic Science refer to Domestic Science Group; for Domestic Art refer to Domestic Art Group.

DOMESTIC SCIENCE GROUP

THIRD YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Bacteriology	4	---	---
Chemistry (Organic)	---	5	---
Chemistry (Physiological)	---	---	5
Economics or History	5	5	---
Home Economics (19)	---	4	---
Home Economics (20)	---	---	4

*Electives

FOURTH YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Home Economics (21)	5	---	---
Home Economics (22)	---	5	---
Home Economics (25)	3	---	---
Home Economics (24)	---	3	---
Chemistry (Food)	3	---	---

*Electives

Note: Students specializing in Domestic Science should elect Qualitative and Quantitative Chemistry in the sophomore year.

DOMESTIC ART GROUP

THIRD YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Bacteriology	4	---	---
Chemistry (Organic)	---	5	---
Chemistry (Physiological)	---	---	5
Home Economics (17)	5	---	---
Home Economics (19)	---	4	---
Home Economics (20)	---	---	4
Home Economics (17)	---	---	5

*Electives

FOURTH YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Home Economics (25).....	3	---	---
Home Economics (24).....	---	3	---
Chemistry (Textiles).....	---	---	3
Hist. and Appreciation of Art.....	5	---	---
History or Economics.....	---	5	5
*Electives			

*Elements of Journalism, Elementary Drawing, Handicraft, Business English, Advanced Composition, Introduction to Literature, American Literature, Contemporary Literature, Modern Drama, English Novel, Essentials of Public Speaking, Sociology.

Foods

13. Foods. 2 Q. Winter and spring. Continuous. 10 cr. Fee \$7 a quarter. Prerequisite, Chemistry 11 or 13. A study of foods as to classification, composition, selection and preparation. No credit is allowed for a single semester's work in this course. Miss Woods.

15. General Food Study. 2 Q. Autumn and winter. Continuous. 10 cr. Fee \$7 a quarter. Open to all students. A course in the study of foods offered as an elective for students not majoring in Home Economics. No credit is allowed for a single semester's work in this course. Miss Faust.

21. Problems in the Preparation and Service of Food. 1 Q. Autumn. 5 cr. Fee \$7. Prerequisite, Chemistry 17, Home Economics 13. Includes the preparation and service of food in family portions; special problems in manipulation; demonstrations. Miss Woods.

22. Dietetics. 1 Q. Spring. 5 cr. Fee \$7. Prerequisite, Home Economics 21, Chemistry 103. A study of the calorific value, digestion, metabolism and cost of foods; diets as influenced by age, sex and occupation; dietetic treatment of disease. Miss Woods.

26. Foods. 1 Q. Summer. 5 cr. Fee \$7. Principles involved in the classification, preparation, selection and conservation of food. Miss

Given each term of summer quarter. 5 cr.

Clothing

11. Clothing. 2 Q. Winter and Spring. Continuous. 10 cr. Fee \$1 a quarter. Prerequisite or parallel, Home Economics 11b (Design). A study of the development of textile industries, the manufacture of fabrics, the selection of materials and the economic and social conditions which affect their value. Text: Woolman and McGowan. The laboratory work includes pattern drafting, hand and machine sewing in the making of undergarments and a wash dress. No credit allowed for a single semester's work in this course. Mrs. Paxton, Miss Faust.

11a. Clothing. 2 Q. Winter and spring. Continuous. 10 cr. Fee \$1 a quarter. Prerequisites, one year of high school sewing and Home Economics 11b. So far as the study of textiles is concerned this course is identical with Clothing 11, but the laboratory work includes a more advanced course in hand and machine sewing. No credit is allowed for a single semester's work in this course. Mrs. Paxton.

11b. Clothing Design. 1 Q. Autumn. 5 cr. A course in the principles of design as influenced by line, area, and color. Ideas for design made practical by application to articles of dress. Miss Faust.

17. Dress. 2 Q. Autumn and Spring. Continuous. 10 cr. Fee \$1 a quarter. Prerequisite, Home Economics 11 or 11a. A study of line color, and ornament in dress; materials and their influence on the design of a gown; economical purchasing and other problems relating to dress. The lectures also include a Historical survey of ancient Egyptian, Grecian, Roman, early and modern French and English costumes, and their relation to dress of today. Laboratory work includes alteration and use of commercial patterns, designing, pattern modeling, the making of wool and silk dresses. Mrs. Paxton.

27. Textiles. 1 Q. Summer. 5 cr. Fee \$2. A study of fibres; the development of textile industry; the manufacture of fabrics and the economic and social conditions which affect their value. Sewing by hand and machine. Problems: drafting of patterns, cutting and fitting; seams and finishes. Students will provide their own material, subject to approval of the instructor. Miss _____.

Given each term of the summer quarter. 5 cr.

Shelter

19. House Planning and Furnishing. 1 Q. Winter. 4 cr. A study of architectural designs as applied to the house; the problem of artistic and economic furnishing of the entire home. Mrs. Paxton.

20. House Construction and Sanitation. 1 Q. Spring. 4 cr. Prerequisite, Home Economics 19. A study of the location of the house; building materials; heating; lighting; ventilating; water supply and drainage; plumbing; hygiene of the home. Miss Woods.

24. Household Management. 1 Q. Winter. 3 cr. Prerequisite, Home Economics 13, or 15, 20. Expenditure of income; organization; care of house; domestic service problems. Miss Woods.

25. Teachers' Course. 1 Q. Autumn. 3 cr. Open only to seniors. Designed to meet the needs of teachers of Home Economics in high schools and grades. Methods of presentation; correlation; planning courses; practice teaching. Mrs. Paxton, Miss Woods.

LATIN AND GREEK

PROFESSOR W. M. ABER.

Students choosing this department for their major work must take in Latin Courses 11, 12, 13, 14, 15, 16, 17, 18, 19, and the courses in Greek and Roman Life. Eighteen hours in Greek or Modern Language must also be taken.

For a Minor, a student must take at least fifteen hours in this department.

To be recommended as qualified to teach Latin in High Schools, there is required at least the successful completion of Courses 11, 12, 13, 14, 15, 16, or their equivalents.

For Undergraduates

Latin:

Note—Courses 11, 12, 13, 14, 15, 16 are designed especially for first-year work, to give a preliminary grammatical review; but students of exceptionally good preparation and aptitude for the work may take other courses first if circumstances require such a departure from the desirable order of work. Students taking Latin as their major subject should, as far as possible, take the courses in the order presented below; but the courses are open to students in any college year if they are prepared to take the work with profit. The prerequisite for any course is the usual four years' Latin work in secondary schools.

11. **Cicero.** 1 Q. Autumn. 3 cr. De Amicitia. Mr. Aber.

12. **Composition.** 1 Q. Autumn, 2 cr. Prose composition with review of grammar. Mr. Aber.

13. **Cicero and Livy.** 1 Q. Winter. 3 cr. De Senectute of Cicero. Selections from Livy. Mr. Aber.

14. **Composition.** 1 Q. Winter. 2 cr. Continuation of 12. Mr. Aber.

15. **Livy.** 1 Q. Spring. 3 cr. Selections from Livy. Mr. Aber.

16. **Composition.** 1 Q. Spring. 2 cr. Continuation of 14. Mr. Aber.

17. **Horace.** 1 Q. Autumn. 3 cr. Selections from Epodes and Odes. Mr. Aber.

18. **Catullus and Tacitus.** 1 Q. Winter. 3 cr. Selected poems of Catullus. Germania of Tacitus, Chapters I-XXVIII. Mr. Aber.

19. **Tacitus.** 1 Q. Spring. 3 cr. Agricola. Mr. Aber.

20. **Horace and Juvenal.** 1 Q. Autumn. 3 cr. Selections from Epistles and Satires of Horace, and Satires of Juvenal. Mr. Aber.

21. **Comedy.** 1 Q. Winter. 3 cr. One play each of Plautus and Terence. Mr. Aber.

22. **Roman Life.** 1 Q. Winter. 3 cr. Open to all students. No knowledge of Latin required. Mr. Aber.

Greek:

11. **Elementary Greek.** 1 Q. Autumn. 3 cr. White's First Greek Book. Mr. Aber.

12. **Elementary Greek.** 1 Q. Winter. 3 cr. Continuation of 11. Mr. Aber.

13. **Elementary Greek.** 1 Q. Spring. 3 cr. Continuation of 12. Mr. Aber.

14. **Second Year Greek.** 1 Q. Autumn. 3 cr. Xenophon's Anabasis. Mr. Aber.
15. **Second Year Greek.** 1 Q. Winter. 3 cr. Anabasis continued. Iliad begun. Mr. Aber.
16. **Second Year Greek.** 1 Q. Spring. 3 cr. Iliad continued. Mr. Aber.
17. **Greek Life.** 1 Q. Autumn. 3 cr. Private life of Greeks. Open to all students. No knowledge of Greek required. Mr. Aber.

LIBRARY SCIENCE

INSTRUCTOR, GERTRUDE BUCKHOUS. ASSISTANT, _____.

1. **General Reference.** 1 Q. Autumn; spring. 1 cr. Open to all students. Lectures, reading and reference work. Lectures will be given on the following topics: The arrangement of the library and the privileges granted students, the use and value of the card catalogue, dictionaries, and encyclopedias, Poole's Index and periodical literature, classification, cataloguing, atlases and gazetteers, note-taking, book-binding and care of books, government publications and reference books on English and American literature, history and science. One lecture or recitation a week. One afternoon laboratory work. Miss Buckhous.

The following are required of students majoring in Library Science: Examinations or two years of college work. Satisfactory reports on maturity of mind and earnestness of purpose. Ability to use a typewriter and to write a good library hand. College courses desirable: French and German, one year; History, Literature and English (as much advanced as possible). General courses in Physics, Chemistry, Geology, Biology, Psychology, Economics and Sociology, Education, Modern Languages, and Art.

12. **Reference.** 1 Q. Autumn. 3 cr. Miss Buckhous.
15. **Library Economy.** 1 Q. Winter. 3 cr. Miss Buckhous.
13. **Reference.** 1 Q. Spring. 3 cr. Prerequisite, 12. Miss Buckhous.
14. **Classification.** 1 Q. Winter. 2 cr. _____.
19. **Classification and Cataloguing.** 1 Q. Spring. 2 cr. Prerequisite, 14. _____.
17. **Reference.** 1 Q. Autumn. 3 cr. Open to seniors. Prerequisites, 12 and 13. Miss Buckhous.
21. **Book Selection.** 1 Q. Winter. 2 cr. Open to seniors. _____
16. **Classification and Cataloguing.** 1 Q. Winter. 3 cr. Open to seniors. Prerequisites, 14 and 19. _____.
18. **Library Administration.** 1 Q. Spring. 2 cr. Open to seniors. Includes County Library Administration and County Library Law. Miss Buckhous.
20. **Public Documents.** 1 Q. Winter. 3 cr. Open to seniors. Miss Buckhous.
22. **Book Selection.** 1 Q. Winter. 1 cr. Open to seniors. _____

- 24. Trade Bibliography and Publishing Houses.** 1 Q. Autumn. 1 cr. Open to seniors. _____.
- 26. Field Practice.** 2 Q. Spring and summer. Continuous. 12 cr. Open to seniors. Miss Buckhous.
- 28. Special Lectures.** 1 Q. Spring. 2 cr. Open to seniors. Newspaper publicity, children's books and work with children, story telling, work with schools, library instruction in high schools. _____.

MATHEMATICS

PROFESSOR, N. J. LENNES. ASSISTANT PROFESSORS, E. A. CAREY, A. S. MERRILL.

The minimum requirement for a major in mathematics is 45 quarter hours. This should include courses 12, 13, 15, 16, 17, and 18. The remaining hours should be selected in consultation with the instructors in charge of the courses which the student proposes to select. Courses 10 and 11 may not be counted as part of the requirement for a major in mathematics.

The mathematics library contains complete sets of all the American mathematical journals, and complete sets of several of the most important foreign journals, such as Crelle, Annalen, Liouville, Fortschritte, and others. The current volumes of all the important mathematical journals are in the library. The important new books are being added. It is usually possible to add books as the need for them arises.

10. Intermediate Algebra. 1 Q. 5 cr. Prerequisite, 1 unit of entrance Algebra. For students entering with only one year of Algebra, this is a prerequisite for all other courses in Mathematics. Autumn, Lennes; winter, Carey.

11. Solid Geometry. 1 Q. 5 cr. Spring, Merrill; Summer (1918), Merrill.

12. College Algebra. 1 Q. 5 cr. Prerequisite, course 10 or $1\frac{1}{2}$ units of entrance Algebra. (The advanced part of the entrance Algebra should be taken not earlier than the third year of the high school course.) Autumn, Carey; Winter, Merrill.

13. Plane Trigonometry. 1 Q. 5 cr. Autumn, Merrill; Winter, Lennes; Spring, Carey; Summer (1918), Lennes.

14. Spherical Trigonometry. 1 Q. 5 cr. Winter, Merrill.

15. Plane Analytic Geometry. 1 Q. 5 cr. Winter, Carey; Spring, Lennes; Summer (1918), Merrill.

16. Differential Calculus. 1 Q. 5 cr. Autumn, Carey.

17. Integral Calculus. 1 Q. 5 cr. Prerequisite, course 16. Winter, Carey.

18. Advanced Calculus. 1 Q. 5 cr. Prerequisite, course 17. Spring, Carey.

19. Solid Analytic Geometry. 1 Q. 5 cr. Winter, Merrill.

(Only one of the courses, 19, 101, 104, will be given in 1918.)

20. Analytic Mechanics. 1 Q. 5 cr. Winter, Carey.

(This course is not given in 1918-19.)

21. Analytic Mechanics. 1 Q. Prerequisite, course 20. Spring Carey.

(This course is not given in 1918-19.)

- 22. Teaching of Secondary Mathematics.** 1 Q. 5 cr. Spring, Lennes; Summer (1918), Lennes.
- 23. Forestry Computation.** 1 Q. This course carries no University credit. Winter, Lennes.
- 24. Teaching of Arithmetic.** $\frac{1}{2}$ Q. $2\frac{1}{2}$ cr. Summer, first term, Lennes; repeated second term, Lennes.
- 25. Plane Geometry.** 1 Q. This course carries no University credit. Summer (1918), Carey.
- 26. Elementary Algebra.** 1 Q. This course carries no University credit. Summer (1918), Carey.
- 27. Mathematics of Investments.** 1 Q. 5 cr. Spring, Lennes.
- 101. Ordinary Differential Equations.** 1 Q. 5 cr. Prerequisite, courses 16 and 17. Winter, Merrill. (See course 19.)
- 102. Partial Differential Equations.** 1 Q. 5 cr. Winter, Carey. (Not given in 1918-19.)
- 103. Synthetic Projective Geometry.** 1 Q. An elementary course. Autumn, Lennes.
- 104. Theory of Equations.** 1 Q. 5 cr. Winter, Merrill. (See course 19.)
- 105. Theory of Determinants.** 1 Q. 5 cr. Summer (1918), Carey.
- 240. Function of a Real Variable.** 1 Q. 5 cr. Spring, Lennes. (Not given in 1918-19.)
- 241. Functions of a Complex Variable.** 1 Q. 5 cr. Autumn, Carey. (Not given in 1918-19.)
- 242. Functions of a Complex Variable.** 1 Q. Prerequisite, course 241. Winter, Carey. (Not given in 1918-19.)
- 243. Vector Analysis.** 1 Q. 5 cr. Winter, Carey. (Not given in 1918-19.)
- 245. Theory of Sets of Points.** 1 Q. 5 cr. Autumn, Lennes. (Not given in 1918-19.)

ASTRONOMY

- A11. Descriptive Astronomy.** 1 Q. 5 cr. Autumn, Merrill; Spring, Merrill.
- A101. Celestial Mechanics.** 1 Q. 5 cr. Spring, Merrill. (Not given in 1918-19.)

MILITARY SCIENCE

COMMANDANT, W. J. McCORMICK, CAPTAIN MONTANA NATIONAL GUARD.

In compliance with the regulations of the war department, courses in this department of the university are compulsory for all male students, less than 26 years old, who have not advanced beyond sophomore standing. Setting-up exercises are given five mornings each week. Company and battalion drill is conducted four afternoons each week. Members of the battalion are examined from time to time, orally and in writing, on military matters, lectures and tactics. It is aimed to keep the battalion abreast with the latest military development in the United States army. Progress has been made toward securing official recognition of the military department of the State University by the government.

11. Military Drill. 3 Q. Autumn, winter and spring. 3 cr. Setting-up exercises; infantry drill. Captain McCormick.

13. Military Science. 3 Q. Autumn, winter and spring. 3 cr. Lectures and study of military organization and science. Captain McCormick.

MODERN LANGUAGES

PROFESSOR, F. C. SCHEUCH. ASSISTANT PROFESSORS, HENRY HAXO, MRS. K. W. JAMESON, G. W. LUSSKY, J. W. SWAIN.

German

Those who do major work in German must take the following courses: 11, 13, 15, 19, 20, 21, 23. In addition, they will take two years of one other modern language and one course in the History of Europe.

11. Elementary. 3 Q. Autumn, winter, spring. 15 cr. Mrs. Jameson.

13. Intermediate. 3 Q. Autumn, winter, spring. 9 cr. Prerequisite, course 11, or two years' high school German. Mr. Lussky.

15. Advanced. 3 Q. Autumn, winter, spring. 9 cr. Continuation of 13. Mr. Lussky.

17, 18. Scientific. 2 or 3 Q. 4 or 6 cr. Prerequisites, courses 11 and 13. For students who have had at least two years of college German and who wish to do German reading in their major subjects. Mr. Lussky.

19, 20. Special. 1, 2, or 3 Q. 2, 4 or 6 cr. Prerequisites, courses 11, 13, 15. Arranged for individual requirements. Mrs. Jameson.

This course for 1916-17 was given as a course in Faust.

French

Those who do major work in French must take the following courses: 11, 13, 15, 17, 18, 19, 21, 23. In addition they are required to take two years of one other modern language and one course in the History of Europe. Course 126 is required of those who wish to teach French. Candidates for the teachers' certificate must have completed these requirements.

11. Elementary French. 3 Q. Autumn, winter, spring. 9 cr. Mr. Haxo.

13. Intermediate French. 2 Q. Autumn, winter. 8 cr. Mr. Haxo.

15. Advanced French. 2 Q. Autumn, winter. 8 cr. Mr. Haxo.

17. French Composition. 1 Q. Spring. 4 cr. Mr. Haxo.

18. French Conversation. 1 Q. Spring. 2 cr. Mr. Haxo.

19. Survey of French Literature. 2 Q. Winter, spring. 8 cr. Not open to freshmen. Mr. Haxo.

21. Moliere. 1 Q. Winter or spring. 4 cr. Not open to freshmen. Given in alternate years. Mr. Haxo.

23. French Literature of the Nineteenth Century. 2 Q. Autumn; winter or spring. 8 cr. Not open to freshmen. Given in alternate years. Mr. Haxo.

Students in other departments who wish to gain a knowledge of French literature may register for two credits in 19, 21 and 23 and be excused from the French Reading.

126. Teacher's Course. 1 Q. Winter or spring. 4 cr. Open to advanced students.

Spanish

Those who do major work in Spanish must have taken: One course of History of Europe; two years of one other foreign language.

11. Elementary. 3 Q. Autumn, winter, spring. 15 cr. Mr. Scheuch.

For Teachers. 1 Q. Summer. 3 or 2 cr. Mr. Scheuch.

13. Intermediate. 3 Q. Autumn, winter, spring. 15 cr. Prerequisite, course 11 or two years' high school Spanish. Mr. Scheuch.

For Teachers. 1 Q. Summer. 3 or 2 cr. Prerequisite, courses 11 or two years' high school Spanish. Mr. Scheuch.

15. Advanced. 3 Q. Autumn, winter, spring. 9 cr. Prerequisites, courses 11, 13, or three years' high school Spanish. Mr. Scheuch.

17. Classical Readings. 2 Q. Winter, spring. 4 cr. Not open to freshmen. Prerequisites, courses 11, 13, 15. Mr. Scheuch.

19. Cervantes, Lope de Vega. 2 Q. Not open to freshmen. Prerequisites, courses 11, 13, 15, 17. Mr. Scheuch.

Not offered in 1918-1919.

PHYSICAL EDUCATION

PHYSICAL DIRECTOR, PROFESSOR WILLIAM E. SCHREIBER. DIRECTOR OF PHYSICAL EDUCATION FOR WOMEN, ASSISTANT PROFESSOR INA E. GITTINGS. COACH AND ASSISTANT, J. N. NISSEN.

The practice courses in Physical Education are open as electives. No student may take work in the department without regular registration.

Members of all classes in Physical Education and of all University athletic teams are required to take a physical examination at the beginning of the college year.

All women are required to take Physical Training three days per week for the first two years (six quarters).

The general health of all women is carefully looked after by the Director. Special Medical Gymnastics may be arranged for those whose health does not permit them to take general class work.

Women are required to wear uniform gymnasium suits which should, under no conditions, be ordered before consulting the instructor.

Professional Course for Men and Women

The University Certificate in Physical Education is granted to graduates of the University who have satisfied all the special requirements given below.

Students not graduates of this University, who complete this course, receive statements to that effect and also credit toward a degree for their work.

Requirements: English 11a, 11b, 11c; Public Speaking 30, 31; Biology; Physiology; Hygiene; Comparative Anatomy; Psychology 11; Principles of Education; School Hygiene; Physical Education 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41 for both men and women; Physical Education (practice) 11, 12, 13, 14, 15, 16 for men: 17, 18, 19, 20, 21, 22, 23, 24, 25 for women.

PHYSICAL EDUCATION—PRACTICE

Undergraduate Courses for Men

11. Freshmen Gymnastics. 1 Q. Autumn. 1 cr. Required of all freshmen. Free-hand body building; setting up exercises; work with light apparatus; heavy gymnastics on the parallel bars, side and long horse, buck and horizontal bars; tumbling; wrestling; recreative games.

12. Freshmen Gymnastics. 1 Q. Winter. 1 cr. Required of all freshmen. Continuation of P. E. 11.

13. Freshmen Gymnastics. 1 Q. Spring. 1 cr. Required of all freshmen. Continuation of P. E. 12.

14. Sophomore Gymnastics. 1 Q. Autumn. 1 cr. Required of all sophomores. Advanced light and heavy gymnastics; elementary gymnastic dancing; wrestling; fencing.

15. Sophomore Gymnastics. 1 Q. Winter. 1 cr. Required of all sophomores. Continuation of P. E. 14.

16. Sophomore Gymnastics. 1 Q. Spring. 1 cr. Required of all sophomores. Continuation of P. E. 15.

11a. General Gymnastics. 1 Q. Summer. 1 cr.

Undergraduate Courses for Women

17. Freshmen Gymnastics. 1 Q. Autumn. 1 cr. Required of all freshmen. Swedish gymnastics; instruction in proper walking and standing positions; elementary dancing; athletic and gymnastic games; freehand drills; work on spring boards, stall bars, ropes, poles and rings. (This course is given in the Summer Quarter also.)

18. Freshmen Gymnastics. 1 Q. Winter. 1 cr. Required of all freshmen. Continuation of P. E. 17.

19. Freshmen Gymnastics. 1 Q. Spring. 1 cr. Required of all freshmen. Continuation of P. E. 18.

20. Sophomore Gymnastics. 1 Q. Autumn. 1 cr. Required of all sophomores. Military marching; German Gymnastics; dumb-bells, wands, and Indian clubs; exercises on horse, parallel bars, flying rings, and buck; athletic games; folk and aesthetic dancing. (This course is given in the Summer Quarter also.)

21. Sophomore Gymnastics. 1 Q. Winter. 1 cr. Required of all sophomores. Continuation of P. E. 20.

22. Sophomore Gymnastics. 1 Q. Spring. 1 cr. Required of all sophomores. Continuation of P. E. 21.

23. Advanced Gymnastics. 1 Q. Autumn. 1 cr. Required for professional physical education students and elective for others by permission. Advanced light and heavy gymnastics; advanced work with dumb-bells, wands and Indian clubs; folk and aesthetic dancing; field hockey and soccer football.

24. Advanced Gymnastics. 1 Q. Winter. 1 cr. Required for professional physical education students and elective for others by permission. Continuation of P. E. 23 and advanced apparatus work on horse, parallel bars, flying and traveling rings, spring board, buck, etc. Instruction in basketball and indoor baseball.

25. Advanced Gymnastics. 1 Q. Spring. 1 cr. Required for professional physical education students and elective for others by permission. Instruction in tennis and fencing. Continuation of work in P. E. 24.

23a. Advanced Gymnastics. 1 Q. Summer. 1 cr. A combination of work outlined in P. E. 23, 24 and 25, especially fitted for those who wish to use the material in teaching the following year.

Hygiene Lectures

Occasional lectures will be given to all students registered in Physical Education classes for the purpose of enlisting interest in their physical welfare. These lectures are on such subjects as applied physiology, the importance and possibilities of physical exercise, personal and public hygiene.

PHYSICAL EDUCATION—THEORY

26. Anthropometry. 1 Q. Autumn. 2 cr. History. Measurements, their statistical and diagnostic value. Practice in taking and recording measurements and making charts. Laws of human proportions. Average, mean and ideal types.

27. History of Physical Education. 1 Q. Autumn. 1 cr. Ancient and modern literature concerning the development of physical education. Lectures and assigned readings, digests, reports and discussions.

28. Physiology of Bodily Exercises. 1 Q. Spring. 2 cr. Physiological features of training, breathlessness, fatigue, and stiffness. Testing respiratory movements and circulation before and after exercises.

29. First Aid. 1 Q. Autumn. 2 cr. First aid treatment in case of accidents such as fractures, dislocations, wounds, hemorrhages, poisoning and drowning. Practice in applying bandages, dressings, adhesive strappings. (This course is given in the Summer Quarter also.)

30. Home Nursing. 1 Q. Winter. 2 cr. Hygiene of the home; symptoms of disease; care of the sick in the home; use of simple sick-room devices and appliances; bed making for patients; household medicine closet.

31. Kinesiology. 1 Q. Autumn. 2 cr. Mechanical principles operative in the human body and their effects; the origins and insertions of muscles and their associated and isolated action; the analysis of movements; the body levers and joints.

32. Applied Anatomy. 1 Q. Winter. 2 cr. Muscles and their relation to common gymnastic and athletic movements; effects of faulty postures on internal organs.

33. Applied Anatomy. 1 Q. Spring. 2 cr. Continuation of P. E. 32.

34. Playgrounds. 1 Q. Winter. 2 cr. Philosophy of Play; Aims and purposes of the playground; organization, construction, equipment,

administration and management. Playground activities—games, festivals, and social work.

35. Playgrounds. 1 Q. Spring. 2 cr. Continuation of P. E. 34.

36. Management and Equipment of a Department. 1 Q. Winter. 1 cr. Planning a gymnasium and athletic field; construction, equipment, organization, rules and management. (This course is given in Summer Quarter also.)

37. Methods of Teaching Gymnastics. 1 Q. Autumn. 2 cr. Principles of selection, progression, and presentation of gymnastic material; principles of successful teaching.

38. Methods of Teaching Gymnastics. 1 Q. Winter. 2 cr. Continuation of P. E. 37.

39. Methods of Coaching. 1 Q. Spring. 2 cr. Principles of coaching athletic teams, organizing athletic associations, managing contests, tournaments and track-meets. (This course is given in the Summer Quarter also.)

40. Prescription of Exercise. 1 Q. Autumn. 2 cr. Analysis and critical inspection of measurements and personal histories for determining fitness for gymnastic work. Corrective gymnastics as applied to abnormal conditions. Massage—theory and practice.

41. Prescription of Exercise. 1 Q. Winter. 2 cr. Continuation of P. E. 40.

Courses 28, 37, 38, 39, 40 and 41 will not be given in 1918-1919.

PHYSICS

ASSISTANT PROFESSOR, ROBERT N. THOMPSON.

Those students who expect to take physics in their college course, and who have not had Physics and Trigonometry in high school, should take both in their freshman year. Those students who have had such preparation are advised to take Physics 11 and 12 in their freshman year. This advice should be followed by students in taking their pre-medical or pre-engineering course.

Those who do major work in Physics should take Calculus and General Chemistry not later than their sophomore year and Differential Equations in their junior year where possible. The minimum requirement is 45 credit hours in Physics and an additional 15 credit hours in Physics, Astronomy, Chemistry or Mathematics.

For Undergraduates

A. Elementary Physics. 3 Q. 9 cr. Deposit \$1. Fee \$1 a quarter. This course is intended for students who have not had a high school course in physics. Credit will not be given for one quarter without the other two. Mr. Thompson.

M. Military Physics. 2 Q. Autumn, winter. 5 cr. Deposit \$1. Fee \$1. An Elementary lecture—laboratory course in general physics. Special attention will be paid, through a study of current literature, to applications of physical principles to modern warfare. Special emphasis will be laid on the subject of mechanics, sound, light and electricity as

they are applied to the problems of path and range of projectiles, flight of air planes, detection of enemy operations, signalling, and range finding. Some attention will be paid to the construction and development of war machines.

11. Mechanics, Molecular Physics and Heat. 1 Q. Autumn. 5 cr. Prerequisite, Trigonometry and Physics A or equivalent. Deposit \$1. Fee \$2. A first course in college physics. It comprises about twenty-five fundamental and representative problems in these fields, which experimentally, will yield quantitative results at the hands of the average college student. Mr. Thompson.

12. Electricity, Sound and Light. 1 Q. Winter. 5 cr. Prerequisite, Physics 11. Deposit \$1. Fee \$2. This is a continuation of Physics 11, and with it constitutes an introduction to the experimental methods of college physics. Mr. Thompson.

13. General Physics. 1 Q. Spring. 5 cr. Prerequisite, Physics 12. A lecture—demonstration course. In addition to unifying the subject of college physics, it takes up and amplifies those topics that it has been found inadvisable to introduce into the two previous courses. It thus rounds out and completes the introductory survey of college physics. Mr. Thompson.

14. Electrical Measurements. 1 Q. Spring. 5 cr. Prerequisite, Physics 13. Deposit \$3. A lecture—laboratory course dealing with the theory and practice of electrical measurements and measuring instruments. Not given in 1918-19. Mr. Thompson.

21. Physical Optics. 1 Q. Autumn. 3 cr. Prerequisite, Physics 13 and Calculus. Introductory to the mathematical theory of optics, with especial emphasis on interference, diffraction, dispersion, and polarization. Mr. Thompson.

22. Sound. 1 Q. Winter. 5 cr. Prerequisite, Physics 21 and Differential Equations. Introductory to the mathematical theory of sound. The treatment will follow in the main that given in Lamb's Dynamical Theory of Sound. Not given 1918-19. Mr. Thompson.

45. Discharge of Electricity Through Gases. 1 Q. Winter. 3 cr. Prerequisite, Physics 13, Calculus. An introductory course. It will include discussion of ionization, recombination of ions, specific velocity, ionic charge, atomic constitution, vacuum tube discharge, electronic constants, electromagnetic mass, etc. Not given 1918-19. Mr. Thompson.

Students having only Physics 12 may register for 2 credits only.

46. Radioactivity. 1 Q. Spring. 2 cr. Prerequisites, Physics 12. A study of fundamental phenomena of radioactivity; types of radiation, radioactive substances and their transformation, relation to atomic properties, disintegration theory and the role of helium, ionic charge, electronic mass and velocity, secondary radiation, etc. Not given 1918-19. Mr. Thompson.

31-32-33. Junior Laboratory. 3 Q. Autumn. Winter, spring. 2 to 5 cr. Fee \$3. Advanced experimental work in mechanics, heat, sound, light and electricity. Mr. Thompson.

41-43. Senior Laboratory. 3 Q. Autumn, winter, spring. 2 to 5 cr. A continuation of course 33 with emphasis on light and electricity. Not given in 1918-19. Mr. Thompson.

PSYCHOLOGY AND PHILOSOPHY

PROFESSOR, FRANKLIN O. SMITH.

Students who take General Psychology are advised to take General Zoology as a foundation.

Those who do major work in Psychology must have 40 credits in Psychology apportioned as follows: General Psychology 10, Experimental Psychology 10, Genetic Psychology 5, Social Psychology 5, Abnormal Psychology 5, Ethics 5. In addition a major student in psychology should acquire some knowledge of mathematics and physics. For those who wish to pursue psychological studies further, a reading knowledge of German and French is essential.

For Undergraduates

11. General Psychology. 2 Q. Autumn and winter; spring and summer. 10 cr. Open to all students who have done one year of work in the university. M., T., W., Th., 9:30; laboratory S., 8:30-10:30. A prerequisite for all other courses in psychology and for courses in education which are required for teachers' certificate of qualification to teach. Mr. Smith.

12. Logic. 1 Q. Autumn. 5 cr. Open to all students. M., T., W., Th., F.; 8:30. Mr. _____.

13. Introduction to Philosophy. 1 Q. Autumn. 3 cr. Open to all students who have done one year of work in the university. T., Th., S.; 10:30. Statement of philosophical problems; explanation of terms; purpose and methods of the study of philosophy. History of Greek Philosophy. Mr. _____.

Not given in 1918-19.

14. History of Modern Philosophy. 1 Q. Winter. 3 cr. A continuation of course 13, but may be taken independently by those who have had courses 11 and 12. T., Th., S., 10:30. Mr. _____.

Not given in 1918-19.

15. Ethics. 1 Q. Winter. 5 cr. Open to all students who have done one year of work in the university. M., T., W., Th., F.; 10:30. Mr. _____.

Given also in the summer quarter of 1918.

16. Ethical Theory. 1 Q. Spring. 5 cr. Prerequisite, course 15. M., T., W., Th.; 10:30. The evolutionary theory of ethics. The relation of this theory to utilitarianism and to idealism will be developed. Mr. _____.

17. Experimental Psychology of Hearing. 1 Q. Autumn. 5 cr. Prerequisite, course 11. T., Th.; 1:30-4; or M., W.; 1:30-4. An experimental study of the phenomena of hearing, with special reference to the psychology of music. Includes the study of pitch, beats, tone fusion, consonance and dissonance, time sense, rhythm, tone imagery, tone memory, vowel sounds, etc. Mr. Smith.

18. Experimental Psychology of Skill. 1 Q. Spring. 5 cr. Prerequisite, course 11. T., Th., 1:30-4, or M., W., 1:30-4. Mr. Smith.

For Graduates and Undergraduates

101. Genetic Psychology. 1 Q. Autumn. 5 cr. Prerequisite, course 11, but open to advanced students in biology who have not had

general psychology. M., T., W., Th., 10:30. A study of animal behavior and of genetic and evolutionary theories of mind. Mr. Smith.

102. Psychology of Religion. 1 Q. Autumn. 5 cr. Prerequisite, course 11. M., T., W., Th., 10:30. Mr. Smith.

Not given in 1918-19.

103. Abnormal Psychology. 1 Q. Winter. 5 cr. Prerequisite, course 11. M., T., W., Th., 10:30. Mr. Smith.

104. Mental measurements. 1 Q. Winter. 5 cr. Prerequisite, course 11. M., T., W., Th., 10:30. Mr. Smith.

105. Social Psychology. 1 Q. Spring. 5 cr. Prerequisite, course 11. M., T., W., Th., 10:30. Mr. Smith.

Also given in the summer quarter of 1918.

106. Psychology in Daily Life. 1 Q. Spring. 5 cr. Prerequisite, course 11. M., T., W., Th., 10:30. Mr. Smith.

Not given in 1919.

107. Advanced Experimental Psychology. 1 Q. Autumn. 5 cr. Prerequisites, courses 11 and 17, or 18. Mr. Smith.

Special problems in quantitative psychology.

108. Psychology Journal Club. 1 Q. Autumn, winter, spring. 1 cr. Open only to advanced students who have taken two or more courses in psychology. Once a week, time to be assigned. Mr. Smith.

Summer Quarter

S1. General Psychology. 5 cr. Continuation of spring quarter. Open to regular students who have had the first quarter of general psychology and also to teachers and other summer school students who are preparing to teach. Mr. Smith.

S2. Social Psychology. 5 cr. Prerequisite, general psychology.

S3. Ethics. 5 cr. Open to all students who have had one year of work in the University or who have had experience as teachers. Mr. Smith.

Classes in mental measurements and related subjects will be offered in the summer quarter. Further information on these classes will appear in the Summer School bulletin.

Public-Service Division

ACTING DIRECTOR, DR. N. J. LENNES

The University is actuated by the idea that, so far as its resources permit, it should perform any public service for which it is more naturally adapted than other existing agencies. For this reason it undertakes various extension activities, such as correspondence-study, extension-lecturing, etc.

DEPARTMENT OF CORRESPONDENCE-STUDY

During the past year the University has offered the following correspondence courses:

Art

Artistic Anatomy, Design, Elementary Drawing and History of Art.

Commerce and Accounting

Shorthand, Beginning Accounting, Money and Banking, Life Insurance, Property Insurance, Salesmanship and Business Methods.

Economics

Economic Principles.

Education

History of Education, Educational Psychology, Principles of Education, The High School, School Hygiene, School Supervision and Educational Sociology.

English and Literature

Preparatory English Composition, Preparatory English Literature, Freshman English, Survey of English Literature Before the Nineteenth Century, Nineteenth Century Literature.

French

Intermediate French, Advanced French.

German

Elementary German, Intermediate German, Reading and Composition, Goethe.

Greek

White's First Greek Book, Xenophon: Anabasis, Homer; Iliad, Plato: Apology and Crito.

History

American History, Modern History, Medieval History, History of England and Greater Britain, American Government and Politics, The French Revolution, Studies in American History.

Home Economics

Foods, Household Management.

Latin

Cicero, Livy, Tacitus, Prose Composition, Horace.

Library Science

Reference work, intended for the general reader, and Reference work, intended for library attendants.

Mathematics

Elementary Algebra, Plane Geometry, Solid Geometry, Trigonometry, College Algebra, Analytic Geometry, Differential Calculus, Integral Calculus, Mechanics, Teaching of Mathematics, Projective Geometry, Functions of Real Variables, Shop Mathematics, Mathematics for Foresters.

Psychology

General Psychology, Social Psychology.

Zoology

Invertebrates, Vertebrates, Photography.

DEPARTMENT OF PUBLIC LECTURES

The following lectures and recitals are now offered by members of the University faculty:

Edward O. Sisson, President:

"Why We Are at War—an Irrepressible Conflict," "Abraham Lincoln and the Present Crisis," "Germany and the World War," "The New Instrument: Thinking," "The Role of the Teacher," "The Mind of Democracy," "The Psychology of Suggestion in Everyday Life," "The Radius of Altruism," "The Realm of Faith," "World Order and World Citizenship," "The Schools and National Ideals."

W. G. Bateman, Assistant Professor of Chemistry:

"Pure Food," "Experiences in China," "Modern Opera," Music and Reading.

M. G. Buckhous, Librarian:

"Library Methods," "Reference Work and Bibliography."

George R. Coffman, Professor of English:

"The Miracle or Saint's Plays," "Stevenson and the Spirit of Romance," "Ideals of Democracy as Shown in English and American Literature," "Some Social and Industrial Problems as Reflected in Modern Drama."

Mrs. George R. Coffman, University Extension Lecturer:

"The Rhine Country" (Illustrated), "Southern Germany" (Illustrated), "The Feminist Movement in Germany," "Some Tendencies in Modern German Literature."

Freeman Daughters, Professor of Education:

"Changing Conception of Education," "The Old-Time Schoolmaster and His School" (Illustrated), "The School Survey," "Methods of Discipline—Old and New."

M. J. Elrod, Professor of Biology:

"Yellowstone National Park" (Illustrated), "Glacier National Park" (Illustrated), "An Evening Among Montana's Mountains" (Illustrated),

"Whence Comes the Water?" (Illustrated), "The Forests and Wild Flowers of Montana" (Illustrated), "Game Animals, Mammals, Birds, and Fishes and Their Haunts" (Illustrated).

Henry Haxo, Assistant Professor of Romanic Languages:

"The Spirit of French Literature," "One Aspect of French Literature," "The Development of Rationalism in France."

Joseph Edward Kirkwood, Professor of Botany and Forestry:

"Mexican Plants and People" (Illustrated), "Forest Trees of Montana" (Illustrated), "Arizona—Desert Life of the Southwest" (Illustrated).

Mrs. K. W. Jameson, Dean of Women:

"Student Life in Germany Contrasted with that in America," "Goethe" (Illustrated), "Goethe in the Home," "Wilhelm Tell" (Illustrated).

Louis Levine, Professor of Economics:

"Economic Foundations of World-Peace," "The Foreign Trade of the United States," "Tax Reform in Montana."

N. J. Lennes, Professor of Mathematics:

"Charles Darwin—His Social and Private Life," "Charles Darwin—The Man of Science," "The Wonders of Modern Astronomy" (Illustrated), "The Life of Mark Twain" (Illustrated), "Educating for a Job or a Career," "The German People and the War."

Charles Melvin Neff, Professor of Law:

"Interstate Problems in Irrigation."

Gertrude Curtiss Paxton, Instructor in Domestic Art:

"Art in Ornament and Dress," "What Dress Makes Us."

J. P. Rowe, Professor of Geology:

"Montana Before Man and Today" (Illustrated), "Genesis and Geology," "The Earth and Its History or Animals Before Man" (Illustrated), "Glaciers, Mountains and Volcanoes."

Paul C. Phillips, Professor of History:

"Problems of Contemporary American Politics."

Frederick C. Scheuch, Professor of Modern Languages:

"Life in Spain" (Illustrated), "The Past of Spain," "Italy and the War."

DeLoss Smith, Professor of Music:

Musical Recitals.

Franklin O. Smith, Professor of Psychology:

"Psychology of Recreation," "The Exceptional Child," "Teaching Children vs. Teaching Books," "The Outcomes of Education," "The Changing Views of Human Personality," "Our Educational Ladder," "The Submerged Nine-Tenths of Life," "The Newer Educational Ideals," "Raw Materials of Education," "Scientific Methods of Testing Results," "The Foundation of Habit and Habit as a Foundation," "The Imagination," "The Problem of Education," "The Relation of the 'Teens,'" "Some Undercurrents in Child Life," "Racial Tendencies in Religion."

A. E. Spaulding, Professor of Commerce and Accounting:

"The Evolution of Business," "The Culture View of the Commercial Curriculum."

A. L. Stone, Professor of Journalism :

"Getting the News."

H. A. Trexler, Professor of Economic History :

"Student Life in a German University," "Medieval Castles and Their Legends" (Illustrated), "The Balkans and the War," "Belgium and the War."

Joseph Harding Underwood, Professor of History and Economics :

"Farm Credits," "The Social Center," "Unter Den Linden and the Boulevards," "Observations from Travel," "The Holy Land—Its Life and Religion" (Illustrated), "Observation of a Visitor," "Idealism of the Great War," "Education for the Next Decade," "The Social Question," "The Idea of the Social Center," "The Religion of the Calm Mind," "The Christian Community," "The Life of Cities," "Economics of Production," "The Organization of Industry," "Economics of Consumption and Luxury," "The Cost of Living and War," "The Distribution of Social Well Being," "Tendencies in Economic Organization," "The American Cost of the European War," "Problems of Social Organization," "Turkey and the War."

Lectures Especially Adapted for Commencement Addresses.

George R. Coffman, Professor of English :

"Educating a Democracy," "Ideals That Are Worth While."

Joseph Edward Kirkwood, Professor of Botany and Forestry :

"Science in the High School."

N. J. Lennes, Professor of Mathematics and Director of Extension Services :

"A Job or a Career," "The Pay that We Get."

Franklin O. Smith, Professor of Philosophy :

"The Outcomes of Education," "Problems of the Present," "The Forward View," "Our Educational Pyramid."

Joseph Harding Underwood, Professor of History and Economics :

"Education for the Next Decade," "Education and Sociability," "Cosmopolitan Education."

Mrs. K. W. Jameson, Dean of Women :

On some general topic.

Special Lectures and Addresses

Dean A. L. Stone of the School of Journalism may be obtained for a limited number of addresses before commercial bodies and for special occasions.

Mrs. K. W. Jameson, Dean of Women, may be obtained for special addresses before women's clubs and in high schools.

BUREAU OF INFORMATION

The Bureau of Public Information was established in October, 1913, for the purpose of furnishing information to all classes of citizens of Montana on all classes of subjects. Such information is furnished absolutely free except that each letter of inquiry must be accompanied by a stamp in order to pay return postage. It is believed that this new effort on the part of the University to aid citizens of the state has proved its value, and every person seeking information of any character whatever is therefore urged to take advantage of this offer of help.

Graduate Study

DR. R. H. JESSE, JR., CHAIRMAN.

The State University of Montana has an established system of graduate study. Every graduate student is required to do private reading and study covering a wide range in the field of his special work; this reading is supplemented by lectures and laboratory work and is under the direction of the head of the university department in which the advanced work is being done.

The administration of graduate study is in the hands of the members of the university faculty who offer advanced courses. The details of management are vested in a faculty standing committee.

Admission

For admission to graduate study in work leading to an advanced degree, the student must hold a first degree from some university or college of recognized standing. Admission to advanced work in special departments or schools may be obtained only by those who have done the requisite undergraduate work in these departments or schools.

In order to be enrolled in graduate study, the student must be doing graduate work. The mere possession of a degree does not entitle the student to become a member of this department if the courses which he is taking are undergraduate courses.

Students who satisfy the faculty of their fitness, may be permitted to take advanced work without reference to a degree. The preliminary requirements for study of this character are the same as if the student were a candidate for a degree.

Fees and Courses

The fees and tuition in graduate study are the same as those for undergraduates. Courses in graduate work are offered by the following departments of the university: Biology, Botany, Chemistry, Economics and Sociology, Education, Geology, German, History, Mathematics, Political Science, Psychology and Philosophy, and Romanic Languages.

The State University is prepared to give instruction of a thorough character leading to the degrees of Master of Arts and Master of Science. For the present the university does not offer courses leading to the degrees of Doctor of Philosophy or Doctor of Science.

Degrees of Master of Arts or Master of Science may be conferred in accordance with the following regulations:

The Master's Degree is granted only for special attainment in some branch of learning. As evidence of such attainment the candidate must submit a satisfactory thesis and must pass a satisfactory examination. The thesis must be submitted to an examining committee of three members, consisting of the instructor with whom the major work has been done and two other members of the faculty selected by the Committee on Graduate Work. This examining committee will pass upon the merits of the thesis. When the thesis has been accepted, the same committee

will arrange and conduct the examination of the candidate. The examination may be oral, or written, or both, as the committee decides.

In order to be admitted to the examination, the candidate must have complied with the following conditions:

1—He must be a graduate of the University of Montana or of some other institution of equal rank approved by the Committee on Graduate Work.

2—He must have been in residence and registered at this University as a candidate for the Master's Degree, for three full quarters.

3—He must offer himself for examination in specific subjects amounting to the equivalent of at least thirty credits. Twenty-two of these thirty credits must be in the major subject. Eighteen of the thirty credits must have been pursued in residence at the University. A list of the specific subjects in which the candidate offers himself must be reported one month before the time of examination to the Committee on Graduate Work and must be approved by this committee.

Note—Graduate work is intensive in character and it requires much more diligent application than does undergraduate work. Therefore, the thirty credits of graduate work is considerably more than the equivalent of thirty credits of undergraduate work. It should be understood that the Masters' Degree is not granted for any number of credits. In all cases some distinction in achievement is required of the candidate.

4—The instructor with whom the major work is elected is the candidate's adviser. With his help, the candidate must, within two weeks after the time at which he takes residence, prepare and submit to the Committee on Graduate Work for its approval a program of the courses which he intends to pursue in preparation for the examination.

5—The subject of the thesis must be reported to the Committee on Graduate Work three months before the time at which the candidate expects to present himself for examination and the subject must be approved by this committee.

School of Forestry

PROFESSORS, W. M. DRAKE, *DORR SKEELS (Dean), *T. C. SPAULDING, *JAMES BONNER. ASSISTANT PROFESSORS, CHARLES FARMER, R. R. FENSKA (Acting Dean).

The work of the Montana School of Forestry is along two distinct lines—an undergraduate course of four years which provides liberally for specialization in all the various branches of Forestry and Forestry Engineering, and a short course of 12 weeks for Forest Rangers.

The undergraduate courses are arranged to train men for the various branches of scientific and administrative work in the government forest service and for work with lumber companies and timber-owning corporations involving the administration, protection and utilization of forests. The work of the third and fourth years is arranged to allow for specialization in Forest Administration, Lumbering, Logging Engineering, Forest Engineering and Scientific Forestry.

The ranger school is organized for the special purpose of training men already in woods work to do better service in forestry and particularly to improve the training of forestry officers. Distinctly, it is not a course for inexperienced men.

A forestry club with a student and faculty membership of 70 meets fortnightly for the discussion of forestry problems, the consideration of technical and professional papers and the promotion of a social spirit.

The Missoula section of the American Foresters holds regular fortnightly meetings. This is a national organization of professional foresters of the United States, with headquarters in Washington, D. C. There is a branch section in each of the seven districts of the national forest service. The meetings are open sessions to which students of the school are admitted. Professional papers, dealing with subjects of technical forestry, are read and discussed.

At the annual meeting of the Pacific Coast Logging Congress in 1917 it was proposed to create an Advisory Board for each of the Forestry Schools in the western states. This board was to consist of prominent lumbermen and members of the U. S. Forest Service who would cooperate with the faculty of the forest school in formulating an educational policy which would meet with the approval of both the lumbermen and Forest Service.

The advisory board of the Montana school consists of the following members: Kenneth Ross, General Manager Lumber Dep't., Anaconda Copper Mining Co., Bonner, Mont.; W. R. Ballard, General Manager, Somers Lumber Co., Somers, Mont.; R. H. Rutledge, Acting District Forester, District I, U. S. F. S., Missoula, Mont.; E. G. Polleys, Polleys Lumber Co., Missoula, Mont.

Advantageous Location

The Montana School of Forestry possesses marked advantages in the matter of location. Every forest type of the inland northwest is

*Absent on leave for military service.

found within a few miles of the school. Two transcontinental railroads, three branch railroads and two interurban electric lines place the school within easy reach of extensive logging, lumbering and lumber manufacturing operations.

The headquarters of District I of the United States Forest Service and the offices of three forest supervisors are located in Missoula. The boundaries of the Lolo National Forest, the Bitter Root National Forest and the Missoula National Forest are closely adjacent to the school and include more than 3,000,000 acres of government timber lands, under forestry management. Within 50 miles of the school are the boundaries of nine national forests and two other government timber reserves. Within 100 miles are the boundaries of seventeen national forests, three other government timber reserves and a national park.

The school is located at the foot of the steep slope of Mount Sentinel, which is a part of the university campus. On the top of this mountain, reached by two and a half miles of trail from the school of forestry, is a lookout station maintained by the school in co-operation with the forest service for the protection of national forests from fire. This station is used as a laboratory in the study of fire protection methods and during the summer is used by forest officers in the actual fire protection work of the federal service.

Specialists from the staff of the forest service assist in the training of students for national forest work. A considerable part of the study in lumbering and forest engineering is carried on in the nearby forests and on the properties of adjacent lumbering companies.

Requirements for Admission

The completion of a four years' preparatory or high school course is the standard for regular entrance to the School of Forestry in the university, as in the other regular courses of the university.

Students in high schools and preparatory schools who plan to enter the forest school should preferably include elementary Biology, Botany and Zoology, English, and Mathematics in their training. Students intending to elect the course leading to the degree of forest engineer, should preferably include English, Physics, Chemistry, and four years of Mathematics in their preparation. Candidates for the degree of Bachelor of Science in Forestry will be required to make up any deficiency in their preparatory training in English and Mathematics.

Special Students

Any person more than 20 years of age, of good character, who gives sufficient evidence of his ability to pursue the studies may enter as a special student.

Course of Instruction

The course of study extends over a period of four college years. A total of 108 credit hours of specified work is required in the first two years. Courses are offered in the last two years leading to specialization in the various branches of forestry, and the student may elect, with the approval of the faculty, such courses as will best train him for the particular branch of forestry work which he chooses.

Graduation and Degree

A total of 200 credits is required for graduation with the degree of Bachelor of Science in Forestry. Of these, 194 credits must be earned in school and 6 credits may be earned by approved summer field work and the preparation of a thesis.

COURSES IN FORESTRY

FRESHMAN YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Mathematics 13, 14.....	4	4	....
Botany 11.....	4	4	....
Botany (Dendrology) 63.....	....	....	3
Introduction to Forestry 11.....	2	....	....
Surveying, 41, 41a, 41b.....	2	2	2
Mapping, 42, 42a, 42b.....	2	2	2
English 11a, 11b, 11c.....	3	3	3
Geology 11.....	....	....	5
Economics of Forestry 12.....	....	1	2
Shop 40.....	....	1	....
Military Science 11.....	2	2	2

SOPHOMORE YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Modern Languages.....	3	3	3
Mathematics, 12, 15.....	4	4	....
Physics, 11, 12.....	3	3	....
Topographic Surveying 43, 45.....	2	....	2
Topographic Mapping, 44, 46.....	2	....	2
Business English.....	....	....	4
Cruising, 32.....	....	....	2
Log Scaling, 31.....	2	....	....
Forest Measurements, 21.....	....	2	....
Fire Protection, 13.....	....	3	....
First Aid, 27.....	....	....	2
Military Science.....	2	2	2

JUNIOR YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Botany, 22, 31, 21.....	4	5	4
Silviculture, 14, 15, 16.....	3	3	3
Forest Policy, 18, 18a, 18b.....	2	2	2
Lumbering, 33.....	3	....	....
Highways and Bridges, 48.....	2	....	....
Strength of Materials, 49.....	2	....	....
Slide Rule, 51.....	1	....	....
Economics.....	....	5	....
Wood Utilization, 34.....	....	3	....
Graphic Statics, 52.....	....	2	....
Forest Products, 32.....	....	....	2
Forest Entomology.....	....	....	5
Logging Railroads, 47.....	....	....	2
Stream Measurements, 50.....	....	....	2

SENIOR YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Mathematics, 16.....	4	5	....
Forest Management, 20, 20a, 20b.....	3	3	3
Improvement Construction, 53, 53a.....	2	....	2
Range management, 22, 22a, 22b.....	2	2	2
Logging, 37.....	4	....	....
Silviculture, 17.....	3	....	....
Wood Technology, 36.....	....	2	....
Forest Administration, 19, 19a.....	....	3	3
Forest Engineering, 54.....	....	2	....
Logging Engineering, 38.....	....	....	3
Forest Appraisal, 39.....	....	....	2

The courses of training in the School of Forestry are arranged under three branches. The first two years of work as shown in the Schedule of Courses include the fundamental courses in Mathematics, Botany and English, and at the same time enough of the forest subjects to give the student an idea as to what branch of forestry he may want to specialize in during the junior and senior years.

I. Forest Management. Principles governing the administration of forests. Forest treatment, culture and protection. Measurements of growth and yield. Forest finance.

II. Forest Engineering. Adaptation of forest resources to the use of man. Forest surveys, maps, and improvements.

III. Forest Utilization. Uses of the forest; forest exploitation; forest products; commercial measurements and values; lumbering, grazing.

DESCRIPTION OF COURSES

Forest Management

11. Introduction to Forestry. 1 Q. Autumn, summer. 2 cr. Required of all freshmen. The course covers the functions and characteristics of forests, the methods of utilization, usefulness and manufacture of the products. The forest regions of the United States are thoroughly covered. Text: Moon and Brown, Elements of Forestry. Mr. Drake and Mr. Fenska.

12. Economics of Forestry. 1 Q. Spring. 2 cr. Required of all freshmen. A study of forest problems from an economic standpoint, value and benefits of forests, abuse of forest resources, forest requirements of the nation, relation to other industries, forest resources of the nation, economic results of forestry practice. Text: Fernow's Forest Economics. Mr. Drake.

13. Fire Protection. 1 Q. Winter. 3 cr. Sophomores. A detailed analysis of fire organization, prevention, detection and suppression, including the adjunct insurance bases, surveys, risks, liabilities and suppressive factors. Types and use of instruments. Co-operation. Text: Government Publication, Fire Protection in District 1. Mr. Drake.

14. Silviculture. 1 Q. Fall. 3 cr. Junior. Definitions, place in forestry. Factors determining site quality. Effect of climate, location and soil, on the development of trees and forest. Influence of the forest upon the site, climate and waterflow. Assessment of site quality. Development and growth of trees. Mr. Drake.

15. Silviculture. 1 Q. Winter. 3 cr. Junior. Forms of forest. Systems of silvicultural treatment. Relation of grazing, public use, timber sales, and timber utilization to the different silvicultural systems. Protection against damage from man, livestock, birds, rodents and climatic damage. Text: Graves' Principles of Handling Woodlands. Mr. Drake.

16. Silviculture. 1 Q. Spring. 3 cr. Junior. Forest distribution. Forest types; their influence and characteristics. Methods of reproducing trees and stands. Factors influencing reproduction. Afforestation and reforestation. Effect of man upon the forest. Formation and reproduction of the forest. Choice of species. Seed: characteristics, properties, etc. Natural seeding. Collection of seeds; storage; testing, etc.

Methods of direct seeding. Nurseries, nursery practices. Methods of planting. Sprouts and cuttings. Field work. Text: Toumey, *Seeding and Planting in the Practice of Forestry*. Mr. Drake.

17. Silviculture. 1 Q. Fall. 3 cr. Senior. Care of the forest in its development. Influence of method of formation of the forest. Maintenance and improvement of soil and moisture conditions. Number of trees to an acre. Pure and mixed forests. Under planting, weeding, pruning, cleanings and thinnings. Stimulation of growth. Relations of various kinds. Field work. Mr. Drake.

18. Forest Policy. 3 Q. Fall. 2 cr. each quarter. Junior. A continued course. An advanced review of forest economics. The subject is handled as recommended in the report of the Conference of Forest Schools. There is also included a study of the fundamentals of the forest laws of the various states. Texts: Fernow, *Economics of Forestry*; Kiney, *Forest Law in America*, and *Essentials of American Timber Law*; Schenck, *Forest Policy*. Mr. Drake.

18a. Forest Policy. 1 Q. Winter. 2 cr. Junior. A continuation of the previous course. Mr. Drake.

18b. Forest Policy. 1 Q. Spring. 2 cr. Junior. A continuation of the previous course. Mr. Drake.

19. Forest Administration. 2 Q. Winter and spring. 3 cr. each quarter. Senior. Public and private forest organization, the handling of forest problems, general organization, the personnel question, overhead and supervision, efficiency methods, detailed analysis of the various regulations and instructions and their practical application from the forest officers' and forest users' standpoint. Mr. Drake.

19a. Forest Administration. 1 Q. Spring. 3 cr. Senior. A continuation of the previous course. Mr. Drake.

20. Forest Management. 3 Q. Fall. 3 cr. each quarter. Senior. The method of making an inventory of the forest; the collection and tabulation of data, preparation of maps; and other work that is necessary for a detailed report on the forest property before a working plan can be made; and the normal forest and its relation to the working plan, are studied. Text: Roth, *Forest Regulation*. Mr. Drake.

20a. Forest Management. 1 Q. Winter 3 cr. Senior. A continuation of the preceding course 20. This course covers forest valuation: definitions of value, elements of forest value, capital and interest, theory of expectation of values, nature of forest capital, interest rates on forest capital, formulae of interest calculation, methods of determining values; statistics, financial effects of management as related to forest valuation; methods of measuring profits of forestry. Text: Chapman, *Forest Valuation*. Mr. Drake.

20b. Forest Management. 1 Q. Spring. 3 cr. Senior. A continuation of the preceding courses 20 and 20a. This course includes determination of management; choice of species, of silvicultural treatment, of rotation and of regulation; preparation of felling, planting, administration and improvement plans. Text: Recknagle, *Theory and Practice of Forest Working Plans*. Mr. Drake.

21. Forest Measurements. 1 Q. Winter. 2 cr. This course deals particularly with the accurate methods of determination of volume for use in scientific work and as the basis for forest management. Con-

struction and use of volume tables and yield tables. Methods of measuring diameter, height and volume growth. Ratio and relation of forest products in different commercial units. Graves' "Forest Mensuration" is used as a textbook. One hour lecture and two and a half hours field work per week. Mr. Fenska.

Forest Engineering

41. Surveying. 3 Q. Autumn. 2 cr. Freshmen. Instruction covers the care, use and adjustments of instruments used in making forest surveys; United States public land survey methods; retracements and the sub-division of sections; traverse board surveys. One hour lecture and five hours field practice per week. Reference: Theory and Practice of Surveying, Vol. 1, Breed & Hosmer. Mr. Farmer.

41a. Surveying. 1 Q. Winter. Prerequisite, 41. 2 cr. Freshmen. Continuation of 41. Differential and profile leveling. Computation of yardage. Ranger stations and homestead surveys. One hour lecture, three hour field practice. Mr. Farmer.

41b. Surveying. 1 Q. Spring. Prerequisite, 41 and 41a. 2 cr. Freshmen. Continuation of 41a. Transit and tape surveys. Observations for meridian. Triangulation; surveys for trails and roads. One hour lecture, five hours field practice. Mr. Farmer.

42. Mapping. 3 Q. Autumn, winter, spring. 2 cr. Freshmen. Elementary map making and lettering; conventional signs for maps as used by forest service. Five hours practice in drawing room per week. Mr. Farmer.

42a. Mapping. 1 Q. Winter. 2 cr. Prerequisite, 44. Freshmen. Practice in plotting and compiling maps from field notes of ranger station and homestead surveys; plotting profiles and establishing grade. Five hours practice in drawing room per week. Mr. Farmer.

42b. Mapping. 1 Q. Spring. 2 cr. Prerequisite, 44 and 45. Freshmen. Compiling of maps from notes in the field by the surveying class; computation of areas by planimeter and latitudes and departures; map titles and borders; reproduction methods, blue printing, black printing and photolithography. Five hours practice in the drawing room per week. Mr. Farmer.

43. Topographic Surveying. 1 Q. Autumn. 2 cr. Sophomores. Aneroid and pacing method; the transit and stadia; trigonometric levelling; the plane table and traverse board; Abney level method; a study of field methods of collecting data for the preparation of maps to be used in the planning of logging operations. Five hours field practice per week, supplemented by lectures and recitations. Textbook: Breed & Hosmer's "Higher Surveying." Mr. Farmer.

44. Topographic Mapping. 1 Q. Autumn. 2 cr. Sophomores. Practice in the production of topographic maps from field notes; a study of hachure and contour maps; fire control, soil classification and special use maps; type and stand maps; timber survey maps. Five hours practice in drawing room per week. Reference works: Wilson's "Topographic Surveying," and Forest Service bulletins on "Standard Maps." Mr. Farmer.

45. Topographic Surveying. 1 Q. Spring. 2 cr. Sophomores. A continuation of Topographic Surveying, dwelling in detail on Abney methods

of mapping, with special application to the surveying of timbered regions. Mr. Farmer.

46. Forest Mapping. 1 Q. Spring. 2 cr. Sophomores. A course in map projection dealing in detail with the following projections: Orthographic, Stereographic, Mercators; Rectangular; Simple Conic; Boones and Polyconics and explaining their respective uses in the make-up of forest maps. Mr. Farmer.

47. Logging Railroads. 1 Q. Spring. 2 cr. Juniors. Reconnaissance; preliminary surveys and location; the laying out of logging railroads with the hand level and tape; topography and cross-sectioning; borrow pits; trestles and culverts; structures; the spiral; cost estimates; railroad drafting. Five hours field and drafting room practice and one hour recitation or lecture per week. Reference books used: Searles and Ives "Field Engineering," Raymond's "Railroad Engineering," Nagle's "Field Manual for Railroad Engineers," Searles' "The Railroad Spiral." Mr. Farmer.

48. Highways and Bridges. 1 Q. Autumn. 2 cr. Juniors. Location, drainage and grading of new roads for forest improvement and logging; relocation and improvement of old roads; maintenance; road plans and profiles; volumes and cost estimates. Design and construction of forest service standard bridges; practice in staking out bridges and securing data for design. One hour lecture and five hours field and drafting room practice per week supplemented by inspection trips to highway construction camps. References: Harger & Rooney's "Highway Engineer's Handbook," Forest Service, "Trail and Highway Manual," Ketcham's "Design of Highway Bridges," and Waddell's "DePontibus." Mr. Farmer.

49. Strength of Materials. 1 Q. Autumn. 2 cr. Juniors. A mathematical course dealing with the properties of materials used in engineering construction; a study of iron, steel and timber under compression, tension and shear; the theory of beams; deformations and elasticity; plain and reinforced concrete. Text book: Merriam's "Strength of Materials." Mr. Farmer.

50. Stream Measurements. 1 Q. Spring. 2 cr. Juniors. The fundamentals of hydro-mechanics; the measurement of the flow of water in conduits and open channels; weir measurements; gauging stations; current meters; pumps and motors. Text book: Merriman's "Elements of Hydraulics." References: The fifth, sixth and seventh annual reports of the State Engineer on the flow of Montana streams. Mr. Farmer.

51. The Slide Rule. 1 Q. Autumn. 1 cr. Juniors. Study and practice with the various makes of slide rules as an aid to rapid mathematical calculations. The Mannheim, Stadia, Polyphase and Log Rules, their theory and use. Reference: Cox's "Complete Manual on the Slide Rule." Mr. Farmer.

52. Graphic Statics. 1 Q. Winter. 2 cr. Juniors. A study of the principles underlying the design of roof and bridge trusses as used in forest improvements; graphic analysis to determine dead load, live load, snow load and wind load stresses. Suspension bridges; lateral systems and portal bracing. Five hours practice in drafting room per week and round table discussions. Mr. Farmer.

53. Improvement Construction. 2 Q. Autumn. 2 cr. Seniors.

This course is planned to give the students a final rounding out in the design and construction of various forest and logging improvements, covering in detail the reconnaissance, preliminary and final survey of trails, estimating costs and construction; explaining the use of the trail topography and various forest service tables; the design estimating and construction of cabin and ranger stations; special problems in bridge construction. Mr. Farmer.

53a. Improvement Construction. 1 Q. Spring. 2 cr. Seniors. A continuation of the work of the preceding semester. Study of telephone construction, tree lines, pole lines, emergency lines, testing for trouble, estimates, ranger station fences, drift fences, corrals, etc. Mr. Farmer.

54. Forest Engineering. 1 Q. Winter. 2 cr. Seniors. Rope and cable systems, logging improvements; structural materials. Location methods for flumes, chutes, bridges, trails, roads, railways and special conveyors. Piles and pile driving; stream improvement. Lectures, recitations, design work in drafting room and field work in surveying. Mr. Farmer.

Forest Utilization

31. Log Scaling. 1 Q. Autumn. 2 cr. Sophomore. Origin and theory of scale rules. Commercial measurements of logs and other forest products. Methods of making deductions for defects affecting quantity of lumber. Practice in log scaling. Graves' "Forest Mensuration" is used as a textbook. One hour lecture and two and one-half hours field work per week. Mr. Fenska.

32. Cruising. 1 Q. Spring. 2 cr. Sophomore. Commercial measurements of standing timber, methods of timber surveys, forest reconnaissance and practical cruising. Determination of cull factors. Relation of log size classes, quality and defects to lumber grades and mill over-run. Cruiser's report. Graves' "Forest Mensuration" is used as a textbook. One hour lecture and four hours field work per week. Mr. Fenska.

33. Lumbering. 1 Q. Autumn. 3 cr. Junior. History of the lumber industry. Study of saw mill machinery and equipment. Manufacturing methods and mill study. Grading, seasoning and treatment of lumber. Study of Cost of Manufacturing, "mill-run" values, lumber prices, markets and freight rates. Lumber associations and export trade. Mr. Fenska.

34. Wood Utilization. 1 Q. Winter. 3 cr. Junior. Study of the utilization of various woods in the different wood-using industries, their adaptability for specific purposes. Experiments to extend the usefulness and widen the market for western forest products. Three one-hour lectures and occasional field trips. Mr. Fenska.

35. Forest Products. 1 Q. Spring. 2 cr. Junior. A study of forest products such as naval stores, wood distillation, potash, paper pulp, maple sugar, dye woods, extraction of tannic acid, oils, extracts, etc., from bark, wood and leaves, and other forest "by-products." Two one-hour lectures per week. Mr. Fenska.

36. Wood Technology. 1 Q. Winter. 2 cr. Senior. Identification of the economic woods of the United States by their macroscopic characteristics. The school is supplied with an extensive collection of commercial American woods in the form of hand specimens affording

the student ample opportunity to become familiar with the appearance of the different woods on the market. Text: "Economic Woods of the United States" by S. J. Record. Two laboratory periods of two and one-half hours each, per week. Mr. Fenska.

37. Logging. 1 Q. Autumn. 4 cr. Senior. Study of the logging methods in different regions of the United States. Falling, bucking, swamping, skidding, loading, unloading devices, storage and transportation of logs. Camp construction and management. Practical work in nearby logging operations. Detailed report following a prepared outline. Three one-hour lectures and one two-hour and a half field trip per week. Mr. Fenska.

38. Logging Engineering. 1 Q. Spring. 3 cr. Senior. The application of engineering principles to logging operations. Location and operations of timber slides, log flumes, logging roads, transportation routes, log driving and stream and improvements. Factors of efficiency; sources of loss and waste, and analysis of operative cost factors. Use of topographical maps. Working plans for logging operations. Mr. Fenska.

39. Forest Appraisal. 1 Q. Winter. 2 cr. Senior. A study of present commercial forest values. Uses of land and forest. Land values. Land classifications. Timber values, uses of forest cover. Forest classifications. Problems of finance in the lumber industry. Factors of investment, depreciation, maintenance, and operation. Salvage of investments, wrecking values, residual values. Relation of production costs, selling values, and profits to forest values. A consideration of practical methods of determining stumpage values. Mr. Fenska.

40. Shop. 1 Q. Winter. 1 cr. Freshman. A practical course in the use of iron and steel in ordinary shop practice. Use of wood working tools and machinery. Mr. Deschamps and Mr. Ambrose.

Grazing

22. Range Management. 3 Q. Fall. 2 cr. Junior or Senior. This course covers the methods of investigating range conditions, surveying, mapping, collection and tabulation of data, relative to forage, water, and carrying capacity conditions, range improvements, methods of handling stock in use, etc., necessary for the preparation of working plans, and the preparation of a report covering the actual range conditions. Mr. Drake.

22a. Range Management. 1 Q. Winter. 2 cr. Junior or Senior. A continuation of the preceding course. The course covers a study of the types and breeds of livestock found on the National Forests. The theory and practice of breeding animals and the value and use of cross breeding is included. The common diseases and methods of treatment are briefly discussed. Mr. Drake.

22b. Range Management. 1 Q. Spring. 2 cr. Junior or Senior. A continuation of the preceding course. The work covers the choice of type and breed of animals, choice of method of breeding practice and choice of method of handling stock on the range. Then plans for improvements, for breeding practice, for handling stock on the range and for administration are discussed. Mr. Drake.

COURSE FOR FOREST RANGERS

The Ranger School, or special course for forest rangers, begins each

year on the first Wednesday in January and continues for twelve weeks.

It is the purpose of this school to improve the training of forest rangers and other forest officers. Men who have either a high school training or some practical experience in forestry work are prepared to pass the civil service examination for forest ranger.

During the course of the Ranger School opportunity is also offered for specialization or short course training in lumbering and logging engineering, scaling and cruising, surveying and mapping, stream gauging, highway and bridge construction and grazing.

The work of the Ranger School is carried on in close co-operation with the United States Forest Service. Experts in various branches of forest service work are detailed under authorization of the secretary of agriculture as special lecturers in the school. Other state and government officials and experts in the employ of lumber companies assist in the training. Special lectures in grazing are given by the director of the State Agricultural College and by the state veterinarian.

Students in the Ranger School who are just beginning their forestry training usually pursue the following courses of training:

Surveying and Mapping, 4cr.; Scaling and Cruising, 2 cr.; Fire Protection, 3 cr.; Forest Improvement, 3 cr.; Forest Administration, 2 cr.; Lumbering, 2 cr.; Botany and Silviculture, 3 cr.; Grazing, 3 cr.; Seminar of General Forestry, 1 cr.

More advanced students and most forest rangers who attend the school elect short courses of training from the following schedule: Advanced Topographic Surveying and Mapping, 2 cr.; Hydraulics, 1 cr.; Logging Engineering, 3 cr.; Geology, 3 cr.; Insect Control, 3 cr.; Tree Diseases, 3 cr.; Forest Appraisals, 3 cr.; Grazing, Breeds and Breeding, Diseases, 2 cr.; Physics, 3 cr.; First Aid, Camp Surgery and Medicines, 1 cr.

Expenses of the Ranger School

Expenses for Ranger School students have been made as little as possible. Entrants who own drawing instruments should bring them. Forest officers who attend the school should correspond with the dean of the school about certain book and forest equipment which may be brought from their forests.

The cost to the average Ranger School student is about as follows:

Matriculation, Laboratory and Incidental Fees.....	\$ 10.00
Books and Notebooks.....	10.00
Board and Room, 12 weeks.....	85.00
Forestry Club dues and entertainments.....	5.00
	<hr/>
	\$110.00
Add for drawing instruments if purchased.....	12.50
	<hr/>
	\$122.50

The Ranger School has been held each winter for nine years. It is attended each year by from 30 to 50 short course students, most of whom are forest rangers and forest guards, and by some men who are qualified either by education or practical experience to benefit by short course training.

School of Journalism

PROFESSOR, ARTHUR L. STONE (Dean). ASSISTANT PROFESSOR, RALPH D. CASEY.

The School of Journalism of the State University of Montana is organized upon the plan to train men and women practically in the work of newspaper making. The school aims to combine technical training with courses in the College of Arts and Sciences, that its graduates may have as broad and comprehensive an education as possible.

The vocational work of the School of Journalism is thoroughly practical. Its purpose throughout is to develop reporters; to ground its students thoroughly in the fundamentals of newspaper endeavor and practice. No student leaves his work in this school with the mistaken idea that he is ready to step at once into editorial or managerial work.

The four years of work in the school are arranged so that they present features of newspaper production under conditions which parallel as closely as possible those which obtain in a newspaper office. This plan of instruction makes the Journalism building veritably a workshop. The reporters' room resembles the newsroom of a newspaper office; the work done here is identical with that which is required of the reporter on a daily newspaper.

Following the work in newsgathering, newswriting and the study of news values, which covers two years, the student is given experience in editing copy, in editorial writing and in the makeup of a newspaper. The problems of the business office—circulation, the writing and selling of advertising and the general organization of a newspaper—are taken up.

There are no textbooks employed in the course; the student studies the newspaper. The school receives daily representative newspapers from all parts of the United States. These are studied intensively, comparisons of newspapers are made to familiarize the student with individual qualities of each of the great dailies. The student scans the newspaper files to observe the method of writing the news and displaying it; to study editorial policy and advertising. A portion of the junior and senior work is given over to a study of the foreign press.

The school obtains weekly and monthly publications devoted to newspaper making and advertising which supplement the work of the advanced classes. The school maintains a newspaper "morgue" patterned after the "morgues" of the large newspaper editorial rooms. Students keep in close touch with the news by reading assigned newspapers, attendance on the class in current events and clipping and filing material for the "morgue."

The Associated Press, the United Press and the International News service donate to the School of Journalism for student use, duplicate copy of their daily telegraph service. This is used as the basis for the work in head-writing and editing. The Mergenthaler Linotype company, the American Typefounders' company, the Missoulian Publishing company and the Buckbee Mears company, designers and engravers of St. Paul, have been generous in their donation of material and service. To

a great extent, the co-operation of these companies has made possible the performance of plans made by the faculty.

A pleasant and close relationship is maintained between Montana newspapermen and the School of Journalism. The school furnishes university news in the form of a weekly news bulletin, to state newspapers, and answers calls made upon the school through an extension service.

Men prominent in newspaper and publicity work in the Northwest lecture to the students of the School of Journalism upon subjects of direct and practical benefit. These lectures have been a prominent feature of the work.

Admission

The requirements for admission to the School of Journalism are the general requirements of the university. There are no special fees for journalism registration.

Course of Instruction

The course in the School of Journalism extends over the four-year college period. It requires 70 hours in journalism and 116 hours in correlated subjects. Students in the School of Journalism are subject to the general university requirements in physical education and in military training. Elective courses are offered in Newspaper Photography, Cartooning and The Short Story. The four-year schedule of the course in journalism leading to the degree of Bachelor of Arts, follows:

FRESHMAN YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Elements of Journalism.....	5	5	5
Freshman English	3	3	3
Modern Language	3	3	3
Advised Science Elective.....	4	4	4
Physical Education	1	1	1
Military Science	1	1	1
Education, 10.....	1	---	---

SOPHOMORE YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Advanced Reporting	3	3	3
Editing	2	2	2
Contemporary Literature	4	4	---
Modern Language	3	3	3
Recent United States History.....	---	---	3
Advanced Economic Theory.....	---	---	3
Physical Education	1	1	1
Military Science	1	1	1

JUNIOR YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
Editorial Writing	3	3	3
History and Principles of Journalism.....	2	2	---
Journalism Laboratory	2	2	2
Modern Drama	---	---	4
The Labor Problem.....	---	---	3
Social Theories	---	---	3
Psychology	5	5	---
Elementary Economics	4	4	---

SENIOR YEAR

	Autumn Quarter Credits	Winter Quarter Credits	Spring Quarter Credits
The Newspaper	3	3	3
Journalism Laboratory	2	2	2
Seminar in Journalism	2	2	2
International Relations	3	3	---
Advised Course in Literature.....	---	---	4
Sociology	3	3	---
Short Story	2	---	---
Political Science	3	---	---
Advised Course in Economics.....	---	---	3

DESCRIPTION OF COURSES

First Year

11. Elements of Journalism. 3 Q. Autumn, winter and spring. 15 cr. Open to all students. Reporting. What is news? Methods of gathering and writing news. Study of news sources and services. Considerable practice with assignments. One period a week is devoted to study of current events. Mr. Stone.

Second Year

13. Advanced Reporting. 3 Q. Autumn, winter and spring. 9 cr. Prerequisite, course 11. Attention is paid to more difficult assignments with exercises in the gathering and writing of news for the student newspaper. Study of the forms of newspaper composition, of correspondence and the handling of state, district or sectional news. Re-writing. The study of the handling of news in representative newspapers. The Sunday feature. Mr. Casey.

15. Editing. 3 Q. Autumn, winter and spring. 6 cr. Prerequisite, course 11. Editing, copy-reading. Writing of heads. Studies in newspaper usage. Evaluation of news. Study of the news associations and the transmission of news. Makeup. Mr. Casey.

Third Year

17. Editorial Writing. 3 Q. Autumn, winter and spring. 9 cr. Prerequisite, courses 11 and 13. Preparation and presentation of editorial interpretation and comment. Study of the functions of the editorial page. Mr. Stone.

19. History and Principles of Journalism. 2 Q. Autumn and winter. 4 cr. Open to all students. History of newspaper making. Studies of the careers of great editors and the history of great newspapers. Aims of journalism. Journalism as related to the great political, economic and social movements of history. Contemporary newspaper history. Mr. Casey.

21. Laboratory in Journalism. 3 Q. Autumn, winter and spring. 6 cr. Prerequisite, courses 11 and 13. Practical experience in reporting and editing. Mr. Stone and Mr. Casey.

Fourth Year

23. The Newspaper. 3 Q. Autumn, winter and spring. 9 cr. Prerequisite, courses 11, 13 and 15. Organization of the newspaper office. Duties of department heads. Formulation of newspaper policy. Business office management. Circulation. Advertising. The mechanics of

the newspaper. The relation of the various departments, editorial and business. Mr. Stone and Mr. Casey.

25. Seminar in Journalism. 3 Q. Autumn, winter and spring. 6 cr. Prerequisite, courses 11, 13, 15 and 17. Mr. Stone and Mr. Casey.

27. Laboratory in Journalism. 3 Q. Autumn, winter and spring. 6 cr. Prerequisite, course 21. Continuation of course 21. Mr. Stone and Mr. Casey.

ELECTIVE COURSES

29. Short Story. 1 Q. Winter. 2 cr. Open to all upperclassmen and to underclassmen who have special permission of the instructor. The short story as a literary form. The history of the short story. The writing of the short story. Mr. Casey.

A17. Illustration. 1 Q. Spring. 2 cr. Prerequisite, Fine Arts department course 21. Students do practical illustrating for books, newspapers and magazines. Special attention will be given to pictorial composition. Mr. Schwalm.

A27. Cartooning. 1 Q. Autumn. 2 cr. Prerequisite, Fine Arts department course 23. A course in practical training; work is identical with that done by artists on a daily newspaper. Mr. Schwalm.

34. Newspaper Photography. Open to all students. Mr. Stone.

School of Law

PROFESSORS, G. E. CLEARY, C. M. NEFF, WALTER L. POPE, A. N. WHITLOCK (Dean). LECTURERS, F. R. ANGEVINE, W. L. MURPHY, F. C. WEBSTER.

The School of Law was established as a department of the University of Montana in 1911. Prior to that time there had been no School of Law in Montana.

The school occupies quarters in the library building in the University where the law library reading room, class rooms and offices of the faculty are located. The school has a good working library known as the William Wirt Dixon law library composed of more than six thousand volumes, including the Reporter System, Digests and all leading collections of cases, in addition to the State Reports of a number of states and all leading encyclopedias.

ENDOWMENT

A recent gift to the School of Law under the will of Mrs. W. W. Dixon will make possible the endowment of a professorship and also many additions to the library.

REQUIREMENTS FOR ADMISSION

Students may register in the School of Law either in regular or special standing. Regular students who are candidates for the degree of Bachelor of Laws (LL.B.) must present credentials showing that they have completed substantially one-half or more of the work required for the degree of B. A. or B. S. in the University of Montana, or two years' work in some other college or university whose credits are recognized by the University of Montana.

Special students may be admitted provided they are twenty-one years of age, or more, and have diplomas from accredited high schools, or are qualified to enter the freshman class of the University of Montana.

Advanced standing may be granted to students who present satisfactory credentials for equivalent courses taken in standard schools of law. Also, in special cases, advanced standing may be granted upon examination satisfactory to the law faculty.

GRADUATION AND DEGREES

Regular students who have satisfactorily completed courses in law, equivalent to three full years of professional study, and who have a total of one hundred twenty seven credit hours, including all required courses will be granted the degree of Bachelor of Laws (LL.B.). Special students in exceptional cases of distinguished excellence, may, upon completion of the three years' work, by special vote of the law faculty, be granted a law degree, but in all ordinary cases will be given certificates as to the work done, in lieu of the degree awarded to regular students.

Undergraduate students in regular standing, candidates for the degree of Bachelor of Arts, electing law as a major subject at the beginning of the junior year may count not to exceed two years of the law course

toward graduation and the degree of Bachelor of Arts. Those who have thus obtained the degree of Bachelor of Arts, conferred at the end of four years, may receive the degree of Bachelor of Laws at the end of the fifth year on the completion of the third year of the law course. Students desiring to take the combined course leading to both degrees will register as pre-legal students and be assigned to some member of the law faculty as an adviser.

FEES AND EXPENSES

No tuition fee is charged in the School of Law. The regular matriculation fee of \$10 and the Associated Students fee of \$10 a year must be paid by every student. Regularly registered students in the School of Law may take any course in the College of Arts and Sciences without additional cost, except the payment of laboratory fees.

The cost of books in the School of Law will average about \$25 a year.

METHOD OF INSTRUCTION

The case system of instruction is generally employed.

Special attention is given to practice court work, in which the students are required not only to argue legal questions, but to try cases, prepare appeals and go through all the steps incident to the trial of a law suit.

ADMISSION TO PRACTICE IN MONTANA

Students who have successfully completed the regular law course and received a certificate or degree for same as outlined in this bulletin, may in the discretion of the supreme court of Montana be admitted to practice in the courts of Montana without further examination.

COURSES OF INSTRUCTION

The course of study extends over a period of three years, and is so arranged as to require a total of one hundred twenty-seven credits or quarter hours. All first year work is required and in addition the courses in Pleading and Practice Court II are required of all candidates for the degree or certificate. Aside from the two courses mentioned, all other courses in the second and third year are elective. The curriculum is designed to afford a preparation for the practice of law in any state, and at the same time special attention will be given in all courses to the codes and decisions of Montana and the western states. The list of courses announced for the year 1918-1919, with their credit hours is as follows:

	FIRST YEAR		
	1st Quarter	2nd Quarter	3rd Quarter
Contracts	3	3	3
Property I. (begins middle 2nd Q.)....		2	4
Torts (ends middle 2nd Q.).....	4	2	
Practice Court I.....	2	2	2
Criminal Law and Procedure.....	3	2	
Debate and Argumentation.....	2	2	2
Agency			4

SECOND AND THIRD YEARS

	1st Quarter	2nd Quarter	3rd Quarter
Pleading and Practice.....	3	3	3
Equity (ends middle 2nd Q.).....	4	2	
Evidence	3	3	3
Irrigation Law		2	3
Wills and Administration.....	1	1	1
Sales (begins middle 2nd Q.).....		2	4
Practice Court II.....	1	1	1
Appellate Practice	2	2	2
Conflict of Laws (ends middle 2nd Q.)	4	2	
Private Corporations	5		
Mining Law		3	2
*Constitutional Law		3	3
**Suretyship and Mortgages.....		3	3
Trusts (begins middle 2nd Q.).....		2	4
Property II.	3		
Public Service Companies.....	2	1	
*Bills and Notes.....		2	2
Abstracts and Exam. of Title.....			1
**Insurance	4		
*Partnership	4		
**Bankruptcy		3	
**Municipal Corporations			3
*Persons		3	
**Damages	4		
**Quasi-Contracts		3	

Note—Credits are based upon the number of recitation hours a week, and credits are allowed accordingly, one credit being one hour a week for one quarter. Courses marked * given school year 1918-19, alternating successive years with courses marked **.

FOURTH QUARTER

In view of the war situation no announcement of courses in Law is made for the fourth or Summer Quarter.

DESCRIPTION OF COURSES

First Year

Contracts. Offer and acceptance; consideration; contracts under seal; contracts for benefit of third persons; assignment of contracts; joint obligations; statute of frauds; express and implied conditions; impossibility; illegal contracts; discharge of contracts, including agreement to discharge, novation, release, etc. Williston's Cases on Contracts. Vols. I. and II. Mr. Cleary.

Property I. Acquisition of title to personal property by statute of limitations, accession, confusion and judgments. The bailee's and finder's rights in property, together with a consideration of the rules of common law liens and pledges. Introduction to the law of real property. Tenure, estates and conveyances. Fixtures and waste. Easements and covenants running with the land. Warren's Cases on Property. Mr. Whitlock.

Torts. Trespass to the person, to real property and to personal property; excuses for trespass; legal cause; negligence; contributory negligence; duties of landowners; nuisance; hazardous occupations; liability for animals; deceit; slander; libel; privilege; malice; malicious prosecution; interference with business; unfair competition, strikes, boycotts, business combinations. Ames' Cases. Vol. I. (3d Ed.) Smith, Vol. II. (2d Ed.) Burdick on Torts. Mr. Neff.

Agency. Introductory principles; nature of the relationship; appointment; when the principal is liable to third parties when the agent has acted in case of torts, crimes, and contracts; liability of principal to agent; liability of the agent to his principal; liability of the agent to third parties; doctrines of undisclosed principal; delegation by an agent; ratification; termination of the agency. Wambaugh's Cases on Agency. Mr. Pope.

Criminal Law. Sources of criminal law; nature of crimes; analysis of criminal act and criminal intent; causation; conditions of criminal responsibility; justification; excuse; analysis of particular crimes. Emphasis on the Penal Code of Montana is an important feature of this course. Beale's Cases on Criminal Law. Mr. Cleary.

Practice Court I. The argument of questions of law; the use of law books; the preparation of briefs upon legal questions; instruction in the method of trying criminal cases, and the actual trial of criminal cases during the third quarter. No book is used. Mr. Angevine.

Debate and Argumentation. (See College Arts and Sciences, page 54. Mr. Coleman.

Second and Third Years

Pleading and Practice. Two hours a week in pleading and one hour a week in trial practice are offered during each semester for which 3 credits a semester are given. In general the topics covered in the course in pleading are parties, splitting of causes of action, joinder of causes of action, answers, demurrers, replies, various motions, bills of particulars, amendments and ailer, construction of pleadings. The following topics are selected in trial practice: writs, service of writs, appearance, continuance, the jury, right to open and close, opening statement of counsel, judgment on the pleadings, motions of various kinds, instructions, conduct of counsel, special interrogatories, special verdicts, judgment notwithstanding the verdict, arrest of judgment, new trials, trial and findings of the court. There is also given one hour a week throughout the year devoted to laboratory work in the drafting of pleadings. Sutherland's Cases on Code Pleading and Trial Practice, and selected cases. Mr. Neff.

Equity. Nature of Equity Jurisdiction; specific performance; the statute of frauds; defenses to specific performance because of plaintiff's conduct; laches, fraud, misrepresentation, concealment and unfairness; failure to make good title; effect of mistake and hard bargains; mutuality of remedies, and want of mutuality; relief for and against third parties; bills for an account, specific reparation and prevention of torts. Ames's Cases in Equity Jurisdiction. Parts I.-VI. Mr. Cleary.

Bills and Notes. This subject is studied from the standpoint of negotiable instruments law which is in force in Montana, and in most of

the other states, negotiability, form and inception of bills and notes, acceptance, delivery, consideration, negotiation, rights and liabilities of the various parties, presentment, dishonor, and discharge are taken up. *Smith & Moore, Cases on Bills and Notes.* Mr. Cleary.

Evidence. The theory of evidence; rules governing admissibility; the hearsay rule and its exceptions; opinion evidence; the parole evidence rule, and the rules governing the introduction and interpretation of documents; the methods of producing evidence; the attendance of witnesses, their examination, cross-examination, impeachment and confirmation; evidence before trial; the respective functions of judge and jury; the burden of proof and presumptions; judicial notice and judicial admission; actual practice in introducing evidence. *Wigmore's Cases on Evidence (2d Ed).* Mr. Whitlock.

Irrigation Law. This course traces the genesis and development of the law of water rights in the west; how rights to the use of water may be acquired and retained, and generally, the law of water as applied to irrigation, mining, manufacturing, and the generation of power. Special attention will be given to the preparation of water right litigation, and instruction as to the actual trial thereof. *Bingham's Cases. Legislative Enactments. Constitutional Provisions.* Mr. Neff.

Wills and Administration. The law of wills, including the making, revocation and interpretation of wills, in the first semester. Probate procedure, in the second semester, with actual practice in probating wills and the administration of estates. *Montana Code, and Lectures.* Judge Webster.

Property II. Form of conveyance: Conveyances at common law, under the statute of uses, and under modern statutes; execution and delivery of deeds; recording acts and abstracts of title; description of property granted; covenants for title; creation of easements; original acquisition; adverse possession and prescription; practical exercises in conveyancing and examination of titles. *Aigler's Cases on Titles.* Mr. Pope.

Sales. Subject matter at law and equity; relation of possession and payment to title; presumptions as to title; conditions; bills of lading; fraud, retention of possession; factors and factors' acts; sellers' rights as to recovery of price, liens and stoppage in transitu; buyers' rights, including inspection and various warranties; statute of frauds. *Williston's Cases on Sales.* Mr. Cleary.

Practice Court II. Each student is required to try without assistance at least two civil jury cases during the year. Separate abstracts of testimony, as nearly as possible in the form in which a case is presented to a lawyer in his office, are given the respective student-counsel. The student must, from his abstract, decide upon his remedy or defense, draw and file pleadings, serve process, and try his case without deviation from the requirements of the Code of Civil Procedure and the rules of the Missoula County District Court. A jury is empaneled in each case and the instructor presides at all trials. All students are required to be present at all trials. *Montana Code of Civil Procedure, selected cases, and practical exercises.* Mr. Pope.

Abstracts and Examination of Title. Title to real property in general; title by descent; title by purchase; sources of information; analysis

of abstracts; inception of title; congressional and legislative grants; patents; surveys; plats and sub-divisions; formal parts of deeds, including errors, omissions and defects; conveyances; individual, official, and special agreements for conveyances; leases; mortgages; wills; liens; charges and incumbrances; *lis pendens* and attachments; judgment and decrees; judicial and execution sales; actions and proceedings; taxes and tax titles; descents; adverse title; all of the foregoing considered in the making of a correct abstract and also considered in the view of an examiner of title looking for defects; methods of examining title, including actual examinations of abstracts with criticisms showing objections and methods of curing same. Selected Abstracts and Lectures. Mr. _____.

Appellate Practice. The appellate jurisdiction of the various courts is considered, what judgments, orders and proceedings may be appealed from parties who may appeal, time within which appeal may be taken, extent of review and the various steps by which the appeal is taken. Actual practice will be given in preparing the record proper and bills of exceptions. Besides this, extraordinary remedies will be studied, such as Writ of Certiorari, Writ of Prohibition, Writ of Mandamus, Writ of Habeas Corpus and the Montana Writ of Supervisory Control. Selected Cases on Appellate Practice. Mr. Whitlock.

Conflict of Laws. The extent of legislative power and the doctrine of the conflict of laws. Domicile and jurisdiction for taxation. The jurisdiction of courts. A consideration of the creation of rights arising from contract and from tort. The law of capacity and other personal rights. The doctrine of conflict of laws as to rights of property, both by transfer *inter vivos* and by inheritance. The recognition and enforcement of rights; foreign executors and administrators; the nature, obligation and effect of judgments. Beale's Cases on Conflict of Laws (3 Vol. Ed.) Mr. Whitlock.

Private Corporations. Corporations distinguished from partnerships and joint stock companies; disregarding the corporate fiction; formations of corporations; powers of a corporation; *de facto* corporations; *ultra vires* acts of corporations; rights and liabilities of directors, promoters, creditors and shareholders; rights of minority shareholders; shares of stock; transfer; assessment; voting trusts; foreign corporations; corporate forms. Warren's Cases on Corporations. (2 Ed.) Mr. Pope.

Mining Law. Lodes; placers; locators; discovery; location; tunnel sites and blind veins; conditions of retention of claims; sub-surface rights; adverse claims; patents; oil, gas, and other mining leases; tenancies in common and mining partnership; rights of access; rights of subjacent and of lateral support. Costigan's Cases on Mining Law. Mr. Pope.

Damages. Respective functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Beale's Cases on Damages. (2 Ed.) Mr. Neff.

Public Service Companies. The development of the law of public

callings, and the rights and obligations of the various public services, such as common carriers of passengers and of goods, innkeepers, telephone, telegraph, gas, electric, and other companies; governmental regulation and control of the public callings. Wyman's Cases on Public Service Companies. Mr. Murphy.

Insurance. Insurable interest; concealment; misrepresentation; warranties; other cases of invalidity of contract; amount of recovery; subrogation; conditions; waiver; estoppel, election and power of agents; assignees and beneficiaries. Wambaugh's Cases on Insurance. Mr. Neff.

Constitutional Law I. Adopting and amending constitutions; effect of unconstitutional laws; delegation of powers; political and civil rights of individuals; rights of persons accused of crime; an extended examination of the fourteenth amendment. Mr. Pope.

Constitutional Law II. Retroactive laws, including laws impairing the obligation of contract; general scope of federal powers; foreign relations, Indians; aliens; regulation of commerce; jurisdiction of federal courts. Hall's Cases on Constitutional Law. Mr. Pope.

Suretyship and Mortgages. Guaranty; defenses of surety; rights of surety against principal or co-surety; subrogation; reimbursements, exoneration, contribution; rights of creditors to securities held by co-surety. Elements of mortgage; title and lien theory; equitable mortgages; conveyances absolute in form; rights and duties of mortgagor and mortgagee; dower and courtesy; limitation on redemption; clogging the equity; assignment of mortgages; marshalling the assets. Ames' Cases on Suretyship. Wyman's Cases on Mortgages. Mr. Pope.

Trusts. Nature and requisites of trusts and the distinction between trusts, debts and other legal relations; the language necessary to the creation of a trust; the question of consideration; the effect of the statute of frauds and of wills; subject matter of a trust; the different kinds of trusts; transfer of the respective interests of trustee and of beneficiary; rights and remedies of the creditors of trustee and of beneficiary; following the trustee res; resignation and removal of the trustee; the duties of the trustee as to the general execution of the trust and as to investment. Ames' Cases on Trusts. (2d Ed.) Mr. Neff.

Bankruptcy. The respective jurisdictions of the United States and of the several states. Who may be a bankrupt and who may be petitioning creditors. Fraudulent conveyances, preferences, and general assignments. Property passing to the trustee. Proofs of claims, exemptions and discharge. Williston's Cases on Bankruptcy. Mr. Pope.

Municipal Corporations. Nature of municipal corporations; corporate capacity; self-government; creation; annexation, division; dissolution; succession; legislative control; officers and agents; governmental functions; municipal police power; quasi-governmental and commercial functions; local improvements and services, including special assessments; public streets; liability for torts; liability for contract; indebtedness and its constitutional limit; remedies of creditors. Beale's Cases on Municipal Corporations. Mr. Cleary.

Partnership. Formation of a partnership; partnership as to third persons; nature of a partnership, including firm titles; powers of partners; rights and remedies of creditors; duties and liabilities of partners

inter se; dissolution of partnership; accounting and distribution; limited partnerships. Burdick's Cases on Partnership. Mr. Neff.

Persons. Parent and child; custody; support; property and earnings; emancipation; damages to parental rights; liability for torts of children. Infants; contracts, conveyances; affirmance, disaffirmance, restoration of benefits; particular contracts and obligations; necessities; torts. Husband and wife; rights of spouses in each other's property; incapacities of wife; antenuptial contracts; torts; separate estate in equity; statutory changes of common law; marriage and divorce. Kales' Cases on Persons. Mr. Pope.

Quasi-Contracts. Recovery upon record; recovery upon statutory, or official, or customary duty; recovery upon doctrine that one person shall not be allowed to enrich himself unjustly at the expense of another; quasi-contracts and true contracts distinguished; benefits conferred voluntarily and involuntarily; relation of quasi-contracts to equity. Woodruff's Cases on Quasi-Contracts. (2d Ed.) Mr. Neff.

Medicine

The University of Montana has no medical school as such. Courses offered by the State University prepare students for entrance to any medical school in the United States. Besides the courses demanded for admission to medical colleges the departments of Chemistry, Physics, Botany and Biology present outlines of study of greatest use and service to students who plan to enter the field of medicine, supplementing, and in some cases paralleling, the courses offered to the student of medicine in the medical college. In addition to these courses by the departments mentioned the School of Pharmacy has many courses which may be elected by students not planning for a degree in pharmacy. Many of these courses are intimately connected with the work of the physician, and are involved in the general medical instruction.

ESSENTIALS OF AN ACCEPTABLE MEDICAL COLLEGE

Students to be admitted to an acceptable medical college conform to the following standards determined by the Council of Medical Education of the American Medical Association:

For admission to the preliminary college year students must have completed a four-year course of at least fourteen units in a standard accredited high school or other institution of standard secondary grade, or have its equivalent as demonstrated by an examination. The subjects suggested by the committee make about the same list as given for any accredited high school.

The minimum requirements for admission to acceptable medical schools, as determined by the above named committee, in addition to the high school work previously specified, is one year for collegiate work extending through thirty-two weeks and covering thirty semester hours, which must have been completed by the student before he is eligible for admission. This college work should include courses in physics, chemistry, biology, and preferably German or French. Some medical colleges require a high school course of fifteen units of credit.

Those institutions requiring two years of college study for admission have quite uniform requirements, about as follows: Chemistry, including inorganic, organic and qualitative; physics, covering the work of a year in high school and an additional year in college; general biology, in some cases elementary zoology and vertebrate anatomy, in other cases botany, or a combination of the two, covering the work of a full year; the American Medical Association suggests a second year of biology; the student must have a reading knowledge of a modern language, French or German being generally specified.

Montana State University presents courses in each of the above subjects, giving laboratory work in full amount and with proper facilities, to prepare any student for admission to any medical college. Every medical school of high standing urges students to take more than two years above mentioned. Such courses as Greek, botany, zoology, introductory physiology, physical chemistry, quantitative chemical analysis,

physiography, and psychology are suggested. These are all offered in the curriculum of the State University.

The work of the first two years of a medical course includes the following subjects, varying somewhat in different institutions: Anatomy, histology, embryology, physiology, chemistry (inorganic, organic and physiological), bacteriology, pathology, pharmacology, therapeutics and clinical diagnosis. These subjects should consist largely of laboratory work in well-equipped laboratories.

PRE-MEDICAL COURSE

The pre-medical course is suggested for those who expect to enter the medical profession. The following courses, offered at the State University, cover the subjects specified by the Council of Medical Education of the American Medical Association, and prepare the student for entrance to any medical school requiring two years of college work. For the medical schools requiring a bachelor's degree the work of junior and senior college years are outlined. These institutions make the same demands as others that chemistry, physics, biology, and modern language be taken during the college course. The freshman and sophomore years must be taken, as here outlined, to fill the requirements.

FIRST YEAR

	Credits		Credits
English, 11	6	Zoology, 11	8
Chemistry, 11 or 13.....	8 or 10	German or French.....	6 to 8
		Physical Education	½

SECOND YEAR

	Credits		Credits
Chemistry, 15 and 19.....	8	Physics, 11	8 to 10
Zoology or Botany.....	6 to 8	German or French.....	6 to 8
		Physical Education	½

However, a number of the best medical schools now require or advise either three or four years of college work for entrance. If students wish to carry out this plan, they may major in any department of the college of arts and sciences. The courses mentioned above as essential entrance requirements to medical schools must be taken. Some of these may fulfill major requirements or satisfy restricted electives. Among the free electives it is suggested that further work in biology and courses in psychology, bio-chemistry, and modern languages, both French and German are desirable.

School of Music

PROFESSORS, CECIL BURLEIGH, DELLOSS SMITH (Dean), JOSEPHINE SWENSON. ASSISTANT PROFESSOR, E. O. BANGS.

The fundamental purpose of those in charge has been to make the School of Music complete and thorough in every respect.

Twenty-seven music credits will be accepted by the College of Arts and Science toward the B. A. degree.

Candidates for the degree of Bachelor of Music must have completed the entrance requirements of the University and take an examination in applied music and theoretical subjects before beginning the course.

DESCRIPTION OF COURSES

Freshman Year

First Quarter. Applied music, voice, piano or violin. 2 half hours of instruction and not less than 6 hours of practice a week, 2 cr. 31a sight singing and ear training, 3 cr. 17 fundamentals, 2 cr. 11a English, 3 cr. College Education, 1 cr. 11a Elementary French, 3 cr. Physical Education, 1 cr. Total 16 cr.

Second Quarter. Applied music. Continuation of first quarter, 2 cr. 31b sight singing and ear training, 3 cr. 19a Harmony, 2 cr. 11b English, 3 cr. 11b Elementary French, 3 cr. Elective, 2 cr. Physical Education, 1 cr. Total 16 cr.

Third Quarter. Applied music. Continuation of second quarter, 2 cr. 31c sight singing and ear training, 3 cr. 19b Harmony, 2 cr. 11c English, 3 cr. 11c French, 3 cr. Physical Education, 1 cr. Total 14 cr.

Sophomore Year

First Quarter. Applied music. Voice, piano or violin. Two half hours of instruction and not less than six hours practice per week, 2 cr. 33a History of Music, 3 cr. 21a Harmony, 2 cr. 24a English, 5 cr. 11a German (elementary), 3 cr. Physical Education, 1 cr. Total 16 cr.

Second Quarter. Applied music. Continuation of first quarter, 2 cr. 33b History, 3 cr. 21b Harmony, 2 cr. 24b English, 5 cr. 11b German (elementary), 3 cr. Physical Education, 1 cr. Total 16 cr.

Third Quarter. Applied music. Continuation of second quarter, 2 cr. 11c German (elementary), 3 cr. 21c Harmony, 2 cr. E Elementary Physics of Sound, 3 cr. Elective, 5 cr. Physical Education, 1 cr. Total 16 cr.

Junior Year

First Quarter. Applied music. Voice, violin or piano. Two half hours of instruction and not less than six hours of practice a week, 2 cr. 39a Appreciation of Music, 2 cr. 17 Psychology of Hearing, 3 cr. 13a German (intermediate), 3 cr. 23a Counterpoint, 2 cr. Elective, 3 cr. Total 15 cr.

Second Quarter. Applied music. Continuation of first quarter, 2 cr. 39b Appreciation of Music, 2 cr. 23b Counterpoint, 2 cr. 13b German (intermediate), 3 cr. Elective, 6 cr. Total 15 cr.

Third Quarter. Applied music. Continuation of second quarter, 2 cr. 39c Appreciation of Music, 2 cr. 23c Counterpoint, 2 cr. 13c German (intermediate), 3 cr. Elective, 5 cr. Total 14 cr.

Senior Year

First Quarter. Applied music. Voice, violin or piano. Two half hours of instruction and not less than 6 hours practice per week, 2 cr. 25 Fugue and Canon, 2 cr. Thesis or Recital, 3 cr. Ensemble playing or singing, 2 cr. English, French or German Literature, 3 cr. Public Speaking, 2 cr. Total 14 cr.

Second Quarter. Applied music. Continuation of first quarter, 2 cr. 41 Orchestration, 2 cr. Ensemble singing and playing, 2 cr. English, French or German Literature, 3 cr. Public Speaking, 2 cr. Elective, 3 cr. Total 14 cr.

Third Quarter. Continuation of second quarter. Total for four years, 180 cr.

Voice students are subject to the following exceptions: First, two years of pianoforte study are required; second, year of pianoforts study is substituted for elective; third, counterpoint and composition are not required.

Violin students are required to take two years of pianoforte study and may substitute those credits for electives.

PUBLIC SCHOOL MUSIC

(Entrance requirements same as Bachelor of Music course.)

This course is for supervisors and teachers of music in the public schools. It covers a period of two years. Those who desire may add two more years from the Bachelor of Music course and receive a degree.

Those completing the two-year course will receive a Supervisor of Music certificate and will be recommended by the State Superintendent of Instruction to receive a special certificate to teach music in the schools of the state.

Students will do their observation work in the city schools of Missoula.

First Year

First Quarter. 11 voice, 1 cr. 13 piano, 1 cr. 31a sight singing and ear training, 3 cr. 11a English, 3 cr. 17 Fundamentals, 2 cr. Education 10, 1 cr. Elective, 3 cr. Physical Education, 1 cr. Total 15 cr.

Second Quarter. 11 voice, 1 cr. 13 piano, 1 cr. 31b sight singing and ear training, 3 cr. 11b English, 3 cr. 19a Harmony, 2 cr. Elective, 5 cr. Physical Education, 1 cr. Total 16 cr.

Third Quarter. 11 voice, 1 cr. 13 piano, 1 cr. 31c sight singing and ear training, 3 cr. 11c English, 3 cr. 19b Harmony, 2 cr. Elective, 5 cr. Physical Education, 1 cr. Total 16 cr.

Second Year

First Quarter. 11 voice, 1 cr. 13 piano, 1 cr. 37a Methods, 2 cr. 33a History of Music, 3 cr. 21a Harmony, 2 cr. 39a Appreciation of Music, 2 cr. 11 General Psychology, 5 cr. Physical Education, 1 cr. Total 17 cr.

Second Quarter. 11 voice, 1 cr. 13 piano, 1 cr. 33b History of Music, 3 cr. 118 Principles of Education, 3 cr. 37b Methods, 3 cr. Observation, no credit. Physical Education, 1 cr. 21b Harmony, 2 cr. 39b. Appreciation of Music, 2 cr. Total 16 cr.

Third Quarter. 11 voice, 1 cr. 13 piano, 1 cr. Principles of Education, 3 cr. 37c Methods, 3 cr. Observation, no credit. 21c Harmony, 2 cr. 39c Appreciation of Music, 2 cr. Physical Education, 1 cr. Elective, 3 cr. Total 16 cr.

APPLIED MUSIC (VOICE, VIOLIN OR PIANO).

Fixed adherence to a given list of studies is not required. The needs of the student are considered and the studies varied accordingly.

Students in Applied Music may register at any time. Credits to be determined by amount of work done.

11. **Voice.** Mr. Bangs, Mr. Smith.

13. **Piano.** Miss Swenson.

15. **Violin.** Mr. Burleigh.

THEORETICAL SUBJECTS

17. **Fundamentals.** 1 Q. Autumn. 2 cr. Open to all first-year music students. Mr. Bangs.

19a. **Harmony.** 1 Q. Winter. 2 cr. Mr. Burleigh.

19b. **Harmony.** 1 Q. Spring. 2 cr. Mr. Burleigh.

21a. **Harmony.** 1 Q. Autumn. 2 cr. Mr. Burleigh.

21b. **Harmony.** 1 Q. Winter. 2 cr. Mr. Burleigh.

21c. **Harmony.** 1 Q. Spring. 2 cr. Mr. Burleigh.

23a. **Counterpoint.** 1 Q. Autumn. 2 cr. Prerequisite, Harmony 21c. Mr. Burleigh.

23b. **Counterpoint.** 1 Q. Winter. 2 cr. Mr. Burleigh.

23c. **Counterpoint.** 1 Q. Spring. 2 cr. Mr. Burleigh.

25. **Fugue and Canon.** 1 Q. Autumn. 2 cr. Mr. Burleigh.

27. **Orchestration.** 1 Q. Winter. 2 cr. Mr. Burleigh.

31a. **Sight Singing and Ear Training.** 1 Q. Autumn. 3 cr. Mr. Bangs.

31b. **Sight Singing and Ear Training.** 1 Q. Winter. 3 cr. Mr. Bangs.

31c. **Sight Singing and Ear Training.** 1 Q. Spring. 3 cr. Mr. Bangs.

This course is open to all university students.

33a. **History of Music.** 1 Q. Autumn. 3 cr. Mr. Bangs.

33b. **History of Music.** 1 Q. Winter. 3 cr. Mr. Bangs.

34. **Melody Writing.**

35. **Methods.** 1 Q. Autumn. 2 cr. Mr. Bangs.

37a. **Methods.** 1 Q. Winter. 3 cr. Mr. Bangs.

37b. **Methods.** 1 Q. Spring. 3 cr. Mr. Bangs.

39a. **Appreciation of Music.** 1 Q. Autumn. 2 cr. Mr. Burleigh.

39b. **Appreciation of Music.** 1 Q. Winter. 2 cr. Mr. Burleigh.

39c. **Appreciation of Music.** 1 Q. Winter. 2 cr. Mr. Burleigh.

41. **Orchestra.** 1 yr. 2 cr. The orchestra is made up of students and musicians from the city. Rehearsals are held weekly and concerts are given at frequent intervals. Mr. Burleigh.

43. University Band. 1 yr. 2 cr. Weekly rehearsals are held in the auditorium.

45. Women's Glee Club. 1 yr. 2 cr. A continuation course. Mr. Smith.

47. Men's Glee Club. 1 yr. A continuation course. Mr. Smith.

49. Choral Society. 1 yr. 2 cr. All students possessing good voices are admitted to the glee clubs and choral society. Mr. Smith.

Oratorios, cantatas and part songs are studied and performed in recitals and concerts during the season.

Recitals. Student recitals are given at intervals during the year. The object is to afford opportunity for the students to apply in public the proficiency that has been developed in the studio.

Students must obtain consent of instructors before performing in public.

TUITION

One quarter (12 weeks) two lessons a week, piano, violin or voice \$28.00

One quarter, one lesson a week, piano, violin or voice.....\$15.00

An extra fee will be charged for those desiring to take less than one quarter.

Harmony, two class lessons a week.....\$3.00

Piano practice on the university pianos may be arranged for at the following rate:

One hour daily, a quarter.....\$3.00

Each additional hour.....\$2.00

Piano rent must be paid for full quarter.

Sight singing and public school music free to all matriculated students.

A fee of \$5.00 will be charged all others desiring to take this course.

No absence from lessons will be excused. Lessons lost through fault of teacher will be made up. Lessons falling on legal holidays will not be made up.

School of Pharmacy

PROFESSOR, CHARLES E. F. MOLLET (Dean). INSTRUCTOR, CHARLES P. VALENTINE.

The School of Pharmacy was authorized by the State Board of Education July, 1906, and was organized in 1907 as a department of the State College of Agriculture and Mechanic Arts at Bozeman. It was transferred to the State University of Montana at Missoula, July 17, 1913. It is the only School of Pharmacy in the state.

The purpose of the school is to assist in advancing the science of Pharmacy and to afford opportunities for students within the state to obtain a thorough technical education in Pharmacy. Splendid opportunities exist in this state for men and women who are well trained in the principles of pharmacy and their practical application.

Young men who are planning to enter the medical service of the United States Army or Navy, will find the training offered in this school, of value and material aid in advancement and promotion.

The work of this school has been indorsed by pharmacists of Montana, and has received favorable recognition elsewhere. The school is registered by the department of education of the University of the State of New York, and is a member of the Conference of Faculties of the American Pharmaceutical Association.

The School of Pharmacy maintains a pharmaceutical society for the purpose of stimulating a greater interest in matters of practical importance to pharmacy students. Monthly meetings are held and talks given upon various topics by the instructors, students, practicing pharmacists and others. This society is a branch of the Montana Pharmaceutical Association, such recognition being authorized by the association at its meeting in July, 1914.

ENTRANCE REQUIREMENTS

Applicants for all courses leading to degrees in pharmacy must have completed a four-year preparatory or high school course or its equivalent. This must include at least fifteen units of work.

Students twenty years of age and older who have fulfilled the State Board of Pharmacy requirements for examination, may be admitted to the courses in the department of pharmacy without the usual entrance units. Such students can not acquire status as regular students unless they comply with the University rules applicable to such cases.

DEGREES

1. For the degree of Graduate in Pharmacy (Ph. G.), 96 credits are required. In addition to the 53 credits of prescribed work in pharmacy, this must include the following: Botany, 12 credits; General and Qualitative Chemistry, 12 credits; Organic Chemistry, 5 credits; Physiology, 4 credits.

2. For the degree of Pharmaceutical Chemist (Ph. C.), 140 credits are required. Candidates for the degree must have completed the courses required for the degree of Graduate in Pharmacy, and the fol-

lowing: Bacteriology, 4 credits; Quantitative Analysis, 4 credits; Physiological Chemistry, 4 credits.

3. For the degree of Bachelor of Science in Pharmacy (Phar. B.) 186 credits are required. This must include the prescribed work for the degree of Pharmaceutical Chemist, and in addition the following: English 1 yr., Modern Language 2 yrs.

Candidates for the degrees of Pharmaceutical Chemist and Bachelor in Pharmacy are given opportunity to specialize and to elect such subjects as they may desire, in other departments of the University.

Except in cases of physical disability, Military Drill for men and Physical Education for women, are compulsory courses for students of freshmen and sophomore standing.

LOCATION AND EQUIPMENT

The Pharmacy Department is located in Science Hall and is equipped with apparatus and supplies for the instruction of students. It possesses a fairly complete set of text and reference books, including many bound volumes of journals and of the proceedings of the American Pharmaceutical Association. The department receives a number of the best pharmacy magazines and journals published in the United States.

MEDICINAL PLANT GARDEN

As a much needed and important addition to the equipment in pharmacy, a small plot is devoted to the raising of medicinal plants for the purpose of study and research and to provide material for laboratory use of students in the courses of pharmacognosy, manufacturing pharmacy and drug analysis. Here the student can become acquainted with the growth and characteristics of the official drug plants found in Montana, as well as a number successfully introduced from other states. The enterprise has received assistance from the Bureau of Plant Industry of the United States and from a number of the schools of pharmacy of other states which have well-established gardens.

DESCRIPTION OF COURSES

11. Introductory Pharmacy. 1 Q. 8 cr. Fee \$2, deposit \$2. A study of pharmaceutical literature, apparatus and processes, including practical laboratory training in the above processes. The course also includes a study of pharmaceutical arithmetic. Lectures and recitations 6; laboratories 2. Mr. Mollet, Mr. Valentine and assistant.

12. Manufacturing Pharmacy. 2 Q. Winter and spring. 10 cr. Fee \$6, deposit \$4. A continuation of course 11, consisting of a detailed study of the galenic preparations included in the United States Pharmacopoeia and National Formulary. The course includes laboratory training in the manufacture of many of these preparations. Lectures and recitations, 3; laboratories, 2. Mr. Valentine and assistant.

13. Pharmacognosy. 2 Q. Winter and spring. Continuous. 6 or 8 cr. Fee \$4. A study of crude vegetable and animal drugs, their sources, identification, constituents, preparations, official names and synonyms. Mr. Mollet and assistant.

(Courses 11, 12 and 13 are for freshmen.)

21. Materia Medica and Pharmacology. 3 Q. Autumn, winter and

spring. Continuous. 13 or 15 cr. The official inorganic and organic compounds and preparations, together with new and non-official remedies, are studied with regard to nomenclature, source and preparation, physical properties and pharmaceutical uses. The course also includes a discussion of the physiological and therapeutic actions of all of the official drugs. Special attention is given to posology and antidotes of the commonly used poisons. Lectures and recitations. Mr. Mollet, Mr. Valentine and assistant.

22. Drug Analysis. 2 Q. Autumn and winter. 7 cr. Continuous. Fee \$6, deposit \$2. Microscopical and chemical analysis of vegetable drug, and chemical analysis of inorganic and organic drugs and preparations according to the methods of the United States Pharmacopoeia and National Formulary. Lectures and recitations will be given upon these methods. Mr. Mollet, Mr. Valentine and assistant.

23. Dispensing. 2 Q. Spring. 5 cr. Fee \$4, deposit, \$2. A technical study of all phases of the prescription, practical exercises at sight reading and in the art of extemporaneous compounding. Lectures, recitations and laboratories. Mr. Valentine and assistant.

24. Commercial Pharmacy. 3 Q. Autumn, winter and spring. 3 or 6 cr. A study of the commercial problems of the modern pharmacy. The student will be assigned readings in the current drug journals. Mr. Mollet.

N. Materia Medica. 3 Q. Autumn, winter and spring. 6 cr. Continuous. This course is intended to familiarize the student with the character, use, action and methods of administration of the commonly used medicines. Open to freshmen and sophomores in nurses preparatory course. Text: Blumgarten. Mr. Mollet and assistant.

Text and Reference Works for the Courses in Pharmacy

United States Pharmacopoeia
 National Formulary
 National Standard or United States Dispensatory
 Treatise on Pharmacy; Arny, Caspari or Remington
 Materia Medica and Pharmacology; Culbreth, Kraemer or Sayre
 Medical Dictionary; Dorland or Gould

Summer Quarter

DIRECTOR, DR. JESSE P. ROWE.

A Special Summer Quarter Bulletin will be issued.

Plans are being made to hold the Summer Session a full quarter of eleven weeks instead of six weeks as heretofore. The quarter will be divided, however, into two terms. The First Term will begin June 17 and continue for six weeks or until July 26. The Second Term will open July 29 and continue five weeks or until August 30th.

Several special courses for teachers and others will be arranged for the First Term; many courses will run through the entire quarter.

WAR COURSES

Every effort is being made to have the work of the Summer Session serve the war. Work is being planned that will materially assist in this way, such as a course for Scoutmasters; a course for Home Nursing; Red Cross Courses; work in Conservation and Preservation of Foods; Military Training and other like courses.

COURSES FOR TEACHERS

Many courses are being arranged for teachers and school administrators. Most of the subjects for county and state certificates will be given. In accordance with a recent opinion of Attorney-General Ford, "County Superintendents may designate the University of Montana in which teachers may pursue, study and secure certificates as required by law, and that teachers may select any of the branches of the University for such summer work." State Superintendent May Trumper has approved the following certificate subjects that will be given at the State University this summer: Civics, History of the United States, American Literature, Physical Geography, Elementary Algebra through quadratics, School management, physics, plane geometry, elementary psychology, and the subjects for State and Life diplomas. Certificate Grades earned at the University in these subjects will be accepted in lieu of the regular county or state examination and accredited on the certificate.

REGULAR COLLEGE COURSES

In accordance with the general plan of the quarter system, many regular college courses will be given during the summer. By taking advantage of the summer quarter, regular college students can secure their degree in three instead of four years.

Registration. Students should enroll on June 17. Instruction begins at 8:00 a. m., on the following day, June 18.

Admission. Students who are eighteen years of age or over, may be admitted to any course by securing the approval of the instructor in charge. Students under eighteen years of age, in order to be admitted, must be graduates of some preparatory or high school of recognized standing.

Credit. University credit toward degrees will be given only to those who satisfy the regular entrance requirements. A maximum of nine quar-

ter credits per term may be carried by a student who devotes his entire time to courses of university grade. Should a greater number of credits be desired, permission must be obtained from the Committee on Admission and Registration. Proper blanks for making out a petition to carry more credits may be had at the registrar's office. One hundred eighty-six quarter credits are required for a B. A. or B. S. degree.

Certificate of Attendance. Students of the Summer Session who are not eligible to receive University credit will, upon request to the Registrar, receive a certificate for attendance and for courses satisfactorily completed.

Graduate Work. It is possible for properly qualified students to obtain credit toward a Master's degree for work done at the Summer Session. The department of Major study should be consulted with reference to the general requirements for the Master's degree and the special condition under which graduate work may be taken.

Teacher's Appointment Committee. The University maintains an Appointment Committee for the purpose of assisting teachers to secure desirable positions. The services of this committee are entirely free to students and graduates of the University, and to school officers. Calls are received at all times of the year. The Summer Session is a good time for teachers to meet superintendents. Professor Freeman Daughters of the Department of Education is chairman of this committee.

Library. The University Library will be open throughout the Summer Session. Full library privileges are extended to Summer Session students. The library hours are as follows: Monday, Tuesday, Wednesday and Thursday, 8 a. m. to 5 p. m.; 7 to 9 p. m.; Friday, 8 a. m. to 5 p. m.; Saturday, 9 to 12 a. m.

Recreation. Social and recreational features will be made attractive. There will be receptions, picnics, trout fishing, excursions up the mountains, and to the Bitter Root and other points of interest.

EXPENSES

Registration. A general registration fee of \$10 will be charged except in certain music courses. For persons wishing to enroll in only one of the Physical Education Courses or in Public School Music and in no other work, the regular registration fee of ten dollars will not be required but a special fee of \$5.00 will be charged.

Music Fees. A charge of \$15 is made for two lessons a week during the first term or \$28 for the quarter for each course in Voice, Violin, and Piano; for less than a term's work, \$1.50 per lesson; for Theory and Harmony, \$5 for the quarter; for Public School Music, no fee will be charged to matriculated students. Fees must be paid upon enrolling or at the office of the Business Manager in University Hall.

Laboratory Fees. Fees to cover the cost of breakage and of materials furnished to students will be required as follows:

Botany—Courses S1 and S3, each, \$1.00.

Chemistry—Courses 11, 15a, 17 and 19, each, \$4.00.

Dress—Course S6, \$1.00.

Foods—Course S3, \$4.00.

Geology—Course 11, \$1.00.

Mineralogy—Course 17, \$3.00.

Physics—Course 12, \$3.00.

Physiography—Course S1, \$1.00.

Textiles—Courses S4 and S5, each, \$1.00.

Board and Room. Owing to the limited capacity of Craig Hall (the Women's Dormitory), the University will undertake to provide rooms for but eighty women students. The facilities for serving meals at Craig Hall are also limited and but one hundred and seventy students, including the eighty who room at Craig Hall, can regularly take their meals there.

The price of room and board at Craig Hall will be \$26.00 and \$28.00 per month. Those who do not room at the Hall but who take their meals there may secure such meals at the rate of \$5.00 per week.

Those who room at Craig Hall furnish their own towels and bed linen.

Students wishing reservation at Craig Hall should write early. A deposit of \$5.00 must accompany each request for reservation. Every room in the Hall is supplied with two single beds and other necessary furniture. Two students will therefore occupy one room. Each student, however, must send in her name and deposit fee in order to be assured of a reservation.

Rooms in private houses may be had from \$10.00 to \$16.00 per month.

The University will offer all possible help to students in securing quarters for the Summer Session. If those who cannot be accommodated at Craig Hall will write either direct to proprietors in Missoula or to the University, suitable rooms can undoubtedly be secured.

If you arrive in Missoula without having secured permanent quarters for the summer, call at or telephone to the University office, where all possible assistance will be given. A list of available rooming places will be kept in the office for your benefit.

Railway Rates in Montana. By agreement of the Chicago, Milwaukee & St. Paul, the Great Northern, the Northern Pacific, the Oregon Short Line, and the Burlington railways, one and one-third round trip rates will be allowed in Montana, on the certificate plan. Tickets will be on sale June 14 to July 9, inclusive, and are good for return travel up to and including July 28; no certificate to be honored unless each student has been in attendance at the Summer Session for a period of at least ten days.

To take advantage of this rate every student must get a receipt which should not include war tax, when purchasing a ticket. If a student travels over two railway lines in reaching Missoula, receipts should be procured from each road. Do not buy a round trip ticket.

REFUND OF RAILROAD FARE

In accordance with the provisions of chapter 123 of the session laws of 1917, and under the regulations established by the State Board of Education, the State University is enabled to make the opportunities for study offered during the summer equally accessible to all Montana teachers and students. Each regularly enrolled student who carries satisfactorily six quarter credits or its equivalent, of regular work, for at least four weeks during the summer will be entitled to receive at the

close of either term of the quarter, a refund of the amount actually paid for the round trip fare less \$5.00. The amount of the refund will be based upon the railroad fare over the cheapest route on the one and one-third round trip rate. This refund cannot be made to students coming from other states, or to those who do not secure official railroad receipts for the amounts paid. No refund can be made of any war tax.

LECTURES AND CONCERTS

A course of lectures of general interest to be given at least once a week will be arranged. Musical and dramatic entertainment will also be a feature.

Biological Station

DIRECTOR, M. J. ELROD.

A station for instruction and research, located at Yellow bay on the east shore of Flathead lake. The university owns 87 acres here with nearly a mile and a half of shore line; the institution is owner also of 40 acres on Wild Horse island and 40 acres on Bull island. All of this land is for biological-station use. The station is accessible by a good automobile road or by boat from either end of the lake, connecting with both Great Northern and Northern Pacific trains.

The building equipment of the station consists of a substantial brick laboratory, a log dining building, a kitchen and a group of sleeping tents. The station has, also, a good equipment of boats and launches, with the collecting apparatus and laboratory instruments necessary for research work.

The station is located in virgin forest between the lake and the Mission mountains, which rise to an altitude of 8,500 feet at this point. Forest and lake and mountains afford an attractive and, to a great extent, an unexplored field for biological research.

It is the purpose of the biological station to provide opportunity for field work of a sort which cannot be done in the routine of a university program. Instruction is limited to prescribed work for beginners but qualified students may select their own lines of research.

Students are required to pay a matriculation fee of \$10. An additional fee of \$5 is required for the use of scientific apparatus and boats. Meals are furnished for \$6 a week.

Credit for equivalent university work is given.

DESCRIPTION OF COURSES

For the season 1917 the following courses were offered :

1. Elementary and Field Botany. A course for beginners, illustrated by common types of plants, including anatomy, classification, and distribution. Seven half days a week. There is an herbarium of the plants of the region. Miss Norton.

2. Systematic Botany. Intended for those who have had some botany, and who wish to make a collection for class or other use, or who wish to work on some special orders or groups. Time and hours to be arranged. Miss Norton.

3. Elementary and Field Zoology. A course for beginners, including morphology, elements of systematic zoology, methods of field study and collection, with special reference to the animals of the region. Seven half days a week. Mr. Bray.

4. Microbiology. For those who may desire a study of the protozoa, diatoms, rotifers and other microscopic forms, with special reference to anatomy, distribution, and relationship to higher forms of life. Special groups may be studied. Time and work to be arranged. Mr. Bray.

5. Research Problems in Zoology or Botany. Students have an opportunity to do work toward a thesis for M. A. degree. Investigation of

this kind will usually require more than one season. Work to be arranged with each person.

6. Forests. An elementary course for those who wish to know the trees and shrubs. Nearly every tree and shrub in the western part of the state grows near the station. Classification and plant associations will be included in the work of the course. Seven half days a week. Mr. Graff.

7. Plant Pathology. For those who have a knowledge of botany. Plant diseases and their effects will be treated from the standpoint of the flora of the region. The native forests, orchards, cultivated fields, and prairies make possible extensive and profitable study. Time and hours to be arranged. Mr. Graff.

8. Animal and Plant Ecology. For students who are prepared to do some advanced work. A study of the interrelationships of plants and animals, of plant and animal communities: a study of the disposition of terrestrial and aquatic animals and of the factors which govern their distribution. Seven half days per week. Mr. Elrod.

9. Limnobiology. Study dealing with the life of the waters of the lake. Time and hours to be arranged. Mr. Elrod.

10. Bird Study—Ornithology. A course for teachers, students and others who desire knowledge of birds. It will include a study of song, habits, and distribution, some classification, and much practical field work. Seven half days a week.

11. Photography. No regular course offered, but instruction and suggestions will be given to those who wish to use a camera for scientific work.

Register of Students

1917-18

Credit hours are stated as completed March 22, 1918. L—Law; P—Pharmacy; F—Forestry; J—Journalism; M—Music; Sp—Special.

Name.	Quarter Credits.	Professional School	Home Address.
Abel, Edna Margaret.....	65		Lewistown
Ainsworth, Lewina	168		Thompson Falls
Aldrich, Fremont Newburn.....	26	Sp.	Missoula
Aldrich, Mrs. Fremont Newburn....	96		Missoula
Allan, Roy Frederick.....	61		Butte
Allen, Gladys Marilynn.....	10		Helena
Allen, Joyce Mercedes.....	10		Helena
Allen, Naomi Fay.....	38	J.	Glendive
Alling, John Sheridan.....	11		Sidney
Anderson, Jennings Bryan.....	26	Sp.	Twin Falls, Idaho
Anderson, Virginia Pearl.....	151		Twin Falls, Idaho
Arneson, Joseph Alfred.....	21		Big Timber
Austin, Carl Rubin.....	35		Superior
Babb, Ruth Consuelo.....	108		Portland, Oregon
Backus, Hazel E.....	59		Tacoma, Wash.
Bailey, Mrs. Jane Meigher.....	186	L.	Missoula
Baker, Clyde Phennes.....	30		Missoula
Baldwin, Charles S.....	61	L.	Kalispell
Baldwin, Chester Leroy.....	106		Missoula
Baptist, Charles F. D.....	107		Missoula
Barnes, Retta May.....	13	Irreg.	Missoula
Barnett, Grace Treleven.....	41		Missoula
Barnett, Ruth Amelia.....	168½		Missoula
Barnett, Donald Robert.....	139		Missoula
Barney, Onoto Aneita.....	0	M.	Moore
Barrows, Beth Caroline.....	178		Billings
Barrows, Howard C.....	102		Cleveland, Ohio
Barto Margaret.....	33		Thompson Falls
Bates, F. B.....		Irreg.	Missoula
Bates, Mary Elaine.....	35	J.	Malta
Bayer, Mrs. Margaret Canfield.....	57		Lander, Wyoming
Bauch, Amelia.....		Irreg.	Missoula
Beckwith, Alice M.....	22	Sp.	Missoula
Beckwith, Lawton Bancroft.....	124½		Missoula
Beckwith, Radcliffe Harold.....	17		Missoula
Begley, Irene.....	4		Missoula
Belknap, Edna Mae.....	33		Polson
Bell, Ralph Wallace.....	17		Florence
Bentz, Christian.....	158	L.	Artas, S. D.
Berg, Lawrence Richard.....	39	F.	Missoula
Bilyeu, Marie.....	25		Wibaux
Black, Howard B.....	99	L.	Kalispell
Black, Martha Ann.....	196		Idaho Falls, Idaho
Black, E. Vera.....	179		Stanford, Ill.
Blackwood, Roena Sybil.....	10		Chinook
Blomgren, Carl Harold.....	33½		Butte
Blomquist, Louis Earl.....	0	F.	Belt
Boals, Frank.....	7	P.	Arlee

Bober, Mandell Mordecai.....	185	.....	Missoula
Bockes, Charlotte Maxine.....	179	.....	Windham
Bockes, Henry Stuart.....	23	.....	Windham
Boles, Alice Margaret.....	181	.....	Missoula
Booth, Myrna Elizabeth.....	122	.....	Missoula
Bourdeau, Etha Marie.....	14	.....	Missoula
Bourdeau, Lea Loretto.....	14	.....	Missoula
Bourquin, John Justin.....	62	L.	Butte
Bowen, James Herbert.....	35	.....	Worden
Boyd, Andrew, Jr.....	67	.....	Helena
Boyd, Eva Margaret.....	36	.....	Ovando
Brackett, Lloyd Anthony.....	2	.....	Butte
Brechbill, Elton E.....	61	.....	Missoula
Brechbill, Richard Etta.....	17	Sp.	Missoula
Briggs, Ian Albert.....	78	.....	Darby
Briner, Edith.....	77	.....	Big Timber
Broadland, Thelma.....	0	Sp.	Butte
Brockway, Maude Marie.....	0	.....	Billings
Brown, Dudley Murray.....	29½	.....	Butte
Brown, Mary Gantt.....	32	.....	Philipsburg
Brown, Robert Keith.....	105	L.	Billings
Bruce, Irene Frances.....	31	.....	Kalispell
Burke, Monica Frances.....	162½	.....	Dover, Idaho
Burkhart, Alma Ethel.....	31	.....	Missoula
Burkhart, Minnie Ethel.....	33	.....	Missoula
Burrell, Fayette Owen.....	13	F.	Hamilton
Burt, Elva.....	72	.....	Forsyth
Burt, John Loyd.....	69	.....	Forsyth
Buse, Alpha, B.A.....		.....	Polson
Butler, Everett Franklin.....	89½	F.	Chicago, Ill.
Butler, Hal Charles.....	14	.....	Helena
Campbell, Hugh.....	104	Sp.	Missoula
Carlson, Clarence Edward.....	0	F.	Rockford, Ill.
Carmichael, Hugh D.....	44	.....	Butte
Carmichael, John David.....	28	P.	Billings
Carney, Grace.....	29	.....	Springdale
Carroll, Matthew V.....	176	.....	Missoula
Carver, Dwight Leslie.....	0	.....	Florence
Casey, Ralph Droz, B.A.....		J.	Missoula
Cassidy, Francis Joseph.....	172	.....	Winston
Cassidy, Vera Mary.....	8	Sp.	Winston
Caulkins, Clarence Adelbert, Jr.....	32½	.....	Big Timber
Cavin, Ruth Lillian.....	34	.....	Missoula
Chapin, Daisy Winifred.....		Irreg.	Missoula
Chaffin, Glenn M.....	64½	J.	Corvallis
Chilton, Rex Weymouth.....	35	F.	Baker
Christensen, Earle Arthur.....	54	.....	Missoula
Clark, Frances Naomi.....	80	P.	Plains
Clark, Gertrude.....	35	.....	Columbus
Clarke, Stedman Kendrick.....	35	.....	Manhattan
Collins, Fay Mettella.....	30½	.....	Anaconda
Colvin, Alice Frances.....	164	.....	Big Timber
Conser, Beth.....	30	.....	Baker
Cook, Elizabeth Mabel.....		J. Irreg.	Rochester, Minn.
Cook, Marcus B.....	58	F.	Como
Corbin, Grace E.....	81	M. Sp.	Missoula
Corbin, Mildred Emma.....	64	Sp.	Missoula
Coucher, Margaret Jessie.....	108	J.	Missoula
Cowell, Vern Edith.....	39	.....	Stevensville
Crangle, Isabel Margaret.....	30	.....	Butte
Crangle, Mary Adelaide.....	41	.....	Butte
Crews, Clinton Aloysius.....	22	J.	Anaconda
Crouch, George Bertsell.....	14	.....	Missoula

Cullinan, Nicholas C.....	9	L.	Butte
Cummings, Ruth.....	54		Billings
Curran, Lucile Honarie.....	45		Missoula
Custer, Mrs. Laura Hollinger.....	32	Sp.	Missoula
Dahlberg, Harry William.....	82		Butte
Dana, Edwin Morris.....	3		Deer Lodge
Dana, Ruth Glaphry.....	91		Deer Lodge
Daniels, Helen Lucile.....	53		Deer Lodge
Daniels, Phillips X.....	177	L.	Anaconda
Darst, Delbert Jackson.....	18		Lovilia, Iowa
Davey, Clarence Osborne.....	10½		Deer Lodge
Davis, Arnin Archibald.....	100		Missoula
Davis, Ruth Maxwell.....	151½		Butte
Dawe, William Henry.....	111	P.	Missoula
Dawes, John Arthur.....	43		Hamilton
DeCamp, Viola B.....	2	Sp.	Missoula
DeJarnette, George Monroe.....	39	F.	Missoula
Demers, Lambert Lawrence.....	29		Arlee
Dennie, Louis White.....	80	F.	Missoula
Derr, Marcus.....	17	L.	Valley, Wash
DeRyke, LeRoy.....	34		Missoula
Deschamps, Armond Peter.....	13	F. Sp.	Missoula
Dietrich, J. Maurice.....	183		Helena
Dillon, Eva Marie.....		P. Sp.	Great Falls
Dixon, Florence Worden.....	78		Missoula
Dobson, Olive C.....	34		Missoula
Dodge, Keith Allen.....	30	F.	Challis, Idaho
Doherty, Emmet Edward.....	13		Butte
Donlan, Christiana.....	0	Sp.	Missoula
Denohue, Dorothy Agnes.....	178		Missoula
Donahue, Joseph Patrick.....	21		Three Forks
Douglas, Dorothy Gurney.....	71		Billings
Dowd, Clarence.....	44	F.	Victor
Dragoye, Marcus John.....		P. Sp.	Anaconda
Drenckhahn, Esther C.....	174		Minneiska, Minn.
Driscoll, John Bryan.....	28		Butte
Duncan, Dorothy Maude.....	34	J.	Great Falls
Duquette, William Henry.....	3	P.	Potomac
Dyll, Louis Martin.....	33½		Helena
Ector, Phoebe Payne.....	45		Missoula
Ellinghouse, Bertha Ellen.....	183		Missoula
Elliott, Mildred Clair.....	17		Dillon
Erickson, Marie W.....	88		Missoula
Erickson, Sadie Amanda.....	36	J.	Silver Bow
Evans, David Van.....	13	Sp.	Missoula
Everly, Paul Lester.....	19		Corvallis
Ewalt, Florine.....	91		Ekalaka
Fahey, William George.....	26	P. Sp.	Castlebar, Ireland
Fairchild, Lillian Fay.....	168½		Townsend
Falk, Nina Victoria.....	14		Essex, Iowa
Farmer, Eliza Ella.....		Irreg.	Missoula
Farrell, Katherine Helen.....	152		Butte
Farrell, Margaret Phyllis.....	21		Butte
Farrell, Mary Norene.....	68		Joliet
Faust, J. Florence.....	76		Missoula
Faust, Hilda, B.A., visitor.....			Missoula
Felker, Jessie Lee.....	14		Missoula
Felker, Preston Richard.....	168		Missoula
Fergus, Gertrude.....	74		Great Falls
Finch, Helen Edith.....	105½	M.	Dillon
Finlay, Sylvia Elfreda.....	86	J.	Butte
Foley, Kathrynne.....	124	J.	Victor
Fonner, Delma.....		Irreg.	Missoula

Fox, Percy	15		Missoula
Fraser, Barbara	127½		Columbus
Fredericks, Helen G.	106	L. Sp.	Missoula
Friauf, James Byron	201		Missoula
Fries, Earl Robert	0		Sun River
Froebe, Mary Amelia	0	Sp.	Helena
Froebe, Mrs. Mary Katherine	0	Sp.	Helena
Gallagher, Merle Cuyler	184		Wabasha, Minn.
Gardner, Grace Lillian	79	J.	Kalispell
Garrigus, Mary Frances	197	L.	Missoula
Garvin, Margaret (Mrs. Percy Stone)	176	J.	Dillon
Gessner, Bernhart Frank	35½		Glendive
Gettys, Marvilla	33		Sheridan, Wyo.
Gillette, Helen May	126½		Belt
Gleason, Hildred Frances	80		Florence
Gleeson, Mary Eleana	0	J.	Butte
Godfrey, Lavina Jewell	34		Helena
Goff, Lillian Belle	33		Valier
Goldman, Jack	115	L.	Missoula
Goodwin, Helen Durrie	157		Helena
Gorsline, Seymour E.	123		Roundup
Graff, Mrs. Mary Lulu	5	Irreg.	Missoula
Grant, Mae A.	72		Kalispell
Grant, Muriel Rose	35		Anaconda
Graves, Ralph S.	0	F. Sp.	Missoula
Gray, Bertha R.	5	Sp.	Missoula
Gray, Ernest Royal	46		Missoula
Graybeal, William Thomas	7	L. Sp.	Missoula
Gretencort, Robert John	116	L.	Lewistown
Griffin, Harry	89½		Roundup
Griffith, Vera Gwendolyn	19	M. Sp.	Columbus
Grill, Lester Edward	28½		Missoula
Grover, Marjorie Julia	17	J. Sp.	Great Falls
Gruenheck, Augusta Ann	34		Philipsburg
Gunning, Nellie	77½		Silver Bow
Hale, Mary Jane	17		Missoula
Hale, Richard J.	23	F. Sp.	Missoula
Hall, Harriet Elizabeth	65		Missoula
Halse, Lillian Elizabeth	64½		Sheridan
Hammond, Lacy Lucile	27		Butte
Hansen, Estelle Marie	80½		Missoula
Hanson, Karen	70½		Wilbur, Wash.
Hanson, Nettie Othilde	161		Missoula
Harbert, Dorris Dorsey	33		Polson
Harpole, Eugene	35		Patterson, Iowa
Harrington, Florence Christine	25		Stevensville
Harris, James C.	60		Butte
Harry, Arthur Edward	25		Missoula
Hartson, Harley Howard	96	F.	New Rockford, N. D.
Hauck, Herman Lawrence	38½	J.	Philipsburg
Haun, Fernie Mary	33		Haugan
Hayes, Ethel Margaret	22		Butte
Hebert, Frances Marian	45		Three Forks
Heden, Myrtle Mary	33	P.	Conrad
Helvik, Lottie Jonetta	78		Darby
Herring, Erton V.	146		Hall
Hickey, Charles Thomas	113	L.	Missoula
Hiebert, Samuel L.	39	F.	Chinook
Hill, John Harold	138		Union
Hirst, Edward Lodge	48	F.	Deer Lodge
Hodson, Lysle Robert	160		Missoula
Hoem, Inga Amelia	33		Butte

Hoiles, William Morse.....	124	.....	Dixon
Hollensteiner, Neola.....	33	.....	Lo Lo
Horrigan, Francis William.....	0	F. Sp.	New Haven, Conn.
Howard, Cort.....	11	F.	Bozeman
Howe, Elmer Bernard.....	88½	.....	Missoula
Huang, Chin.....	63	.....	Peking, China
Hubert, Ernest, B.S.....	.....	.....	Missoula
Huleatt, Elmer Kennedy.....	114	.....	Missoula
Hunter, Margaret Teresa.....	36	J.	Billings
Hurzeler, Gladys Lillian.....	65	.....	Butte
Hurwitz, Robert Isidore.....	2	F. Sp.	Hartford, Conn.
Inch, Beatrice E.....	130	.....	Missoula
Ireland, Russell Alexander.....	74½	F.	Pendleton, Ind.
Jackman, Roscoe Elmer.....	36	.....	Polson
Jackson, Clifton Samuel, B.A.....	.....	.....	Victor
Jackson, Mrs. Clifton S.....	85	.....	Victor
Jackson, John W.....	72	.....	Des Moines, Iowa
Jacobson, Esther I. A.....	164½	.....	Missoula
Jacobson, Ruby I. S., B.A.....	.....	.....	Missoula
James, Lois Harriet.....	29½	.....	Anaconda
Jameson, Lucille.....	28	.....	Missoula
Jameson, William J., Jr.....	124	.....	Missoula
Jarl, Ruth Evelyn.....	32	.....	Great Falls
Jenkins, Cornelia Pauline.....	9	.....	Stevensville
Jensen, Florence Vivian.....	27	.....	Butte
Johnson, Charlene Clare.....	127½	.....	Missoula
Johnson, Clara Agnes.....	84½	.....	Victor
Johnson, Elsie May.....	120½	.....	Hamilton
Johnson, Lester James.....	2	F.	Victor
Johnson, Margaret M.....	80	J.	Great Falls
Johnson, Rhea Marna.....	128	.....	Missoula
Johnston, Ethel.....	43	J.	New York, N. Y.
Jones, Josephine.....	20	.....	Twin Bridges
Jones, Mrs. Josephine Miles.....	.....	Irreg.	Missoula
Jones, Josie Juel.....	154	.....	Missoula
Jones, Kyle, B.S.....	.....	.....	Bynum
Jones, Wilma.....	29	.....	Bynum
Kain, Elsie Maud.....	133½	.....	Stevensville
Kain, Hazel Mary.....	122	.....	Stevensville
Kapp, Nora Marguerite.....	178½	.....	Livingston
Keith, Beverly Clinton.....	25	.....	Thompson Falls
Keith, Constance.....	31	.....	Missoula
Keith, Florence.....	0	.....	Butte
Keith, Ruth.....	80	.....	Missoula
Kelley, Elizabeth A.....	99	.....	Providence, R. I.
Kelly, Frank J.....	35	.....	Butte
Kelly, Madeline Aloise.....	85	.....	Missoula
Kemp, Bernice.....	70½	Sp.	Missoula
Kimball, Gladys Ola.....	15	M.	Hysham
King, James Asher.....	120	.....	Missoula
King, Ollie May.....	170½	.....	Geraldine
Kirkendall, Ben Dakotha.....	0	.....	Marmouth, N. D.
Kleinoeder, Ruth Marguerite.....	75½	.....	Hamilton
Knowles, Vera Helen.....	35	J.	Missoula
Kreis, Robert William.....	4	.....	Sidney
Kuhl, Clara Goodrich.....	.....	J. Irreg.	Missoula
Lamb, Cosette.....	160	.....	Butte
Lamb, John Henry.....	150	.....	Laurel
Lane, Sylvia Booth.....	80½	.....	Forsyth
Largent, Howard.....	30	.....	Anaconda
Larkin, William Roger.....	53	.....	Red Lodge
Larson, Edna Blanche.....	.....	Irreg.	Missoula
Larson, Esther Natalie.....	171	.....	Livingston

Latham, Mattie Ellen.....	55		Columbus
Lawler, Lorene Alvina.....	16		Anaconda
Layton, Jack Joseph.....	154	L.	Portland, Ore.
Leach, Marion A.....	66½		Dillon
Leahy, Arthur Byron.....	25		Butte
Lennstrend, Tesla Viking.....	187½		Missoula
Lester, George Anthony.....	71½	L.	Belt
Lindberg, Edith.....	43		Missoula
Lindfors, Verena Olive.....		Irreg.	Missoula
Line, Ruth Marie.....	33		Columbus
Ling, Luella Catherine.....	32		Billings
Lister, Alvin Evans.....	49	F.	Missoula
Little, Helen.....	34	J.	Hamilton
Little, Helen Amity.....	33		Butte
Lloyd, Leslie Mark.....	7		Great Falls
Lockridge, Hugh F.....	47½	F.	Corvallis
Lockwood, Charles Lloyd.....	36	F.	Hamilton
Lockwood, Hazel Mae.....	5		Hamilton
Longshore, Alice Virginia.....	154		Columbiana, Ala.
Lowry, Eleanor.....		Sp.	Missoula
Lowrie, Frances Lora.....	33		Missoula
Lucas, Douglas Porter.....		Irreg.	Missoula
Lukens, Josephine Mary.....	84½		Missoula
Luttrell, Dorothy Alberta.....	31	P.	Plains
Lyden, Marguerite Anna.....	172		Butte
Lynum, Mattie Olive.....	1	Sp.	Missoula
McAuliffe, Virginia Marie.....	67½		Butte
McCarty, Mrs. E. C.....	70½	Sp.	Missoula
McCarthy, Mary Helen.....	30		Butte
McCormick, M. Aileen.....	15	J.	Missoula
McCrary, Frances Louzella.....	32		Park City
McCullough, William Frank.....	73		Mullan, Idaho
McDonnell, Anna Elizabeth.....	76½		Big Timber
McDonnell, Edith Helen.....	26		Big Timber
McGreevy, Marguerite Mary.....	174		Anaconda
McHaffie, Ruth.....	138		Missoula
McHaffie, Stewart Maxwell, B.A.....	59	L.	Missoula
McKain, Neil Dunn.....	34½	J.	Missoula
McKenzie, Anna.....	97½		Anaconda
McLaughlin, Eugene Milton.....	38½		Billings
McLaughlin, Flora Gillies.....	85½		Missoula
McLeod, Evelyn.....	105	J.	Missoula
McLure, Charles Derickson, Jr.....	19	Sp.	Missoula
McLure, Clara Edgar.....	55½	J. Sp.	Missoula
McManus, Hugh Henry.....	37		Butte
McNair, Chester Sprague.....	18		Great Falls
MacRae, Erma Jean.....	62½		Anaconda
Maclay, Carrie Virginia.....	66½		Lo Lo
Maclay, Elizabeth Bower.....	35		Missoula
Maclay, Samuel Sinclair.....	30		Lo Lo
Maerdian, Edith Adele.....	86½		Polson
Maley, Frances.....		Irreg.	Missoula
Mallory, Ethel Marie.....	30		Polson
Malone, Earl Webster.....	62	P.	Hamilton
Manning, David Martin.....	31		Hysham
Markle, John E. H.....	116	J.	Bonner
Marsh, Russell Ledwith.....	27	L.	Deer Lodge
Marshall, Dorothy Edith.....	35		Missoula
Matthews, Thomas Kennedy.....	0		Missoula
May, George Louis.....	28		Stevensville
Meeks, Winifred Anne.....	55		Great Falls
Millam, Ralph H.....	130		Darby
Miller, Dorothy.....	75		Darby

Mills, Kathryn Mary.....	59	J.	Missoula
Mobley, Eugenia Stilwell.....	33		Missoula
Mobley, Mary Speer.....	34½		Missoula
Mongold, Gaddis Tom.....	11	P.	Three Forks
Montgomery, Edna Morley.....	127½		Chinook
Montgomery, Alice Minette.....	94		Helena
Mooney, Guy Hastings.....	23		Judith Gap
Moore, Thomas Benjamin.....	36		Butte
Morehouse, Inez Isadora.....	169	J.	Stevensville
Morris, Lydia Jane.....	6		Missoula
Marshall, Jean Morrison.....		Irreg.	Elgin, Ill.
Moyer, Lester Harold.....	36		Missoula
Murphy, Judith Olene.....	8	P.	Alder
Murphey, Katherine Warren.....	34		Butte
Napton, Sheila.....	30	Irreg.	Missoula
Narum, Duncan Horace.....	4		Sidney
Nelson, Carl Albert.....	79½	F.	Helmsville
Nelson, Ellen.....	20		Dillon
Nelson, Harry Hamilton.....	7	L. Sp.	Missoula
Nelson, Jennie Irene.....	194		Butte
Nelson, Estella Marie.....	28		Plains
Nepstad, Lillian Genevieve.....	50		Grey Cliff
Newmack, Gustav Nicholas.....	0		Belt
Newman, Marion Emily.....	28	M.	Florence
Newman, Leo L.....	42	Sp.	Great Falls
Niles, Grace Evalyn.....	28		Livingston
Nooney, Loretta Elizabeth.....	1		Necedah, Wis.
Norville, Hugh Weston.....	87		Boulder
O'Donnell, Irene Anastasia.....	157½		Billings
O'Hara, Geraldine Margaret.....	148½	L.	Hamilton
O'Neil, Louis Clinton.....	37	F.	Kalispell
Orgain, Kellogg Middler.....	17	F.	Wibaux
Orr, Conrad O.....	120		Missoula
O'Rourke, J. Leo.....	42		Anaconda
Owens, Forest.....	163		Helena
Page, Joseph Aime.....	0	J. Sp.	Butte
Page, Leo Moses.....	13	Sp.	Anaconda
Parker, Helen Lucyle.....	34½	M.	Missoula
Paul, Lucile Justan.....	183		Dillon
Paulson, Myrtle May.....	13	J.	Minneapolis, Minn.
Paxton, Gertrude Curtiss, B.S. (Visitor).....			Nevada, Iowa
Paxson, Lelia Everetta.....	73		Missoula
Peirce, Ruth Elizabeth.....	6		Camas Prairie
Perry, Beatrice M.....		Irreg.	Missoula
Peters, George F.....	41½		Hamburg, Germany
Pew, Mary Elizabeth.....	117		Missoula
Phillips, George Francis.....	32	F.	Butte
Phillips, Gladys Marie.....	54½		Missoula
Pilger, Marie Henrietta.....	0		Butte
Plummer, Charlotte Wharton.....	138		Stevensville
Poole, Anna May.....	95½		Butte
Pope, Ethel Mildred.....	23		Billings
Prescott, Doris.....	201½		Missoula
Prescott, Ernest M.....	201½		Missoula
Prestbye, Emin Christian.....	220½	L.	Kalispell
Purcell, James Mark.....	112½	L.	Billings
Quail, Gladys Stella.....	22		Dupuyer
Quail, Margaret Wellington.....	12		Dupuyer
Quast, Cora.....	116	M.	Corvallis
Rafferty, Evelyn Dorothy.....	54½		Missoula
Railsback, Jessie Alazene.....	181		Billings
Randall, Helen Elizabeth.....	17	M.	Corwin Springs
Rankin, Edna, B.A.....	112	L.	Missoula

Raudabaugh, Lillian, B.A.			Missoula
Raudabaugh, Charles Briggs	36		Victor
Ratterman, Anne		Irreg.	Missoula
Reely, Anna	20½	Sp.	Missoula
Rees, John Alva	101½	L.	Big Timber
Rehder, Annabelle	172½		Missoula
Rehorst, Clarence Peter	0		Victor
Reinholt, Theodore	0	Sp.	Havre
Rennick, Lenore		Irreg.	Missoula
Resner, Herbert Andrew	63	L.	Missoula
Reynolds, Roxborough	89	J.	Anaconda
Riechel, Wade	30	Sp.	Aznoe
Riechel, Mrs. Olive May	42	Sp.	Aznoe
Ries, Bertha Sabina	35		Billings
Risley, Dorothy	25½	Sp.	Missoula
Robinson, Verne Eugene, B.A.	73	L.	Great Falls
Roepke, Anna E.		Irreg.	Missoula
Rooney, Harry Needham	29		Bonner
Rosendorf, Edward	66	J.	Sandpoint, Idaho
Rudd, Helen Morgan	80½	M. Sp.	Missoula
Ruiter, Beatrice M.	82½		Red Lodge
Rule, Thelma Roberta	65		Deer Lodge
Rupp, Chris Albert		Irreg.	Missoula
Ruppel, Henry George	69		Twin Bridges
Ruttledge, Bessie Maurine	94		Missoula
Sailor, Floyd Warren	49	L.	Gildford
Sanders, Helen Edgerton	57		Helena
Sanders, John Earl	35½		Havre
Sanders, Josephine	34		Havre
Sargent, Lester Eugene		Irreg.	Missoula
Schatz, Anna Josephine	5	Sp.	Missoula
Schilling, Helen Eva	61		Glasgow
Schmidt, Frederick	16	Sp.	Port Blakeley, Wash.
Schwefel, Alice Caffery	76½		Butte
Seely, Minnie E.	4	Irreg.	Missoula
Sell, Esther Mary	62½		Red Lodge
Sell, John Raymond	21		Red Lodge
Seright, Fern Fayette	35	P.	Joliet
Sestak, Bessie, B.A.			Victor
Sestak, Minnie	121		Victor
Shay, Valma Ruth	69		Laurel
Shea, Anna Margaret	56		Stevensville
Shea, Lillian Marie	29		Butte
Shepherd, Jean Charlotte	129		Great Falls
Sheridan, Thomas J.	33		Missoula
Shoup, Mittie Lois		Irreg.	Missoula
Simons, Marjorie Evelyn	6		Missoula
Sloan, Emily Eva	25	L. Sp.	Belle Fourche, S. D.
Smith, George Richmond	10		Missoula
Smith, Mae Elizabeth	59½		Dillon
Smith, Richard Hubert, LL.B.			Missoula
Smith, Winifred Margaret	33	J.	Great Falls
Somer, Augustus	84		New Albin, Iowa
Sousley, Cecil Dewey	0		Arlee
Southwick, John Jay	20		Hamilton
Spiller, Charles Rapheal	26		Belt
Spogen, Leo Raymond	31		Belt
Springer, Fred John	17		Great Falls
Spuhler, Jeanette Hilda	131		Sheridan
Squire, Ione Ruhama	56		Aberdeen, S. D.
Stache, Mildred Edna	59	M.	Wallace, Idaho
Stalcup, Wynne Ione	35	P.	Twin Bridges
Stein, Harriet Elizabeth	33		Belt

Stevens, Marjorie Marie.....	9		Pony
Stewart, Helen Elizabeth.....	33		Billings
Stewart, Leo William.....	105	L.	Basin
Stimpert, Fred Dewey.....	20		Great Falls
Stivers, Glen Fern.....	31		Hartford City, Ind.
Stoddard, Helen Friend.....	68		Missoula
Stoddard, Ida Freeman.....	28		Missoula
Stone, Alberta Rae, B.A.....			Missoula
Stone, Emerson.....	168½	J.	Missoula
Streit, Alma Cathryne.....	4		Missoula
Sullivan, John Daniel.....	36		Belton
Sullivan, Richard Francis.....	70		Hamilton
Sullivan, Stephen Patrick.....	22		Butte
Summers, Ruth Louise.....	9	M. Sp.	Missoula
Sutherland, Carlyn Hoblitt.....	21		Corvallis
Swearingen, Thomas G.....	69½	F.	Great Falls
Templeton, Payne, B.A.....	82	L.	Missoula
Templeton, Gladys Lewis, B.A.....			Missoula
Thefge, Doris.....	34		Helena
Thomas, Amos Jesse.....	0	Sp.	Missoula
Thompson, Elsie Addie.....	16		Winston
Thompson, Lois Elizabeth.....	34		Red Lodge
Thompson, Merle Mobey.....	76	P.	Red Lodge
Tiedt, Inez Josephine.....	0		Missoula
Tintinger, Solomon Nicholas.....	35		Cascade
Tipton, Guthrie Hughes.....	16		White Sulphur Springs
Torrance, Edward Glazar.....	32		Butte
Trudeau, Nellie Kain.....		Irreg.	Missoula
Tuchscherer, Viola.....	164½		Anaconda
Turcott, George L.....	133		Ruby
Turcott, Lucy Evangeline.....	18	P.	Ruby
Turner, Beatrice.....	126½		Beatrice
Turner, Margaret Barbour.....	76		Helena
Urey, Harold Clayton, B.S.....			Missoula
Valentine, Albert Chester.....	61½	F. Sp.	New York City
VanCleve, Gretchen Olga.....	117		Custer
VanHorn, Thomas Boyd.....	26	F.	Miles City
Vitt, Herbert Otis.....	84½		Butte
Vogler, Ralph Marquis.....	22		Butte
Wagner, Eileen Louise.....	130		Missoula
Walker, Grace Darling.....	14		Pompey's Pillar
Wallace, Enid Camille.....	136		Missoula
Waltemate, Beulah Belle.....	150½		Missoula
Walter, Adeline Neldo.....	82	P.	Sheridan
Walton, Ellen Marie.....	27	J.	Dickinson, N. D.
Walton, Florence Loretta.....	126		Dickinson, N. D.
Wanderer, Myrtle May.....	178		Hamilton
Wardle, Inez Victoria Hollans.....	7½		Missoula
Warner, Neil Gardner.....	35	F.	Clear Lake, S. D.
Watson, Glenn Ray.....	10		Pondera
Watson, Tom Crawford.....	45		Pondera
Westby, Cleve Oscar.....	80		Terry
Wheeler, William Bryan.....	0		Valier
Whisler, Harold.....	98	F.	Missoula
White, Wellington Irwin.....	181½	F.	Conner
Whitesitt, Hazel Mary.....	73		Corvallis
Whitesitt, Mabel Lorene.....	57		Corvallis
Whitham, Belle Meredith.....	5	J. Sp.	Missoula
Whitworth, Dorothy.....	34		Deer Lodge
Wickes, Margaret Stinson.....	79½		Missoula
Wilkinson, Dorothy.....	36		Missoula
Williams, J. U.....		Irreg.	Missoula
Williams, Zelda Rohma.....	25		Chinook

Wilson, Fred Barlow.....	57		Missoula
Winsor, Ivan Francis.....	34½	F.	Miles City
Wissbrod, Reta Louisa.....	19		Missoula
Woehner, Albert Edward.....	71	P.	Great Falls
Wold, T. F.....	21	L.	Portland, Ore.
Wolpert, Ferd S.....	173½		Boulder
Wood, Edith Elizabeth.....	63		Helena
Woods, Ella, B.S.....			Missoula
Woods, Melville Leroy.....	98½		Billings
Worth, William Norton.....	21	Sp.	Butte
Wren, Jadie Lee.....	29	J.	Great Falls
Wright, Mary Della.....	191½		Missoula
Wyman, Rosa Emiline.....	35	J.	Glendive
Young, Buena Belle.....	14		Kalispell
Young, Harold Conway.....	89½	P.	Three Forks
Zeh, William Herman.....	73	F.	Elkhart Lake, Wis.

MUSIC SPECIALS (OVER 16 YEARS OF AGE)

Beebe, Hope Idaho.....			Missoula
Buck, Hollys Virginia.....			Stevensville
Cleary, Mrs. George E.....			Missoula
Davis, Erma Louise.....			Missoula
Dickey, Dorothy May.....			Missoula
Gessner, Ida Whilhelmina.....			Glendive
Hartman, Eudora Louise.....			Missoula
Hassler, Donna Gertrude.....			Missoula
Hoblitt, Florence R.....			Missoula
Jones, Margaret Hannah.....			Missoula
Long, Beatrice.....			Lincoln, Nebr.
McCormick, Jennie Lucile.....			Missoula
McDermott, Genevieve.....			Missoula
McLeod, Mrs. Olive Wheeler.....			Missoula
McMurry, Mrs. Grace.....			Missoula
Manley, Irene.....			Florence
Marshall, Jean.....			Missoula
Metcalf, Gladys Irene.....			Finn
Myers, Mary Frances.....			Corvallis
Neff, Mrs. Charles Melvin.....			Missoula
Nelson, Helen Hildora.....			Missoula
Nicholson, Margaret Ellen.....			Missoula
Olson, Lorena Dale.....			Missoula
Pope, Marshall Thomas.....			Wisdom
Pope, Mrs. Walter L.....			Missoula
Rollins, Rae.....			Florence
Sanders, Ursula.....			Missoula
Shunk, Shirlie B.....			Missoula
Swain, J. W.....			Missoula
Therriault, Anna Henrietta.....			Missoula
Thompson, Jean Sloane.....			Missoula
Vincent, Geneva.....			Hamilton
Waite, Mildred Evelyn.....			Missoula
Walker, Phoebe Howell.....			Missoula
Walsh, Helen Elizabeth.....			Missoula
Weisel, Mrs. Thula Toole.....			Missoula
Wooster, LeVieve.....			Missoula

PHARMACY "WAR SPECIALS"

Davis, Milas Eldon.....	Ft. Missoula
Downs, Blaine.....	Ft. Missoula
Emery, George W.....	Ft. Missoula
Fox, Edward Alexander.....	Ft. Missoula
Normand, Herman.....	Ft. Missoula
Perring, Ray A.....	Ft. Missoula

SHORT COURSE FORESTRY STUDENTS

Berglund, William	Zortman
Cranston, Leon J. H.	Porterville, Calif.
Daigle, Fred Alfred	Alberton
Eagan, Fitz W.	Hope, Idaho
Gallano, Joseph Alexander	Whitefish
Hubbard, Charles Mills	Deer Lodge
Mitchell, A. C.	Hamilton
Urquhart, James Crete	Kamish, Idaho
Valentine, John Martin	Prospect
Zeh, Herbert	Elkhart Lake, Wis.

CORRESPONDENCE STUDENTS

Anderson, Mabel	Valier
Barnett, Ruth	Glendive
Barnes, Carmelita V.	Oak Grove, Mo.
Brown, Gladys	Thompson Falls
Cody, Mary E.	Butte
Curtis, Elizabeth	Butte
Davey, Mrs. Mary R.	Butte
Day, Bessie J.	Drummond
Darlington, Nora	Superior
Dengler, Harry	Potomac
Fuson, Richard C.	Corvallis
Geenen, Mabel	Butte
Hanratty, Mrs. Agnes	Helmville
Hapner, Leora M.	Bozeman
Haswell, Laura Cool.	Great Falls
Ireland, Elizabeth	Have
Kemper, Lucy	Butte
Leary, Grace M.	Eureka
McGrady, Anna L.	Anaconda
Madison, F. H.	Hardin
Payne, Lillian	Missoula
Poindexter, Jessie C.	Harlowton
Pond, Carrie	Hamilton
Porter, Ruth E.	Pleasant Valley
Riechel, Mrs. Wade	Aznoe
Shepard, George R.	Custer
Simons, Bertha E.	Butte
Spurgin, Minnie	Missoula
Stimson, Claude W.	Missoula
Stone, Margaret Garvin	Dillon
Troyer, Charles P.	Creston
Waltemate, Beulah	Missoula
Wanderer, Myrtle	Boulder
Ward, Mrs. J. W.	Kalma
Ward, Fred J.	Brockway
Weidmar, Frank	Manhattan
White, Millard C.	Wagon Wheel Gap, Colo.
Wilson, Louis J. (Mrs.)	Broadview
Woll, Lena K.	Barnes, N. D.

EXTENSION CLASS—CURRENT EVENTS

Baker, Agnes	Missoula
Bell, Mrs. W. B.	Missoula
Berry, Agnes	Missoula
Fisher, Ida L.	Missoula
Hanson, Miss Josephine	Missoula
Hollensteiner, Miss	Missoula
McDonald, Miss Louise	Missoula

Monroe, Gussie	Missoula
Palmer, Kate L.	Missoula
Palmer, Mabel	Missoula
Palmer, Grace	Missoula
Payne, Lillian	Missoula
Ratterman, Anne	Missoula
Ratterman, Louise	Missoula
Sleeman, Florence	Missoula
Taylor, Miss E.	Missoula
Twomey, Miss Jane	Missoula
Williams, Mrs.	Missoula

EXTENSION COURSE—TEACHING OF ARITHMETIC

Byrne, Katherine	Butte
Feeley, Emma	Butte
Fitzgerald, Mary	Butte
Holland, Margaret	Butte
Lambrecht, Jeanette	Butte
Lynch, Veronica	Butte
Lynch, Lorretta C.	Butte
Nevin, Kate T.	Butte
Nicol, Ruth	Butte
Oestrich, Ethel	Butte
Platt, Lina	Butte
Sullivan, Margaret	Butte
Simons, Bertha	Butte

EXTENSION COURSE—GENETIC PSYCHOLOGY

Abbott, Newton C.	Have
Aebly, Lena F.	Have
Anderson, Nora E.	Have
Barnhill, Edith	Have
Barnhill, Ethel	Have
Bondeson, Selma	Have
Bulen, Ruth	Have
Carrier, Harriet E.	Have
Chittick, Elva L.	Have
Chittick, William A.	Have
Clack, Mrs. H. Earle	Have
Easter, Grace M.	Have
Hoffland, Henry H.	Have
Ireland, Elizabeth	Have
Johnson, Stella H.	Have
Kennedy, Hazel C.	Have
deLorimier, Cecilia R.	Have
Maris, Jeanne	Have
Moncrief, Frances	Have
Myhre, Ida M.	Have
O'Neil, Madeline	Have
O'Shanesy, Mildred	Have
Phifes, Maud H.	Have
Sutherland, Agnes R.	Have
Switzer, Elsie S.	Have
Wheeler, Maud E.	Have
Wilkie, Margaret	Have

EXTENSION COURSE—MODERN DRAMA

Boland, Iva	Butte
Brady, Mary M. (Visitor)	Butte
Breslin, Sarah	Butte
Burt, Mamie E.	Butte
Doughty, Mrs. Mary T.	Butte

Dunshee, Mrs. Fannie B.....	Butte
Kelley, Isabel M.....	Butte
McDonald, Elizabeth.....	Butte
McDonald, Marguerite M.....	Butte
McGovern, Stella.....	Butte
Montgomery, Cora.....	Butte
O'Brien, Jane Alexander.....	Butte
O'Donnell, Teressa.....	Butte
O'Leary, Edythe.....	Butte
Quigley, Margaret.....	Butte
Quigley, Mary.....	Butte
Roberts, Mrs. Ina Streete.....	Butte
Rue, Mrs. Mollie Vernon.....	Butte
Swanson, Elvera.....	Butte

SUMMER SESSION—1917

Acker, Anabel.....	White Sulphur Springs
Albertson, Genevieve.....	Twin Bridges
Allen, Genevieve F.....	Fairview
Anderberg, Edith L.....	Cohagen
Anderberg, Mabel C.....	Cohagen
Anderson, Alma C.....	Helena
Anderson, Alma May.....	Joliet
Anderson, Esther O.....	Ridge
Armstrong, Grace E.....	Anaconda
Arnot, Ruth Lillian.....	Conrad
Baman, Mayme C.....	Belgrade
Barnett, Grace T.....	Missoula
Barnett, Ruth.....	Missoula
Bingham, Elva M.....	Helena
Black, Martha A.....	Idaho Falls, Idaho
Blackburn, Antoinette M.....	Atlanta, Ga.
Blackstone, Jessie E.....	Anaconda
Blodgett, Rachel N.....	Orleans, Nebr.
Bober, Mandell M.....	Passaic, N. J.
Bockes, Charlotte M.....	Windham
Boles, Alice M.....	Missoula
Boles, Mary A.....	Missoula
Boone, Katherine.....	Missoula
Boyd, Gail Agnes.....	Boyd
Brooks, Lillian J.....	Butte
Brown, Gladys K.....	Glendive
Bulen, Ruth.....	Missoula
Burke, Mary Elizabeth.....	Missoula
Burke, Monica F.....	Missoula
Cameron, Lulu.....	Missoula
Carroll, Mathew V.....	Missoula
Catlin, Florence.....	Anaconda
Caves, Millie Marie.....	Malta
Chisholm, Ruth A.....	Bonnors Ferry, Idaho
Clement, Margaret H.....	Sidney
Colvin, Frances Alice.....	Big Timber
Coucher, Marguerite.....	Missoula
Cox, Helen Grace.....	Kalispell
Craig, Ralph S.....	Collins
Crandall, Miss Jim.....	Charleston, Ark.
Culmer, Orpha.....	Missoula
Davis, Arnim A.....	Billings
Davis, Ruth M.....	Butte
Dawe, William H.....	Missoula
Delaney, Sue Ellen.....	Bristol, Tenn.
Delaney, Wm. F.....	Lehigh
Dobler, Augustine H.....	Hingham

Dodds, Mrs. Mabel Pratt.....	Missoula
Donohue, Dorothy A.....	Missoula
Donohue, Eileen.....	Missoula
Driscoll, Marie E.....	Butte
Duffield, Ethel.....	Joliet
Duffield, Elizabeth M.....	Joliet
Dunbar, Mrs. Ida L.....	Wauseon, Ohio
Dunn, Romantes Henry.....	Corvallis
Dykema, Jessie D.....	Madison, Wis.
Ellinghouse, Bertha E.....	Missoula
Evans, Mary.....	Missoula
Everett, Florence M.....	Wallace, Idaho
Farrell, Katherine H.....	Butte
Felker, Mrs. Jessie.....	Missoula
Felker, Preston R.....	Missoula
Finn, Susie M.....	Butte
Fisher, Ida Luella.....	Missoula
Fonner, Delma.....	Spokane, Wash.
Forbes, Lucius E.....	Harlowton
Foster, Rose.....	Great Falls
Fox, Mrs. Geo. F.....	Missoula
Francisco, Annette.....	Russell
Gallagher, Merle C.....	Hawley, Minn.
Gardner, Grace L.....	Kalispell
Garvin, Margaret (Mrs. Percy Stone).....	Dillon
Gault, Frank G.....	Great Falls
Getz, Mrs. Carol O'D.....	Billings
Gibbons, Mrs. Clair B.....	Stevensville
Gibbons, Delia I.....	Butte
Gibbons, Deborah F.....	Butte
Gilbert, Margaret.....	Brooklyn, N. Y.
Golder, Violet May.....	Missoula
Goodwin, Helen D.....	Helena
Gullard, Manda Palma.....	Acton
Gwin, Ira A.....	Sunburst
Hanson, Nettie O.....	Taylor, Wis.
Hapner, Leora M.....	Bozeman
Harrington, Kathryn C.....	Butte
Harry, Arthur Edward.....	Missoula
Hartley, Leslie E.....	Silesia
Hartney, Katherine W.....	Dupuyer
Hemmick, E. Lenore.....	Missoula
Henderson, Helen W.....	Somers
Henderson, Mary J.....	Hall
Hickey, Charles T.....	Roosevelt, Minn.
Ireland, Elizabeth.....	Havre
Ireland, Russell A.....	Pendleton, Ind.
Irving, Florence C.....	Missoula
Jacobson, Esther.....	Missoula
Jeffries, Bess O.....	Orchard Homes
Jemison, Marion B.....	Missoula
Johnson, Annie.....	Missoula
Johnson, Rea M.....	Missoula
Jones, Josie J.....	Missoula
Jones, Mabel E.....	Missoula
Kain, Elsie M.....	Stevensville
Kao, Pearl E.....	Froid
Keas, Minnie.....	Hillsdale, Mich.
Kelly, Madeline A.....	Missoula
Kennedy, Barbara K.....	Butte
Kennedy, Margaret C.....	Grafton, Ill.
Kerlaouezo, Armand V.....	Southern Cross
Kimmel, Thelka Dorothy.....	Verdon, S. D.

King, Dean	Kalispell
Kirkwood, Bertha May.....	Missoula
Knapton, Alice B.....	Dodson
Koenig, Otilie	Parkston, S. D.
Lamb, Henry	Laurel
Lane, Anna I.....	Butte
Larson, Carrie	Valier
LeClair, Hazel A.....	Froid
LeMere, Anna R.....	Miles City
Lemon, Allan C.....	Culbertson
Lennstrend, Tesla V.....	Missoula
Lester, Geo. A.....	Forsyth
Lewis, Mary C.....	Bozeman
Lindberg, Edith	Missoula
Lombard, Madelyn H.....	Missoula
McAlmon, George A.....	Billings
McCann, Lucy Anna.....	Big Timber
McCann, Mary T.....	Big Timber
McCarthy, Edward C.....	Drummond
McCormick, Marfa Aileen.....	Lawrence, Kansas
McDaniel, Elva E.....	Florence
MacDonald, Agnes	Anaconda
Maben, Mrs. Constance.....	Missoula
Madison, Fred H.....	Missoula
Mann, Anna C.....	Missoula
Manning, Helen M.....	Hysham
Manning, Irene H.....	Hysham
Mantley, Elizabeth J.....	Stockett
Mantley, Isabel W.....	Stockett
Marsh, Hilda F.....	Missoula
Masters, Myrtle M.....	Sweet Springs, Mo.
Matsler, E. Russell.....	Radersburg
Metcalf, Mrs. H.....	Stevensville
Morgan, Eva Mae.....	Joliet
Murphey, Caroline	Terry
Murphy, Norine B.....	Helena
Nick, M. Lucile	Deer Lodge
Nichols, Martha C.....	Geary, Okla.
Nichols, Stella	Geary, Okla.
Nicolls, Agnes	Sidney
Ninnemann, Hilda M.....	Westby
Nooney, Margaret A.....	Necedah, Wis.
Nutterville, Catherine	Butte
Nutting, Ruth A.....	Laurel
O'Connell, Suse L.....	Marysville
Omta, Anna Marie.....	Bozeman
Orra, Gertrude Mary.....	Missoula
Payne, Lillian M.....	Missoula
Phillips, Frank	Missoula
Pierce, Edna L.....	Forest Grove
Pierson, Esther M.....	Missoula
Poole, Anna M.....	Butte
Porter, Ruth E.....	Libby
Powell, Anna G.....	Ridge
Prescott, Doris	Missoula
Prestbye, E. C.....	Kalispell
Price, E. E.....	Eureka
Price, Frances C.....	Eureka
Putney, Emma M.....	Missoula
Rafferty, Mary R.....	Missoula
Railsback, Jessie A.....	Billings
Ray, Willis E.....	Sidney
Reardon, Leo F.....	Missoula

Ribble, Bel	Detroit, Mich.
Rice, Alice Mabel.....	Hettinger, N. D.
Richardson, Margaret.....	Spokane, Wash.
Roberts, Mrs. Bertha M.....	Missoula
Roseman, Mrs. Georgiana.....	Missoula
Rutherford, William L.....	Cascade
Rutledge, Bessie	Missoula
Sandstrom, Esther	Victor
Sandstrom, Olga	Victor
Sanford, Emmett Ried.....	Missoula
Scherrer, Amelia Rose.....	Helena
Schilling, Elsie J.....	Missoula
Schmidt, Manila Rose.....	Fort Missoula
Shindler, Gladys A.....	Portage
Shope, Irene	Missoula
Shuart, Clara	Stevensville
Shull, Mary	Missoula
Shull, Zona	Missoula
Singleton, Ethel E.....	Reserve
Sloane, Ona M.....	Missoula
Smalley, Thomas E.....	Lavina
Smith, Ethel E.....	Paxton
Sorenson, Thora A.....	Coalridge
Spencer, Alice E.....	Sloan, Iowa
Specht, Edward J.....	Priest River, Idaho
Spriggs, Josephine L.....	Helena
Staples, Della	Harlem
Steffen, Theodore H.....	Moore
Steffen, Vera K.....	Moore
Sanderson, Irene	Monroe, Wash.
Stephenson, Derrick A.....	Missoula
Sterling, Jack W.....	Missoula
Stetson, Isetta M.....	Deer Lodge
Stipe, Florence M.....	W. Unity, Ohio
Streit, Alma C.....	Missoula
Strong, George A.....	Priest River, Idaho
Swanson, Bertha B.....	Potomac
Taft, Harriet E.....	Lavina
Taylor, Clyde	Custer
TeSelle, Mary Edith.....	Manhattan
Thompson, Howard E.....	Boulder
Thompson, Leta Mae.....	Anaconda
Tintinger, Violet L.....	Silesia
Troeltsch, Elsa M.....	Philipsburg
Turcott, Geo. L.....	Ruby
Twomey, Hanorah Jane.....	Julesburg, Colo.
Utley, Maytie	Missoula
VanCleve, Gretchen	Custer
Waltemate, Beulah	Missoula
Way, Harold H.....	Ballantine
Wayne, Margaret	Tacoma, Wash.
Wellman, Naida Olive.....	Augusta
Wheeler, Aida Laure.....	Missoula
Whitham, Belle M.....	Laurel
Whiting, June	Missoula
Williams, Ella A.....	Waukon, Iowa
Wilson, Irma	Hamilton
Wilson, Mrs. Louis J.....	Billings
Woehner, Walter A.....	Great Falls
Woods, Ella	Missoula
Wright, Mary Della.....	Missoula
Wyatt, W. R.....	Philipsburg
Young, Leta Mildred.....	West Unity, Ohio

MUSIC SPECIALS—SUMMER SESSION

Berry, Virginia H.	Missoula
Clark, Pearl E.	Missoula
Colby, Florence	Missoula
Daugherty, Bessey L.	Cameron, Mo.
Effinger, Vivian	Missoula
Fraser, Afton L.	Missoula
Fraser M.	Missoula
Griffin, Stella	Missoula
Hansen, Stelle M.	Missoula
Hartman, Edora L.	Missoula
Hassler, D. Gertrude.	Missoula
Hoblitt, Florence	Missoula
James, Opal Naomi.	Missoula
Little, Zella D.	Twin Bridges
McDermott, Genevieve	Missoula
McDonald, Katherine	Missoula
Marshall, Dorothy E.	Missoula
Olson, Lorena D.	Missoula
Pease, Gertrude L.	Missoula
Pope, Mrs. W. L.	Missoula
Ritchey, Catherine	Missoula
Shaughnessy, Ceilia R.	Missoula
Smith, Fanny W.	Butte
Stephens, Harvey M.	Missoula
Stone, Emerson	Missoula
Turner, Maude McC.	Missoula
Walker, Phoebe H.	Missoula
Whitham, Miriam B.	Laurel
Williams, A.	Missoula
Stillwell, Stella	Missoula

STUDENTS AT BIOLOGICAL STATION

Sherwood, Faith	Libby
Brady, Helen	Bancroft, Wis.
Kolbensen, Margaret	Laurel
Cannon, Ida M.	Cambridge, Mass.
Dunkle, M. B.	Hope, Idaho
Brewer, Elias	Hardin
Danforth, Charles H.	St. Louis, Mo.
Claycomb, G. B.	Missoula
Summer, Sarah E.	Missoula
Pellins, Myra C.	Lo Lo
Wells, Caroline	Missoula
Shoup, Mittie L.	Missoula
Walvoord, Cornelia	Buffalo

SUMMARY OF REGISTRATION

	1916-17			1917-18		
	Men	Women	Total	Men	Women	Total
College of Arts and Science.....	171	255	426	151	276	427
School of Law.....	59	3	62	26	6	32
School of Pharmacy.....	20	3	23	11	9	20
School of Forestry.....	44	....	44	37	....	37
School of Journalism.....	23	11	34	10	29	39
School of Music.....	8	38	46	3	46	49
Totals.....	325	310	635	238	366	604
Forestry Short Course.....	31	....	31	10	....	10
Pharmacy "War Specials".....	....	....	....	6	....	6
Special Class in Phys. Educ.....	....	18	18	....	....	....
Correspondence Study.....	47	22	69	9	30	39
Extension Courses.....	1	52	53	3	74	77
Summer Session.....	89	244	333	53	226	279
Totals.....	493	646	1139	319	696	1015
Counted Twice.....	32	46	78	15	59	74
Grand Totals.....	461	600	1061	304	637	941

SUMMARY BY COUNTIES AND STATES

1917-18

Beaverhead County	7
Big Horn County.....	1
Blaine County	7
Broadwater County	5
Carbon County	15
Carter County	1
Cascade County	36
Choteau County	4
Custer County	5
Dawson County	9
Deer Lodge County.....	21
Fallon County	2
Fergus County	11
Flathead County	20
Gallatin County	12
Granite County	8
Hill County	31
Jefferson County	4
Lewis and Clark County.....	24
Lincoln County	5
Madison County	13
Meagher County	3
Mineral County	4
Missoula County	300
Musselshell County	4
Park County	5
Phillips County	4
Powell County	16
Prairie County	2
Ravalli County	66
Richland County	7
Rosebud County	7
Sanders County	9
Sheridan County	6
Silver Bow County.....	98
Stillwater County	6
Sweet Grass County.....	10
Teton County	13
Toole County	5
Wheatland County	2
Wibaux County	2
Valley County	1
Yellowstone County	31
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Total Montana	842
Other States	99
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	941

Register of Alumni

Names marked * are of Alumni in War Service.

Ade, Harry George, B.S. (Forestry) ('15)	Missoula
Allen, Edgar Warren, Ph.C. ('10)	Red Lodge
Allen, Edward Dudley, B.S. (Biology) ('15)	
	Rush Medical College, Chicago
Allison, Herman Thomas, B.A. (Mathematics) ('13)	
	Puget Sound Light & Water Co., Seattle, Wn.
Ambrose, Ethel O. (Mrs. H. L. Hitchcock) B.A. (Literary) ('08)	
	4571 Fountain Ave., Los Angeles, California
Anderson, John Frederick, B.S. (in M. E.) ('02) (Deceased Oct. 3, 1910)	
Anderson, Laura, B.S. (Home Economics) ('16)	
	Rhode Island State College, Kingston, R. I.
Andrews, Almeda (Mrs. C. F. Farmer) B.A. (Classical) ('09)	Missoula
*Angevine, Eugene E., Ph.C. ('17)	Missoula
*Armitage, George, B.A. (Journalism and Commerce & Acct.) ('14)	
	Great Falls
Averill, Cora (Mrs. N. S. Poole) B.A. (Classical) ('07)	Townsend
Averill, Frances Hale, B.A. (Literature) ('11)	Billings
Avery, Charles Earl, B.Ph. ('00)	Anaconda
Avery, Myrtle Weber (Mrs. Chas. E. Avery) B.S. (Classical) ('03)	
	(Deceased July, 1914)
Bachelor, Elwin Paul, B.A. (Law) ('15) LL.B. ('16)	Miles City
Bachelor, Harold Irving, B.A. (Law) ('15) LL.B. ('16)	Miles City
*Baird, Alva C., B.A. (Law) ('16)	Stevensville
Baker, Leo Walter, B.S. (Engineering) ('12)	Schneectady, N. Y.
Barnes, George, Rev., B.A. (Classical) ('02) (D.D., Oxford University)	Battle Creek, Mich.
Bauer, Charles E. M., B. A. (Psychology and Education) ('16)	Hingham
*Baxter, Galin Otis, B.A. (History and Economics) ('16)	Harlowton
Beavers, George Edward, B.S. ('09)	Billings
Bellew, Zoe (Mrs. Sidney M. Ward) B.A. ('99) M.A. ('02)	Hamilton
Bennett, William Andrew, B.A. (Economics) ('11)	Belgrade
Berry, Agnes Dorothea, B.A. (Literary) ('08)	Missoula
Berry, Oral J., B.S. ('08)	Silver City, New Mexico
Birdsall, Frances, B.A. (Fine Arts) ('16)	Minneapolis, Minn.
Birely, Esther, B.A. (English) ('14)	Billings
Bishop, Arthur Fowler, B.S. (Forestry) ('11)	Ovando
Bishop, Jessie May (Mrs. E. P. Giboney) B.A. (Literary) ('05)	
	Seattle, Wash.
*Blake, Harold, B.S. (in M. E.) ('02) Major Commissary Dept.	
	Anaconda
Blomgren, Ethel Elizabeth, B.A. (Mathematics) ('17)	Powell, Wyoming
Bol, Cornelius, B.S. (Physics) ('14)	Palo Alto, Calif.
*Bonner, James Henry, B.S. (Engineering) ('07)	Missoula
Bovee, Estelle, B.Ph. ('01)	Gendive
Bowman, Conrad Henry, B.A. (History and Economics) ('11)	
	Corvallis
Bradford, Bess Margaret (Mrs. Charles Popkins) B.A. (Literary) ('09)	Sapulpa, Okla.
Brady, Sylvia May (Mrs. Carl Holliday) M.A. (English) ('15)	
	Toledo, Ohio
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 Converse, Earl W., Ph.C. ('13).....Anaconda
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- *Graham, John Wirt, B.A. (Chemistry) ('17).....Nottingham, Penn.
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- Hammer, Walter, B.A. (Literary) ('04).....Hardin
- Hanley, Clarence, LL.B. ('16).....Butte
- Hanon, Jessie (Mrs. Emil Saxl) B.A. (Latin and Greek) ('11).....
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- Hansen, Peter E., B.A. (Education and Psychology) ('15).....Horte, Mont.
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- Herr, Alice, B.A. (Literary) ('04).....(Deceased)
- Hershey, Elizabeth, B.A. (English) ('17).....Round Butte
- Heyward, Gladys Loie (Mrs. Abbot Sylva) B.A. (Literature) ('13).....
Hamilton
- Hoblitt, Alvin Bailey, LL.B. ('13).....Missoula
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- Horst, Leo Stuart, B.A. (Economics) ('16).....St. Regis
- Howell, Roxane (Mrs. J. A. Derge) B.A. (Classical) ('04).....
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- Hubert, Ernest, B.S. (Forestry) ('12).....Missoula

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M.D. (Rush Medical College)	Gresham, Oregon
Hunter, Birdie Florence (Mrs. R. A. Lathom) B.A. (Mathematics)	
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Hutchinson, Anne Elizabeth (Mrs. A. R. Sanders) B.S. (Physics)	
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Hutter, Anna Jo (Mrs. Hal Van Eaton) B.A. (Literary) ('07)	
	Winnipeg, Manitoba
Ingalls, Mildred Franklin (Mrs. Geo. Stone) B.A. (Modern Lan-	
guages) ('13)	Missoula
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Irwin, Bessie, B.S. (Botany) ('12)	Ronan
Jackson, Clifton S., B.A. (History and Economics) ('14)	Missoula
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Johnson, Maud Esther, B.A. ('06)	Long Beach, Calif.
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Jones, Frances Margaret (Mrs. John M. Winscott) B.A. (Literary)	
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Jones, Mabel Emily, B.A. (Literary) ('03)	Missoula
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Jordan, Lillian F. (Mrs. L. L. Bendon) B.A. (Literary) ('03)	Glendive
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('99)	Kellogg, Idaho
Kennett, Helene (Mrs. Geo. Wilcox) B.A. (Literary) ('02)	Missoula
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Knowles, Eloise, Ph.B. ('98) (Ph.M., University of Chicago)	
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 Rankin, Grace Evelyn (Mrs. Tom Kinney) B.A. (History and Eco-
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 Rankin, Harriet Laura (Mrs. Oscar Sedman) B.A. (Classical) ('03)
 Washington, D. C.
 Rankin, Jeannette Pickering, B.S. ('02).....Washington, D. C.

- Rankin, Mary Frances (Mrs. Bert Bragg) B.A. (Classical) ('09).....
 Colfax, Wash.
- Rankin, Wellington Duncan, B.S. ('03)..... Helena
- Reardon, Stephen James, B.S. (Engineering) ('11)..... Butte
- Rector, Anna L., B.S. (Commerce and Accounting) ('16)..... Great Falls
- Reely, Marguerite Grace, B.A. (English) ('17)..... Deer Lodge
- *Reid, Edgar Paul, LL.B. ('17)..... Royalton, Virginia
- Rennick, Percy Shelley, B.Ph. ('00) (M.D., Kentucky Medical Col-
 lege) Helmville
- Rhoades, Bess Ann (Mrs. Ernest Hubert) B.A. (Literature) ('15).....
 Missoula
- Richards, Dudley David, B.S. (Geology) ('12)..... Missoula
- *Richardson, Wm. Donald, B.S. (Forestry) ('17)..... Steubenville, Ohio
- Rigby, Eloise (Mrs. R. C. Durnford) B.A. ('03)..... Florence
- Rigby, Ida, B.A. (Literary) ('03)..... (Deceased Feb. 19, 1904)
- Riordan, Benjamin R., B.A., LL.B. ('17)..... Pt. Washington, Wis.
- Robb, Josie May (Mrs. Joseph Lynch) B.A. ('06)..... Burley, Idaho
- Robertson, Annabelle (Mrs. Walter Marshall) B.A. (Latin and
 Greek) ('12) Deer Lodge
- Robertson, A. J., B.A. (Law) ('16)..... Univ. of Minn., Minneapolis
- Robinson, Lloyd W., Jr., LL.B. ('16)..... Great Falls
- *Robinson, Verne E., B.A. (Law) ('17)..... Great Falls
- Rolfe, Lucia Ione (Mrs. Chas. Pierre) B.A. (Latin and Greek)
 ('11) Stanford
- Rolfe, Martha Edith (Mrs. Maxwell) B.A. (Modern Languages)
 ('10) Butte
- Ronan, Katherine (Mrs. E. C. Trask) B.A. (Classical) ('02).....
 Copperopolis, Cal.
- Ronan, Margaret, B.A. (Classical) ('02)..... Missoula
- Ross, Marjorie (Mrs. Howard Toole) B.A. (Modern Languages)
 ('11) Missoula
- *Ryan, William Emmett, B.S. (Geology) ('12)..... Valier
- Saner, Grace Yates, B.A. (English) ('14)..... St. Ignatius
- Satterthwaite, Roberta, B.A. (Literature) ('10).....
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- Savage, Azelie Agnes, B.A. (Modern Languages) ('12)..... Ronan
- Schoonover, Charles Edward, B.A. (Classical) ('05).....
 (Deceased March 21, 1909)
- Schug, Harry Penman, B.A. (Education and Psychology) ('16)..... Nelson
- Scott, Mary Mildred, B.S. (Library Science) ('17)..... Malta
- Scott, Pearl (Mrs. Fritz Kroger) B.A. (Classical) ('02)..... Philipsburg
- Seifert, Regina Irene, B.A. (Mathematics) ('17)..... Two Dot
- Selfridge, Bernice, B.A., LL.B. ('15)..... Butte
- Sestak, Bessie, B.A. (English) ('16)..... Missoula
- Sestak, Rosa, B.A. (English) ('16)..... Conrad
- Sewell, Harry Fisher, LL.B. ('15)..... Conrad
- *Sheedy, Christopher C., Ph.C. ('15)..... Missoula
- Sheridan, Guy Emerson, B.S. ('02)..... 659½ W. Granite St., Butte
- Sheridan, Leslie Mitchell, B.S. (in M. E.) ('03)..... Anxoy, B. C.
- Shope, Irene, B.A. (History) ('17)..... Worden
- Shull, Florence Josephine (Mrs. Henry Haxo) B.A. (History) ('15).....
 Missoula
- Shull, Helen Elizabeth, Ph.C., B.S. (Pharmacy) ('17)..... Stevensville
- Shull, Mary Patience, B.S. (Botany) ('13)..... Ronan
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- Siedentopf, Marie Charlotte, B.A. (Modern Languages) ('17)..... Miles City
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- *Simpkins, Claude, B.A. (Chemistry) ('16)..... Missoula
- Simpkins, Edward, B.S. (Forestry) ('17)..... Kalispell
- Simpson, Bertha, B.Ph. ('01) (Mrs. Dr. W. H. Harrison)..... Missoula
- Simpson, Blanche (Mrs. Frank Borg) B.A. (Literary) ('05)..... Missoula

Simpson, Morton Dixon, B.S. (Engineering) ('11)	Butte
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Sleeman, Florence, B.A. (History and Economics) ('12)	Missoula
Sloane, Ona Mansfield, B.A. ('06)	Missoula
*Sloan, Royal Daniel, B.S. (Engineering) ('13)	Great Falls
Smead, Helen Antoinette (Mrs. O. M. Harris) B.S. ('08)	Missoula
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Smith, Louise Elizabeth (Mrs. C. F. Dobson) B.A. (Modern Languages) ('13)	Great Falls
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Stabern, Suzanne (Mrs. Geo. F. Graham) B.A. (Mathematics) ('13)	Mineola, Long Island
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Stephenson, D. A., LL.B. ('17)	Missoula
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Thieme, Florence Ethel (Mrs. Ray Hamilton) B.A. (Classical) ('09)	Missoula
Thieme, Fred E., B.S. (Engineering) ('12)	Missoula
Thomas, Evalyn, B.A. (Modern Languages) ('17)	Judith Gap
Thompson, Iva Blanche, Ph.G. ('16)	Anaconda
Thompson, Oscar James, LL.B. ('13)	Circle
Tope, Joseph C., A.B. (Law) ('15) LL.B. ('16)	Terry
*Tow, William Melton, M.A. (Economics) ('15)	Judith Gap
Uline, Augusta Diana (Mrs. Arthur F. Grove) B.S. (Botany) ('15)	Dell Rapids, S. D.
Urey, Harold Clayton, B.S. (Biology) ('17)	The Barrett Co., Frankford, Philadelphia
Valentine, Charles P., Ph.C. ('10) B.S. ('17) (Pharmacy)	Missoula
Van Eman, William Montgomery, B.S. (Engineering) ('09)	Augusta
Van Engelman, Beulah (Mrs. Douglas P. Lucas) B.S. (Biology) ('12)	Missoula
Van Vliet, Ethel May, B.S. (Biology) ('17)	Wilcox, Wash.
Wagy, Debora (Mrs. J. Lee Sedwick) B.A. ('06)	Fort Benton

- Walker, Sidney Elery, B.S. ('00) (LL.B., University of Michigan)
 (Address Unknown)
- Walters, Ray Epperson, B.A. (Classical) ('05).....Larson, Idaho
- Ward, Clarence T., LL.B. ('17).....Pocatello, Idaho
- Ward, Ruth (Mrs. D. I. Grush) B.A. ('06).....Anaconda
- Ward, Sidney Mire, B.Ph. ('01).....Hamilton
- Warren, DeWitt Cregier, B.A. (History and Economics) ('12).....Sidney
- Warren, Lillian, B.A. (Classical) ('07).....(Deceased Feb. 22, 1908)
- Watkins, Gordon, B.A. (History and Economics) ('14).....
Univ. of Illinois, Urbana, Ill.
- Watson, Edith (Mrs. C. H. Keel) B.A. (Classical) ('02).....Red Lodge
- Wear, Helen, B.A. (Latin and Greek) ('12).....Helena
- Weiss, Ralph H., Ph.G. ('17).....Missoula
- Welch, Alice Brown, B.A. (Literary) ('07).....San Diego, Calif.
- Wells, Lansing Sadler, B.A. (Chemistry) ('15).....Champaign, Ill.
- Wells, Roscoe Ward, B.A. (Economics) ('13).....Bozeman
- Wenger, Edward Angus, B.S. (Engineering) ('08).....Anaconda
- Wenzel, Harry E., B.S. (Commerce and Accounting) ('16).....
Fond du Lac, Wis.
- Westby, George Cutler, B.S. (in M. E.) ('01) M.S. ('09).....Ely, Nevada
- Wharton, Caroline Pack (Mrs. Edgar Wilde) B.S. (Biology) ('12)
Butte
- Whipple, Gertrude A., B.A. (Modern Languages) ('12).....Harlowton
- Whisler, Fred Herbert, B.S. (Forest Engineering) ('15).....Missoula
- Whitaker, Helen Margaret (Mrs. Chas. Donnelly) B.A. (Modern
 Languages) ('10).....Anchorage, Alaska
- *Whitaker, Jocelyn Alfred, B.S. (Botany and Forestry) ('14).....Seattle
- Whitesitt, Roy Newton, B.A. (Literary) ('08).....Stevensville
- Whiting, June, B.A. (Literature) ('14).....Polson
- Weidman, Henry Raymond, LL.B. ('14).....Whitefish
- Wilde, Bessie May (Mrs. R. G. Bailey) B.A. (Modern Languages)
 ('14).....Missoula
- Wilhelm, Hedda, B.A. (Modern Languages) ('17).....Helena
- Williams, Edward, B.A. (Classical) ('05).....Hotel Lenox, Portland, Ore.
- Williams, Lillian (Mrs. Charles Kelly) B.A. (Literature) ('11).....
Deer Lodge
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- Wilson, Katherine Clara, B.Ph. ('01).....E. Aurora, N. Y.
- Wilson, Roy Arthur, B.S. ('16) M.A. ('17) (Geology).....
5318 Maryland Ave., Chicago, Ill.
- Winninghoff, Wilford Joseph, B.S. (Chemistry) ('10).....E. Orange, N. J.
- Winstanley, Edward Alexander, B.S. (Geology) ('12).....Los Angeles, Cal.
- Woehner, Walter A., Ph.C. ('17).....Missoula
- Woodward, Henry Guy, M.A. (Mathematics) ('15).....Frankfort, Mich.
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- Young, Donald B., A.B. (History and Economics) ('15).....Superior
- *Young, Earl, Ph.C. ('10).....Great Falls

HONORARY DEGREES CONFERRED

1901

Thomas H. Carter, LL.D.....(Deceased, Sept. 17, 1911)
United States Senator.

1902

Joseph K. Toole, LL.D.....Helena
Ex-Governor of Montana.

1904

Hiram Knowles, LL.D.....(Deceased, April 7, 1911)
United States Judge.

1909

Howard Taylor Ricketts, LL.D.....(Deceased, May 3, 1910)
Professor, University of Chicago.

LAW CERTIFICATES GRANTED

Brown, James M. ('16).....War Risk Insurance Dept., Washington
*Cummins, Edwin John ('16).....Missoula
Friday, R. C. W. ('17).....Missoula
*Gwin, Ira A. ('17).....Sunburst
Judson, Horace W. ('16).....Great Falls
*O'Sullivan, Emmet M. A. ('17).....Denmark, W. Australia
Ray, Willis E. ('17).....Deer Lodge
Tyman, Charles L. ('17).....Butte
Wuolle, Onni August ('17).....San Francisco, Calif.

INDEX

Page	Page		
Absence, Regulations	21	Drawing	85
Accredited High Schools.....	17	Economics	47
Admission, Committee on.....	11	Education	50
On Examination	17	English	52
Of Special Students.....	18	Fine Arts	55
On Certificates	16	Forestry	30
Requirements	16	French	55
To Advance Standing.....	18	Geology	56
With Conditions	16	German	66
Advanced Degrees	78	Greek	62
Advanced Standing	18	History	57
Advisers, Committee on.....	11	Home Economics	58
Alumni, Register of.....	136	Journalism	90
Archives, Committee on.....	11	Latin	62
Arts and Sciences, College of.....	37	Law	94
Astronomy, Courses	65	Library Science	63
A. S. U. M.	31	Mathematics	64
Fee	23	Military Drill	66
Athletic Association, High School	35	Military Science	65
Athletics	34	Mineralogy	56
Athletics, Committees on.....	12, 34	Modern Languages	66
Attendance, Regulations	21	Music	104
Baccalaureate Degrees	19	Pharmacy	108
Bennett Prize	29	Philosophy	72
Biological Station	40, 115	Physical Education	67
Biology Courses	38	Physics	70
Board at Dormitory, Cost of.....	26	Political Science	57
Board, Executive	7	Pre-Medical	102
Board of Education, State.....	Inside Cover	Psychology	72
Bonner Scholarship	28	Public Speaking	54
Books for Scholarship.....	30	Sociology	49
Books in Library	35	Spanish	67
Botany Courses	41	Summer Quarter	111
Buildings	15	Couse Scholarship	28
Bureau of Information.....	77	Craig Hall	16, 33
Business Administration, Courses	42	Credits, Admission	16
Calendar	4	For Graduation	18
Calendar, University	5, 6	Curriculum, Committee on.....	12
Campus, The	2, 15	Debating Contests	33
Certificate of Qualification to		Debating Courses	54
Teach	20	Debating League, High Schools.....	35
Certificates of Admission.....	16	Defense, Council of	31
Certified Public Accountancy.....	19	Degrees	19
Examiners for	13, 19	Deposits	23, 24, 25, 26
Chairmen of Departments.....	12	Directory, Official	7
Chancellor	7	Distributing Committee	12
Charter Day	6	Dormitory for Women.....	16, 33
Chemistry Courses	45	Dramatic Club	32
Choral Society	32, 107	Drawing Courses	85
Christian Associations	32	Duniway Prizes	30
Christmas Holidays	5, 6	Economics Courses	47
Class Day	5	Education Courses	50
Class of 1904 Prize.....	30	Elective Courses	18, 19
College of Arts and Sciences.....	37	Elective, Major	19
Commencement	5	Elective, Restricted	18
Committees of the Faculty.....	11	Employment for Students.....	23
Conditional Admission	17	Engineering, Forest	85
Conduct and Scholarship.....	21	English Courses	52
Contents, Table of	3	Enrollment	117, 134
Convocation, Committee on.....	12	Examination for Admission.....	17
Correspondence Courses	74	Executive Board	7
Council of Defense	31	Expenses	22
County High Schools.....	17	Faculty, The	7, 8, 9, 10, 11
Courses of Instruction:		Faculty Affairs, Committee on.....	12
Astronomy	65	Faculty Committees	11
Biology	38	Fees	23
Botany	41	Payment of	26
Business Administration	42	Refund of	26
Chemistry	45	Fine Arts Courses.....	55
Debate	54	Forestry Courses	80, 82
		Building	15, 16

	Page		Page
Engineering	85	Organization of Instruction.....	36
Lecturers	10, 11	Painting Courses	55
Management	83	Pharmacy Courses	108
Short Course	88	Degrees	108
Admission	81	Pharmaceutical Society	32
Fraternalities, Professional	32	Philosophy Courses	72
French Courses	66	Physical Education, Committee on	
General Information	14-36	For Men	12
Geology Courses	56	For Women	12
German Courses	66	Physical Education Courses.....	67
Glee Club	32, 107	Physical Plant, Committee on.....	12
Graduate Study	78	Physics Courses	70
Graduate Study, Committee on.....	12	Political Science Courses.....	57
Graduation Requirements	18	Pre-Medical Course	103
Greek Courses	62	Press Club	32
Gymnasium	34	Professional Fraternities	32
Gymnasium Classes	68	Prizes	29, 30
High Schools		Psychology Courses	72
Athletic Association	35	Public Accountancy	19
Debating League	35	Committee on	12
Interscholastic Games	35	Board of Examiners.....	13, 19
Lists of	17	Public Information	77
Historical Sketch	14, 15	Public Lectures	75
History Courses	57	Public Service Division.....	74
Holidays	5, 6	Committee on	12
Home Economics Courses.....	58, 59, 60	Public School Music	105
Honor Roll	22	Public Speaking Courses.....	54
Honor Scholarships	27	Publications	31, 33
Honorary Degrees	146	Publications, Student	33
Honorary Fraternities	32	Publicity, Committee on	12
Housing Committees	12	Science Hall	15, 16
Infirmary	16	Rangers' School	88, 89
Instruction, Organization of.....	36	Recommendations, Committee on.....	12
Interscholastic Games	35	Refund of Railway Fare.....	22, 113
Committee on	12	Register of Alumni	136
Journalism Courses	91	Of Students	117
Joyce Medal	29	Registration Days	5, 6
Kaimin	33	Registration Fee	23
Keith Prize	29	Registration, Scholarship Regula-	
Latin Courses	62	tions Affecting	16
Law Courses	94	Registration, Summary of.....	134, 135
Admission	94	Required Courses	18
Degrees	94	Requirements for Admission.....	16
Courses	95	Requirements for Graduation.....	18
Library	94	Rider Art Prize.....	30
Methods	95	Schedule, Committee on.....	12
Special Lecturers	11	Scholarship, Committee on.....	12
Special Students	94	Scholarship and Conduct.....	21
Lecturers in Forestry	10	Scholarship and Registration.....	16
Lectures, Public	75	Scholarship Grades	21
Librarians	11	Scholarships	27
Library, The	35	School of Forestry	80
Library Science, Courses in.....	63	School of Journalism.....	90
Literary Societies	32	School of Law.....	94
Loan Funds	22	School of Music.....	104
Major Electives	19	School of Pharmacy.....	108
Major Requirements (See Each		Schools, High	17
Department)		Science Hall	15, 16
Map of Campus.....	2	Self-Help, Committee on.....	12
Mathematics Courses	64	Sentinel, The	33
Matriculation Fee	23	Shop Work Courses	89
Mechanical Drawing Courses.....	85	Societies	31
Medicine	102	Sociology Courses	49
Memorial Day	5	Spanish Courses	67
Military Drill	66	Special Students, Admission.....	18
Military Science	65	State Board of Education.....	Inside Cover
Military Service Scholarships.....	29	State Fair Exhibit, Committee on.....	12
Military Training, Committee on.....	12	State University, History.....	15
Mineralogy Courses	56	Student Activity Fee	23
Missoula	16	Student Affairs, Committee on.....	12
Modern Languages	66	Student Employment	23
Museum, The	36	Student Loan	22
Music Courses	104	Committee on	12
Tuition	107	Student Publications	33
Music Degrees	104	Students, Register of.....	117
Music Medals	30	Summer Quarter	5, 111
Observation and Practice Teaching		Admission	111
Instruction in	51	Board and Room	113
Office Training, Courses.....	43, 44	Courses of Instruction.....	111
Official Directory	7		

	Page		Page
Credits and Certificates.....	111, 112	University Surroundings	16
Committee on	12	University of Montana, History....	14
Fees	112	Vacations	6, 7
Railway Fare	113	War Activities	31
Refund	113	War Courses	42, 43, 111
War Courses	111	Welfare, Committee on.....	12
Summer Students	129	Woman's Dormitory	33
Surveying Courses	85	Women's Club Scholarship.....	28
Teachers' Certificate of Qualifica- tion	20	Women's League	34
Teachers, Courses for.....	28, 50, 111	Women in the University.....	33
Thanksgiving Day	5	Young Men's Christian Association	32
University Hall	15	Young Women's Christian Associ- ation	32, 34
University Publications, Inside Cover and	31		

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