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VOL. XV NO. 3

ANNUAL CATALOG

1919-1920

MAY, 1920

PUBLISHED QUARTERLY BY THE UNIVERSITY OF IDAHO, MOSCOW, IDAHO



THE UNIVERSITY OF IDAHO BULLETIN

VOL. XV

MAY, 1920

NO. 3

TWENTY-EIGHTH ANNUAL

CATALOG

OF THE

UNIVERSITY OF IDAHO

WITH ANNOUNCEMENTS FOR 1920-1921

PUBLISHED QUARTERLY BY THE UNIVERSITY OF IDAHO, MOSCOW, IDAHO

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1920 CALENDAR 1920																											
JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
4	5	6	7	8	9	10	1	2	3	4	5	6	7	7	8	9	10	11	12	13	4	5	6	7	8	9	10
11	12	13	14	15	16	17	15	16	17	18	19	20	21	14	15	16	17	18	19	20	11	12	13	14	15	16	17
18	19	20	21	22	23	24	22	23	24	25	26	27	28	21	22	23	24	25	26	27	18	19	20	21	22	23	24
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9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
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19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
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JANUARY							FEBRUARY							MARCH							APRIL						
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9	10	11	12	13	14	15	6	7	8	9	10	11	12	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	13	14	15	16	17	18	19	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	20	21	22	23	24	25	26	27	28	29	30	31			24	25	26	27	28	29	30
30	31																										
MAY							JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	5	6	7	8	9	10	11	3	4	5	6	7	8	9	1	2	3	4	5	6	
8	9	10	11	12	13	14	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
15	16	17	18	19	20	21	19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
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29	30	31																									
SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31

CALENDAR OF THE UNIVERSITY

1919-20	First Semester	1920-21
1919		1920
Sept. 13	First Faculty Meeting	Sept. 11
Sept. 13	Condition Examinations	Sept. 11
Sept. 15-16	Registration Days	Sept. 13-14
Sept. 17	All University Exercises begin	Sept. 15
Sept. 17	Freshman Convocation 4 p.m.	Sept. 15
Oct. 13	School of Practical Agriculture begins	Oct. 11
Oct. 14	Creamery Course begins	Oct. 11
Oct. 14	Last Date for Change of Study-List	Oct. 12
Nov. 3	Ranger Course begins	Nov. 1
Nov. 27-30	Thanksgiving Recess	Nov. 25-28
Dec. 19	Christmas Vacation begins 4 p.m.	Dec. 17
1920		1921
Jan. 5	Christmas Vacation ends 8 a.m.	Jan. 3
Jan. 5	Miners Short Course begins	Jan. 3
Jan. 26-31	First Semester Examinations	Jan. 24-29
	Second Semester	
Feb. 2-3	Second Semester Registration	Jan. 31- Feb. 1
Feb. 4	All University Exercises begin	Feb. 2
Feb. 21	Condition Examinations	Feb. 19
Feb. 22	Washington's Birthday	Feb. 22
Feb. 24	Last Date for Change of Study-List	Feb. 22
Feb. 28	Miners Short Course ends	Feb. 26
Mar. 11	School of Practical Agriculture ends	Mar. 9
Mar. 11	Creamery Course ends	Mar. 9
Mar. 27	Ranger Course ends	Mar. 25
Mar. 29- April 4	Spring Vacation	Mar. 21-27
May 30	Memorial Day	May 30
June 7, 8, 10, 11, 12	Second Semester Examinations	June 5, 6, 8, 10, 11
June 9	Commencement	June 7
	Summer Session	
June 14	Summer Session begins	June 12
July 23	Summer Session ends	July 21

ORGANIZATION

- I. The College of Letters and Science
 - (a) Bachelor of Arts Curriculum
 - (b) Bachelor of Science Curriculum
 - (c) Curriculum in Home Economics
 - (d) Pre-Medical Curriculum
 - (e) School of Education
- II. The College of Agriculture
 - (a) Curriculum in Animal Husbandry
 - (b) Curriculum in Dairying
 - (c) Curriculum in Farm Crops
 - (d) Curriculum in Horticulture
 - (e) Commercial Course in Dairying
 - (f) School of Practical Agriculture
- III. The College of Engineering
 - (a) Curriculum in Civil Engineering
 - (b) Curriculum in Electrical Engineering
 - (c) Curriculum in Mechanical Engineering
 - (d) Curriculum in Chemical Engineering
- IV. The College of Law
- V. The School of Mines
 - (a) Curriculum in Geology
 - (b) Curriculum in Mining
 - (c) Curriculum in Metallurgy
- VI. The School of Forestry
 - (a) Curriculum in General Forestry
 - (b) Curriculum in Logging Engineering
 - (c) Curriculum in Grazing
- VII. The Agricultural Experiment Station
- VIII. University Extension
- IX. The Summer Session

STATE BOARD OF EDUCATION

Office of the Secretary of the University of Idaho

PART I.

OFFICERS OF THE
UNIVERSITY

Force, 1918-19; 2d Lieut., 1918; Assistant Professor of Forestry, University of Idaho, 1919—

WILFRED CHARLES BLEAMASTER, B.S., B.P.E., *Professor of Physical Education, and Director of Athletics*

B.S., Grinnell College, 1908; B.P.E., Battle Creek Normal School of Physical Education, 1913; Student of University of Chicago, summers 1910-11; Director of Physical Education and Instructor in Zoology, Carroll College, 1909-12; University of Illinois School for Athletic Coaches and Gymnastic Instructors, summer, 1916; Director of Physical Education and Instructor in Zoology, Alma College, 1912-16; Professor of Physical Education, and Director of Athletics, University of Idaho, 1916—.

ROBERT KLINE BONNETT, M.S.(AGR.), *Professor of Farm Crops*

B.S., Kansas State Agricultural College, 1913; M.S.(Agr.), University of Wisconsin, 1916; Assistant in Farm Crops, Kansas State Agricultural College, 1914-15; Graduate Student, University of Wisconsin, 1916; Student, Graduate School of Agriculture, Amherst, Mass., (Summer) 1916; Instructor in Farm Crops, Kansas State Agricultural College, 1917; Assistant Professor of Farm Crops, 1918; Professor of Farm Crops, University of Idaho, 1918—.

SQUIRE FRED BROWNE, M.A., *Assistant Professor of Economics*

A.B., Columbia University, 1901; M.A., University of Chicago, 1918; Student, Washington University Law School, 1910-11; Principal, Fenton Normal School, Fenton, Mich., 1901-05; Director Extension Work and Instructor in History, Washington University, 1905-09; Director Extension Work, People's University, 1909-13; Lecturer on Advertising, College of Law and Finance, St. Louis 1911-12; Superintendent of Public School, Malden, Mo., 1913-15; Superintendent of Public Schools, Vinton, Iowa, 1916-18; Principal of School of Business and Head of Department of Economics, Huron College, 1918-19; Statistical Investigator for the Federal Government, summer of 1918; Assistant Professor of Economics, University of Idaho, 1919—.

BAKER BROWNELL, A.M., *Assistant Professor of English*

A.B., Northwestern University, 1910; A.M., Harvard University, 1911; Undergraduate Gorham Thomas Scholar, Harvard, 1910; James Walker Traveling Fellow in Philosophy, Harvard, 1912-13; Tuebingen University, Germany, 1912-13; Cambridge University, England, 1913; Chicago Tribune, 1913-14; Editor of *Teaching* and Instructor of English, Kansas State Normal School, 1914-17; U. S. Service, 1917-19; Assistant Professor of English, University of Idaho, 1919—.

CURTIS WORTH CHENOWETH, M.A., *Assistant Professor of English*

B.A., Wesleyan College of West Virginia, 1911; M.A., Harvard University, 1913; Instructor, Harvard University, 1913-18; Instructor, Boston University School of Theology, 1916-18; Instructor, Northeastern Y. M. C. A. College, 1916-18; Student, Oxford University, England, 1919; Assistant Professor of English, University of Idaho, 1919—.

EDWARD ROBERT CHRISMAN, Colonel, U. S. Army, *Professor of Military Science and Tactics*

U. S. Military Academy, 1888; Second Lieutenant, 1888; First Lieutenant, 1895; Captain, 1899; Major, 1911; Lieutenant-Colonel, 1916; Colonel, 1917; Brigadier-General, 1918; Sioux Indian Campaign, 1890-91; Santiago Campaign, 1898; Philippine Insurrection, 1899-1902; Leyte Campaign, 1906-07; Panama Canal Zone and Porto Rico, 1915-19; School of Submarine Mining, 1891-92; Professor of Mathematics, University of Idaho, 1896-98; Professor of Military Science and Tactics, South Dakota State College, 1909-11; Inspector-Instructor, National Guard, New Jersey, 1912-14; Professor of Military Science and Tactics, University of Idaho, 1894-98; 1902-05; 1919—.

ORVILLE PORTER COCKERILL, LL.B., *Professor of Law and Dean of the College of Law*

A.B., Ohio State University, 1902; LL.B., 1905; Student, Uni-

versity of Michigan, 1904; University of Chicago, 1911; Instructor in Mathematics and Chemistry, High-School, Washington Court House, Ohio, 1902-04; Instructor in Chemistry, East High School, Columbus, Ohio, 1904-08; associated with the firm of Griffith, Bennett & Westfall in the practice of law, Columbus, Ohio, 1906-10; Professor of Law, University of Washington, 1910-16; member of the law firm of Grinstead & Laube, Seattle, Wash., 1916-19; Professor of Law and Dean of the College of Law, University of Idaho, 1919—.

HERMAN HENRY CONWELL, M.S., *Associate Professor of Mathematics and Physics*

B.S. (E.E.), Kansas State Agricultural College, 1907; M.S., University of Kansas, 1915; with General Electric Co., Schenectady, N. Y., 1907-08; In charge of Survey Party, U. S. Forestry Service, summers of 1910 and 1911; Graduate Student, University of Chicago, summers of 1909 and 1915; Graduate Student, University of Kansas, summers of 1912, 1913, and 1915; Assistant Professor of Mathematics, University of New Mexico, 1908-11; Associate Professor of Mathematics, 1911-13; Instructor in Mathematics, University of Kansas, 1913-14; Instructor in Mathematics and Physics, University of Idaho, 1915-16; Assistant Professor of Mathematics and Physics, 1916-18; Associate Professor, 1918—.

JOHN HOUSTON CUSHMAN, M.A., *Assistant Professor of English*

B.A., Brown University, 1913; M.A., Harvard University, 1914; Graduate Student, Harvard University, summers of 1915 and 1917; Instructor in English, Syracuse University, 1914-18; Assistant Professor of English, Syracuse University, 1918-19; Assistant Professor of English, University of Idaho, 1919—.

HERBERT PERRY DAVIS, M.S., *Professor of Dairy Husbandry, and Vice-Director of the Agricultural Experiment Station*

M.S. (Agr.), University of Missouri, 1911; M.S., Pennsylvania State College, 1914; Assistant in Dairy Husbandry, University of Illinois, February-June, 1911; Herdsman, Maple Farm of Midlothian, Tinley Park, Ill., June-November, 1911; Assistant in Experimental Dairy Husbandry and Instructor in Dairy Husbandry, Pennsylvania State College, 1911-14; Assistant Dairy Husbandman, United States Department of Agriculture, 1914-16; Dairy Husbandman and Editor Dairy Division, 1916-19; Professor of Dairy Husbandry and Vice-Director, Agricultural Experiment Station, University of Idaho, 1919—.

JAY GLOVER ELDRIDGE, PH.D., *Professor of the German Language and Literature, and Dean of the University Faculty*

B.A., Yale University, 1896; M.A., 1899; Ph.D., 1906; Graduate Scholar, Yale University, 1896-1901; Assistant in German, Sheffield Scientific School, Yale University, 1897-98; Instructor in German, Yale College, 1899-1901; Professor of Modern Languages, University of Idaho, 1901-08; Professor of the German Language and Literature, 1908—; Dean of the University Faculty, 1903—; with Y. M. C. A. in France, Jan.-Sept., 1918.

FRANK MORTON ERICKSON, M.A., *Professor of Education*

B.A., Wabash College, 1892; M.A., University of Chicago, 1895; Graduate Student, University of Chicago, 1894-96; Student of Archaeology, Athens, Greece, 1900; Austin Scholar, Harvard University, 1906-07; Graduate Student, on leave of absence, Leland Stanford, Jr., University, 1915; Instructor in Classics, Highland University, 1892-94; Professor of Classics, Ripon College, 1896-1915; Acting Professor of Education, 1913-15; Dean, 1909-15; Army Educational Corps, A. E. F. University, France, 1919; Professor of Education, University of Idaho, 1915—.

ALVIN E. EVANS, Ph.D., J.D., *Professor of Law*

A.B., Cotner University, 1896; A.M., University of Nebraska, 1898; Ph.D., 1908, and J.D., 1918, University of Michigan; Graduate Student, Harvard Law School, 1915-16; admitted to practice in Michigan, Nebraska, and Idaho; practicing attorney, Falls City, Nebraska,

EDWARD JOHN IDDINGS, B.S.(AGR.), *Dean of Agriculture and Director of Idaho Experiment Station*

Butler College, 1899-1901; B.S. (Agr.), Colorado Agricultural College, 1907; Special Agent, Bureau of Plant Industry, U. S. Department of Agriculture, 1906; Assistant to the Dean of Agriculture, Colorado Agricultural College, 1907-09; Field Commissioner, Dry Farming Congress, summer of 1909; Assistant in Animal Husbandry, Colorado Agricultural College, 1909-10; Editor Dry Farming Congress Bulletin, summer of 1910; Principal of the School of Practical Agriculture, and Assistant in Animal Husbandry, University of Idaho, 1910-11; Professor of Animal Husbandry, 1911—; Vice-Dean of the College of Agriculture, 1913-15; Dean of the College of Agriculture, 1915—; Dean of Agriculture, 1918—.

FRANCIS JENKINS, *Bursar, and Secretary of the Faculty*

Treasurer of Shoshone County, 1885-87; Superintendent Bunker Hill and Sullivan Mine, 1886-93; Independent Operator, 1894-97; General Manager, Virtue Consolidated Mines of Silver City, Idaho, and Baker City, Ore., 1899-1901; Bursar, and Secretary of the Faculty, University of Idaho, 1905—.

KATHERINE JENSEN, M.S., *Professor of Home Economics*

B.S., North Dakota Agricultural College, 1904; M.S., University of Illinois, 1912; Teacher, Public Schools of North Dakota, 1904-10; Instructor in Home Economics, State Normal School, Kansas, Summer, 1912; Instructor Home Economics, North Dakota Agricultural College, 1912-14; Head of Extension Service in Home Economics, Montana State College, 1914-16; Professor of Home Economics, North Dakota Agricultural College, 1916-20; Graduate Student, Columbia University, Summer 1918; Professor of Home Economics, University of Idaho, February 1920—.

J. HUGO JOHNSON, E.E., *Professor of Electrical Engineering*

B.A., University of Wisconsin, 1909; E.E., 1911; with Stone and Webster Engineering Corporation, Houston, Texas, 1911-12; with The Texas Oil Co., Port Arthur, Texas, 1912-13; with The Interurban Co., Des Moines, Iowa, 1913-14; with Des Moines Electrical Contracting Co., 1914-16; with Great Western Sugar Co., 1916-18; Professor of Electrical Engineering, University of Idaho, 1918—.

WILBUR ROSS KIDWELL, D.V.M., *Assistant Professor of Veterinary Science*

D.V.M., College of Veterinary Medicine, Ohio State University, 1919; Sergeant, U. S. Army 1916-18; Assistant Professor of Veterinary Science, University of Idaho, 1919—.

JOHN ANTON KOSTALEK, PH.D., *Professor of Organic Chemistry*

B.A., University of Wisconsin, 1908; Ph.D., University of Illinois, 1910; Research Chemist for B. F. Goodrich Rubber Co., Akron, Ohio, 1910-11; Instructor in Organic Chemistry, University of Idaho, 1911-12; Assistant Professor of Chemistry, 1912-15; Associate Professor of Chemistry, 1915—; in Chemical Warfare Service, Research Division, Washington, D.C., Nov., 1918-Jan., 1919; Head of Division of Analytical and Organic Chemistry, North Dakota Agricultural College, Jan.-June, 1919; Professor of Organic Chemistry, University of Idaho, 1919—.

STEPHEN JACOB KROH, B.S., *Assistant Professor of Chemistry*

B.S., University of Idaho, 1914; Research Assistant in Chemistry, 1916-17, University of Idaho; Assistant Professor of Chemistry, 1919—.

*CORA IRENE LEIBY, B.S.(D.E.), *Assistant Professor of Home Economics*

B.S., (D.E.), James Milliken University, 1909; Supervisor of Domestic Art, East St. Louis Public Schools, 1910-11; Head of Home Economics Department, College of Montana, 1911-13; Instructor in Home Economics, University of Idaho, 1913-18; Graduate Student,

*Resigned, February 5, 1920.

Teachers' College, Columbia University, Summer 1918; Assistant Professor of Home Economics, University of Idaho, 1918—.

HOWARD THOMPSON LEWIS, A.M., *Professor of Economics and Political Science*

Graduate, State Normal School, Oshkosh, Wis., 1907; A.B., Lawrence College, 1910; A.M., University of Wisconsin, 1911; Superintendent of Schools, Arbor Vitae, Wis., 1907-08; Scholar in Economics, University of Wisconsin, 1910-11; Assistant in Economics, 1911-12; Professor of Economics and Sociology, State Normal School, Emporia, Kansas, Summer Session, 1912; Assistant Professor of Economics and Political Science, Hiram College, 1912-14; Associate Professor of Economics and Political Science, University of Idaho, 1914-16; Professor of Economics and Political Science, 1916—.

CHARLES NEWTON LITTLE, Ph.D., *Professor of Civil Engineering, and Dean of the College of Engineering*

A.B., University of Nebraska, 1879; A.M., University of Nebraska, 1884; Ph.D., Yale University, 1885; Instructor in Mathematics and Civil Engineering, University of Nebraska, 1880-84; Associate Professor of Civil Engineering, 1885-90; Professor of Civil Engineering, 1890-93; Professor of Mathematics, Leland Stanford, Jr., University, 1893-1901; on leave of absence at Universities of Goettingen and Berlin, 1899-1900; Professor of Civil Engineering, University of Idaho, 1901—; Dean of the College of Engineering, 1911—.

DOUGLAS CLERMONT LIVINGSTON, B.S.(M.E.), *Professor of Geology*

Special Student, Stanford University, 1905; B.S. (M.E.), McGill University, 1906; Associate Member, Canadian Society of Civil Engineers; U. S. Mineral Surveyor for Arizona; Practical Mining Work, B. C., 1897-1901; Instructor in Field Surveying, Summer School, McGill University, 1905 and 1906; Examination Work, Cobalt, Ontario, 1906; Engineer and Assayer, Tighe Mining Co., S. A., Sonora, Mexico, 1906-08; Superintendent Fortuna and North Tigre Mining Co., Sonora, Mexico, 1908-10; in Private Engineering and Examination Work in Arizona and Mexico, 1910-11; Engineer, Montezuma Copper Co., 1911; Associate Professor of Mining Engineering, University of Idaho, 1911-13; Professor of Mining Engineering, 1913-15; Professor of Geology, 1915—.

LEWIS ELWARD LONGLEY, M.S.(AGR.), *Associate Professor of Horticulture, and Assistant Horticulturist*

A.B., Coe College, 1904; M.S.(Agr.), Washington State College; Laboratory Assistant in Botany, Coe College, 1907-09; Florist and Instructor in Floriculture, Washington State College, 1911-13; Scientific Assistant in Plant Breeding, U. S. Department of Agriculture, 1913-18; Assistant Professor of Horticulture and Assistant Horticulturist, University of Idaho, 1918—.

HORACE JAMES MACINTIRE, M.M.E., *Professor of Mechanical Engineering*

S.B., Massachusetts Institute of Technology, 1905; M.M.E., Harvard University, 1911; Assistant Instructor, Massachusetts Institute of Technology, 1905-07; with National Lead Co., 1907-09; Instructor of Mechanical Engineering, Harvard University, 1909-10; Hilton Scholar, 1910-11; Instructor of Mechanical Engineering, Carnegie Institute of Technology, 1911-13; Assistant Professor of Mechanical Engineering, University of Washington, 1913-18; Associate Professor, 1918-19; Refrigerating Engineer, Construction Division of U. S. A. Department of War, 1918; Assistant Advisory Engineer, Department of War, 1919; Professor of Mechanical Engineering, University of Idaho, 1919—.

*O. ELBERT MCCONNELL, B.S.(AGR.), *Assistant Professor of Animal Husbandry*

B.S., (Agr.), University of Missouri, 1918; Instructor in Animal Husbandry, University of Idaho, 1918-19; Assistant Professor, 1919.

*Resigned December 11, 1919.

MARY BELLE SWEET, B.L.S., *Librarian, and Instructor in Library Science*

B.L.S., University of Illinois, 1904; Assistant Cataloger, Cincinnati Public Library, 1903; Librarian, Clinton (Iowa) Public Library, 1904-05; Librarian and Instructor in Library Science, University of Idaho, 1905—.

NOEL FINLEY THOMPSON, M.S., *Assistant Professor of Botany (ad interim)*

B.S., Whitworth College, 1914; B.S., University of Washington, 1915; M.S., 1916; Teaching Fellow, University of Washington, 1915-17; Assistant, Puget Sound Biological Station, 1916 and 1917; Field Assistant, U. S. Department of Agriculture, 1917-18; Assistant Pathologist, U. S. Department of Agriculture, 1918-19; Instructor in Botany, University of Washington, Summer Quarter, 1919; Assistant Professor of Botany (ad interim), University of Idaho, 1919—.

FRANCIS ANDREW THOMSON, M.S., *Professor of Mining and Metallurgy, and Dean of the School of Mines*

E.M., Colorado School of Mines, 1902; M.S., 1914; in Professional Mining work in British Columbia, 1895-98, 1903-04; in Western United States, 1904-07; Head of Department of Mining Engineering, State College of Washington, 1907-17; Acting Dean of Faculty, 1914-15; Dean, School of Mines, 1917; Consulting Metallurgist, U. S. Bureau of Mines; Professor of Mining and Metallurgy and Dean of the School of Mines, University of Idaho, 1917—; Idaho State Supervisor of Vocational Trades and Industries, 1918—.

WILLIAM JOSEPH TRIMBLE, PH.D., *Professor of American History*

B.A., Denison University, 1900; Graduate Student, University of Chicago, 1901-02; M.A., Washington State College, 1903; Ph.D., University of Wisconsin, 1909; Instructor in History, High School, Spokane, 1904-07; Fellow in American History, University of Wisconsin, 1908-09; Professor of History and Social Science, North Dakota Agricultural College, 1909-19; Professor of American History, University of Idaho, 1919—.

CLARENCE CORNELIUS VINCENT, M.S.(AGR.), *Professor of Horticulture, and Horticulturist, Idaho Experiment Station*

B.S.A., Oregon Agricultural College, 1907; M.S., 1909; M.S. (Agr.), Cornell University, 1910; Assistant in Horticulture, Oregon Agricultural College, 1907-09; Graduate Assistant in Horticulture, Cornell University, 1909-10; Assistant Horticulturist, University of Idaho, 1910-11; Associate Professor of Horticulture, Clemson Agricultural and Mechanical College, 1911-12; Associate Professor of Horticulture, University of Idaho, 1912-13; Professor of Horticulture, and Horticulturist, Idaho Experiment Station, 1913—.

CARL LEOPOLD VON ENDE, PH.D., *Professor of Chemistry and Head of Department of Chemistry*

B.S., University of Iowa, 1893; M.S., 1894; Ph.D., University of Goettingen, 1899; Demonstrator in Chemistry, University of Iowa, 1894-95; Science Teacher, High School, Burlington, Iowa, 1895-96; Instructor in Chemistry, University of Iowa, 1896-97, and 1899-1905; Assistant Professor of Chemistry, 1905-07; Research Associate, Research Laboratory of Physical Chemistry, Massachusetts Institute of Technology, 1907-08; Professor of Chemistry, University of Idaho, 1908—.

IRENE ANNE WATSON, *Assistant Professor of Physical Education*

Graduate of Western Illinois State Normal, 1910; Graduate of Sargent School for Physical Education, Cambridge, Mass., 1913; Graduate of Chicago Normal School of Dancing, 1916; Assistant in Physical Education, Kansas State Normal School, 1913-16; Director of Physical Education, 1916-17; Director of Physical Education, State Normal School, Lewiston, Idaho, 1917-18; Associate Professor of Physical Education for Women, Iowa State College, 1918-19; Assistant Professor of Physical Education, University of Idaho, 1919—.

ALEXANDER RAFFEN WEBB, C.E., *Assistant Professor of Civil Engineering*

B.S. in C.E., Armour Institute of Technology, 1908; C.E., 1913; Chief Draftsman and Assistant Engineer on Irrigation work in Wyoming and Oregon, 1908-10; Engineer and Local Manager, Murdock Land Co., Florida, 1910-11; Engineer, Arcadia Groves Inc., Florida, 1912; with Land Department C. B. & Q. R. R. Co., 1913-15; Professor of Civil Engineering, Highland Park College, 1915; Professor of Engineering, Des Moines College, 1918-19; Director of Vocational Training, U. S. A. Auto Mechanics Detachment, Des Moines College, 1918; Acting Dean of College of Engineering, 1918-19; with Land Department, Tennessee Coal, Iron, and Railroad Co., Birmingham, Alabama, 1919; Assistant Professor of Civil Engineering, University of Idaho, 1919—.

CHARLES HAMLINE WERKMAN, B.S.(Agr.), *Assistant Bacteriologist*

B.S.(Agr.), Purdue University, 1917; Student Assistant, Indiana Agricultural Experiment Station, 1917-18; Assistant Bacteriologist, Idaho Experiment Station, 1920—.

CARL BURGHARDT WILSON, M.A., *Principal of the School of Practical Agriculture, and Professor of Agricultural Education*

B.A., Oberlin College, 1906; M.A., 1909; B.S.(Agr. Educ.), Iowa State College, 1916; Assistant in Botanical Laboratory of Oberlin College, 1906-07; Tutor in Botany and Zoology, Oberlin Academy, 1907-11; Assistant Instructor in Biological Sciences, Moorhead State Normal, Minn., 1911-14; Principal of the School of Practical Agriculture, University of Idaho, 1915—; Instructor in Education, 1915-16; Assistant Professor of Education, 1916-18; State Supervisor of Vocational Agriculture, 1918—; Professor of Agricultural Education, 1918—.

JERRY EDWARD WODSEDALEK, PH.D., *Professor of Zoology and Entomology, and Head of Division of Zoology and Entomology, Idaho Experiment Station*

Ph.B., University of Wisconsin, 1910; M.Ph., 1911; Ph.D., 1913; Assistant in Zoology, University of Wisconsin, 1910-11; Instructor in Zoology and Entomology, Summer Sessions of 1911 and 1912; Fellow in Zoology, 1911-13; Research, Wisconsin Biological Station, summers 1913 and 1914; Professor of Zoology and Entomology, University of Idaho, 1913—; Head of Division of Zoology and Entomology, Idaho Experiment Station, 1918—.

JOHN C. WOOLEY, B.S.(A.E.), *Professor of Agricultural Engineering and Irrigation*

B.Di., Iowa State Teachers College, 1907; M.Di., 1912; B.S.(A.E.), Iowa State Agricultural College, 1917; Superintendent Crawford Township High School, 1908-10; Principal, Iowa Falls High School, 1912-13; in charge of Agricultural Engineering on Extension Train, Iowa State College, 1915-16; Assistant Professor of Agricultural Engineering Extension, Iowa State College, 1917; Professor of Agricultural Engineering, University of Idaho, 1917—.

V. H. YOUNG, PH.D., *Professor of Botany and Plant Pathology, and Plant Physiologist of the Experiment Station*

Graduate, State Normal School, Whitewater, Wis., 1908; Ph.B., University of Wisconsin, 1913; Ph.M., 1914; Ph.D., 1916; Principal, Public School, Munich, N. Dak., 1905-06; District Supervising Teacher, Province of Sorsogon, Philippine Islands, 1908-11; Assistant and Fellow in Botany, University of Wisconsin, 1913-16; Assistant Professor of Botany, State University of Iowa, 1916-18; Assistant Plant Pathologist, U. S. Bureau of Plant Industry, 1918; Professor of Botany and Plant Pathology, University of Idaho, 1918—.

INSTRUCTORS AND ASSISTANTS IN INSTRUCTION

GRACE ELIZABETH BALL, A.B., *Instructor*

A.B., Colorado College, 1914; Special Work in Advanced Commercial Work, State Teachers' College, Greeley, Colorado, 1915; Ef-

EDMUND E. MOORE, B.S.(CHEM.), *Storekeeper Assistant

B.S. (in Chemistry), Worcester Polytechnic Institute, 1918;
Atlas Powder Company, 1918; Storekeeper Assistant, University of
Idaho, 1919—.

RAY FRANKLIN MORGAN, B.S., *Instructor in Dairy Husbandry*

B.S., Pennsylvania State College, 1919; Instructor in Dairy Hus-
bandry, University of Idaho, 1919—.

**WILLIAM ARTHUR MURRAY, B.S.(E.E.), *Instructor in Electrical Engi-
neering***

B.S.(E.E.), University of Idaho, 1914; with Federal Mining and
Smelting Company, Mullan, Idaho, 1914-15; with General Electric
Company, Schenectady, New York, in Testing Department, 1915-16;
in Radio Research Department, 1917; in Signal Corps, U. S. A.,
1918; with Bunker Hill Mining and Smelting Company, Kellogg,
Idaho, 1919; Instructor in Electrical Engineering, University of
Idaho, 1919—.

EUGENE NAGELE, Sgt. Infantry, U. S. Army, *Assistant in Military Art*

Served in Spanish-American War, Cuba, 1898-1901; in Philippines,
1905-07; Leyte Campaign, 1906-07; in Alaska, 1914-18; Second Lieu-
tenant, U. S. Army, 1918-19; Assistant in Military Science and
Tactics, University of Idaho, November, 1919.

**BERNT NIELSEN, *Instructor in Cornet-Playing and Leader of the Cadet
Military Band***

Graduate of Army Music School, Trondhjem, Norway, 1882; Solo
Cornetist with the 3rd United States Infantry Band, 1890; Served in
Spanish-American War, 1898; Band Leader with the 17th United
States Infantry, 1902; Served in United States Army in Philippine
Islands and Cuba, 1903-05; 1906-09; Instructor of Georgia Military
Academy Band, 1912-13; Served in Mexican Border Campaign, 1913-16;
Director of Pillsbury Concert Band, 1917-18; Instructor of Letter
Carriers Band, Minneapolis, 1916-18; Leader of the Cadet Military
Band, University of Idaho, 1918—.

GRACE MARGARET PALMER, PH.B., *Instructor in Art*

Student, Washburn College, 1907-08; B.A.(Educ.), Kansas State
Normal School, 1913; Ph.B., University of Chicago, 1915; Student
Assistant in Art, Kansas State Normal School, 1911-13; Instructor,
High School, Council Grove, Kan., 1913-14; Instructor in Modeling,
School of Education, University of Chicago, Spring, 1914; Instruc-
tor in Art, High School, La Salle, Ill., 1915-17; Acting Head of
Department of Home Art, Kansas State Agricultural College, 1917-18;
Instructor in Art, High School, Duluth, Minn., 1918-19; Instructor
of Art, Summer School, Miami University, 1919; Instructor in Art,
University of Idaho, 1919—.

HENRY SCHMITZ, PH.D., *Instructor in Forestry*

B.S.(For.), University of Washington, 1915; M.S., 1916; Ph.D.,
1919; U. S. Forest Service, summer of 1915; Fellow in Botany, Wash-
ington University, 1916-17; Instructor, Summer Session, University of
Washington, 1917; Ensign, United States Naval Reserve Force, 1917-19;
Fellow in Botany, Washington University, 1919; Instructor in For-
estry, University of Idaho, 1919—.

**LULU EMILY VANCE, B.S., *Analytical Assistant in Agricultural Chem-
istry, Idaho Experiment Station***

B.S., University of California, 1914; Teacher of Chemistry, Sugar
City High School, 1914-15; Teacher of Mathematics, Boise Junior
High School, 1914-16; County Superintendent of Schools, Ada County,
1916-18; Assistant in Agricultural Chemistry, Idaho Experiment Sta-
tion, 1918—.

CARL VER STEEG, S.B., *Instructor in Geology and Assistant Geologist*

S.B., Central College, 1914; Instructor, High School, Pella, Iowa,

*Resigned, Feb. 1920.

1914-15; Principal of High School, Preston, Minn., 1915-17; Assistant Principal of High School, Neenah, Wis., 1917-18; Army Y. M. C. A., 1918-19; Student, University of Chicago, Summers of 1915, 1916, 1917, 1919, Spring, 1919; Du Pont Manual Training High School, Louisville, 1919; University of Idaho, 1919—.

HELEN WEGMANN, *Instructor in Music*

Soloist's Diploma from New England Conservatory of Music, 1918; Student with W. Griffith Nash, Portland, Ore., and George W. Proctor, Boston; Student in Theoretical Work with Clement Lenom, Harry N. Redmann, Louis C. Elson, and in Ensemble Music with Joseph Adamowski; Teacher of Music, Portland, Ore., and Boston, Mass.; Instructor in Music, University of Idaho, 1919—.

THOMAS F. WELDON, Sgt., Infantry, U. S. Army, *Assistant in Military Art*

Served in Hawaiian Islands, 1915-18; qualified as Bayonet Instructor, Divisional Infantry School of Arms, Thirteenth Division, Oct. 1918; Assistant in Military Science and Tactics, University of Idaho, May, 1919—.

IDA MAY YATES, B.Ph., *Instructor in Mathematics*

B.Ph., Grinnell College, 1910; Student, Iowa State Normal School, 1902-03; Instructor in Public School, Whiting, Iowa, 1903-07; Principal and Instructor, High School, North English, Iowa, 1910-13; Instructor in Latin and Mathematics, High School, Moscow, Idaho, 1910—; Instructor in Mathematics, 1919—.

SUPERINTENDENTS OF EXPERIMENT SUBSTATIONS

LOUIS C. AICHER, B.S.(AGR.), Aberdeen

B.S.(Agr.), Kansas State Agricultural College, 1910; Superintendent, Experiment Substation, Caldwell, Idaho, 1910-11; Assistant in Cereal Investigations, U. S. Department of Agriculture, 1911-14; Assistant Agronomist, 1914-18; Agronomist, 1918—; Superintendent, Idaho Experiment Substation, Aberdeen, 1911—.

CARL MARTIN EKLOF, B.S.(AGR.), Caldwell

B.S.(Agr.), University of Idaho, 1916; Assistant in Farm Crops, University of Idaho, 1916-17; Superintendent Experiment Substation, Caldwell, 1917-20.

WILLIAM ALFRED MOSS, B.S.(AGR.), Felt

B.S.(Agr.), Kansas State Agricultural College, 1912; Farmer, Kansas, 1912-18; Superintendent, Idaho Experiment Substation, 1918—.

FRANK HENRY LA FRENZ, B.S.(AGR.), Coeur d'Alene

B.S.(Agr.), 1915; Superintendent, Idaho Experiment Substation, Coeur d'Alene, 1915-20.

CHASE W. RANEY, Coeur d'Alene

Student, University of Idaho, 1915-20; with U. S. Army in France, 1918; Superintendent, Idaho Experiment Substation, Coeur d'Alene, March, 1920—.

UNIVERSITY EXTENSION OFFICERS

Director.

LEE WILEY FLUHARTY, B.S.(AGR.), *Director of Extension*
State House, Boise

B.S.(Agr.), University of Idaho, 1910; Deputy Horticultural Inspector Chelan County, Washington, 1910-11; Assistant, Agricultural Bureau of Plant Industry, U. S. Department of Agriculture, 1911-12; Assistant District Leader, County Agricultural Agents, Washington, Oregon and Idaho, 1912-14; Assistant Agriculturist in Charge Farm

CLIFFORD C. TAYLOR, *Farm Management Demonstrator*
Boise

B.S., Colorado Agricultural College, 1917; Assistant County Agent, Trinidad, Colo., 1917; Scientific Assistant, U. S. Department of Agriculture, 1918-19; Farm Management Demonstrator, Extension Division, University of Idaho, February, 1920—.

*PAUL ABRAM WENGER, *State Seed Analyst*

Bethel College, 1906-09; Academy of Idaho, 1910-11; University of Idaho, 1912-16; State Seed Analyst, November, 1917-19.

COUNTY AGRICULTURAL AGENTS

ROY E. ALEXANDER, B.S.(AGR.), *Agricultural Agent, Elmore County*
Mountain Home

B.S.(Agr.), Kansas State Agricultural College, 1912; Farmer, 1912-16; Teacher of Agriculture, High School, Weiser, 1916-17; County Agricultural Agent, Elmore County, January, 1918—.

HARRY GRANT AVERY, *Agricultural Agent, Jerome County*
Jerome

Kansas State Agricultural College, 1909-13; Farm Manager, 1913-15; Instructor, High School, Blackfoot, Idaho, 1915-16; County Agricultural Agent, Lincoln County, April, 1917; County Agricultural Agent, Jerome County, July 1, 1919—.

HERBERT BEIER, B.S.(AGR.), *Agricultural Agent, Kootenai County*
Coeur d'Alene

B.S.(Agr.), University of Idaho, 1915; in Forestry Service, June-November, 1915; Buttermaker, Caldwell, 1915-16; Official Tester for Cow-testing Association, April, 1916; County Agricultural Agent, Kootenai County, March, 1917—.

ALBERT LEROY BERRY, B.S.(AGR.), *Agricultural Agent, Gem County*
Emmett

B.S.(Agr.), Kansas State Agricultural College, 1912; Silo Builder, Summers 1913-15; Assistant Manager of Farm, 1915-18; County Agricultural Agent at Large, 1918; County Agricultural Agent Gem County, May, 1918—.

CHARLES HOMER BOHRER, *Agricultural Agent, Twin Falls County*
Twin Falls

University of Nebraska, 1903-06; Bookkeeper and Yard Manager, Lumber Yard, Weiser; County Assessor, 1914-18; County Agricultural Agent, Twin Falls County, February, 1918-19.

ROLAND ELMER BROSSARD, B.S., *Agricultural Agent, Bonneville County*
Idaho Falls

B.S., Utah Agricultural College, 1913; Dry Farm Demonstrator, Wyoming, 1913; U. S. Forest Service, 1912-14; District Club Leader and Principal Wellsville Junior High School, 1915-17; County Agricultural Agent, Bonneville County, July, 1917-19.

GROVER BURNETT, B.S.(AGR.), *Agricultural Agent, Minidoka County*
Rupert

B.S.(Agr.), University of Idaho, 1917; Student, Utah Agricultural College, 1912-16; County Agricultural Agent, Minidoka County, 1919—.

EDWARD E. CHESTER, B.S.(AGR.), *Agricultural Agent, Cassia County*
Burley

B.S.(Agr.), University of Illinois, 1903-07; Farmer in Idaho, 1908-18; County Agricultural Agent, Cassia County, April, 1918—.

*-Resigned Oct. 1919.

LLOYD W. COLEMAN, B.S.(AGR.), *Agricultural Agent, Twin Falls County*
Twin Falls

B.S.(Agr.), Oregon Agricultural College, 1918; Foreman Dairy Farm, Hopeland, Calif., 1919; Assistant County Agent, Coos County, Ore.; Farm Foreman, Tygh Valley, Oregon; County Agricultural Agent, Twin Falls County, November, 1919—.

GEORGE W. DEWEY, B.S.(AGR.), *Agricultural Agent, Canyon County*
Caldwell

B.S.(Agr.), Michigan Agricultural College, 1911; Horticultural Inspector, Bitter Root Valley, Summer 1911; Fruit Transportation and Storage, U. S. D. A., 1914; Superintendent Experiment Station, Jerome, 1914-18; County Agricultural Agent, Canyon County, January, 1919—.

EDGAR BUCE DUNCAN, *Agricultural Agent, Bannock County*
McCammon

Assistant County Agricultural Agent, Bannock County, March, 1919; County Agricultural Agent, Bannock County, 1919—.

JOHN ORVAL ELLSWORTH, B.S.(AGR.), *Assistant County Agent Leader*
State House, Boise

B.S.(Agr.), Utah Agricultural College, 1915; Teacher in High School, 1915-17; County Agricultural Agent, Gooding County, July, 1917; Assistant County Agent Leader, June 1, 1919—.

JOHN F. FINLEY, B.S., *Agricultural Agent, Blaine County*
Hailey

B.S., Utah Agricultural College, 1915; Teacher Nebo District School, 1915-17; Managed Farm, 1915-17; County Agricultural Agent, Blaine County, September, 1917-19.

O. S. FLETCHER, B.S.(AGR.), *Agricultural Agent, Latah County*
Moscow

B.S.(Agr.), Washington State College, 1913; Teacher of Agriculture, High School and Club Leader of District Schools, Ellensburg, Wash., 1913-17; Deputy District Horticultural Inspector, Yakima, Wash., Summer, 1914; County Club Leader, Spokane County, Wash., April-November, 1917; Assistant County Agricultural Agent, Spokane County, Wash., 1917-18; County Agricultural Agent, Latah County, September, 1918—.

PHILIP T. FORTNER, B.S.(AGR.), *Agricultural Agent, Payette County*
Payette

B.S.(Agr.), Oregon Agricultural College, in Ranch Work, California, 1913-15; Student Assistant County Agent, Lane County, Oregon; Student Assistant Pig-Club Agent, Oregon; County Agricultural Agent, Payette, December, 1919—.

ROBERT ROY GRONINGER, B.S.(AGR.), *Agricultural Agent at Large*
Lewiston

B.S.(Agr.), University of Idaho, 1917; County Agricultural Agent, Bingham County, Idaho, 1917-18; County Agricultural Agent at Large, Lewiston, February, 1918-19.

PETER MARTIN JESNESS, *Agricultural Agent, Camas County*
Fairfield

Minnesota Agricultural College, 1911-17; Manager of Cow Testing Association, Ellendale and Mankato, Minnesota; Farmer, Boise Valley, Idaho, Summer and Fall, 1917; County Agricultural Agent at Large, 1918; County Agricultural Agent, Camas County, 1918—.

ALBERT WEIDEL BUCH KJOSNESS, B.S.(AGR.), *Assistant County Agent*
Leader Moscow

B.A., Spokane College, 1910; B.S.(Agr.), University of Idaho, 1913;

Student, University of Washington, Summer of 1914; Teacher, Prescott, Wash., High School, 1913-15; County Agricultural Agent, Power County, Idaho, October, 1915-May, 1918; Assistant County Agent Leader, May, 1918—.

THOMAS J. KLINGLER, B.S., *Agricultural Agent, Adams County Council*

B.S., Ohio Northern University, 1900-04; in Public School Work, 1904-10; Practical Farmer, 1910-13; in Public School Work, 1913-17; County Club Leader, 1918; County Agricultural Agent, Adams County, December, 1918-June, 1919; County Agricultural Agent, Blaine County, June, 1919—.

BRUCE LAMPSON, *Agricultural Agent, Power County American Falls*

Washington State College; Herdsman, Washington State College; Boys' and Girls' Club Leader, Whitman County, Wash.; District County Agent, Grant County, Wash., 1918; County Agricultural Agent, Power County, August, 1918—.

ROBERT ROY LANCASTER, B.S.(AGR.), *Agricultural Agent, Minidoka County Rupert*

B.S.(Agr.), Kansas State Agricultural College, 1916; Student, Warrensburg State Normal, 1903; Missouri University, 1912-13; Kansas State Agricultural College, 1914-16; Kansas Experiment Station; Manager of Farm, The Dalles, Oregon; County Agricultural Agent, Minidoka County, May, 1917-19.

EDGAR L. LUDWICK, B.S., *Agricultural Agent, Bonner County Sandpoint*

B.S., Washington State College, 1909; University of Washington, 1907; Electrical Engineer, Spokane; Chief Engineer, Rutledge Lumber Co., Coeur d'Alene, Idaho; Principal and Agricultural Teacher, High School, Rockford, Wash.; Assistant Grain Standards, U. S. Bureau of Markets; County Agricultural Agent, Bonner County, 1918—.

MELVIN LUKE, B.S., *Agricultural Agent, Jefferson County Rigby*

B.S., Utah Agricultural College; Instructor Public Schools, Rexburg, Idaho; County Agricultural Agent, Jefferson County, April, 1919—.

GEORGE EUGENE MARONEY, A.M., *Agricultural Agent, Lincoln County Shoshone*

B.S.(Agr.), Kansas State Agricultural College, 1912; A.B., 1914; A.M., 1915; Pure Seed Wheat Inspector, Kansas State Agricultural College, Summer, 1911; Principal High School, Alma Kansas, 1912-13; Instructor in Anatomy, University of Utah, 1915-16; in Business and Farming, 1916-17; District Assistant Emergency Agent, Lincoln, Twin Falls and Cassia Counties, August, 1918; County Agricultural Agent, Lincoln County, April, 1919—.

MERLE ORION MONROE, B.S., *Agricultural Agent, Bingham County Blackfoot*

B.S., State College of Washington, 1915; Manager of Farm, 1913-14; Instructor of Agriculture, High School, Toppenish, Wash., 1915-16; Editor Toppenish Tribune, 1917; County Agricultural Agent, Bingham County, November, 1917—.

GEORGE L. MORRISON, B.S., *Agricultural Agent, Franklin County Preston*

B.S., Utah Agricultural College; Cerealists, Department of Agriculture, Argentine, S. A., 1914-15; County Agent, St. Anthony, Idaho, 1915-17; Assistant County Agent Leader, Boise, 1917-18; County Agent Leader, Reno, Nevada, 1918-19; County Agricultural Agent, Franklin County, 1919—.

DAVID PARKER MURRAY, B.S.(AGR.), *Agricultural Agent, Madison County Rexburg*

B.S.(Agr.), Utah Agricultural College, 1916; Special Student, Summer School, Utah Agricultural College, 1911-12; Student, Summer School, University of Utah, 1916; Farm Manager, Wellsville, Utah, 1905-07; Principal of High School, Franklin, Idaho, 1916-17; County Agricultural Agent, Madison County, July, 1917—.

GUY D. NOEL, B.S., *Agricultural Agent, Washington County Weiser*

B.S., Kansas State Agricultural College, 1909; Instructor in Science, High School, Olathe, Kan., 1909-10; Agricultural Instructor, Dickinson County High School, Chapman, Kan., 1910-11; Superintendent Branch Experiment Station, Dodge City, Kan., 1911-13; Farmer, 1913-18; County Agricultural Agent, Washington County, April, 1918—.

ANDREW E. OMAN, M.F., *Agricultural Agent, Canyon County Caldwell*

B.S., Kansas State College, 1900; M.F., Yale Forest School, 1906; Farmer and Teacher, Riley County, Kansas, 1900-03; Forest Assistant and Forest Examiner, Forest Service, 1906-17; Instructor, Rangers' Short Course in Forestry, Utah Agricultural College, 1911; Assistant Emergency Demonstration Agent, Canyon County, September, 1918-19; County Agent Boundary County, 1919—.

WINTHA RUDOLPH PALMER, B.S.(AGR.), *Agricultural Agent, Payette County Payette*

B.S.(Agr.), Oregon Agricultural College, 1909; Student, Cornell University, Summer, 1915; Instructor in Horticulture and Extension Worker, University of Maine, 1909-12; Extension Specialist in Horticulture, Purdue University, 1912-14; Resident Instructor in Horticulture, Purdue University, 1914-16; Instructor in Agriculture, Payette High School, 1916-18; County Agricultural Agent, Payette County, January, 1918-19.

ELMER C. RIGBY, B.S., *Agricultural Agent, Bonneville County Idaho Falls*

B.S.(Agr.), Utah Agricultural College, 1916; Farm Manager, Dayton, Idaho, 1916-18; Grain Buyer, Rexburg, 1919; County Agricultural Agent, Bonneville County, September, 1919—.

FRANK IRVING ROCKWELL, B.S.F., *Agricultural Agent, Benewah County St. Maries*

B.S.F., College of Agriculture, University of Minnesota, 1906; Farmer, 1901-07; Forest Assistant, U. S. Forest Service, 1908-13; Forest Examiner, U. S. Forest Service, 1913-17; Alfalfa Hay Buyer, 1917-18; Farm Bureau Organizer, 1918; County Agricultural Agent, Benewah County, May, 1918—.

DAVID L. SARGENT, B.S.(AGR.), *Agricultural Agent, Bear Lake County Paris*

B.S.(Agr.), Utah Agricultural College, 1915; Student, University of Utah, 1911-13; Principal of Rural High School, Grace, Ida., 1915-18; County Agricultural Agent, Bear Lake County, April, 1918—.

WALDO S. SKUSE, B.S.(AGR.), *Agricultural Agent, Nez Perce County Lewiston*

B.S.(Agr.), B.S.-C.E., State College of Washington; Assistant County Agent, Spokane, Washington, 1916; County Agent, Helena, Montana, 1917-19; County Agricultural Agent, Nezperce County, June, 1919—.

ANDREW N. SMITH, B.S., *Agricultural Agent, Gooding County Gooding*

B.S., Iowa State College, 1916; Agricultural Director, Minnesota,

1916-18; County Agent, Missouri, 1918; Assistant County Agent Leader, Nebraska, 1919; County Agricultural Agent, Gooding County, June, 1919—.

RAYMOND JAMES SMITH, B.S.(AGR.), *Agricultural Agent, Oneida County Malad*

B.S.(Agr.), Utah Agricultural College, 1917; Assistant in Horticultural Department, 1910-13; Superintendent Southern Utah Experiment Station, 1913-15; Assistant in Veterinary Department, Utah Agricultural College, 1916-17; Utah State Deputy Live Stock Inspector, 1917-18; County Agricultural Agent, Oneida County, October, 1918—.

GEORGE LEROY TANNER, B.S.(AGR.), *Agricultural Agent, Jefferson County Rigby*

B.S.(Agr.), Utah Agricultural College, 1915; Manager of Farm, 1915-18; County Agricultural Agent, Jefferson County, January, 1918-1919.

LUCIUS EDWIN TILLOTSON, B.S., *Agricultural Agent, Lemhi County Salmon*

B.S., University of Minnesota, 1917; Student Aberdeen Normal School, South Dakota, 1910-13; Instructor, High School, Glendive, Montana, 1917; in U. S. Army, 1917-18; Instructor, High School, Glendive, Montana, 1919; County Club Leader, Bingham County, April, 1919; County Agricultural Agent, Lemhi County, November 1, 1919—.

WILLIAM BENJAMIN TUCKER, *Agricultural Agent, Ada County State House, Boise*

Student of Science and Agriculture, University of Illinois, 1908-13; Farm Manager, 1914-16; Teacher of Agriculture, 1916-18; County Agricultural Agent, Ada County, August, 1918—.

ALBERT EDWARD WADE, *Agricultural Agent, Lewis County Nezperce*

Special Student in Agriculture, University of Illinois, 1899-1902; Assistant Agriculturist for Detroit Sugar Company, 1902-04; Farm Manager, 1904-06; Farmer, 1906-15; County Agricultural Agent, Lewis County, April, 1915—.

JOHN EDWARD WHITE, B.S.(AGR.), *Agricultural Agent, Fremont County St. Anthony*

B.S.(Agr.), Utah Agricultural College, 1913; Teacher of Agriculture, High School, Hyrum, Utah, 1913-17; County Agricultural Agent, Fremont County, October, 1917—.

FRED L. WILLIAMS, *State Leader of County Agricultural Agents State House, Boise*

Kansas State Agricultural College, 1903-07; Student Assistant in Extension work, Kansas State Agricultural College, 1905-07; with St. Joseph Stock Yards Company, 1907-11; Farmer and Stockman, 1911-15; County Agricultural Agent, Ada County, 1915-18; Assistant State Leader of County Agricultural Agents, July, 1918-19; State Leader, 1919—.

HOME ECONOMICS OFFICERS AND AGENTS

ANNABELLE BENNETT, *State Home Health Demonstrator State House, Boise*

Oberlin College, 1901; Lakeside Hospital, Cleveland, Ohio, 1904; Slum Worker, New York City, 1904-05; Superintendent Lakeside Hospital, 1905-07; in Institute Work, Colorado, 1907-09; Instructor in Home Nursing, First Aid, and Obstetrics, Colorado Agricultural College, 1910; Nurse Specialist, University of Idaho Extension Division, November, 1917-19; State Home Health Demonstrator, 1919—.

CAROLINE H. BROWN, *Home Demonstration Agent*, Twin Falls

Diploma in Textile Work, Chico State Normal School, 1902; Teacher Public Schools, Superior, Wis.; Teacher, Redlands, Calif., 1904-5; Teacher, Los Angeles, 1905-12; Emergency Home Demonstration Agent, Twin Falls, 1918-19.

**LELA MAY BULLOCK, A.B., B.S., *Home Demonstration Agent*
Idaho Falls**

A.B., University of Illinois, 1909; B.S., Kansas State Manual Training Normal School, 1916; Graduate Illinois State Normal University; Emergency Home Demonstration Agent, Bonneville County, October, 1917-19.

ESTHER DAVIS, B.S., *Home Demonstration Agent*, Coeur d'Alene

B. S., University of California, 1915; Illinois Wesleyan University, 1910-12; Dietitian, East Bay Sanitarium, Oakland, Calif.; Dietitian, State Hospital, Stockton, Calif.; Emergency Home Demonstration Agent, Coeur d'Alene, Idaho, January, 1918-19.

**HEDWIG K. DJUPE, *County Home Health Demonstrator*, Canyon County
Caldwell**

Student, Michigan State Normal School; Student Michael Reese Hospital Training School for Nurses, Chicago, Illinois; City School Nurse, Grand Forks, N. D.; with Chicago Health Department; County Home Health Demonstrator, Canyon County, 1919—.

**ANNA ESBENSEN, *County Home Health Demonstrator*, Ada County
Boise**

County Home Health Demonstrator, Ada County, 1919—.

GEORGIA BELLE ELWELL, B.S., *Clothing Specialist*, State House, Boise

B.S., Columbia University, 1911; Bachelor's Diploma in Domestic Art, Teachers College, 1911; Student, University of Minnesota, 1906-10; Instructor of Domestic Art, University of Minnesota, 1911-12; Teacher of Domestic Art, East High School, Minneapolis, Minnesota, 1912-13; Instructor of Domestic Art, Summer Sessions, South Dakota State College, 1914-15; Critic Teacher and Instructor of Domestic Art, Stout Institute, Menomonie, Wisconsin, 1915; Clothing Specialist, University of Idaho Extension Division, 1918-19.

**ADA B. ERWIN, M.S., *Assistant State Home Demonstration Leader*
State House, Boise**

B.S., South Dakota State College, 1911; M.S., Teachers College, Columbia University; Instructor in Home Economics, South Dakota State College, 1911-13; Instructor, Stevens Point Normal School, Wisconsin, 1914-15; Assistant Principal, School of Agriculture, South Dakota State College, 1916-17; Field Worker in Home Economics, University of Idaho, December, 1917; Assistant State Home Demonstration Leader, December, 1917—.

**Mrs. ALPHA HOLT, *Field Home Demonstration Agent*
State House, Boise**

In Extension Work in Idaho, 1914-17; Emergency Home Demonstration Agent, 1917; Field Home Demonstration Agent, February, 1918—.

NINA B. HUYCK, B.S., *Home Demonstration Agent*, Rupert

B.S., South Dakota College, 1913; Instructor in Home Economics, High School, Wayne, Neb.; 1913-15; Instructor in Home Economics, South Dakota State Normal School, 1915-17; Home Demonstration Agent, University of Idaho Extension Division, November, 1917—.

**VERNA R. JOHANNESEN, B.S.(H.Ec.), *Home Demonstration Agent*
Idaho Falls**

B.S.(H.Ec.), University of Idaho, 1918; Teacher of Home Economics, Tonopah, Nevada, 1918-19; Home Demonstration Agent, Bonneville County, June, 1919—.

AMY KELLY, B.S., *State Home Demonstration Leader*
State House, Boise

B.S., South Dakota State College, 1908; Graduate Student University of Illinois, 1908-09; Special Student Columbia University; Dietitian, Passavant Hospital, Jacksonville, Illinois, 1909; Assistant Principal of School of Agriculture, South Dakota State College, 1909-13; Field Instructor in Home Economics, Extension Division, University of Idaho, 1913-17; State Home Demonstration Leader, 1917—.

EDNA M. LADWIG, B.S., *Home Demonstration Agent*
Twin Falls

B.S., Colorado Agricultural College, 1912; Student, Teachers College, New York City, Summer; Student, University of Colorado, Summer; Teacher of Domestic Science, Hesperus, Colo., 1912-13; Salida, Colo., 1913-15; Teacher, St. Anthony, Idaho, 1915-16; Demonstrator Utah Power & Light Co., 1916-17; Emergency Home Demonstration Agent, Weber County, Utah, 1917-19; Home Demonstration Agent, Twin Falls County, June, 1919—.

MARY LUCILE LEE, B.S.(H.Ec.), *Home Demonstration Agent At Large*
State House, Boise

B.S.(H.Ec.), Utah Agricultural College; Head of Home Economics Department, Jordan High School, 1914-16; Emergency Home Demonstration Agent, Davis County, Utah, 1917-19; Home Demonstration Agent at Large, University of Idaho Extension Division, 1919—.

CAREY D. MILLER, A.B., *Assistant State Home Demonstrator Leader*
Boise

A.B., University of California, 1917; Instructor in Home Economics, State College of Washington, 1917-18; Instructor of Home Economics, University of California, 1918-19; Assistant State Home Demonstrator Leader, February, 1920—.

LILLIAN MILLER, B.S., *City Worker*, Pocatello

B.S., Oregon Agricultural College, University of California, Domestic Science Teacher, Albany, Ore.; Emergency Home Demonstration Agent, Pocatello, Idaho, 1918-19—.

G. LOUISE RIDDLE, B.S., *Home Demonstration Agent*
Caldwell

A.B., College of Sisters of Bethany, 1906; B.S., Kansas State Agricultural College, 1908; Graduate Student University of Washington, 1916-17; Teacher of Domestic Science, High School, Sallisaw, Okla., 1908-09; Instructor in Rural School, Ada County, Idaho, 1910-12; Instructor in Domestic Science, High School, Kuna, Ida., 1912-14; Instructor in Domestic Science and Art, High School, Caldwell, Ida., 1914-15; Home Demonstration Agent, University of Idaho Extension Division, October, 1917—.

LYDIA SINCLAIR, *County Home Health Demonstrator, Lincoln County*
Shoshone

Student, Iowa Wesleyan College, Mt. Pleasant, Iowa; Graduate of Nebraska Methodist Episcopal Hospital; School Nurse, Omaha; in U. S. Army service, Camp Taylor and France; County Home Health Demonstrator, Lincoln County, 1919—.

DOROTHY TAYLOR, B.S., (H.Ec.), *Home Demonstration Agent*, Moscow

B.S., (H. Ec.), University of Idaho, 1915; Teacher of Home Economics, High School, Rathdrum, 1915-17; Home Demonstration Agent, University of Idaho Extension Division, September, 1917-19.

ESTHER WOLD, *Clothing Specialist*

State House, Boise

Received Diploma, Stout Institute, Menomonie, Wisconsin; 1916

Student, University of Minnesota Summer Sessions; Instructor, High School, La Crosse Wisconsin, 1916-18; Clothing Specialist Extension Department, State College of Rhode Island, 1918-19; Clothing Specialist, University of Idaho Extension Division, 1919—.

BOYS' AND GIRLS' CLUB LEADERS

FLOYD R. BARBER, *County Club Leader, Bear Lake County*

Paris

Student, Teachers Normal School, Missouri, 1903; Albion Normal School, 1917; Teacher, Public Schools of Heman, Humphrey, and Thornton, Idaho; County Club Leader, Bear Lake County, January, 1920—.

EDNA A. BLACK, *County Club Leader, Canyon County*

Caldwell

Student, Colorado Agricultural College; Student, Moody Training School, Chicago; Teacher, Houston, Texas; Teacher of Domestic Science, Salt Lake City, 1913-17; Teacher of Domestic Science, Oakland, California, 1917; County Club Leader, Canyon County, July 1, 1919—.

HAZEL V. BULLOCK, *Club Leader, Bannock County, McCammon*

Bradley Polytechnic Institute, Peoria, Illinois, 1914-15; University of Chicago, 1916; Teacher of Home Economics, Y. W. C. A., Cleveland, Ohio; Teacher Home Economics, Morresville, Indiana; Teacher, Caroline County, Md.; Director and Instructor, 1917-18; County Club Leader, Bannock County, 1918-Nov. 1919.

HARRIETTE E. CUSHMAN, A.B., *County Club Leader, Washington County*

Weiser

A.B., Cornell University, 1914; received certificate in Short Course, State Agricultural College, Rutgers College; Biochemist, Training School, Vineland, N. J.; Biochemist with Dr. J. P. McKelvy, Pittsburg, Pa.; Manager Poultry Department, Training School, Vineland, New Jersey; County Club Leader, Washington County, University of Idaho Extension Division, 1919—.

MYRTLE DAVIDSON, B.S., *County Club Leader, Fremont County*

St. Anthony

B.S., Utah Agricultural College; Student Brigham Young College 4 years; Teacher District School, Logan, Utah, 5 years; Teacher Box Elder High School 1 year; Club Leader 1 year; County Club Leader, Fremont County, February, 1919—.

ZELMA FAY FOWLER, *Assistant State Leader Boys' and Girls' Clubs*

State House, Boise

Student University of Chicago, 1906; Primary Teacher Lone Tree, 1904-05; Primary Teacher, Midway, 1906-08; Principal Midway, 1908-10; Principal Lakeview, 1910-12; Special Student in Home Economics, University of Idaho, 1915; County Superintendent, Canyon County, 1912-16; Assistant State Leader Boys' & Girls' Clubs, University of Idaho Extension Division, 1916—.

ALICE HOLMSTEAD, B.S., *County Club Leader, Jefferson County*

Rigby

B.S., Kansas State Agricultural College; Student, Utah Agricultural College Summer School; Instructor in Home Economics, Cayson, Utah; Emergency Home Demonstration Agent, Richfield, Utah; County Club Leader, Jefferson County, 1919—.

IVAH L. HOLT, *Club Leader, Gooding County, Gooding*

Graduated from Milwaukee Normal, 1905; Teacher in Wisconsin, 1905-09; Teacher in Idaho; Summer Club Leader, June 1-August 1, 1918; County Club Leader, Gooding County, September, 1918—.

WILLIAM THOMAS MCCALL, B.S., *State Leader Boys' and Girls' Clubs*

State House, Boise

B.S., Kansas Agricultural College, 1908; Kansas Wesleyan Business College; Agricultural Work with Farm Machinery, 1908-14; County Agent, Canyon County, Idaho, 1915-17; State Leader Boys' & Girls' Clubs, University of Idaho Extension Division, April, 1917—.

MAUDE ETHELYN NEAR, *Club Leader, Lewis County, Nez Perce*

Cedar Rapids Business College, Cedar Rapids, Iowa; Private Secretary, 1906-17; County Superintendent, 1917; County Club Leader, Lewis County, 1918—.

ABIGAIL NEIKIRK, A.B., *County Club Leader, Madison County*

Rexburg

A.B., University of Colorado, 1906; Student University of Washington, Summer, 1913; Teacher of Science and Mathematics; County Club Leader, Madison County, 1919—.

HERBERT T. NIECE, *Club Leader, Ada County*

State House, Boise

Student State Normal, Indiana; Student Indiana and Chicago Training Schools; Teacher in Public and High Schools and Insular Normal School of Porto Rico; Club Leader, Hill Social Settlement, Chicago; Grade Teacher; Normal Teacher; High School Teacher, 1911-18; Assistant County Club Leader, Canyon County, May, 1918; County Club Leader, Ada County, November, 1918—.

ALPHONSUS I. O'REILLY, *County Club Leader, Twin Falls County*

Twin Falls

Student, South Dakota Agricultural College; County School Superintendent, Java, South Dakota, 1906-10; County School Superintendent, Eugene, Oregon, 1910-15; City School Superintendent, Junction City, Oregon; Assistant State Club Leader, Oregon, 1917-19; County Club Leader, Twin Falls County, Idaho, 1919—.

FLORA M. RICHARDSON, *County Club Leader, Jerome County*

Jerome

Private Secretary, Pacific Telephone Company, Portland, Oregon, 1913-15; Private Secretary, A. M. Harris, Portland, Oregon, 1918; Assistant State Leader Boys' & Girls' Clubs, June, 1918—July, 1919; County Club Leader, Bear Lake County, July-November, 1919; County Club Leader, Jerome County, November, 1919—.

INA SCRIVNER, B.S., *County Club Leader, Payette County*

Payette

B.S., Oregon Agricultural College, 1916; Head of Home Economics Department, Lewiston High School, 1916-18; Assistant State Club Leader, Idaho County, 1918; District Club Leader, July-November, 1919; County Club Leader, Payette County, November, 1919—.

HANNA MARIE SPENCE, *Club Leader, Twin Falls County, Twin Falls*

Student, Drake University; Graduate of Highland Park College, Des Moines, Iowa, 1914; Teacher of Home Economics, St. Anthony, Idaho; Teacher of Home Economics, Weiser, 1915-18; Summer Club Leader, June, 1918; County Club Leader, Twin Falls County, 1918-19.

CHLOE E. STOCKARD, B.S., *Club Leader, Bingham County*

Blackfoot

Graduate of Cotter College, 1916; B.S., Southwest Missouri State Teachers College, 1919; Teacher of Home Economics, Woodson, Tex., 1916-17; Verona, Mo., 1917-18; Teacher of Home Economics, Post Falls, Idaho, 1919-Feb., 1920; Club Leader, Bingham County, 1919—.

FLORENCE N. STRONG, A.B., *Club Leader, Jefferson County, Rigby*

A.B., Lexington College, W. Va.; Special Student, Kentucky Uni-

versity; Columbia University; Teacher, Indiana School for Girls; Club Worker, New York City; Teacher and Extension Worker, Nacoochee Institute; District Club Leader, Jefferson, Bingham and Bonneville Counties; County Club Leader, Jefferson County, 1918-19.

ALICE L. THAYER, *Club Leader At Large*

Student, Stout Institute, Menomonie, Wis.; Instructor in Home Economics, High School, Nevis, Minn.; Kellerton, Home Demonstration Agent, Missouri; Instructor in Home Economics, Basin, Wyo.; Club Leader at Large, 1920—.

ALFRED IRVIN TIPPETTS, *County Club Leader, Bannock County*
McCammon

Received diploma from Brigham Young College, Normal School, 1913; Student, Summer School, 1914-15; Principal of Schools Utah, 1915-16; County Club Leader, Weber County, Utah, 1917-19; County Club Leader, Bannock County, Idaho, 1919—.

JESSIE WARRINGTON, *Office Assistant, Boys' and Girls' Club Work*
State House, Idaho

County Club Leader, Jefferson County, April-July, 1919; Office Assistant, Boys' & Girls' Club Work, July, Extension Division, University of Idaho, 1919—.

LIBRARY ASSISTANTS

Mrs. LEONE HAMILTON BUTTERFIELD, *Assistant Librarian and Cataloger*

Graduate of Kansas State Normal School Library School, 1912; University of Wisconsin, 1915-16; Student, University of Wisconsin, 1915-16, with special work in Library School; Cataloger, Lewiston State Normal School, Lewiston, 1912-13; Librarian in charge, 1913-14; Cataloger, University of Idaho, 1916; Assistant Librarian, University of Idaho, 1919-20.

LOIS CRISWELL, *Cataloger*

Student, University of Washington, 1906-09; University of Illinois Library School, 1910; First Assistant, Public Library, Walla Walla Wash., 1911-13; First Assistant, Umatilla County Library, Pendleton, Oregon, 1914-17; Senior Assistant, Catalog Department, University of California Library, 1917-19; Cataloger, University of Idaho Library, 1919—.

CATHERINE ANNE FRANTZ, B.A., *Loan Librarian*

B.A., University of Idaho, 1918; Loan Librarian, University of Idaho, 1919—.

AGNES PETERSON, *Assistant Loan Librarian*

Student, University of Idaho, 1916-18; Assistant Loan Librarian, 1919—.

ASSISTANTS IN ADMINISTRATION

LAR VERN BORELL, *Stenographer*

Office of Dean of College of Letters and Science

Student, University of Idaho, 1915-17; Chief Clerk, Exemption Board, Spokane, Wash., 1917-19; Stenographer, College of Letters and Science, University of Idaho, 1919—.

DOLLY HEATH, *Stenographer*

Administration Building

RHODA HOBSON, *Secretary to the Dean of Agriculture*

Clerk and Stenographer of Experiment Station, University of Idaho, 1918-19; Secretary to Dean of Agriculture, 1919—.

Grounds:

Dean Miller, Chairman; Professors Vincent, Livingston, Webb.

Health and Housing:

Professor Lewis, Chairman; Dean French; Professors Bleamaster, Hyde, Jensen, Wodsedalek, Neidig, Watson, Kostalek.

Library:

Miss Sweet, Chairman; Deans Miller, Little; Professors von Ende, Peterson, Livingston, Lewis, Evans, Schell, Trimble, G. M. Miller.

Pre-Medical:

Professor Wodsedalek, Chairman; Deans Eldridge, Angell; Professors von Ende, Schell, Muttkowski.

Publications:

Professor Axtell, Chairman; Dean Eldridge; Professors Erickson, Davis, Brownell.

Public Events:

Dean Thomson, Chairman; Dean Cockerill; Professors Conwell, Bangs, Vincent, G. M. Miller, Chenoweth; Miss Wegmann.

Recommendations:

Professor Erickson, Chairman; Deans Eldridge, Iddings, Angell, Miller, Thomson, French; Professors Soulen, Jensen.

Research:

Professor Wodsedalek, Chairman; Dean Thomson; Professors Axtell, Lewis, Peterson, Macintire, Schmitz, Evans.

Scholarship:

Dean Eldridge, Chairman; Deans Angell, Iddings, Little, Miller, Thomson, French; Professors G. M. Miller, von Ende, Lewis, Leiby, Trimble, Jensen.

School of Forestry:

Dean Miller, Chairman; Professor Behre; Mr. Schmitz.

School of Mines:

Dean Thomson, Chairman; Professor Livingston; Mr. Fahrenwald.

Student Affairs:

Dean Eldridge, Chairman; Dean French; Professors Gill, Livingston, Neidig, Snow, Bleamaster, Schell, Colonel Chrisman.

Student Organizations:

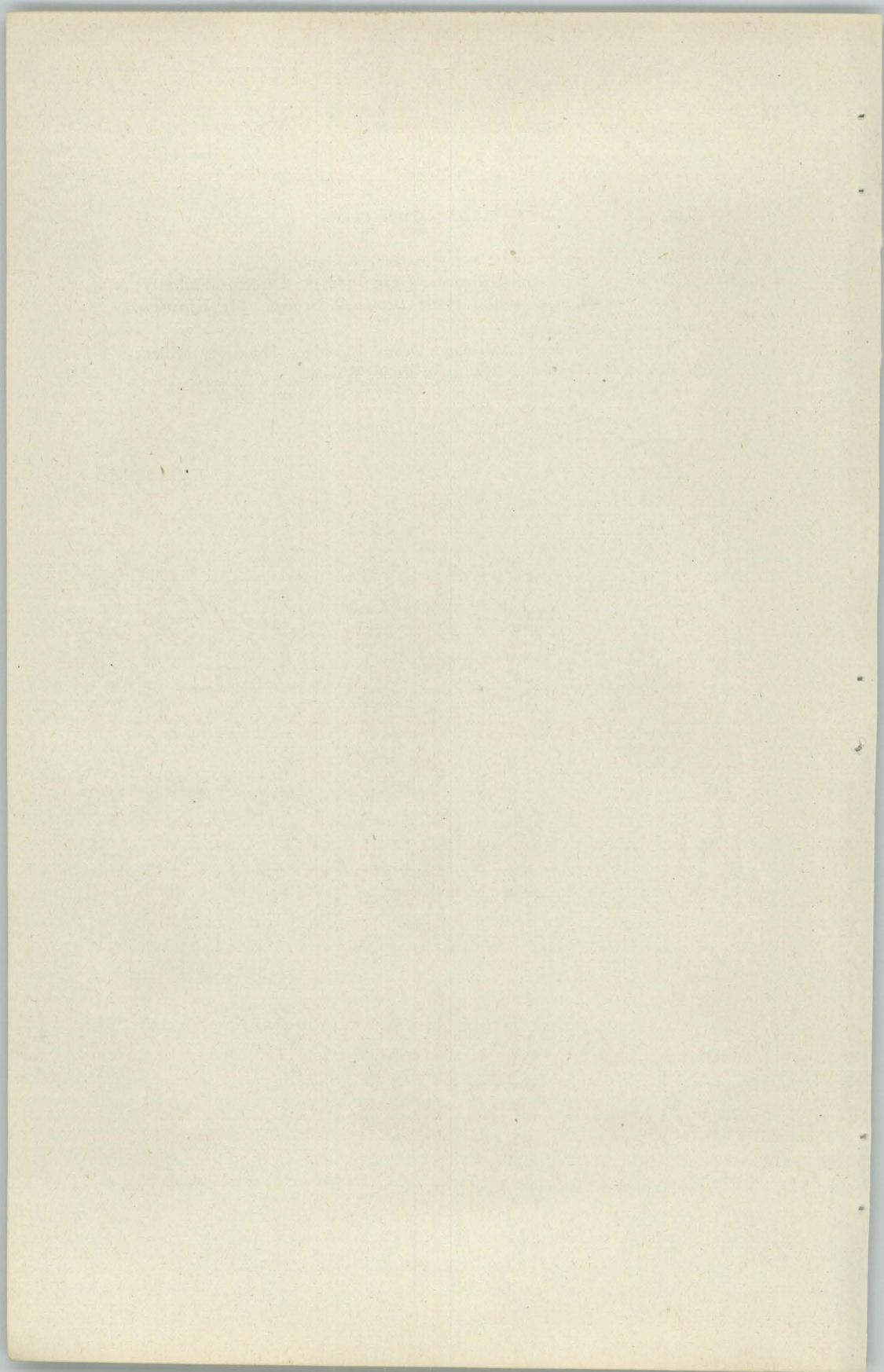
Professor Gill, Chairman; Deans French, Eldridge, Thomson, Angell, Cockerill; Professors Wodsedalek, Livingston, Axtell, G. M. Miller, Colonel Chrisman.

University Extension and Correspondence Courses:

Professor Erickson, Chairman; Dean Iddings; Director Fluharty;
Professors Lewis, Wilson, Hyde, Brownell, Browne; Mr. Kjosness.

Vocational Guidance:

Professor Soulen, Chairman; Deans Eldridge, Thomson, Miller;
Professors Erickson, Reed, von Ende, Wilson.



PART II.
GENERAL INFORMATION

A. HISTORY AND SCOPE

In January, 1889, the Legislature of the Territory of Idaho passed an act for the establishment of the University, which reads in part as follows:

"There is hereby established in this Territory, at the town of Moscow, in the county of Latah, an institution of learning by the name and style of "The University of Idaho." * * *

"The College or Department of Arts shall embrace courses of instruction in mathematical, physical, and natural sciences, with their application to the industrial arts, such as agriculture, mechanics, engineering, mining and metallurgy, manufactures, architecture, and commerce; and such branches included in the College of Letters as shall be necessary to proper fitness of the pupils in the scientific and practical courses for their chosen pursuits; and as soon as the income of the University will allow, in such order as the wants of the public shall seem to require, the said courses in the sciences and their application to the practical arts shall be expanded into distinct colleges of the University, each with its own faculty and appropriate title. The College of Letters shall be co-existent with the College of Arts, and shall embrace a liberal course of instruction in language, literature, and philosophy, together with such courses or parts of courses in the College of Arts as the Regents of the University shall prescribe." * * *

"Professional or other colleges or departments * * * may from time to time be added thereto or connected therewith."

The Constitution of the State of Idaho adopted by the electors, November, 1889, confirmed the establishment of the University thus: "The location of the University of Idaho as established by existing laws is hereby confirmed. All the rights, immunities, franchises, and endowments heretofore granted thereto by the Territory of Idaho are hereby perpetuated unto the said University."

A board of nine Regents appointed by the Governor was created to govern the University, but in 1901 this number was reduced to five. By constitutional amendment, passed in 1912, and by act of the legislature, 1913, the government of all the state educational institutions and the general supervision of the public schools were placed in the hands of one board, entitled "The State Board of Education and Board of Regents of the University of Idaho." This Board consists of five members appointed by the Governor, each to serve for five years, and the State Superintendent of Public Instruction *ex officio*.

On October 1, 1889, the contract was let for the construction of the west wing of the main building, but not until October 3, 1892, was the University opened. President Franklin B. Gault and one other professor constituted the faculty. During the first year the students, one hundred and thirty-five in number, were all of preparatory grade

except six. With the growth of the collegiate departments and the increase in the high schools thruout the state, the preparatory department diminished in importance, and in 1913 was discontinued.

In 1918 the University became a unit of the Students' Army Training Corps, and assisted the government in the training of over nine hundred student-soldiers.

The College of Letters and Science

The College of Letters and Science offers curricula of study leading to the degrees of Bachelor of Arts and Bachelor of Science, and the advanced degrees of Master of Arts and Master of Science. It affords instruction in ancient and modern languages and literatures, history, economics, commerce, political science, sociology, philosophy, psychology, education, music, mathematics, physics, chemistry, botany, and zoology. It also includes curricula for the degrees of Bachelor of Arts and Bachelor of Science in Education, and Bachelor of Science in Home Economics.

The College of Agriculture

The College of Agriculture offers curricula of study toward the degrees of Bachelor of Science in Agriculture and Master of Science in Agriculture. It gives instruction in agricultural chemistry, bacteriology, soils, farm crops, agricultural engineering, horticulture, animal husbandry, veterinary science, dairying, and poultry-raising. The College also provides thru the School of Practical Agriculture a three-year curriculum of five months annually in industrial and agricultural subjects of high-school grade. A five month's commercial course in dairying is also maintained for those who cannot take the regular course.

The College of Engineering

In the College of Engineering are curricula leading to the degrees of Bachelor of Science in the following branches of engineering: Civil, Electrical, Mechanical, and Chemical; also the advanced degree of Master of Science in these respective branches of engineering.

The College of Law

The College of Law gives a three-year curriculum, open to all students, eighteen years of age and over, who have completed one year of collegiate work in an institution of accepted academic standing. It grants the degree of Bachelor of Laws. By special arrangement students may combine the work of the College of Letters and Science and the College of Law and satisfy the requirements of both the degrees of B.A. and LL.B. in six years. Several specified law courses may be taken free of charge by students enrolled in the other Colleges of the University.

The School of Mines

The School of Mines offers curricula of study leading to the degrees

of Bachelor of Science in Mining Engineering, in Metallurgy, and in Geology. Courses leading to the degree of Master of Science in each of these branches are also offered.

The School of Mines maintains also an eight-weeks' course for prospectors, miners, and millmen, commencing immediately after the Christmas vacation.

The School of Forestry

The School of Forestry offers curricula of study in General Forestry, Logging Engineering, and Grazing. It grants the degrees of Bachelor of Science in Forestry and Master of Science in Forestry. The school also offers a curriculum of high school grade, covering two years of five months each.

The Agricultural Experiment Station

The Agricultural Experiment Station is organized to fulfill as effectually as possible the purpose of the Acts of Congress, known as the Hatch Act and the Adams Act, and of the State legislature in various appropriation measures, in the improvement by research of the agricultural industry of Idaho. The Station Council, composed of the President of the University, the Director of the Station, and those in charge of various departments of agricultural research, directs the work of the Station Staff in experiment and investigation in both the central station in Moscow and the several sub-stations in different parts of the state.

State Bureau of Mines and Geology

The law establishing the State Bureau of Mines and Geology specifies that its office shall be at the University and thru this medium cooperative relations are maintained with the United States Bureau of Mines, and with the United States Geological Survey in all matters pertaining to work in the State of Idaho.

The State and Federal Bureaus maintain a joint metallurgical staff engaged in the investigation of metallurgical problems of the state. This work, of course, not only provides opportunity in the form of fellowships for graduate work in mining and metallurgy of the highest order, but gives the undergraduate student the stimulating influence of working in an atmosphere where the pressing mining problems of the day are being solved.

The cooperative work with the U. S. Geological Survey offers to university students opportunities for summer employment in geologic, topographic, and hydrographic work.

The University Extension Division

The University Extension Division is organized to extend information and educational assistance to the people of the state, so far as the resources of the University permit. At present it conducts work in Agricultural Extension by various County Agricultural Agents, Field

Specialists in Agriculture, Leaders of Boys' and Girls' Clubs, Home Demonstration Agents, under the supervision of the Director at Boise, Idaho. See also page 230.

The Summer Session

The Summer Session of the University is maintained to afford instruction both for regular University students and for persons who desire to avail themselves of the University facilities during the summer only. Credits toward University degrees may be earned. The instructional staff is made up of members of the University faculty and lecturers from other institutions.

B. INCOME AND EQUIPMENT

Income

The income for all departments of the University is estimated for the year 1920 as follows:

Federal:

Land Endowment Fund.....	\$103,000
Funds for Instruction, Experimentation and Research	80,000
Funds for Extension (Agriculture, Home Economics, etc.).....	44,109
	<hr/>
	\$227,109

State:

Maintenance and Equipment.....	\$184,596
Agricultural Extension.....	177,409
Capital Additions.....	15,334
	<hr/>
	\$249,649

Total\$604,448

The original land endowment of the University consisted of 286,080 acres of federal lands, distributed as follows:

- 96,080 acres for the University proper;
- 100,000 acres for the School of Science;
- 90,000 acres for the College of Agriculture.

The value of the land endowment from the Federal government should be nearly six million dollars; approximately one-fourth of this land has been sold.

In the University campus and college farm there are 340 acres, and in addition 60 acres of leased land. There is a sub-station at Caldwell of 320 acres, one at Jerome of 40 acres, and one at Sandpoint of 170 acres, all owned by the University and used for the con-

duct of experimental and demonstration work. The University also has under lease at Aberdeen an 80-acre tract used for similar work. Furthermore a station at an altitude of over 6,000 feet, named "The Highland Experiment Station" was located in 1918. This consists of 160 acres for experiments in dry farming and 40 acres in irrigation at high altitude.

Location and Grounds

The University is located at Moscow, in the northern part of Idaho, on the Palouse and Lewiston branch of the Northern Pacific Railway, at the terminus of the Moscow branch of the Union Pacific system, and at the terminus of the Spokane and Inland Empire Railway (electric). The city has a population of about five thousand, is supplied with exceptionally pure artesian water, and has well sustained churches and excellent public schools. The moderate altitude of 2,600 feet makes the climate of Moscow a desirable change both for students coming from the more humid climate of the coast, and for those from the high, arid regions. The air is pure and invigorating. The locality enjoys the cool summers of the semi-mountain elevation and the mild winters of the region west of the Rocky Mountains. The University is situated on an eminence to the southwest of the city of Moscow and overlooks one of the most attractive prospects of mountain and valley in the Palouse country. The campus, a wide sweep of lawn dotted here and there by tennis courts, a monument, and a grove of trees, is crossed from the city by a winding driveway. The grounds west of the campus proper near the Gymnasium, containing twenty acres, form a natural amphitheater and are laid out as a permanent athletic field. Upon one of the surrounding slopes seats have been built which afford a good view for spectators.

Buildings

THE ADMINISTRATION BUILDING, which replaces the building destroyed by fire, March 30, 1906, is now complete in the center portion and north wing; the south wing is in process of construction. It is an absolutely fireproof, three-story structure in Collegiate Gothic style and contains the library, offices, many class and lecture rooms, as well as an auditorium with a seating capacity of 1000.

THE ENGINEERING BUILDING (1902) is of brick, three stories high, with a ground floor of 60x108 feet. The class-rooms of the departments of Mechanical and Electrical Engineering and Chemistry and the laboratories of Chemical and Electrical Engineering are located in it.

THE ENGINEERING SHOP BUILDING (1918), a one-story brick structure, 56x108 feet, is well planned in its arrangements for heat, light, and ventilation. It furnishes roomy quarters for the wood shop, metal shop, and laboratory of the Mechanical Engineering Depart-

ment; for the general carpenter shop of the University; and for the smaller laboratories of the Civil and Electrical Engineering Departments.

LISZT HALL (1897), a two-story wooden structure, formerly the Horticultural Building, was refitted in 1907 for instruction in piano and theory in the Department of Music.

RIDENBAUGH HALL (1902), the women's dormitory, is a three-story brick building finished and furnished according to the most approved plans. It contains three reception halls, thirty-five rooms, two large sleeping porches, a dining hall for 100 boarders, and apartments for the Dean of Women. The building is steam-heated.

THE ARMORY AND GYMNASIUM (1904) is a large rectangular structure of red brick, with a ground floor of 129x64 feet. It was constructed at an approximate cost of \$25,000, and is one of the most attractive of the University buildings.

LEWIS COURT (1911), an annex to the Gymnasium built by private subscription, is a one-story wooden structure 60x180 feet in dimensions. It stands immediately north of the Gymnasium. The floor is of cinders and contains eight hand-ball courts, three basketball courts, tennis, volley-ball, and hockey courts, a fifty-yard dash stretch for sprinters, and a running track one-twelfth mile long. It is also used for military drill during the winter months.

THE Y. M. C. A. BUILDING is a one-and-one-half-story frame structure erected in 1918 by the National War Work Council and originally intended for the use of the student-soldiers. It contains an auditorium, an office for the resident secretary, and rooms for classes, reading, writing, and other purposes.

THE ASSAY LABORATORY (1906), is of one story, 110x52 feet, of selected brick with rubble foundations, and is fully equipped for assaying and small-scale metallurgical experiments. It contains a furnace room, 70x50 feet, chemical laboratory, office, parting-room, balance room, and laboratory.

THE METALLURGICAL LABORATORY (1906) occupies a red pressed-brick building with ground-floor plan of 84x96 feet and is the best in the Northwest, representing with its present equipment an expenditure of about \$40,000. It is built upon sloping ground and has the different floors or levels common to all mills constructed on a hillside.

MORRILL HALL (1906) constructed of brick and stone at a cost of about \$50,000, is designed to meet the needs of the College of Agriculture and the Agricultural Experiment Station.

THE AGRICULTURAL ENGINEERING BUILDING (1915) is a two-story brick building adjoining the heating plant. It has a ground-floor space 58x70 and contains in addition to the Agricultural Engineering Department, Mechanical Engineering forge shop, a Horticultural laboratory, and the office of the engineer of the heating plant.

THE STOCK JUDGING PAVILION (1911) is situated near the campus

on the west and furnishes ample room for practice work in stock judging. Seats are provided for 136 students arranged on either side of floor space sufficient for handling groups of from three to six animals.

THE GREENHOUSES (1908) are situated west of the Flour Mill.

THE CENTRAL HEATING PLANT (1909) is of brick structure and furnishes steam heat to most of the University buildings.

THE BY-PRODUCTS BUILDING (1907) is a frame structure, 30x34 feet. It is equipped for canning and evaporating fruits and vegetables of all kinds.

THE FLOUR MILL (1907) is equipped for experimental work in the improvement of wheat. One end of it is used for investigation of fruit by-products.

THE DAIRY BUILDING (1918) is a substantial and attractive three-story building containing 6,000 square feet of floor space. The entire building is devoted to the work of the Department of Dairying, giving this department unsurpassed accommodations for its work.

THE DAIRY BARN (1911) is a part-shingle, part-stucco building located just west of the campus and planned to house the University dairy herd of 40-50 animals.

THE HORSE BARN (1918) is a substantial and thoroly modern structure, 40x112 feet, located on the University farm.

THE SHEEP BARN AND SWINE BARN (1918) are new buildings of simple but attractive design conveniently arranged for handling the live stock.

Library

The University Library occupies a large room on the second floor of the Administration Building. The room is well lighted and as now arranged provides chairs and table space for one hundred readers and shelving for 35,000 volumes. In addition to this, a storage room in the basement contains about 5,000 volumes.

The Library consists of about 50,000 volumes and several hundred pamphlets. Books of general interest and usefulness are kept in the main library, where readers have direct access to them. The books are arranged by subject according to the decimal classification. A dictionary card catalog listing all material by author, title, and subject, is being made. For convenience certain collections are deposited in the departments to which they are of especial use. The law library is kept in a separate room, where it is easily accessible.

As a designated depository the library receives all publications of the United States Government. The library receives regularly about 200 of the leading periodicals, both general and technical, American and foreign. These are on file in the reading room or in the department libraries, and completed volumes are bound. The material is all available for quick reference thru excellent periodical indexes. About 100

Idaho newspapers donated by the publishers for the use of the students are filed in the newspaper room.

Any one, whether directly connected with the University or not, is welcome to the use of the library for both reference and reading.

LABORATORIES

Agriculture

AGRICULTURAL CHEMISTRY.—This laboratory is in a large, well lighted, and well ventilated room on the second floor of Morrill Hall, adjoining the chemical laboratories of the Experiment Station. It is equipped with three analytical balances, a large electrically heated hot plate, twelve steam baths, a steam drying oven, Kjeldahl digestion and distilling apparatus, and other special appliances for general use. Reference books, technical bulletins, and journals of pure and applied chemistry are on file in the departmental library.

AGRICULTURAL ENGINEERING.—The laboratories contain levels, transits, current meters, and other equipment for surveying and water-measurement work; eight gasoline engines, ten automobiles, six tractors; one acetylene welding plant and a fully equipped shop and tool room; up-to-date farm machinery commonly found on the average farm in Idaho; a test brake for determining the belt horse-power of tractors and a tractor dynamometer for determining the draw-bar horse-power.

ANIMAL HUSBANDRY.—For use in the scoring and comparative judging of market and breed types the University owns and maintains a live-stock herd consisting of ten pure-bred draft horses representing three breeds and seven grade draft horses; sixty-five head of beef cattle representing three breeds; ninety head of pure-bred sheep representing seven breeds; and fifty head of pure-bred hogs representing three breeds. The stock-judging pavilion offers excellent facilities for classes in stock judging. In the barns additional work is given in the care, handling, and management of live stock.

DAIRYING.—Facilities for instruction in dairying include the creamery laboratory, provided with the usual equipment found in commercial creameries, such as power separators, churns, pasteurizers, and apparatus for the manufacture of cheese and ice cream, several makes of cream separators, milk-testing apparatus, a mechanical refrigeration plant, and cold-storage rooms. In addition, there is a well equipped laboratory for research work. For practice in judging and for other laboratory work the University maintains a herd of thirty-five head of dairy cattle, representing the Jersey, Guernsey, and Holstein breeds. Of these complete milk and butter-fat records are kept.

FARM CROPS.—A large, well equipped laboratory is used for instructional work in grain and forage-crop identification, market grading, and judging. Samples of grain and forage varieties are used for laboratory study in identification and judging. A special laboratory

is provided for seed testing and advanced research in crops. The department operates a 35-acre tract of land for experimental and demonstration work, which is used to supplement the laboratory courses. A part of one of the greenhouses is devoted to raising specimens of forage crops for study during the winter months. Material is also grown for plant-breeding studies.

HORTICULTURE.—The laboratory of this department is on the second floor of Morrill Hall, but much of the laboratory work is carried on in the 45-acre gardening and orchard tract. An implement room for the display of the best horticultural tools and two greenhouses furnishing ample material for work in plant propagation and landscape gardening are maintained.

SOILS.—In the Soils Department three laboratories are well equipped with the modern apparatus for soil physics and soil chemistry. One laboratory is used for instructional work and two for research, but the students have access to the research apparatus. In addition, sixty one-tenth acre field plots are set aside for the use of this department for field work and demonstration.

Bacteriology

The bacteriological laboratory occupies three large rooms on the third floor of Morrill Hall. Here is found all the equipment usually provided in well-appointed laboratories, including two electric dry air sterilizers; two steam-pressure sterilizers; one compartment incubator; two high and two low-temperature incubators; nineteen microscopes; steam baths, digestion and distilling apparatus, and all the necessary apparatus for determining the biological reactions. The student laboratory is adjacent to the Research Laboratory, thus offering the student an excellent opportunity for observation and consultation. A number of the leading national and foreign publications in bacteriology, hygiene, and medicine are taken and are on file in the department.

Botany

This department occupies five rooms on the third floor of the Administration Building. The general laboratory is a large well equipped room which accommodates over one hundred students in three sections. Another room is devoted to advanced work, accommodating about thirty students in three sections. In addition to these two laboratories, there are a store-room, an office, and a lecture-room on the same floor. The department is equipped with compound and dissecting microscopes, a Bausch and Lomb rotary microtome, a freezing microtome, complete apparatus for indoor photography, a Spencer Delineascope, an electric paraffin oven, an electric oven, ice chest, autoclav, apparatus for laboratory work in physiology, ecology, and pathology, a working herbarium, preserved material for class use, and a large collection of

prepared slides for use in morphology, history, and ecology. Sixteen of the leading botanical magazines are taken.

Chemistry

The department occupies twelve rooms on the second and third floors of the Engineering Building, and a large room in the basement partially equipped for industrial chemistry. Three rooms on the second floor are devoted in part to physical chemistry and research. The large lecture room is on the third floor. The various laboratories are located as follows: Freshman, third floor; Sophomore, third floor; Junior, second floor; Senior, second floor. All rooms are equipped with water, gas, drainage, power-current, reagents, and the necessary apparatus. Special equipment for advanced work and research is being gradually added. The analytical balances include the following makes: Sartorius, Becker (long and short arm), Bunge, Spoorhase, and Troemner. The library contains a few complete files of annual reports, transactions, and year-books of chemical societies. The current numbers of about eighteen periodicals, and more or less extended files of these, are available. The laboratories and chemical library are open all day, including Saturday.

Engineering

CIVIL.—In civil engineering there is a full equipment of field instruments, an unusually well-appointed drafting room, a complete cement-testing laboratory and a 200,000-pound universal Olsen testing machine, for testing wood, iron, and steel, with the desirable supplementary equipment. A road-materials laboratory fully equipped for testing both bituminous and non-bituminous materials has been provided and is in operation.

ELECTRICAL.—This laboratory is prepared to demonstrate by machines in commercial sizes the action of the various generators and motors, converters, transformers and other electrical apparatus. In addition to the usual sources of power there is a storage battery of sixty cells. In connection with the department of Physics an electrical standardizing laboratory is maintained.

MECHANICAL.—The mechanical laboratory is equipped for experimental work on steam, gas, and oil engines; on gas producer, air compressor, feed pump and heater, and injectors; on automobile motors, carburetors, ignition, and starting apparatus. Facilities are provided for fuel analysis and testing. The University heating and cold storage plants are also available for laboratory work. The leading mechanical engineering journals in English will be found in the Library.

The forge shop (in the Agricultural Engineering Building) is equipped with twenty Buffalo down-draft forges, power blower, and exhausters.

CHEMICAL.—The chemical engineering laboratories are not segre-

gated from those of the Department of Chemistry. There is the necessary equipment for the work of this course.

Forestry

The School of Forestry is equipped with ample apparatus for carrying on the various courses offered. An excellent herbarium, together with a complete line of wood samples is available; also a splendid collection of lantern and microscopic slides on forestry. An arboretum and nursery lot comprising about twelve acres, in which are growing about one hundred and eighty species of trees, are available to Forestry students and others. A by-products laboratory has been fully equipped with a large semi-commercial distillation retort, a superheater, two smaller retorts, together with a full line of chemicals and apparatus for the analysis and standardization of the various by-products obtained from wood. A great variety of logging machinery and apparatus is also available for the use of students in lumbering and logging engineering. The Forestry laboratory is equipped with a transit, also with levels, plane tables, calipers, etc., in numbers sufficient to meet the demands of the Department.

The library contains a large collection of reference books, besides government and state publications. It receives regularly the leading forestry and lumber-trade journals.

Home Economics

The laboratories of the Home Economics department are situated on the third floor of the Administration Building. These consist of two food laboratories with modern tables, electric ranges, and hot plates; a model dining room, a textile laboratory; and an exhibit room.

School of Mines

GEOLOGY AND MINERALOGY.—The laboratory and museum of the geological department are on the third floor of the Administration Building. Complete mineral and rock collections are available.

MINING.—The equipment in mining includes a large collection of mine models, models and examples of mine timbering, air compressor, rock drills, and rock-drill testing apparatus. This equipment is housed in the metallurgical laboratory.

METALLURGY.—The metallurgical and assay laboratories are among the most complete in the west. Large and small scale apparatus for ore-treatment, by wet and dry process, is available for instruction and experimentation purposes.

Physics

The physical laboratories are located on the first floor and in the basement of the Administration Building. The lecture room is well fitted for a complete course in demonstration lectures. The general laboratory is a well lighted room equipped for the general laboratory course in the College of Letters and Science and of Engineering.

Another room is devoted to electricity and magnetism with some work in the measurement of high temperatures. There is a fair equipment for standardization work along the lines of mechanics, heat, light, electricity, and magnetism. Room is also available for more advanced students, who desire to pursue a particular line of investigation. In addition to this a shop is maintained for the repair and manufacture of apparatus. Current numbers of the leading scientific periodicals with many bound volumes are available for reference.

Psychology

The psychological laboratory is located on the third floor of the Administration Building. It contains the standard apparatus for the study of sensation, memory, association, reaction time, and animal behavior. There is also a large assortment of the various mental tests for the study of measurement of intelligence. In the work for the latter the city schools are generous in always providing rooms and children for practice. All the leading American periodicals in psychology are in the library.

Zoology

This department occupies three rooms on the third floor of the fire-proof Administration Building. The large new laboratory in the northeast corner of the building is especially adapted to detailed microscopic work in the advanced courses. Among the more important items of equipment are forty-eight compound microscopes, forty-eight dissecting microscopes, a Bausch and Lomb binocular microscope with fluorite objective, two Zeiss binocular dissecting microscopes with Porro prisms, a Bausch and Lomb rotary microtome, and a universal balopticon with large microscope. The collections of the department are extensive in fishes, marine invertebrates, skeletons, and especially in insects; sufficient material in other groups is at hand to illustrate the more essential features of each. A large collection of microscope slides, prepared by the late C. B. Simpson of the class of 1898, has been presented to the department by his parents; it is especially valuable in material illustrating the neurology and general history of vertebrates. Also a large collection of slides prepared by the late Ross B. Cartée of the class of 1916, has been presented to the department by his parents; it is especially valuable in embryology and cytology. In addition to this, a series of slides in histology, cytology, and embryology, numbering about 3000, has been made in recent years. Several of the leading periodicals in zoology, entomology, and medicine are taken.

C. UNIVERSITY ORGANIZATIONS

A. S. U. I.—The Associated Students of the University of Idaho is an organization of the whole collegiate body, formed for the purpose of controlling and directing student activities. The organization recog-

nizes three principal departments: athletics, debate and oratory, and the college paper, each of which is under the direct control of a particular board, subject to the general supervision of the Executive Committee of the Associated Students.

The department of athletics is managed by the Athletic Board. Contests in football, basketball, and on track and field are arranged annually with the University of Oregon, the University of Washington, Whitman College, Washington State College, Oregon Agricultural College, and the University of Montana.

The intercollegiate contests in debate are under the control of the Debate Council, which is composed of two members; one is elected by the student body, the other is the debate coach. Annual dual debates are held with colleges and universities of neighboring states.

All funds are under the control of a Board of Supervisors, which consists of two faculty members and the manager of the activity concerned.

Y. M. C. A.—The purpose of the Young Men's Christian Association is to apply the principles of Jesus Christ to the individual and social life of the University men. Its work is religious, social, and recreational. Development is sought thru classes in Bible study, religious meetings, personal interviews, social gatherings, and entertainments. The privileges of the "Hut" with its facilities for writing letters, reading, playing indoor games, etc., are open to the University men and all student organizations. The Association joins with delegates from the other Northwest colleges and universities in the annual Student Conference at Seabeck, Washington.

Y. W. C. A.—The Young Women's Christian Association stands for the highest type of womanhood and has for its purpose the development of Christian character among the students of the University. Regular meetings are held for consideration of present-day topics, for study, and for prayer. Social intercourse is a prominent feature. Representatives are sent annually to the Pacific Coast Student Conferences at Seabeck, Washington.

DeSmet Club.—The DeSmet Club is an organization of the Roman Catholic students of the University which meets monthly for study and social purposes.

Economics Club.—The Commerce and Economics Club is a semi-social organization to which all students enrolled in the courses in Economics, Political Science, and Commerce are eligible. The president must be a senior majoring in one of these departments. Meetings are held every second Wednesday at which topics relating to problems of economics, business, government, and sociology are discussed. Men and women of prominence in these lines are invited to address the club from time to time.

English Club.—The purpose of the English Club is to foster an interest in literature and composition and in all forms of student

activities related to the work of the Department of English. All instructors and major students in the Department are *ex-officio* members, while all students writing for the *Argonaut* or *The Gem of the Mountains*, or participating in intercollegiate debates or college dramatics are eligible to membership. Meetings are held once a month, when the program is furnished either by the members of the club or by some invited guest.

Musical Societies.—The musical organizations under the supervision of the Department of Music are as follows:

The Treble Clef Club.

The University Glee Club.

The Choral Society.

The University Orchestra.

The Music Club.—This is an organization for the purpose of helping all the musical interests of the University. The meetings are held monthly and are informal and social.

The Cadet Military Band.—The band is part of the cadet corps and is under the direction of Mr. Bernt Neilsen, Band Leader, U. S. Army.

Pre-Medical Club.—This is an organization of pre-medical students and those majoring in the zoological sciences. The purpose of the club is partly social and partly scientific.

Science Club.—The University of Idaho Science Club was organized for the purpose of affording its members an opportunity for mutual interchange of thought and the discussion of scientific topics. It meets monthly.

Agricultural Club.—The students and instructors of the College of Agriculture are organized into a club holding regular weekly meetings in the form of an agricultural assembly with a program of special reports.

Associated Engineers of the University of Idaho.—This is a society of the students of all departments of engineering at the University. The constitution provides that regular meetings shall be held once a month with special meetings as called by the president.

Student Branch of A. I. E. E.—Students taking work in the department of electrical engineering are organized into the University of Idaho Branch of the American Institute of Electrical Engineers. This affords affiliation with a national organization. Meetings are held once a month for the discussion of technical papers. Addresses by prominent men in the electrical or allied industries are arranged for from time to time.

Law Club.—(See College of Law.)

Associated Miners.—The Associated Miners is an organization of the students in mining engineering before which papers are read by members of the faculty, students, visiting mining men, and alumni. It is affiliated with the American Institute of Mining Engineers.

Loan Scholarship Fund.—At the first biennial meeting of the State Federation of Women's Clubs, held in Boise, October, 1906, it was decided to establish a scholarship fund for the University, to be loaned to deserving students in amounts varying to suit individual needs. About \$200 was raised at once, which sum has been increased by contributions from clubs, high schools, and individuals to approximately \$7,000. An applicant must be recommended by a club belonging to the State Federation and by the principal of his high school, or the superintendent of the schools of his city. The money thus loaned is to be returned to the fund at the borrower's convenience without interest. Students desiring to take advantage of this offer will apply with the above recommendations to Mrs. M. J. Sweeley, Twin Falls, Idaho, or to Dean Permeal French, University of Idaho.

The Victor Price Debate Fund.—In 1910 Mrs. Mabel E. Price, '03, established an annual fund of \$30 in memory of her husband, Victor Emmanuel Price, '06. It is devoted to the purchase of books that will be helpful to the debate work of the University. Each book purchased with the fund contains a label that denotes its source and the date of its acquisition. Because of the fact that they deal with vital problems, the books obtained by means of the fund will, in a few years, become one of the most valuable parts of the library.

Borah Debate Prize—In 1907 Senator William E. Borah established an annual debate prize of \$50. A debate is held at the University each year, all of the contestants having been chosen in a preliminary debate that is open to all the students of the University. The prize is used in building up a special debate library which is known as the Borah Debate Library. The names of the contestants who secure the three highest places, together with that of Senator Borah, are mentary equipment. A road-material laboratory equipped for testing both bituminous and non-bituminous materials have been provided for and will be at work during the summer of 1919.

placed in the books. The subjects debated thus far, and the names of the winners, are as follows:

1907—*Employers' Liability for Industrial Accidents.*

Ira Tweedy, John A. Rock, and Guy Holman.

1908—*A Graduated Federal Income Tax.*

Ira Tweedy, Jewett D. Matthews, and Robert O. Jones.

1909—*Federal Incorporation for Interstate Commerce Corporations.*

Ransom Mackie, Paul M. Clemens, and John A. Rock.

1910—*Old Age Pensions in England.*

Ira Tweedy, Paul Durrie, and Ralph Foster.

1911—*The Settlement of Industrial Disputes.*

Ralph Foster, Parker V Lucas, and John McEvers.

1912—*Incorporation of Labor Unions.*

Parker V. Lucas, Harry McAdams, and Homer Barton.

- 1913—*The Control of Industrial Combinations.*
Joseph M. Pond, Clarence F. Johnson, Frank Dotson.
- 1914—*Ministerial Responsibility in State Government.*
Charles Chandler, Laurence Huff, Alvin Beckman.
- 1915—*Federal Control of Marriage and Divorce.*
Walter E. Sandelius, Frank A. Koch, Marvin M. Monroe.
- 1916—*Exclusion of Illiterate Immigrants.*
Frank A. Koch, Clarence Taylor, Ernest Poe.
- 1917—*Democracy of the English and American Governments.*
Ernest K. Lindley, Richard Ott, Walter Sandelius.
- 1918—*The Causes and the Issues of the War.*
(No intercollegiate debates held)
- 1919—*Government Ownership of Railroads.*
Clarence J. Taylor, Regner W. Kullberg.

Lewis Prize in Economics.—A prize of a set of books is offered annually by Professor H. T. Lewis to the student majoring in the Department of Economics and Political Science who receives the highest average grade during the current year.

The Jerome J. Day Scholarship.—In 1917 Mr. Jerome J. Day established an annual scholarship in the School of Mines, to be awarded to a high-school student of Shoshone County. The scholarship runs for four years and affords an annual income of \$250. The conditions of the scholarship are set forth on page 197.

Honors.—In order to promote scholarship the Faculty has adopted a system of classified honors with the following rules. Honors are of two kinds: (1) *Yearly Honors*, given at the close of each year and known as First-Year Honors, Second-Year Honors, Third-Year Honors, and Fourth-Year Honors; and (2) *Final Honors*, based upon the work of the entire course. Yearly Honors are divided into two groups, known as *Class A* and *Class B*. Final Honors are divided into three groups, known as *Honors*, *High Honors*, and *Highest Honors*.

Grades are marked by alphabetical symbols which have the following values:

A (excellent), 90-100; B (good), 80-89; C (fair), 70-79; D (passed), 60-69; E (condition), 50-59; F (failure), below 50.

Honors are determined in accordance with the following numerical system:

Each semester-hour with grade A counts as 6, with grade B as 5, C as 4, D as 3, E as 2, F as 1.

Numerical equivalents are attached to the above honor groups as follows:

First-Year, Second-Year, Third-Year and Fourth-Year Honor Lists:—

Class B, an average of 5.000 or over.

Class A, an average of 5.333 or over.

Final Honor Lists:—

Honors, an average of 5.000 or over.

High Honors, an average of 5.333 or over.

Highest Honors, an average of 5.666 or over.

The award of Highest Honors is conferred by vote of the University Faculty only upon candidates who (a) have attained the required grade of 5.666, (b) have performed the work of the Junior and Senior years in residence at the University of Idaho, and (c) have shown capacity for intensive work.

The arrangement of names within groups is alphabetical.

(For the list of final honors of the year 1918-19 see page 237.)

F. EXPENSES

No Tuition.—According to Section IV, of the law by which the University was created, "No student who shall have been a resident of the state for one year next preceding his admission shall be required to pay any fees for his tuition in the University, except in a professional department or for extra studies." At present no tuition is charged at the University of Idaho to students from other states (except the regular fees in law, music, and typewriting.)

Annual Expenses.—The necessary expenses of residence include the A. S. U. I. and health fee (\$12.50), room (\$45 to \$135), and board (\$216 to \$288). In addition to these, a student's expenses will include charges which vary with the means and habits of the individual—as, for example, laundry, (\$18 to \$30), books and stationery (\$10 to \$30), clothing, membership in societies, and subscriptions.

Employment.—There are the usual opportunities for making money to be found in a small town, and many students earn a portion of their expenses. The Faculty has organized a special committee to assist students to find remunerative employment. Many students pay a large part of their expenses in this way. It is, however, strongly advised that before entering the University students have means to meet the expenses of at least one semester.

Rooms.—The cost of rooms occupied by two students, in private houses is \$5 or more for each person monthly, the average, with fuel and light included, being \$6. Many students live in the fraternity and sorority houses, the price per month for board and room ranging from \$30 to \$35. Board and room in private families can be occasionally arranged for, the minimum cost being approximately \$25 per month.

Women's Residence.—Ridenbaugh Hall, the residence for young women, accommodates forty students. The rooms are arranged, partly in suites of two, comprising a study and bedroom intended for two occupants, and partly in single rooms for one student. Two large sleeping-porches are also provided. Rooms are lighted with electricity, heated with steam, and supplied with the following articles: Three-

quarter bed and mattress, bureau, table, and chairs. Students are expected to provide themselves with the following articles:

1. Four table napkins, approximately 22 by 22 inches.
2. A napkin ring and an individual drinking glass or cup.
3. Three pairs of sheets, approximately 1½ by 2½ yards.
4. Three pillow slips, a counterpane, and a pillow.
5. The necessary blankets, comforts, towels, bureau covers, curtains and two small rugs. All articles should be plainly and durably marked with the name of the owner.

Students using the laundry are required to provide themselves with clothes pins, ironing blankets, and sheets. Students who expect to do their own laundry should provide electric irons.

Application may be made at any time to the Manager of Ridenbaugh Hall and rooms will be assigned in the order thereof. The regulations of the Hall are few and simple and appeal to the student's self-respect and personal responsibility. The Hall is under the immediate supervision of the Dean of Women.

All residents of the Hall are urgently requested to have their trunks plainly marked for identification.

Rates at the Women's Residence.—Room rental is \$22.50 a semester, payable in advance. A deposit of \$5 is required of each applicant for accommodations at Ridenbaugh Hall before reservation is effective. This amount will be held until the close of the school year as a guarantee deposit for the proper care of rooms and furnishings.

Board is \$6 a week, payable two weeks in advance.

General Deposit.—Each student is required to make each semester on enrolment a deposit of \$5.00 with the Bursar. Any damage to college property for which he is considered responsible will be charged against this deposit. At the close of the semester, or on his withdrawal from college, whatever balance remains will be refunded to the student.

Military Deposit.—All Students registering in the Military Department are required to make a guarantee deposit of \$7.50 with the Bursar. Loss or damage to personal equipment, if any, will be deducted and the remainder will be refunded at the end of the school year or when the student leaves the University.

Laboratory Deposits.—Persons enrolling in certain laboratory courses are required to make deposits ranging from \$2.00 to \$5.00 to cover risk of breakage and other damage to equipment.

A. S. U. I. Fee.—A fee of \$6.25 per semester is collected for the support of the various enterprises of the student body, known as the Associated Students of the University of Idaho. This entitles the student to a free copy of the weekly student paper, "The Argonaut," to admission to athletic contests, and to free medical services under

certain restrictions imposed by the Faculty Committee on Health and Housing.

G. ADMISSION AND DEGREES

ADMISSION TO THE UNIVERSITY

Credentials.—Applicants for admission to the Freshman Class must be at least sixteen years of age, (eighteen in College of Law), and must present satisfactory evidence of good moral character. *They must submit to the Committee on Admissions credentials from their last principal, or from the educational institution last attended.* The University will furnish blank certificates upon application to the "Committee on Admissions, University of Idaho, Moscow, Idaho." If these are returned to the Committee *before September tenth*, it will facilitate the admission of candidates on the registration days. Diplomas are not necessary, if these certificates are presented.

A graduate of a standard four-year high school who brings the principal's certificate covering the University requirements for entrance to a certain curriculum will be admitted to that curriculum without examination.

Applicants for advanced standing are required to present a complete certified statement of both preparatory and college credits, together with a letter of honorable dismissal from the institution last attended.

Registration.—Both old and new students will be registered on the first and second days of each semester, Monday and Tuesday, September 13 and 14, and January 31 and February 1.

It is strongly recommended that students enter the University at the opening of the first semester. A student may enter at any time, however, provided he is able to take up the work of the classes in progress. Students are strongly urged to present themselves promptly at the beginning of the year and remain to its close. Too much cannot be said of the unwisdom, except in cases of absolute necessity, of the attempt to economize, either in time or money, by late coming and early leaving. For an imagined gain of a few weeks at the opening or the closing of the school year, students often sacrifice the chief advantages to be gained by a course of study at the University. What is lost in this way cannot be regained. In many cases part of the year's work has to be gone over a second time, and in others the student becomes discouraged and falls out of his class. Even in the case of students wholly dependent upon their own efforts, it is questionable whether it would not be wiser to borrow the money with which to pursue their studies.

Admission to Freshman Standing

For unconditioned admission to the Freshman Class, fifteen units, thus:

I. Required for Admission to All Colleges:

	UNITS
a. English	3
b. Social Sciences (including History).....	2
c. Natural Sciences	2
d. Mathematics:	
1. Algebra to Quadratics.....	1
2. Plane Geometry.....	1
Total	9

II. Specific Requirements for the Several Colleges:

	UNITS
College of Letters and Science	
One Foreign Language.....	2
College of Agriculture:	
(None).	
College of Engineering:	
Physics (unless included in I, c).....	(1)
Advanced Algebra.....	$\frac{1}{2}$
Solid Geometry.....	$\frac{1}{2}$
School of Mines:	
Advanced Algebra.....	$\frac{1}{2}$
Solid Geometry.....	$\frac{1}{2}$
School of Forestry:	
(None).	

III. Electives:

Sufficient elective units to complete a total of 15 units, 4 of which may be in "vocational" or non-academic subjects:

	UNITS
College of Letters and Science.....	4
College of Agriculture.....	6
College of Engineering.....	4 (5)
School of Mines.....	5
School of Forestry.....	6

Conditioned Admission.—A student who presents fourteen units may be *conditionally* admitted by the Committee on Admissions, but the deficiency must be made up as soon as possible, and in any case before the beginning of the Junior year. Upon application, classes in preparatory Mathematics may be formed.

Adult Unclassed Students.—Persons twenty-one years of age,

* A "unit" represents a high-school subject taught five times a week in periods of not less than forty minutes (laboratory eighty), for a school year of at least thirty-six weeks.

who are unable to meet the admission requirements and who desire to take special studies, may be admitted as unclassified students upon presentation of satisfactory evidence that they are fully qualified to enter upon the work. Their study lists must receive the approval of the Committee on Scholarship and the instructors in charge of the desired work. Their registration in any subsequent semester is dependent upon the record made at the University.

Admission to Advanced Standing

Students who have completed the work of the Freshman year or beyond in other colleges of recognized rank and who present a certified statement of their record and a letter of honorable dismissal may be admitted to advanced standing. No advanced credit will be given for work done in institutions whose standing is unknown, except upon examination. Definite advanced credits are not given until the student has been in residence for at least a semester. Credentials should be submitted to the Committee on Advanced Credits.

Admission to the College of Law.—For admission to the LL.B. curriculum the requirement is unconditioned admission to the College of Letters and Science and the completion of the Freshman year in the B.A. curriculum (28-36 credits of prescribed work, see page 74), or its equivalent in some other institution having standing satisfactory to the faculty of the College of Law.

Admission of Normal School Graduates.—Graduates of approved normal schools who have completed two years of normal work in addition to a four-year high school course fully covering entrance requirements to the College of Letters and Science are admitted to the B.A. or B.S. curriculum with 60 credits of advanced standing. For graduation with the degree of Bachelor of Arts or Bachelor of Science or from the School of Education, they must satisfy the specific requirements of the respective degree in the following subjects: English, foreign language, social science, natural science, and major and related minor subjects.

Normal school graduates are requested to forward their high school credentials together with those of the normal school.

Admission from Idaho Technical Institute.—By arrangement with the Idaho Technical Institute at Pocatello, students from that institution are admitted without examination and receive credit for all work which is the equivalent of similar courses offered by the University.

Admission to Graduate Standing

A bachelor's degree from a college or university of good standing is required for admission to graduate work. Full certified statements of both preparatory and college work are also required. For further regulations concerning graduate work see under Advanced Degrees.

DEGREES

First Degrees.—The following baccalaureate degrees are conferred upon those who have completed successfully the prescribed courses of study and who have complied with all other requirements laid down by the University:

Bachelor of Arts, B.A.
Bachelor of Science, B.S.
Bachelor of Arts in Education, B.A.(Ed.)
Bachelor of Science in Education, B.S.(Ed.)
Bachelor of Science (Pre-Medical)
Bachelor of Science in Home Economics, B.S.(H.Ec.)
Bachelor of Science in Forestry, B.S.(For.)
Bachelor of Science in Agriculture, B.S.(Agr.)
Bachelor of Science in Civil Engineering, B.S.(C.E.)
Bachelor of Science in Mining Engineering, B.S.(Min.E.)
Bachelor of Science in Metallurgy, B.S.(Met.)
Bachelor of Science in Geology, B.S.(Geol.)
Bachelor of Science in Electrical Engineering, B.S.(E.E.)
Bachelor of Science in Mechanical Engineering, B.S.(M.E.)
Bachelor of Science in Chemical Engineering, B.S.(Chem.E.)
Bachelor of Laws, LL.B.

Advanced Degrees.—The following advanced degrees are offered: Master of Arts, M.A., Master of Science, M.S., Master of Science in Forestry, M.S.(For.), Master of Science in Agriculture, M.S.(Agr.), and Master of Science in the respective branches of engineering, e.g. M.S.(C.E.), etc.

The following rules are in force:

1. Conditions of Candidacy: A graduate of one of the colleges of this University, or of another institution in which the requirements for the first degree are equivalent, may become a candidate for the corresponding master's degree by making application on a blank form provided for the purpose. The application must be submitted for approval to the Committee on Graduate Instruction and Degrees not later than October 15th.

2. Nature and Amount of Work: The minimum requirement shall be twenty-four credits in addition to the thesis, at least one-half to be graduate in character. Not less than twelve credits shall be in the major department, and one or two minors shall be taken in related subjects. Advanced undergraduate work may be accepted in partial fulfillment of the requirements of the Master's degree.

3. Residence: One year's resident work is required of every candidate who has not received a first degree at this University. Graduates of the University of Idaho may be permitted in special cases to spend one semester at some other approved institution. Upon the recommendation of the department in which the candidate takes his

major, attendance upon a six-weeks' summer school of the University of Idaho is counted as a half-semester's residence.

No full-time instructor in the University shall be granted a Master's degree for less than two years of graduate work.

4. Examinations: Final examinations are required upon the completion of each subject.

5. Thesis: A thesis upon some subject connected with the major study is required, unless waived by the Committee upon the recommendation of the major professor. This subject must be submitted for approval to the chairman of the Committee on Graduate Instruction and Degrees before November 15th. Two typewritten copies of the thesis in specified form shall be deposited in the University Library.

6. Fees: Before receiving his degree the candidate shall pay a diploma fee of ten dollars.

H. REGULATIONS

1. "Unit" is a quantitative term applied to preparatory work presented for admission to the University, and means one year's work in a subject in a standard high school. Thus, the ordinary four-year high-school course would amount to sixteen units.

2. "Credit" is a quantitative term applied to work at the University and is determined by the number of recitation-hours each week for a semester. Thus, a course meeting three times a week for one semester is called a three-credit course. Three hours' work in laboratory, shop, or field is counted as the equivalent of one recitation-hour. The latter presupposes two hours of outside preparation.

3. "Advanced Credit" is credit given for work at approved colleges and normal schools. Such credit is never definitely assigned until after one semester's residence. Admission with more than the required fifteen entrance units does not in itself imply that advanced credit will be given.

4. "Grades" are reported as A, B, C, D, E, F, or Inc. (incomplete). A and B are honor grades, C means that the work is satisfactory, and D that it is passable. E means condition, F means failure.

5. "Condition" (a) as applied to an entrance subject or group means a deficiency in that work which must be made up if possible in the first year and in any case within two years; (b) as applied to a course at the University, it means that the semester's work in that subject is unsatisfactory, but such that the student is permitted to work up the subject outside of class. A condition must be removed by examination not later than the regular date scheduled in the Calendar of the University Year, except by special arrangement with the instructor concerned and the Dean of the University Faculty. Otherwise the condition becomes a failure (F).

6. "Failure" means that the semester's work in a subject is so unsatisfactory that the course must be repeated to receive credit.

7. "Incomplete" is a grade given when, on account of illness or other valid reasons accepted by the instructor, some of the semester's work is lacking for a final standing; as, for example, part of the subject, assigned written work, laboratory work, or examination. An incomplete must be made up within the following semester, otherwise it becomes an E, and if not then removed by the time of the next condition examination, it becomes an F. In special cases removal of an incomplete may be deferred upon petition to the Committee on Scholarship.

8. A "Major" consists of not less than 16 and not more than 20 hours of specified advanced work in some one department. A "Minor" consists of not less than 6 and not more than 10 hours of specified advanced work in some one department. It is not expected that a major or a minor will be begun before the Junior year, tho the prerequisites should be taken in the Freshman and Sophomore years. The professor in charge of the "major" department should be consulted in all matters pertaining to scholarship, such as choice of electives, etc.

9. "Probation" is the status of any student who, on account of low scholarship or irregularity of attendance or conduct, is for a specified time deprived of certain privileges and is in danger of being dropped from the rolls. For instance, a student on probation is disqualified from representing the University in any athletic, musical, or dramatic performance and from engaging in any other extra-curriculum activity.

10. Registration. Monday and Tuesday of the first week of each semester are set apart for registration, on which days all students are required to pay their fees and complete their registration. A penalty of \$2 is imposed for *late registration*, except in the case of new students.

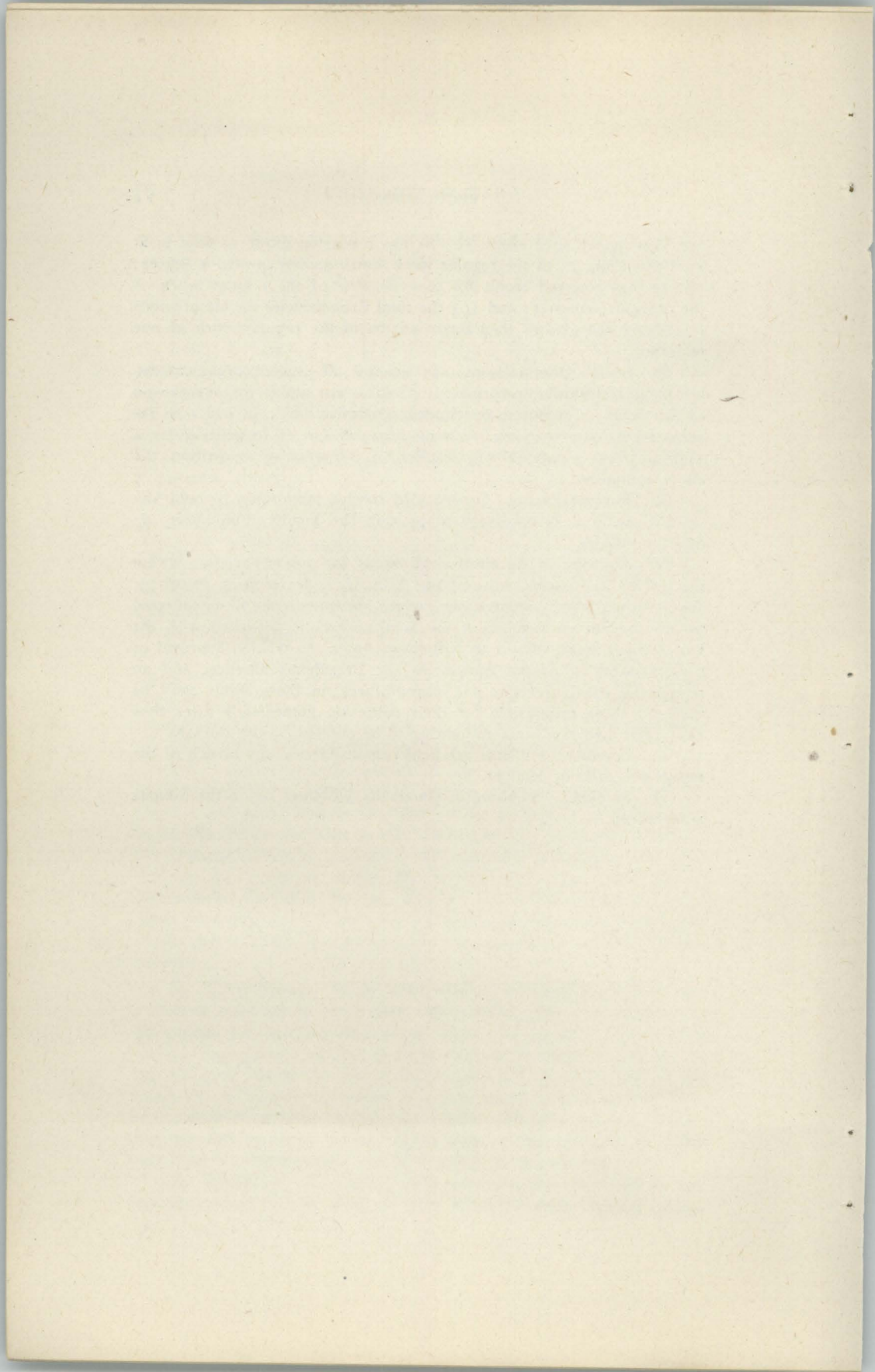
11. No student may be registered for less than the regular schedule of credits in his curriculum without the permission of his dean, nor in any case for less than 12 credits without the permission of the Committee on Scholarship.

(b) In the College of Letters and Science students may not register for more than 18 credits without permission from the Committee on Scholarship.

(c) In the other Colleges no student may register for more than the prescribed number of credits in his curriculum without permission from the Committee on Scholarship.

12. Credit for Foreign Language. Credit is not given for less than one year's work in a foreign language.

13. Change of Study-List. When a student's study list has been filed he may not change his curriculum nor add or drop any course except by the written permission of the Dean of his College and of the instructor concerned. After October 12 and February 22 respectively,



PART III.
THE COLLEGE OF LETTERS AND
SCIENCE

THE COLLEGE OF LETTERS AND SCIENCE

For requirements of admission to the College of Letters and Science see pages 64-65.

Courses are offered in the College of Letters and Science leading to the degrees of Bachelor of Arts, B.A.; Bachelor of Science, B.S.; Bachelor of Arts in Education, B.A.(Ed.); Bachelor of Science in Education, B.S.(Ed.); Bachelor of Science in Home Economics, B.S.(H.Ec.); Master of Arts, M.A.; and Master of Science, M.S.

BACHELOR OF ARTS CURRICULUM

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course.	Credits	Course.	Credits
Eng. 1, Composition and Lit...	3	Eng. 2, Composition and Lit...	3
Hist. 1, Early Middle Ages...	3	Hist. 2, Later Middle Ages...	3
Mil. 1, Freshman Military or P.E. 1a-1b, Freshman Course	2	Mil. 2, Freshman Military or P.E. 2a-2b, Freshman Course	2
Foreign Language	3-5	Foreign Language	3-5
*Science or Second Language.	3-5	*Science or Second Language..	3-5
[Elective if desired	0-4]	[Elective if desired	0-4]
	14-18		14-18

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course.	Credits	Course.	Credits
Eng. 3, Adv. Comp and Lit...	3	Eng. 4, Adv. Comp and Lit...	3
Foreign Language (Advanced).	3-4	Foreign Language (Advanced).	3-4
Mil. 3, Sophomore Military or P.E. 3a-3b, Sophomore Course	2	Mil. 4, Sophomore Military or P.E. 4a-4b, Sophomore Course	2
*Science or Second Language.	3-5	*Science or Second Language.	3-5
Elective	3-7	Elective	3-7
	14-18		14-18

BACHELOR OF SCIENCE CURRICULUM

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course.	Credits	Course.	Credits
Eng. 1, Composition and Lit...	3	Eng. 2, Composition and Lit...	3
Foreign Language	3-5	Foreign Language	3-5
Math. 1, Fresh. Mathematics..	4	Math. 2, Fresh. Mathematics..	4
Chem. 1, General Chemistry...	4	Chem. 2, General Chemistry...	4
Mil. 1, Freshman Military P.E. 1a-1b, Freshman Course	2	Mil. 2, Freshman Military P.E. 2a-2b, Freshman Course	2
Total	16-18	Total	16-18

*Science includes botany, chemistry, geology, mathematics, physics, psychology, and zoology. If not begun in the Freshman year, science must be begun in the Sophomore year. Students wishing to major in music may substitute music for the science or second language in the Freshman year and for an elective in the Sophomore year.

Bachelor of Science Curriculum
Freshman Year
Each Semester

Military or Physical Education	2 credits
English	3 "
Foreign Language	3 or 5 "
Two of the following:	
Chemistry, Mathematics, Biological Science (incl. Botany and Zoology)	8 "
Total	16-18 credits

Sophomore Year
Each Semester

Military or Physical Education	2 credits
English	3 "
Physics (unless both Chemistry and Mathematics taken the 1st year)	4 "
Foreign Language (intermediate or scientific), unless taken 1st year	3 "
Electives	4-13 "
Total	15-16 credits

Additional requirements:

12 credits Social Science

8 credits Biological Science before Senior Year
(Choice of Bacteriology, Botany, Psychology, Zoology)

HOME ECONOMICS CURRICULUM

This curriculum conforms to the requirements of the Smith-Hughes Act passed by Congress in 1917 relative to a training course for teachers of home economics.

Students wishing certificates to teach are advised to elect sufficient credits in Education for a State Teacher's Certificate.

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Comp. and Literature	3	Eng. 2, Comp. and Literature	3
*French, German, or elective	3 (5)	*French, German, or elective	3 (5)
Chem. 1, General Chemistry	4	Chem. 2, General Chemistry	4
H. Ec. 101, Elementary Sewing	2	H. Ec. 102, Elementary Sewing	2
H. Ec. 301, Art Structure	2	H. Ec. 302, Art Structure	2
P. E. 1a, Physical Training	1	P. E. 2a, Physical Training	1
Total	15 (17)	Total	15 (17)

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 3, Adv. Comp and Lit.	3	Eng. 4, Adv. Comp and Lit.	3
*French, German or elective	3	*French, German or elective	3
Chem. 9, Elements of Analysis	4	Chem. 6a, Organic Chemistry	4
Zool. 1, General Zoology	3	Zool. 6, Physiology	3
H. Ec. 303, Freehand Perspective and Sketching	2	H. Ec. 2, Selection and Preparation of Foods	3
P. E. 3a, Physical Training	1	P. E. 4a, Physical Training	1
Total	16	Total	17

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
†Chem. 17, Biochemistry (elective)	4	H. Ec. 4, Marketing & Serving	3
H. Ec. 3, Selection and Preparation of Foods	3	H. Ec. 106, Textiles	2
*Economics	3	H. Ec. 108, Costume Design	2
‡Ed. 1, Introductory Course	2	H. Ec. 202, House Management	5
Bac. 1a, General Bacteriology, (elective)	3	‡Education (elective)	2 (3)
Total	15	H. Ec. 402, Special Methods	3
		Total	17 (18)

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
H. Ec. 5, Dietetics	3	H. Ec. 6, Dietetics	2
H. Ec. 109, Advanced Sewing	2	H. Ec. 204, House Decoration	2
H. Ec. 203, House Construction	2	H. Ec. 110, Dressmaking and Millinery	2
‡Ed. 15, Observation and Practice Teaching	5	H. Ec. 206, Home Nursing	2
‡Electives	6	‡Electives	7
Total	18	Total	15
		Total credits required	128

*To be determined in consultation with head of department.

†To be elected by students specializing in foods or dietetics.

‡To be elected by students desiring teachers' certificates.

PRE-MEDICAL CURRICULUM

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Composition and Lit....	3	Eng. 2, Composition and Lit....	3
German or French.....	3 (5)	German or French.....	3 (5)
Chem. 1, General Chemistry....	4	Chem. 2, General Chemistry....	4
Zool. 1, General Zoology.....	4	Zool. 2, General Zoology.....	4
Mil. 1, Freshman Military.....	2	Mil. 2, Freshman Military.....	2
Total	16 (18)	Total	16 (18)

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
German or French.....	3	German or French.....	3
(Sci. Ger. or Sci. Fr.)		(Sci. Ger. or Sci. Fr.)	
Chem. 3, Qualitative Analysis..	4	Chem. 4, Quantitative Analysis	4
Phys. 1, General Physics.....	4	Phys. 2, General Physics.....	4
Math. 101, Engineering Math...	5	Zool. 4, Comparative Anatomy of	
Mil. 3, Sophomore Military....	2	Vertebrates	4
Total	18	Mil. 4, Sophomore Military....	2
		Total	17

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Chem. 5, Organic Chemistry....	5	Chem. 6, Organic Chemistry....	3
Zool. 13, Embryology	4	Zool. 14, Vertebrate Histology	
Phil. 1, General Psychology ...	4	and Organology	5
Eng. 5, Advanced Comp. and Lit.	2	Bac. 1, General Bacteriology...	4
Elective	2	Zool. 6, Heredity and Eugenics	2
Total	17	Eng. 6, Advanced Comp. and Lit.	2
		Elective	2
		Total	18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Zool. 15, Cytology	5	Zool. 16, Cytology	5
Chem. 17, Biochemistry	4	Chem. 18, Biochemistry.....	4
Elective	8	Bac. 6, Pathogenic Bacteria...	3
Total	17	Elective	5
		Total	17

Total credits required....136-138

Suggested electives: English (additional), economics, history, sociology, political science, mathematics, Latin, Greek, medical terminology, drawing.

THE SCHOOL OF EDUCATION

Aim

The aims of the School of Education are:

1. To enlarge thru undergraduate and graduate study the capacity of students preparing to engage in teaching or other educational effort. In particular it aims to meet the needs of actual or prospective high-school teachers and principals, school principals and superintendents, supervisors and special teachers in music, drawing, home economics, manual training, agriculture, business methods, and physical education.
2. To offer larger opportunities for service and study thru summer

sessions, correspondence, and lectures to teachers now in service and others interested in educational activities.

3. To increase the cooperative effort of the University, the other state educational institutions, teachers' associations, school trustees, and other educational agencies toward maintaining the highest possible educational standards.

Organization

In 1915 the State Board of Education organized under the College of Letters and Science the School of Education. The Council of Education, consisting of the President of the University, ex-officio, and the officers of instruction in the Department of Education, determines the conditions under which recommendations for teaching certificates shall be issued, the selection and amount of work in Education in curricula leading to the degrees in Education or to teachers' certificates, and presents to the faculty from time to time such proposals as the needs of the School and the interests of its students may indicate.

Admission

The admission requirements of the College of Letters and Science apply to all applicants for admission to the School of Education. While the distinctive work of the School does not begin until the Sophomore year, *students expecting to register in this school, as well as those seeking teachers' certificates should confer with the department at the beginning of their college work.* Education 1, an Introductory Course including study methods, is of special value to Freshmen.

Classification of Students

Curricula or courses are arranged to meet the needs of the following groups of students:

A. Those in the School of Education who are candidates for the degree of B.A.(Ed.) or B.S.(Ed.)

B. Graduate students in Education, candidates for the M.A. degree.

C. Students in any College who include in their requirements for graduation sixteen credits in Education and are candidates for an eight-year State Teachers' Certificate.

D. Students in any College who, after completing two years of college work totaling sixty credits, in which have been included ten credits in Education, are candidates for a two-year Provisional Certificate.

E. Students who have completed two years of academic and professional training in special fields and are candidates for a Specialist's Certificate.

Vocational Education

The University of Idaho has been designated as the official institution of the state for training teachers of vocational agriculture and

home economics under the Smith-Hughes Act. Full provision has been made for this work. For detailed information see the College of Agriculture and the Department of Home Economics.

Group Requirements*

Group A students, candidates for degrees in Education, are required to take the following subjects to the extent of the credits specified for each:

	CREDITS
English	8-10
Physical Education	8
Social Science	12
Natural Science	14
One Foreign Language	12-16
Major Subject (including teaching method, if offered)...	24-36
Related Minor Subject	6-10
Education	20
Academic or Professional Electives.....	4-24
<hr/> Total	<hr/> 128

Group B. students must meet the same conditions as those for the M.A. degree. See page 67.

Group C students, candidates for the *State Teachers' Certificate*, must include the following credits in Education:

	CREDITS
Required of all:	
Introductory Course	2
Practice Teaching	2
One from the following:	
Principles of Teaching	3
Educational Psychology	3
Two from the following:	
History of Education	3
Secondary Education	3
Education and Democracy	3
One from the following:	
General H. S. Methods.....	3
Special Methods	3 or 2
Free Elective	0 or 1
<hr/>	<hr/>
	16

* Philosophy 1, General Psychology, (3 credits for group D and 4 credits for group C students) is a required course for State and Provisional certificates.

Group D students, candidates for a *Provisional State Teachers' Certificate*, must meet the following requirements in Education:

1. Sophomores:	CREDITS
Introductory Course	2
Social Aspects of Education.....	3
School Management	2
Observation	1
Elective	2
	<hr/>
	10
2. Juniors and Seniors:	CREDITS
Observation and Practice Teaching	2
Principles of Teaching	3
Methods (General or Special)	2 or 3
Elective	3 or 2
	<hr/>
	10

Group E students, candidates for Specialist's Certificates, should include in their two years of special academic work from four to eight credits in Education. Students in this group should advise with the head of the department in which their specialty is taken.

Variations from the requirements of the above groups will sometimes be necessary in the case of teachers with successful experience or graduates from other institutions. In all such cases, however, deviations from the requirements specified must receive the *written approval* of the School of Education.

A detailed view of the curricula of students who are candidates for degrees in Education may be obtained from the following:

CURRICULA IN EDUCATION

Freshman and Sophomore Years

Freshman and Sophomore students in Education should, in general, follow the requirements of the B.A. or B.S. curricula except in so far as modified by certification requirements. Owing to the unavoidable complexity arising from curriculum and certificate requirements, students in Education should confer with the Department at the beginning of their college work. This will avoid considerable confusion.

Education I, an introductory course including suggestions on how to study, is especially valuable to Freshmen. Students from approved normal schools or teachers who have in part completed the group requirements mentioned above may have their work adjusted by consulting with the Head of the Department of Education.

Junior and Senior Years

Courses to complete:

Requirements in Natural and Social Science (see page 75).

Education, 20 credits

Major subject.

Majors for the degree of Bachelor of Arts in Education may at present be selected in Commerce, Economics, Political Science, English, German, Greek, History, Latin, Law, Music, Philosophy, and Romance Languages. For the degree of Bachelor of Science, Majors may be selected in Botany, Chemistry, Geology, Mathematics, Physics, and Zoology.

Teachers' Certificates

Group A and Group C students upon graduation are eligible to a State Teachers' Certificate, which is valid for eight years in any school in the state.

Group D students, provided their average grade does not fall below 4.00 (see page 61) are eligible to a Provisional Certificate which is valid for two years. Students in this group are also eligible for State High School Certificates, the conditions of which may be obtained from the Department of Education.

A Specialist's Certificate is valid for eight years, but only in the special subject for which the certificate is issued.

All certificates are issued by the State Board of Education upon recommendation of the University Faculty.

In accordance with a recent ruling of the State Board of Education, candidates for High School Certificates, State Certificates, or Life Diplomas by state examinations, may substitute for such examinations a certified statement of their completion of those courses in the School of Education which cover the subjects of the state examination. These courses may be taken in residence or thru correspondence.

Teaching Combinations

Experience has shown that the majority of high schools expect teachers to teach more than one subject. This fact should be kept in mind by the student in Education in selecting his Major and Minor subjects. The following are quite common combinations:

Science and Agriculture

Mathematics, Physics, and Chemistry

Manual Training and Mathematics

Latin and German

Latin and History

English and German

English, History, and Civics

Botany, Zoology, and Physiology

Athletics, Music, or Drawing in connection with one or two other subjects.

Committee on Recommendations

The Committee on Recommendations of the University acts as a clearing house for schools seeking well equipped teachers and for

teachers seeking positions. The service is free, and every effort is made to recommend wisely. School boards and superintendents are invited to make use of this service.

DEPARTMENTS OF INSTRUCTION

NOTE—Courses with odd numbers are given in the first semester; those with even numbers, in the second semester; courses numbered 1-2, 3-4, etc., continue thru the year.

BACTERIOLOGY

PROFESSOR GIBBS, MR. WERKMAN

(For other courses in Bacteriology, see College of Agriculture)

1-2 GENERAL BACTERIOLOGY 4 credits Either semester

A general survey of the field of Bacteriology, designed for students in the general science courses and as a foundation for advanced work in the subject. Prerequisite: Chem. 1-2, and Bot. 1 or Zool. 1. Two lectures, and two three-hour laboratory periods per week. (GIBBS)

4 THE PATHOGENIC BACTERIA 3 credits Second semester

A study of the more important disease-producing organisms, serums, vaccines, etc., concluding with a discussion of the theories of immunity. Prerequisite: Bac. 1. Two lectures and one three-hour laboratory period per week. (GIBBS, WERKMAN)

5 HYGIENE AND SANITATION 3 credits First semester

Includes a general discussion of communicable diseases, immunity, heredity and eugenics, foods, air, soil, water, sewage disposal, refuse disposal, vital statistics, industrial hygiene and diseases of occupation, schools, disinfection, etc. One lecture and two three-hour laboratory periods per week. (GIBBS, WERKMAN)

8-9 RESEARCH Credits to be arranged Each semester

Prerequisite: Bac. 1, 4, 5, 6, and 8. (GIBBS)

Deposit.—To insure reasonable care in the use of laboratory apparatus, a deposit of three to five dollars per semester will be required in all laboratory courses.

BOTANY

Professor YOUNG, *Associate Professor GAIL

Assistant Professor THOMPSON

DR. SCHMITZ

MAJOR AND MINORS

Prerequisites:

1. *General Botany* (Bot. 1-2 or Bot. 101-102)

Major.

A major of 16-20 credits may be selected from the following:

1. *Plant Physiology* (Bot. 3-4)..... 8 cr.

*On leave of absence.

2. *Systematic Botany* (Bot. 5-6)..... 6 cr.
3. *Plant Pathology* (Bot. 9-10)..... 8 cr.
4. *General Morphology* (Bot. 11-12)..... 8 cr.

Minors.

A minor may be selected from advanced courses in related subjects upon consultation with the head of the department.

1-2 GENERAL BOTANY 3-4 credits Each semester

This course begins with a study of the gross and minute anatomy of seed plants. This is followed by a general survey of the entire plant kingdom, including algae, fungi, mosses, ferns, and seed plants. Two lectures and six laboratory hours weekly. May be taken for three credits only by permission of the head of the department. (YOUNG)

101-102 GENERAL BOTANY 3 credits Each semester

A study of the fundamentals of botany with especial reference to agricultural subjects. The course is designed to serve especially as a basis for the courses in Plant Physiology and Plant Pathology and the technical courses of the College of Agriculture. Two lectures and three laboratory hours weekly. (YOUNG, THOMPSON)

3-4 GENERAL PLANT PHYSIOLOGY 4 credits Each semester

A study of the physics, chemistry, growth, and movements of plants. Should be preceded by Botany 1-2, or Botany 101-102. Preparation for this course should include a year of college physics and a year of college chemistry. Two lectures, one quiz, and six laboratory hours weekly. (YOUNG, THOMPSON)

5-6 SYSTEMATIC BOTANY 3 credits Each semester

This course begins with a study of the lower seed plants and progresses toward the higher types. Special attention is given to the grasses the first semester and to the composites the second semester. Should be preceded by Botany 1-2, or Botany 101-102. One lecture and six laboratory hours weekly. (THOMPSON)

7 PLANT HISTORY 4 credits ... First semester

The tissues of plants are considered from the standpoint of origin, development, and function, special attention being given to the histology of the woody plants. A series of microscopical slides for the study of tissues is prepared. The course should be preceded by Botany 1-2, or Botany 101-102. Two lectures and six laboratory hours weekly. (THOMPSON)

8 PLANT ECOLOGY 4 credits Second semester

Comparative study of plant tissues from the standpoint of origin and role, followed by field work in the greenhouse and fields near the University and some work in the adjacent mountains. Should be preceded by Botany 1-2 or 101-102, and Botany 5-6. Two lectures and six laboratory hours weekly. (THOMPSON)

- 9 GENERAL PLANT PATHOLOGY 4 credits First semester
Introduction to the study of diseased plants, the causal agents inducing disease, and the remedies used in connection with economic plants. Should be preceded by Botany 1-2 or 101-102. Two lectures and six laboratory hours weekly. (THOMPSON)
- 10 METHODS IN PLANT PATHOLOGY 4 credits Second semester
Greenhouse and laboratory studies upon the bacterial and fungus diseases of plants, including technique of culture methods, inoculation, spore germination, etc. Attention is also given to non-parasitic diseases and to the principles used in the breeding of plants for disease resistance. Should be preceded by course 9. Two lectures and six laboratory hours weekly. (THOMPSON)
- 11-12 GENERAL MORPHOLOGY 4 credits Each semester
This course is intended for students who have had Botany 1 and 2, and deals with a more intensive morphological study of the four great groups of plants. This course lays an excellent foundation for those who would become scientific workers on plant problems or teachers of botany in colleges or high schools. A large number of preparations will be available and the opportunity to acquire a good line of microscopic preparations will also be given the students. Two lectures and six laboratory hours weekly. (THOMPSON)
- 13 THE TEACHING OF BOTANY 2 credits First semester
The following topics will be included: the aim of teaching botany in secondary education; the principles that determine the selection of botanical apparatus, laboratory material, and texts; a review of the subject matter including methods of presentation, and practice teaching for the practical guidance of high school teachers. This course will be limited to those who major or minor in botany and expect to teach this subject. (YOUNG)
- 14 FORESTRY PATHOLOGY 3 credits Second semester
An intensive course dealing with the important forest-tree diseases in Idaho and their relation to silviculture, forest management, forest utilization, and grazing. During the latter part of the semester, the decay of lumber and structural timbers will be considered with special emphasis on the physiological aspects of the question, lumber-yard sanitation, etc. Two lectures and three hours of laboratory or field work per week. Text: Rankin's *Manual of Tree Diseases*. Prerequisite: Four credits of General Plant Pathology or its equivalent. (SCHMITZ).
- 15-16 ADVANCED PLANT PHYSIOLOGY 2, 3, or 4 credits Each semester
A course designed to prepare students to undertake special problems. Should be preceded by Botany 3-4. One lecture or quiz and three to nine laboratory hours weekly. (YOUNG).

17-18 RESEARCH

Students with sufficient preparation may be assigned to special research problems in botany or plant pathology and will be given all the opportunities available for carrying on their work. (YOUNG, THOMPSON)

CHEMISTRY

Professor VON ENDE, Professor KOSTALEK, Assistant Professors BALDWIN and KROH, Mr. GERLOUGH, Mr. MOORE*

(For outline of course in Chemical Engineering see under College of Engineering. For courses in Agricultural Chemistry and Soil Chemistry see under College of Agriculture).

A laboratory period consists of three consecutive hours.

MAJOR AND MINORS

Prerequisites:

1. *General Chemistry* (Chem. 1-2)
2. *Qualitative Analysis* (Chem. 3)
3. *Quantitative Analysis* (Chem. 4)

Major. (20 credits)

- | | |
|---|-------|
| 1. <i>Organic Chemistry</i> (Chem. 5-6)..... | 8 cr. |
| 2. <i>Advanced Quantitative Analysis</i> (Chem. 7)..... | 4 cr. |
| 3. <i>Special Quantitative Analysis</i> (Chem. 8)..... | 2 cr. |
| 4. <i>Physical Chemistry</i> (Chem. 13-14)..... | 6 cr. |
| 5. <i>Biochemistry</i> (Chem. 17-18)..... | 8 cr. |
| 6. <i>Industrial Chemistry</i> (Chem. 11-12)..... | 6 cr. |

Minors.

- a. IN MATHEMATICS. Six to ten credits in courses 3-10.
- b. IN PHYSICS. Six to ten credits in courses 3-14.

1 GENERAL CHEMISTRY 4 credits First semester

Experimental lectures, quizzes, and laboratory work. The laboratory work consists of a selection of representative experiments, including quantitative. Textbooks: Alex Smith's *General Chemistry for Colleges*, *Experimental Inorganic Chemistry*.

Two lectures, one quiz, and two laboratory periods per week. Laboratory Sections: I, Ia, II, IIa, III. Quiz Sections: A, B1, B2, C, D1, D2, and E. (VON ENDE, KOSTALEK, BALDWIN, KROH, GERLOUGH.)

2 GENERAL CHEMISTRY 4 credits Second semester

Continuation of course 1. The laboratory work consists of an introduction to qualitative analysis, as a means of studying the general chemistry of the cations and anions. Additional text-book: Test and McLaughlin, *Notes on Qualitative Analysis*. Sections as in Chemistry 1. Courses 1 and 2 include about twenty-five problems each. Prerequisite: Course 1.

*Resigned, February 1st, 1920.

following subjects: enzymes, salivary digestion, gastric digestion, intestinal digestion, intestinal putrefaction, blood, milk, connective tissues, muscular tissue, nerve tissue, urine, metabolism. Laboratory work in the qualitative and quantitative examination of the following: saliva, gastric juice, pancreatic juice, bile, blood, milk, and urine. Text-books: Mathews' *Physiological Chemistry* and Hammarsten's *Physiological Chemistry*. Two lectures and two laboratory periods per week. Prerequisite: Course 17, and eight credits in biology. (KOSTALEK)

19 FOOD ANALYSIS 2 or 3 credits Either semester

A laboratory course in the principles of food analysis with weekly conferences. Practice is given in the chemical and microscopic examination of the more common food products, with emphasis placed on the interpretation of analytical results. Text-book: Woodman's *Food Analysis*. Prerequisites: courses 1, 2, 3, 4, 5, or 1, 2, 6a, 9 and 17. (BALDWIN).

20 THE TEACHING OF CHEMISTRY 2 credits Second semester

A course designed for those who expect to teach Chemistry in secondary schools. By means of lectures, reports, and discussions the following are considered: aims, methods, principles of selection and emphasis, sources of material, laboratory equipment and instruction, modern text-books and laboratory manuals. Prerequisites: courses 1, 2, 3, 4, 5, 6, and Ed. 7 or Phil. 2, or 1, 2, 6a, 9, 17, 18, and Ed. 7 or Phil. 2.

21-22 ADVANCED ORGANIC CHEMISTRY 1-3 credits Each semester
(KOSTALEK)

23-24 RESEARCH 2 to 4 credits Each semester

It is intended to place at the disposal of mature and properly qualified students for purposes of investigation, the working and instructional facilities of the department.

Deposits.—A breakage deposit of one dollar per credit per semester, is required for all courses.

ECONOMICS AND POLITICAL SCIENCE

Professor LEWIS, Assistant Professor BROWNE, Miss BALL

Professor GILL, Professor LIVINGSTON, Assistant Professor BROWNELL

Students in the College of Letters and Science may elect any one of the following courses in fulfilment of the Social Science requirement, viz: Economics 1-2, Economics 11-12, Economics 23-24.

Economics 1-2 are not open to Freshmen. Economics 1-2 are prerequisite to all courses in Economics proper, and except where noted, must precede courses 5-10. Exceptions to this rule are made only in rare instances, and only with the consent of the head of the department.

Students majoring in Commerce are required to take a minimum of two courses in Accounting.

A fee of \$5.00 per semester is required of all students in type-writing.

MAJORS AND MINORS

1. In *Economics, Political Science, or Sociology.*

Major:

For a major in any one of these subjects twenty credits are required chosen with the advice and consent of the head of the Department.

Minor:

Six to ten credits in History, Law, Education, or Philosophy.

2. In *Commerce.*

Prerequisite:

Principles of Economics (Econ. 1-2)..... 8 credits

Major:

Principles of Accounting (Econ. 31-32)..... 6 credits

Money and Banking (Econ. 5-6)..... 4 credits

Railway Transportation (Econ. 7)..... 3 credits

Business Finance (Econ. 8)..... 3 credits

Commercial Writing and Advertising (Econ. 42)..... 2 credits

Business Law (Econ. 43-44)..... 4 credits

22 credits

Minor:

Six to ten credits in advanced courses in History, Law, Education, or Philosophy.

- 1-2 **PRINCIPLES OF ECONOMICS** 4 credits Each semester

A study of the fundamental principles of economics, based on text-book, lectures and exercises. Special emphasis is laid on current economic problems during the second semester. Prerequisite for all other courses in economics. Not open to Freshmen. (LEWIS).

- 5 **MONEY AND BANKING** 2 credits First semester

A study of money, credit, and banking in particular reference to the banking system of the United States, with a survey of the banking systems of foreign countries. (LEWIS).

- 6 **THE MONEY MARKETS** 2 credits Second semester

A continuation of Economics 5. (LEWIS).

- 7 **RAILWAY TRANSPORTATION** 3 credits First semester

The history, organization, and operation of railway systems. Problems of rate making and regulation. Particular attention is given to the transportation problems of the Pacific Northwest. (Not offered in 1920-21.) (BROWNE)

- 37 STATISTICS 3 credits First semester
An introductory course in statistical method: the gathering, presenting, and interpreting of statistical data; averages, index numbers; principles of correlation and variation. (LEWIS).
- 38 BUSINESS STATISTICS 3 credits Second semester
A continuation of Econ. 37. A study of the collection and interpretation of statistical data of value to the business man, such as advertising and salesmanship records, business barometers, etc. (LEWIS).
- 42 COMMERCIAL WRITING AND ADVERTISING 2 credits Second semester
Identical with English 30. (BROWNELL)
- 43-44 BUSINESS LAW 2 credits Each semester
The course gives the student a knowledge of the ordinary legal aspects of common business transactions. Topics taken up for study are: contracts, sales, agency, partnership, corporations, guaranty and surety, bailment and negotiable papers. (GILL).
- 45-46 COMMERCIAL GEOGRAPHY 2 credits Each semester
The influence of climatic and topographical situations and environment upon the production, resources, and commercial importance of localities will be discussed. Identical with Geology 19-20. (LIVINGSTON).
- 47 THE TECHNIC OF BUSINESS PRINTING 2 credits First semester
History of typography; modern printing methods; proper selection of paper, fonts and points of type, and size of page for different classes of business literature; drill in the correction of galley, page, and final proof; cost estimation; color work; cuts; layouts. Text, lectures, laboratory work and individually assigned problems. (BROWNE)
- 48 THE PREPARATION OF BUSINESS LITERATURE 2 credits Second semester
The preparation of copy for inserts, folders, booklets, circular letters, catalogs, and house organs; the sales letter and follow-up letters and literature with particular attention to valuation of appeals to attention, instinct, and reason. Planned for secretarial students and others not in a position to employ expert service for the preparation of sales literature. Text, lectures, laboratory work, and individually assigned problems. (BROWNE)
- 49-50 ECONOMICS SEMINAR 2 (3) credits Each semester
(LEWIS, BROWNE)

EDUCATION

Professor SOULEN, Professor ERICKSON, Professor WILSON

- 1 INTRODUCTORY COURSE 2 credits First semester
A course of lectures with assigned readings and reports to

familiarize the student with some of the current educational problems and to serve as an introduction to the sources of information and the methods employed in the study of these problems. (SOULEN)

2 SCHOOL ROOM MANAGEMENT 2 credits Second semester

A study and discussion of factors determining successful management, elimination of waste in teaching, routine factors, teaching qualifications, classroom technique. (SOULEN)

3 SOCIAL ASPECTS OF EDUCATION 3 credits First semester

School procedure as modified by the recent emphasis on the social relations of education; the group as the unit and social efficiency as the aim of education. The school as a constructive social force. (ERICKSON)

4 CHILDHOOD AND YOUTH 2 or 3 credits Second semester

The child as the center of educational effort; historical and biological phases of the subject; important facts of growth and mental development; how the child learns; the conservation movement. (Two credits.)

In addition to the above one hour per week may be given to a study of the characteristic traits and educational needs of the adolescent. (ERICKSON)

5 THE FOUNDATIONS OF MODERN EDUCATION 3 credits First semester

The development of educational theory and practice to accord with successive periods of intellectual and social development. The principal topics considered are: church education in the Middle Ages; the revival of learning; the reformation and education; rise of interest in scientific knowledge and method; the development of state systems. (ERICKSON)

6 EDUCATION IN THE UNITED STATES 3 credits Second semester

Public education under a democracy; establishing the schools of the nation; expansion and adjustment to changing social conditions and needs; contemporary problems in education. (ERICKSON)

7 PRINCIPLES OF TEACHING 3 credits First semester

A course especially for students who are preparing to teach. A practical application of educational principles to concrete classroom problems as observed in actual visitation. (SOULEN)

8 HIGH SCHOOL METHODS 3 credits Second semester

A practical application of the principles of method to high-school teaching. A study of every-day problems of the class room and of the methods of instruction employed in the best schools. (SOULEN)

9-10 METHODS OF TEACHING HIGH SCHOOL AGRICULTURE

2 credits Each semester

General methods of high school teaching applicable to agriculture; special methods of presenting agricultural subject matter and of organizing and conducting laboratory and project work;

outlines of typical courses; project-study outlines; texts and reference books; equipment needed for various courses. The second semester's work consists largely of the outlining of type courses and the planning of laboratory exercises, home projects, and project-study outlines. Open only to advanced students in agriculture. (WILSON)

- 11 EDUCATION AND DEMOCRACY 3 credits Second semester
 The meaning and function of education as suggested by the rise of democratic forms of control, dominance of the theory of evolution, and by recent industrial reorganization. The relation of education to certain social and industrial problems. An evaluation of our present school education and of the proposals for reorganization. (ERICKSON)
- 12 EDUCATIONAL ADMINISTRATION 3 credits Second semester
 An introductory course dealing with the problems of school organization, administration, and supervision. The following topics will be considered: units of control, school costs and support, equipment, the classification of pupils, appointment of teachers. (SOULEN)
- 13 SECONDARY EDUCATION 3 credits First semester
 The evolution of the high school; organization and control; the curriculum and program; student activities and other present problems of secondary education. Special emphasis upon Idaho conditions. (SOULEN)
- 14 VOCATIONAL EDUCATION 2 credits Second semester
 A general course on the growth and organization, the aims and educational values of vocational education. (ERICKSON)
- 15-16 OBSERVATION AND TEACHING 1-4 credits Either semester
 Practice teaching under supervision in the Moscow schools. Open only to advanced students who have the endorsement of the department in which their major subject lies. (SOULEN, ERICKSON)
- 17-18 OBSERVATION AND TEACHING IN AGRICULTURE
 1-3 credits Either semester
 Observation and practice teaching under supervision in the agricultural classes of the Moscow High School. Open only to students taking Agricultural Education, 9-10 (MATHEW, WILSON)
- 19-20 EXPERIMENTAL PEDAGOGY 2 credits Each semester
 A survey of recent experimental studies in education; the types of problems attacked; the methods employed and the results obtained.
 The course may be continued in the second semester by the study of an independent problem of school-room teaching. (ERICKSON)
- 21 THE EXCEPTIONAL SCHOOL CHILD 2 credits First semester
 Individual differences among school children as determined by mental and pedagogical tests; types of children needing special

school opportunities and the effort that schools are making to meet the need. (ERICKSON)

22 RURAL LIFE AND EDUCATION 3 credits Second semester

A survey of the problems of rural social life in America and of the various movements for the improvement of rural life conditions; special attention to the problem of improved educational advantages for the country. Required of seniors in Teacher-Training. (WILSON)

23-24 SCHOOL SURVEYS 3 credits Each semester

A review of recent school surveys in cities, counties, and state, emphasizing the importance of measuring educational efficiency. (SOULEN)

Special Methods

Several departments of the University offer teachers' courses in their respective subjects. For these, see the Departments of English, History, German, Latin, Chemistry, Physical Education, Physics, Zoology, Home Economics, and Music.

ENGLISH

Professor MILLER, Assistant Professors BROWNELL, CHENOWETH, and CUSHMAN, Dr. CHISLETT, Mr. BRIDGE, Miss BADGER

Students notably deficient in spelling, punctuation, capitalization, sentence and paragraph structure, or giving other evidences of illiteracy, will be required to meet in a special sub-freshman section one hour a week, without credit, until such deficiencies have been removed.

The regular courses in the department are divided into two groups, required and elective. Courses 1-2 and either 3-4 or 5-6 are required, with certain minor exceptions, of all students in the University. In general these courses are prerequisites for all advanced courses in the department, altho, with the consent of the head of the department, Sophomores may elect certain advanced courses. The advanced elective courses are intended to serve the needs of those who are taking either a major or a minor in the department and of those in other fields of study who want further work in English either for cultural or for practical purposes. They offer work in the following fields of investigation: linguistic development, periods of literary history, literary types, advanced composition, public speaking, and methods of teaching English.

MAJOR AND MINORS

Major. For a major in English at least twenty credits must be made in advanced courses selected with the advice and consent of the head of the department. Ordinarily Course 9-10, required of students who expect to ask the department for recommendations to teach English, should not count toward the major, while the courses involving linguistic study, 7, 8, and 12, or acceptable substitutes, are required

of all major students. An approved program of major courses and of electives in other departments should be made out not later than the end of the Sophomore year or the beginning of the Junior year.

Minors. For a minor from six to ten credits may be selected, with the advice of the head of the department, from courses, beyond those required for the B.A. degree, in some one of the following departments: History, Philosophy, Sociology, German, Romance Languages, or Classical Languages.

1-2 COMPOSITION AND LITERATURE 3 credits Each semester

Required of all first-year students in all colleges and schools.
Regular conference hours for each student.

A. COMPOSITION. The aim in the first semester is to make clear in theory and practice the general rhetorical principles and rules applicable to all kinds of prose composition. Hence emphasis is placed for the first twelve weeks upon the Principles of Composition and the Rules of Good Use and the written work is largely expository. In the second semester the theory and practice of the separate Kinds of Composition—Description, Narration, and Exposition—are dwelt upon. Instead of emphasizing chiefly external principles and rules, the Second Semester focuses attention upon the results, upon the Qualities of Style—Clearness, Force, and Elegance.

B. LITERATURE. The aim is two-fold—to prepare the students for intelligent and appreciative private reading as a permanent resource in life, and to afford a foundation for a more advanced study of important types, figures, and periods in English literature. Lectures, collateral reading, and reports. Class reading and discussion of the chief literary types—the lyric, the drama, narrative poetry, prose fiction, and the essay. (MILLER, BROWNELL, CHENOWETH, CUSHMAN, CHISLETT, BRIDGE, BADGER)

3-4 ADVANCED COMPOSITION AND LITERATURE

3 credits

Each semester

Required of all Sophomores in the B.A. and B.S. curricula.
Regular conference hours for each student.

A. COMPOSITION. The year's course will develop the different functions of fact, thought, and imagination in the processes of composition. Emphasis will be placed the first part of the year upon the principles of structure, as illustrated in detailed plans for formal Exposition and briefs for Argumentation; in this work technical material from other fields of study will furnish part of the subject matter. Later in the year the more artistic forms of composition, the Personal Essay, Literary Criticism, and Advanced Description and Narration, will be practiced and their principles discussed.

B. The work in Literature will be adapted to two classes of stu-

dents. For regular B.S. students and students in Commerce, Economics, Home Economics, and the Pre-Medical curriculum, lectures and class and collateral reading will be given in nineteenth century and contemporary literature. Regular B.A. students, all students who may wish to take advanced courses in English (as major, minor, or elective), students in History, Education, and other departments, who may wish later to teach English, are expected to take the course in the development of English Literature. The lectures in the latter course will trace in outline the development of English Literature from the earliest times to the end of the nineteenth century, emphasizing the relation of literary production to the life of the times, and discussing more briefly the development of the chief literary types, and the characteristics and achievements of the more important literary figures. Class and collateral reading; reports. (CUSHMAN, CHISLETT)

5-6 ADVANCED COMPOSITION 2 credits Each semester

Required of all Sophomores in the Colleges of Agriculture and Engineering, and in the School of Forestry. Regular conference hours for each student. As in 3, emphasis is placed upon the principles of structure in connection with work in formal exposition and argumentation. Considerable attention will be given to publicity work, the forms of technical reports, and other types of writing of special value to technical students; but some practice will be afforded in the lighter and more literary types of composition. Collateral reading in both technical and general literature; reports. (BROWNELL)

7 OLD ENGLISH 3 credits First semester

Aim both linguistic and literary. The development of the language. Grammar and the reading of selected texts. The history of Old English Literature, with wide reading in modern translations. Primarily for upper classmen. (Not given in 1920-21) (MILLER)

8 MIDDLE ENGLISH AND CHAUCER 3 credits Second semester

The development of the language and literature to the end of the Middle English period. The study of Chaucer as poet and story teller. Primarily for upper classmen. (Not given in 1920-21) (MILLER)

9-10 THE TEACHING OF ENGLISH 2 credits Each semester

Bibliography. Organization of courses. Text-books. The relation of Grammar, Composition and Literature to one another and to other subjects. Special methods in both Composition and Literature and practical work in applying them. Primarily for upper classmen. This course should be taken by all students who expect to ask the department for recommendation to teach English. (MILLER)

- 11 THE DRAMATIC INFLUENCES UPON SHAKESPEARE
3 credits First semester
A study of the development of the Drama to 1594. Special emphasis upon the work of Shakespeare's immediate predecessors and earlier contemporaries, and a comparison of this work with Shakespeare's earlier plays. Theatrical and social conditions affecting the Elizabethan drama. Primarily for upper classmen. (MILLER)
- 12 SHAKESPEARE 3 credits Second semester
Shakespeare's development and characteristics as dramatic artist, poet, and thinker. The more important plays after 1594 are read in class; all others after this date are read outside. In at least one play a careful study is made of the Elizabethan language, its relation to earlier forms of speech, and to late modern English. Primarily for upper classmen. (MILLER)
- 13 ELIZABETHAN NON-DRAMATIC LITERATURE
2 credits First semester
The Lyric, Narrative Poetry, and the beginnings of the Essay. Spenser and Bacon and their contemporaries. Sophomores may elect this course. (Not given in 1920-21) (CUSHMAN)
- 14 FROM SHAKESPEARE TO DRYDEN 2 credits Second semester
The Seventeenth Century from the death of Elizabeth to the Restoration. Ben Jonson, Browne, Walton, the Caroline poets, Milton, Bunyan. Sophomores may elect this course. (Not given in 1920-21) (CUSHMAN)
- 15 THE RESTORATION AND QUEEN ANNE AGES
2 credits First semester
Dryden, Defoe, Swift, Steele, Addison, and Pope. The rise of the Essay, Pseudo-Classicism. Sophomores may elect this course. (Not given in 1920-21) (CHISLETT)
- 16 THE ROMANTIC POETS AND ESSAYISTS 2 credits Second semester
The transition to Romanticism. The romantic writers from the middle of the eighteenth century to the death of Scott. Sophomores may elect this course. (Not given in 1920-21) (CHISLETT)
- 17-18 VICTORIAN PROSE AND POETRY 2 credits Each semester
A study of the greater essayists and poets of the Victorian era, their interpretation of the life and ideals of their time, their relation to one another, and their influence upon their contemporaries and successors. Sophomores may elect this course. (CHISLETT)
- 19-20 AMERICAN LITERATURE 2 credits Each semester
The study of American literature both as an expression of the American spirit and as a part of the development of English literature. The development of American literature is traced from colonial times to the present, but the chief emphasis is placed upon

the more important authors and movements of the nineteenth century. Open to Sophomores. (CHISLETT)

- 21-22 THE NOVEL 2 credits Each semester
The development of English fiction is studied from *Beowulf* to the present, but the chief emphasis is placed upon the development of the novel in the eighteenth and nineteenth centuries, and the course is concluded with some analysis of present conditions and tendencies in both English and American fiction. Primarily for upper classmen. (MILLER)
- 23-24 LITERARY COMPOSITION 2 credits Each semester
A study of the principles underlying successful composition in the short story, the literary essay, verse writing, and the drama, and considerable practice under criticism. Ordinarily not more than two of these forms will be studied in any one year, so, with special permission, the course may be taken in successive years. Open only to those who have completed Freshman and Sophomore English and have shown some aptitude in composition. (CUSHMAN, BROWNELL)
- 25 FOLK LITERATURE 3 credits First semester
The origins of literature. Choric song and dance, the ballad, children's singing games, cowboy songs, and other folk literary forms, and their relation to the development of individual artistic literature. Primarily for Seniors and Graduates. Open to Juniors by special permission. (Not given in 1920-21) (MILLER)
- 26 ENGLISH LITERARY CRITICISM
The development of literary theory from Ascham to Pater. The relation of criticism to the development of literature. Present tendencies in criticism. Primarily for Seniors and Graduates. Open to Juniors by special permission. (Not given in 1920-21) (MILLER)
- 27-28 ARGUMENTATION AND DEBATE 2 credits Each semester
A study of the principles of Argumentation, with practice in their application in brief-making and platform presentation. (CHENOWETH)
- 29-30 INSTRUMENTAL COMPOSITION 2 credits Each semester
Publicity, business correspondence, and advertising. Open only to those who have completed Freshman and Sophomore English courses. (BROWNELL)
- 31-32 CONTEMPORARY LITERATURE 2 credits Each semester
A study of the development of literature in the twentieth century. The chief literary movements and the chief literary figures in poetry, the essay, the novel, and the drama. For upper classmen in any department of the University and for mature persons not regularly registered in the University. (BROWNELL, CUSHMAN)

- 33-34 NEWS WRITING 2 credits Each semester
Advanced laboratory work in writing news and feature stories for regular and college newspapers. The correspondent, his problems, and methods. Open to students of all colleges who have completed English 1-2, but students without newspaper experience are recommended to take English 36 as a preliminary. (BROWNELL)
- 35-36 ELEMENTARY JOURNALISM 1 credit Each semester
The newspaper, its organization and purpose. The principles of news-writing. Newspaper English and ethics. Open to students of all colleges, but Freshmen must receive special permission from the head of the department. (BROWNELL)
- 41-42 ELEMENTARY PUBLIC SPEAKING 2 credits Each semester
Technical drill in voice, gesture and bearing, with special attention to the development of interpretative skill in both selected and original material. (CHENOWETH)
- 43-44 ADVANCED PUBLIC SPEAKING 2 credits Each semester
The construction and delivery of the various types of public address and the interpretation of literature. Prerequisite: Course 41-42 or its equivalent. (CHENOWETH)

FRENCH

(See under Romance Languages).

GEOLOGY

Professor LIVINGSTON, Mr. VER STEEG

- 1 GENERAL GEOLOGY 3 or 4 credits First semester
A foundational course in structural and dynamical geology open to all students. It deals with the minerals and rocks making up the earth's crust; rock weathering and the formation of soil; the work of wind, streams, glaciers, and the ocean; earth movements and mountain making. Wherever possible examples are taken from Idaho and adjacent states and illustrated by lantern slides. Two lectures and a quiz per week, and one optional laboratory course of three hours per week. The laboratory work consists of simple blowpipe tests for minerals and the recognition at sight of the more important economic and rock-forming minerals. Two field trips are also required of all students taking this course. (LIVINGSTON)
- 2 HISTORICAL GEOLOGY 3 or 4 credits Second semester
Continuation of Geol. 1. Deals with the history and evolution of the earth, stratigraphy, and a study of the evolution of the life forms as recorded by fossils in the rocks of the different geological ages. Particular attention is paid to the growth and development of the North American continent. Two lectures, a quiz, and an optional three-hour laboratory period per week. The laboratory

course is a continuation of the work in Geol. 1. It consists of recognition at sight of the common rocks and a few of the more important index fossils besides the interpretation of topographic and geologic maps. (LIVINGSTON)

- 16 GEOLOGY OF IDAHO 1 or 2 credits Second semester
A course of lectures and reading on the geology and mineral resources of Idaho. Given at the option of the instructor.
(LIVINGSTON)

- 19-20 GEOGRAPHY OF NORTH AND SOUTH AMERICA, EUROPE, ASIA
AFRICA AND AUSTRALIA 2 credits Each semester
A course in general geography, primarily designed for students majoring in geology, commerce, economics, history, agriculture and forestry, but open to all.

A study of the relation of the continents to the world as a whole; the physiographic regions; physical features: mountains, plateaus, rivers, etc.; climate; natural vegetation; agriculture; transportation; mineral industries and manufactures. The character and distribution of their natural resources and the influences of geographic conditions in the development and life of the different countries is taken up in detail. Two recitation periods per week. Geol. 1 and 2 are advised but not demanded as prerequisites.
(VER STEEG)

- 21-22 ECONOMICS AND COMMERCIAL GEOGRAPHY
2 credits Each semester
A course of study designed for students taking their major in Commerce and Business administration, but open to all.

A study of production and trade as influenced by geographic conditions. The geography of the more important products of the farm, range, forest, mine, factory, and ocean; continental and oceanic trade routes; great commercial centers; and types of commercial nations. Emphasis is laid upon the economic resources of the North American continent, particularly of the Western United States.

Two recitation periods per week. Geology 1-2 and 19-20 are advised, but not demanded as prerequisites. Text book: J. R. Smith's *Industrial and Commercial Geography*. (VER STEEG)

GERMAN

Professor ELDRIDGE, —————

Students who present two years of high-school German for entrance continue in course 3-4. Those who have had no German take course 1-2. Those who have had *one* year of high-school German will consult the head of the department as to which course to take.

MAJOR AND MINORS

Prerequisites:

1. *Elementary German* (Ger. 1-2 or the equivalent)
2. *Intermediate German* (Ger. 3-4)

Major.

1. *Schiller* (Ger. 5-6) 6 credits
2. Two of the following courses:
 - a. *Goethe* (Ger. 13-14) 6 credits
 - b. *History of German Literature* (Ger. 17-18) 6 credits
 - c. *Middle High German* (Ger. 19-20) 6 credits

Minors. Six to ten credits in advanced courses in French, Latin, Greek, English, or Education.

1-2 ELEMENTARY GERMAN 5 credits Each semester

The essentials of German grammar, with constant practice in pronunciation, simple translation from English into German, and the reading of easy narrative German. (ELDRIDGE)

3-4 INTERMEDIATE GERMAN 3 credits Each semester

Reading from modern and classic authors. Novel, epic, and drama from such authors as Baumbach, Eichendorff, Heine, Goethe, Freytag, and Ernst are studied. German conversation and German idioms by means of prose composition. Text, Bacon's *German Composition*. Prerequisites: course 2, or two years of high-school German. (———)

5-6 SCHILLER 3 credits Each semester

Schiller's biography. (Sime, with references to Thomas). Selected lyrics and ballads. *Die Jungfrau von Orleans*, *Wilhelm Tell*, *Die Braut von Messina*, a part of *Geschichte des dreissig-jährigen Krieges*, and the *Wallenstein* complete. Prerequisite: course 3-4 or the equivalent. (ELDRIDGE)

7-8 MODERN NOVELS 3 credits Each semester

Selected works of Kleist, Hauff, Scheffel, Freytag, Immermann, Ludwig, Meyer, Storm, Keller, Heyse, von Ebner-Eschenbach, Raabe, Sudermann, Frenssen. Given in alternation with course 9-10. (———)

9-10 MODERN DRAMAS 3 credits Each semester

Selected dramas of Kleist, Grillparzer, Hebbel, Anzengruber, Fulda, Sudermann, Hauptmann. Given in alternation with course 7-8. (———)

11-12 CONVERSATION AND COMPOSITION 3 credits Each semester

Open only to those who have done work of A or B grade in Ger. 3-4 or 5-6. The first semester is required of those who wish a recommendation to teach German. (———)

13-14 GOETHE'S LIFE AND WORKS 3 credits Each semester

Study of Goethe's life and development, in connection with his lyric poems: *Dichtung and Wahrheit*, *Götz von Berlichingen*, *Wer-*

- ther, Egmont, Tasso, Iphigenie*. Prerequisite: course 5-6. (———)
- 16 FAUST 3 credits Second semester
Reading, interpretation, and discussion of *Faust I* and *II*, with collateral reading in Faust literature. Prerequisite: course 13. (ELDRIDGE)
- 17-18 HISTORY OF GERMAN LITERATURE 3 credits Each semester
Selected readings, reports, and lectures. Robertson's *History of German Literature*, Thomas's *Anthology*. A general survey of German literature from the earliest times. Prerequisite: 5-6. Required for a recommendation to teach German. (ELDRIDGE)
- 19-20 MIDDLE HIGH GERMAN 3 credits Each semester
Grammar, Michels: *Mittelhochdeutsches Elementarbuch*, or Paul: *Mittelhochdeutsche Grammatik*; Reading of Hartman's *Der arme Heinrich*; the *Nibelungenlied*; selected poems of Walter von der Vogelweide; and selections from Wolfram von Eschenbach's *Parzival*. (ELDRIDGE)
- 23-24 SCIENTIFIC GERMAN 3 credits Each semester
A special course in scientific German, open to those who have completed course 3-4. Wait's *German Science Reader*, and Walther's *Allgemeine Meereskunde*, followed by short monographs. (ELDRIDGE).

GREEK

Profesor AXTELL

Students may begin the study of Greek in the first semester of any of their collegiate years; those who have taken it before entering the University may continue it in those courses for which they are prepared. Greek 13 (=History 13) may be elected as part of the eighteen credits in Social Sciences required of all B.A. students. See page 75.

- 1-2 ELEMENTARY GREEK 4 credits Each semester
First lessons comprising the main features of inflection and syntax are learned; simple sentences are written from English into Greek, and easy selections from Greek authors are translated. (AXTELL)
- 3 XENOPHON 4 credits First semester
Selections from books I-IV of the *Anabasis* are read by prepared translation, and passages from Colson's *Stories and Legends of the Greeks* are frequently used for sight reading. Practice in writing Greek is continued. (AXTELL)
- 4 HOMER 4 credits Second semester
Selections from the most celebrated passages of the *Iliad* or *Odyssey* are translated and read metrically. Epic poetry, the Homeric Question, the Mycenaean Age, the influence of Homer upon English literature, and other topics are investigated. (AXTELL)
- 5 PLATO 3 credits First semester
The *Apology* and the *Crito*. Analysis of other Socratic dialogs.

upon constitutional and economic development and the growth of democracy. Military history is included. Advisable for pre-legal and commerce students and required of all students who major in history. (TRIMBLE)

13 GREEK CIVILIZATION 3 credits First semester

This course may be chosen as part of the eighteen credits in Social Science required of all B.A. students. See page 75. See Greek 13 for a description of the course. (AXTELL)

14 ROMAN CIVILIZATION 3 credits Second semester

This course may be chosen as part of the eighteen credits in Social Science required of all B.A. students. See page 75. See Latin 14 for a description of the course. (AXTELL)

15-16 THE WESTERN MOVEMENT 2 credits Each semester

This course deals with the movement of peoples from the Atlantic seaboard towards the West. It takes into account struggles for territory, settlement of the various physiographic areas, development of transportation, and the influence of the West upon political and social institutions. (TRIMBLE)

17-18 EUROPEAN EXPANSION 3 credits Each semester

The theme of this course is the expansion of European peoples into new regions and the transference of their ideas and institutions into all parts of the world. The course outlines the achievements of the Portuguese and the Dutch in the east, the conquest and settlement of Latin America, the colonial history of the United States, and the growth of the British Empire. (TRIMBLE)

19 HISTORICAL METHOD 2 credits First semester

A course preparatory to historical research and to the teaching of history. It will discuss what history is, what it is for, what are its materials, what are its methods, what are its relations to neighbor studies, how to read history, how to study it, and how to write it. It will also provide for introductory studies of many of the sciences that are auxiliary to history. The course will be open only to students of sufficient maturity and experience. (HULME)

20 THE TEACHING OF HISTORY 2 credits Second semester

A course intended for those students who expect to teach history in intermediate or secondary schools. The purpose of the course is to make the student acquainted with the aims, the methods, the apparatus, and the literature of the work of teaching history. (HULME).

21-22 THE INTELLECTUAL CLASS IN THE NINETEENTH CENTURY

2 credits

Each semester

A study of various movements of thought and ideals of art in the nineteenth century. The illustrations of these movements

and ideals will be sought chiefly in the field of literature. Not open to Freshman. (HULME)

23 PACIFIC NORTHWEST 2 credits First semester

A general course on the history of the Pacific Northwest. It includes discovery and exploration, fur-trading, the missionary era, diplomatic disputes, and the coming of settlers. (TRIMBLE)

24 IDAHO AND THE INLAND EMPIRE 2 credits Second semester

A study of the intermountain region, centering in Idaho. Stress is placed upon physiography, the primacy of the mining industry is recognized, and agricultural development receives special consideration. Use is made of original sources. (TRIMBLE)

HOME ECONOMICS

Professor JENSEN, Associate Professor HYDE, Assistant Professor
HESS, Miss PALMER, Mrs. LIVINGSTON

The purpose of this Department is to give instruction in the "economic, sanitary, and aesthetic aspects of food, shelter, and clothing as connected with the selection, preparation, and use by the family or by other groups of people." Students are prepared for positions as teachers of home economics according to the requirements of the Smith-Hughes Act of Congress. By a proper choice of electives young women are prepared for their life work in the home, or to become extension workers, Chautauqua lecturers and demonstrators, hospital dietitians, or caterers. A "practice house" for further training and experience in these branches will be provided.

On satisfactory completion of the curriculum outlined on page 76 the degree of Bachelor of Science in Home Economics is granted.

Courses in cooking, sewing and house management are open to students not candidates for the B.S. (H.Ec.) degree. Other courses may be elected by the B.A. and B.S. students subject to written approval of the head of the department.

Courses in drawing and art may be elected by all students.

Foods

2-3 SELECTION AND PREPARATION OF FOOD 3 credits Each semester

This course includes a study of the methods of cooking and a general survey of foods as to classification, composition, preservation, and value in diet. The underlying principles involved in the cookery of each class of food are carefully studied. Care and construction of cooking apparatus. One lecture and two three-hour laboratory periods a week. (HYDE).

4 MARKETING AND SERVING 3 credits Second semester

This course includes preparation of food in family portions, also marketing, planning, and serving of meals. It is intended to have a very direct bearing on home problems. Special attention

is given to methods of teaching this course. Prerequisites: Chem. 5a, H.Ec. 2-3. Three three-hour periods a week. (HYDE).

5-6 DIETETICS 3 credits Each semester

This course includes the study of food composition and metabolism; diets as influenced by age, occupation, habits of life, climate, and season; balanced rations, and computation of caloric values. In the second semester infant feeding and special diets in disease are stressed. Teaching methods will be discussed. First semester, two one-hour and one three-hour periods per week. Second semester, one one-hour and one three-hour period per week. Prerequisites: Chem. 1-2, 5a, 10, 17, H.Ec. 4, Zool. 1, 6, and Bac. 1a-2a. (JENSEN)

Textiles and Clothing

101-102 ELEMENTARY SEWING 2 credits Each semester

This course teaches the fundamentals of hand and machine sewing; the use and care of the sewing machine; the drafting of patterns; the adaptation of drafted and commercial patterns to meet individual needs; the cutting, making and finishing of garments; darning; patching; and simple embroidery. It includes a study of fabrics; their special qualities and cost; and the hygiene of clothing. Two three-hour periods a week. (HESS)

106 TEXTILES 2 credits Second semester

This course includes the history and development of textiles; the study of fibers and of processes of manufacture; the identification of fibers and substitute materials chemically and by means of the microscope; the proper use of materials in relation to laundering and dyeing; and the use and value of cotton, wool, silk, linen, and other important fibers in clothing and household furnishings. Two two-hour periods a week with outside work. Prerequisites: Chemistry 5a. (HESS)

108 COSTUME AND DESIGN 2 credits Second semester

This course covers briefly the development of clothing from the origin of dress to the present time. It includes a study of the principles of color and design and their application to the practical demands of the costume for various types of people, figures, occasions. Two three-hour periods a week. Prerequisite: H. E. 102 and 302. (HESS, PALMER)

109 ADVANCED SEWING 2 credits First semester

This course establishes the fundamental principles of garment making. It gives practice in the cutting, fitting, making, remodeling, and renovating of garments; and in purchasing appropriate materials and trimmings. Two two-hour periods a week with outside work. Prerequisites: H. E. 106 and 108. (HESS)

110 DRESSMAKING AND MILLINERY 2 credits Second semester

This course includes the designing and making of elaborate gowns; the application to costume of line, color harmony, dark and light, and texture. It includes designing and modeling of hats of various types in paper and crinoline; making wire and buckram frames; the covering of hats in silk, lace, velvet, and straw; the renovation and use of old materials; practice in making bows, rosettes, flowers, and other forms of hat decoration. Two two-hour periods a week with outside work. Prerequisite: H. E. 109. (HESS)

Household Administration.

202 HOUSE MANAGEMENT AND SANITATION

.5 credits Second semester

Organization of the household; the hygiene of the home; the division of the income; household accounts and business points. Practical application of this course will be made in actual household work. Three recitations a week. (HYDE)

203 HOUSE CONSTRUCTION 2 credits First semester

History of the development of architecture; location of house; terms used by architects; building materials; the making of original plans; and care and use of modern conveniences. Practical application of this course will be made in the actual home. Two two-hour periods per week with outside work. Prerequisites: H. Ec. 301. (HYDE)

204 HOUSE DECORATION 2 credits Second semester

The principles of art applied to interior decoration; a study of period decoration, period furniture, and modern furnishings. Two two-hour periods per week with outside work. Prerequisites: H. Ec. 301, 303, 304. (HYDE, PALMER)

206 HOME NURSING 2 credits Second semester

This course includes personal hygiene; the general care of the sick; emergencies and first aid to the injured. Prerequisites: H. Ec. 6.

301-302 ART STRUCTURE AND DESIGN 2 credits Each semester

Study problems in design, involving principles of line, dark and light, color and composition. Applied design. Two two-hour periods per week. (PALMER)

303-304 FREEHAND PERSPECTIVE AND SKETCHING

2 credits Each semester

The laws of perspective and their application for pictorial purposes. Freehand drawing in charcoal, pastel, and water color. Study of form, light and shade, color, harmony, and composition. Two two-hour periods per week. (PALMER)

305-306 ADVANCED ART STRUCTURE AND DESIGN

2 credits Each semester

Advanced work in principles of composition, with applications.

Two two-hour periods each week with outside work. Prerequisites: 303-304. (PALMER)

307-308 ADVANCED DRAWING AND PAINTING

2 credits

Each semester

Advanced work in perspective, landscape, mural decoration, and drawing from life-model in charcoal, pastel, water color, and oil. Two two-hour periods per week. Prerequisites: 301-302, (PALMER)

309-310 ART APPRECIATION

2 credits

Each semester

An appreciative study of architecture, sculpture, painting, textile, furniture and design, developed historically. Special attention to fine proportion, line, values of light and shade and color. Lectures illustrated by lantern. Two two-hour lectures each week with outside work. Reinath's "*Apollo*" and assigned reading. (PALMER)

Methods.

402 METHODS OF TEACHING HOME ECONOMICS

3 credits

Second semester

This course considers the relation of home economics subjects to education; the different schools in which these subjects are taught; their place in the curriculum; and the methods employed in teaching them; lesson plans, courses of study, and problems of equipment are planned and discussed. This course is followed by Education 9, Observation and Practice Teaching. Three one-hour periods a week. Open to Juniors and Seniors in Home Economics. (JENSEN, HESS)

403 METHODS FOR HOME ECONOMICS EXTENSION WORKERS

2 credits

Second semester

This course is intended to give methods of procedure for extension workers in Home Economics. Each student must prepare and present lectures and demonstrations on various problems of the home. One three-hour laboratory period each week. Open to Junior and Senior Home Economics students only. (JENSEN)

LATIN

Professor AXTELL

Latin 14 (==Hist. 14) may be elected among the eighteen credits in Social Science required for the B.A. degree. (See page 75).

MAJOR AND MINORS

Prerequisites:

1. *Elementary Latin* (Lat. 1-2), or equivalent.
2. *Second-year Latin* (Lat. 3-4).
3. *Cicero and Vergil* (Lat. 5-6).

Major.

1. *The Odes of Horace* (Lat. 7)..... 3 credits
2. *Latin Comedy* (Lat. 8)..... 3 credits
3. *Prose Composition* (Lat. 7a-8a)..... 4 credits
4. *History of Latin Literature* (Lat. 13)..... 2 credits
5. *Teachers' Course* (Lat. 16)..... 2 credits
6. Any two of courses 9-12..... 6 credits

Minors. Six to ten credits in advanced courses in Greek, English, French, or German.

- 1-2 **ELEMENTARY LATIN** 5 credits Each semester
First lessons comprising the main features of inflection and syntax; composition of simple sentences; translation of short stories and other easy passages. English derivatives from Latin words are emphasized. (AXTELL, ———)
- 1a-2a **ONE-YEAR COURSE** 3 credits Each semester
Open to all students without prerequisite. The course deals with the Latin and Greek words, phrases, proverbs, derivatives, prefixes, suffixes, and terminations which form so large a part of English and other modern languages, and of the terminology of the natural and social sciences. Recommended especially for pre-legal and pre-medical students. (AXTELL).
- 3-4 **SECOND-YEAR LATIN** 4 credits Each semester
Continuation of 1-2. Translation of selections from standard authors; prose composition to illustrate important points of grammar. Investigation of topics on Roman life. (———).
- 5-6 **THIRD-YEAR LATIN** 4 credits Each semester
Translation of selected orations of Cicero and investigation of his life and writings constitute the work of the first semester. In the second semester Vergil's Aeneid is translated in part and the style and form of his poetry are carefully studied. (AXTELL).
- 7 **HORACE** 3 credits First semester
Selected *Odes* and *Satires* which show Horace's career, literary development, and character. Metrical reading of the *Odes*. Study of the culture of the court of Augustus. (AXTELL).
- 7a **PROSE COMPOSITION** 2 credits First semester
Systematic exercises affording a thoro review of Latin grammar. Required for a recommendation to teach Latin. (AXTELL).
- 8 **LATIN COMEDY** 3 credits Second semester
Selected comedies of Plautus and Terence. Papers and reports on topics connected with the Roman drama. Study of the meters of comedy. (AXTELL).
- 8a **ADVANCED COMPOSITION** 2 credits First semester
Continuation of 7a. (AXTELL).
- 9 **TACITUS AND PLINY** 3 credits Second semester
Translation and study of the *Agricola* or *Germania*, the earli-

est monographs on England and Germany. Pliny's *Letters*. Life under the Roman Empire. Characteristics of the literature of the "Silver Age." (AXTELL)

- 10 CICERO'S LETTERS 3 credits Second semester
Selected epistles, touching Roman events in the first century B. C. Study of the vexed question of Cicero's position in history. (AXTELL)
- 11 CATULLUS 3 credits First semester
Selected poems. Lectures on Greek and Latin lyric poetry. (AXTELL) (Not given in 1920-21)
- 12 PETRONIUS 3 credits Second semester
Translation of the *Cena Trimalchionis*. Investigation of ancient romantic stories. (AXTELL) (Not given in 1920-21)
- 13 HISTORY OF LATIN LITERATURE 2 credits First semester
A general lecture and reading course with the aid of standard translations. Open to all students. Ability to translate is not required. The influence of Latin upon English classics is emphasized. (AXTELL)
- 14 ROMAN CIVILIZATION (= History 14) 3 credits Second semester
This course deals with the Roman government, customs, art, literature, and institutions. It is carried on thru lectures by the instructor, and reports, papers, and written exercises by members of the class. May be elected as part of the eighteen credits in Social Sciences required by B.A. students. See page 75.
- 16 TEACHERS' COURSE 2 credits Second semester
Comprehensive and advanced work in syntax. Ideals, means, and methods of teaching Latin especially in the high school. (AXTELL)

LAW

Professors COCKERILL, GILL, AND EVANS

The following courses are open to Junior and Senior students in the College of Letters and Science and in the other Colleges, in which they will be credited according to their respective regulations.

MAJOR AND MINORS

Major. Sixteen to twenty credits from the following:

1. *Contracts I* (Law 1)..... 3 cr.
2. *Contracts II* (Law 2)..... 3 cr.
3. *Agency* (Law 13)..... 2 cr.
4. *Property I* (Law 9)..... 3 cr.
5. *Property II* (Law 10)..... 2 cr.
6. *Mining Law* (Law 47)..... 2 cr.
7. *Irrigation* (Law 48)..... 2 cr.

Minors. Six to ten credits in any of the following de-

partments: Economics, Ethics, History, Psychology, Sociology.

- 1 CONTRACTS I 3 credits First semester
Formation of simple contracts; offer and acceptance; reality of consent; consideration; legality of object; statute of frauds; construction and operation. Hopkins' *Cases on Contracts*. (GILL)
- 2 CONTRACTS II 3 credits Second semester
Discharge of contracts; modes of enforcement; actions and remedies; what law governs; quasi contracts. Hopkins' *Cases on Contracts*. (GILL)
- 9 PROPERTY I 2 credits First semester
Classes of property; personal property; acquisition of rights; possession, bailment, liens; real property, including a study of the feudal system, tenures, estates, fixtures, improvements. Gray's *Cases on Property*, Vol. I. (EVANS)
- 10 PROPERTY II 4 credits Second semester
Natural rights; easements; covenants running with the land; public rights; franchises; rents. Gray's *Cases on Property*, Vol. II. (EVANS)
- 13 AGENCY 2 credits First semester
The law of principal and agent, formation of the relation; liabilities of the parties inter se and to third persons; termination of agency. Wambaugh's *Cases on Agency*. (GILL)

MATHEMATICS

*Professor SNOW, Associate Professor CONWELL

Mathematics 3-4 (Calculus) is a key to advanced courses in Physics and Mathematics, and students expecting to major in these departments should elect it in their Sophomore year. Students majoring in Mathematics will be required to take Physics 5-6, *Mechanics*.

MAJOR AND MINORS

Prerequisites:

1. *Freshman Mathematics* (Math. 1-2 or 101-102)
Major. (19 credits)
 1. *Differential and Integral Calculus* (Math. 3-4)..... 10 cr.
 2. *Differential Equations* (Math. 5)..... 3 cr.

Six credits from the following:

 3. *Vector Analysis* (Math. 6)..... 6 cr.
 4. *Advanced Calculus* (Math. 7-8)..... 6 cr.
 5. *Partial Differential Equations* (Math. 9-10)..... 6 cr.
 6. *General Astronomy* (Math. 11)..... 3 cr.
 7. *Advanced Mechanics* (Phys. 13-14)..... 8 cr.
 8. *Celestial Mechanics* (Phys. 17)..... 3 cr.

*Resigned, March, 1920.

six months, during which time he will receive \$100.00 per month and allowances of a Second Lieutenant. Upon completion of the six months service he will be returned to the inactive list of the Reserve Officers Corps, U. S. Army.

Required Work.—Four hours of practical work and one hour of theoretical work are required of all able-bodied male students in the Freshman, Sophomore, First-Year Law, and First- and Second-Year School of Agriculture classes, and of special students, unless excused; optional for Juniors and Seniors, except that they may be required to take practical or theoretical work for cause. Special registration does not exempt students from military instruction.

Excuses.—Absences or excuses from practical instruction and all offenses of a purely military nature, and those of which the military instructor may take cognizance, as bearing on the military discipline of the cadets, shall be dealt with by him in accordance with the regulations of the department, which regulations are made and promulgated by the military instructor, subject to the approval of the President of the University as executive.

Delinquencies in theoretical instruction not strictly military in their nature shall be dealt with in accordance with the standing rules of the Faculty.

Officers.—Cadet officers are, in general, selected from the Junior and Senior classes and non-commissioned officers from the Freshman and Sophomore classes; the former receive one additional credit a semester.

Cadet officers receive one additional credit a semester and compensation for their services.

Equipment and Supplies.—The government furnishes for each member of the R. O. T. C. the following equipment and supplies:

Uniform, including shoes.

Rifle and bayonet, cal. 30, model 1903.

Complete infantry equipment.

200 rounds, cal. .22, gallery ammunition.

200 rounds, cal. .30, ball ammunition.

50 rounds, cal. .45, pistol ammunition.

All necessary target range supplies.

Cadet Band.—A cadet band is organized from members of the R. O. T. C., and others who register especially for the band. The band is part of the cadet corps and is under the direction of Mr. Bernt Nielsen, Band Leader, U. S. Army.

Students may take individual instruction in wind instruments by special arrangement with the band leader, for which additional credits are allowed.

In addition to credits allowed for military work, each member of the Band receives an additional credit each semester for work therein.

The band turns out for concerts at games and assembly when called upon by the President, for not over four hours per month.

Band Conducting.—Students wishing to take special work in Band Conducting will be given such work free of charge, provided they have had at least three years of special instruction on band instruments.

Annual Encampment.—The courses of instruction may be supplemented by an annual college encampment during which the instruction is entirely military and practical, and the cadets are put thru all the duties of camp life. Summer camps for students pursuing the basic course will be established by the government, annually. Attendance is voluntary and free from expense on the part of the students.

U. of I. Rifle Club.—The University of Idaho Rifle Club is open to all students of the University. The purpose of this organization is to promote the interest and to increase the efficiency of the members in rifle firing. The club enters a team for the matches scheduled by the National Rifle Association of America.

Basic Course

- 1-2 FRESHMAN MILITARY 2 credits Each semester
 a. *Practical*: 106 hours; b. *Theoretical*: 38 hours. Organization. Military courtesy and discipline. Drill. Care and handling of arms and equipment. Small-arms firing. Personal hygiene, first aid, and sanitation. Interior guard duty. Minor tactics. Morale. Physical training.
- 3-4 SOPHOMORE MILITARY 2 credits Each semester
 a. *Practical*: 115 hours; b. *Theoretical*: 29 hours. Organization. Military courtesy and discipline. Drill. Care and handling of arms. Small-arms firing. Personal hygiene. First aid and sanitation. Interior guard duty. Minor tactics. Morale. Physical training. Topography and map reading. Signaling. Field engineering. Orders and messages.

Advanced Course

- 5-6 JUNIOR MILITARY 3 credits Each semester
 a. *Practical*: 127 hours. b. *Theoretical*: 53 hours. Camp sanitation and care of troops in the field. Minor tactics. Liaison for all arms. Topography. Field engineering. Law. Military policy, infantry, care and handling of arms and equipment. Small arms firing. Personal hygiene. First aid and sanitation. Interior guard duty. Field engineering. Orders and messages. Military courtesy and discipline.
- 7-8 SENIOR MILITARY 3 credits Each semester
 a. *Practical*: 119 hours. b. *Theoretical*: 61 hours. Minor tactics. Field engineering. Company administration. Military policy, history and economics, military law. Hippology. In-

fantry, care and handling of arm and equipment. Small-arms firing. Personal hygiene and sanitation. Interior guard duty. Topography and map reading. Orders and messages. Tactical walks. Military history.

MUSIC

Professor BANGS, Miss WEGMANN, Mr. DICKINSON

Students may enroll in the Department of Music and elect either Piano, Voice, or the Violin as their major subject leading to a B.A. degree. Students in other departments of the University may elect any of the music courses for which they are prepared.

Students taking courses in applied music will receive credit in proportion to the lessons received. For one lesson per week, one credit will be given; for two lessons per week two credits will be given. Beginners will not receive credit for less than one whole year's work. They may enroll either semester.

MAJOR AND MINORS

Prerequisites:

1. *Applied Music*
2. *Sight Singing and Ear Training* (Mus. 1-2)..... 4 cr.
3. *Harmony* (Mus. 3-4)..... 4 cr.
4. *Harmony* (Mus. 5-6)..... 4 cr.

Major:

1. *Applied Music* (Advanced)..... 10 cr.
2. *Either Counterpoint* (Mus. 7-8) or
Form and Analysis (Mus. 9-10)..... 4 cr.
3. *Either History of Music* (Mus. 11-12) or
Appreciation of Music (Mus. 13-14)..... 4 cr.

Minors: Six credits in advanced courses in German, French, or Italian.

General Music Courses

- | | | | |
|-----|---|-----------|-----------------|
| 1-2 | SIGHT SINGING AND EAR TRAINING | 2 credits | Each semester |
| | (BANGS). | | |
| 3-4 | HARMONY | 2 credits | Second semester |
| | Study of intervals; principal and secondary triads in four-voiced harmony; key-board exercises; figured basses and harmonization of melodies; dispersed harmony; modulation. Text-book: Chadwick's <i>Harmony</i> . (DICKINSON) | | |
| 5-6 | HARMONY | 2 credits | Each semester |
| | Secondary seventh chords and their inversions; harmonization of melodies and figured chorals; modulation; florid melody and accompaniments; non-harmonic tones. Text-book: Chadwick's <i>Harmony</i> . (DICKINSON) | | |

- 7-8 COUNTERPOINT 2 credits Each semester
Simple counterpoint in two, three, and four voices; canon for two voices. Prerequisite: courses 3, 4, 5, 6, in Harmony. (BANGS)
- 9-10 FORM AND ANALYSIS 2 credits Each semester
Chord reading from chorals, Bach's inventions, preludes, figures; works of Mendelssohn; study of the form in works of the classic and romantic schools; dance forms, song forms, rondos, variations, suites, sonatas, etc. (DICKINSON)
- 11-12 HISTORY OF MUSIC 2 credits Each semester
The course covers the entire period of the history of music from early savage endeavor to modern composers. It deals with the various important periods and all phases of development of the art. (BANGS)
- 13-14 THE APPRECIATION OF MUSIC 2 credits Each semester
The course is planned for all students of the University who are interested in music as a part of a liberal education. Music of the various important periods and the great masters will be presented and discussed. (DICKINSON)
- 15-16 PUBLIC SCHOOL MUSIC METHODS 2 credits Each semester
The course will deal with the material to be used thruout the grades and high school and the manner of its presentation. The child voice will be studied, and while taking this course the students will do their observation work in the city schools. (BANGS).

Piano

Miss WEGMANN

- 1a-2a } PIANOFORTE-PLAYING 1 or 2 credits Each semester
3a-4a }

For Freshman and Sophomore years.

The work in these two years includes systematic and progressive study for a thoro technical foundation. Special attention is given to the interpretation of selected compositions in the classic and modern schools of pianoforte. The courses outlined below are altered to suit the individual needs.

Mathews, *Graded Books* 1 and 2; studies selected from Loeschorn, Kohler, Cramer, Czerny, and Kullak. Pieces selected from the following composers: Kuhlau, McDowell, Schumann, Schubert.

- 5a-6a } PIANOFORTE-PLAYING 1 or 2 credits Each semester
7a-8a }

For Junior and Senior years.

Scales and arpeggios; studies selected from Cramer and Czerny; Beethoven Sonatas; compositions by Schumann, Mac-

Dowell, Grieg, Liszt, Chopin, Mendelssohn, and others.

Voice

Professor BANGS

All voice work must be adapted to the individual needs. Hence the following outline is a suggestion only of the ground covered and the material used. Students will be taught as much vocal technique as possible during the period of their instruction, and trained to become as pleasing public performers as their capabilities will permit.

1b-2b, 3b-4b VOICE TRAINING 1 or 2 credits Each semester

For Freshman and Sophomore years.

Principles of breathing, tone production, dictation, and legato.

Exercises from Abt, Marz, Concone, Vacai, Sieber, Marchesi.

Songs adapted to the individual needs and ability.

5b-6b, 7b-8b VOICE TRAINING 1 or 2 credits Each semester

For Junior and Senior years.

Continuation of principles and courses outlined for Freshman and Sophomore years. In addition students will be given more difficult songs from oratorios, operas, and the great masters. They will also be required to appear frequently in public.

Violin

Mr. DICKINSON

1c-2c VIOLIN-PLAYING 1 or 2 credits Each semester

Single stops within the first position; the sustained stroke in several variants; scales and chords in the simpler keys and rhythms; finger exercises, pieces, and etudes. Books by Gruenberg, Wohlfahrt, and Pierre Rodin.

3c-4c VIOLIN-PLAYING 1 or 2 credits Each semester

The first three positions; special exercises for the bow using all three fundamental strokes; the easier double stops and three- and four-part chords. Books by Gruenberg, Wohlfahrt, Kayser, and Sitt. Pieces by Gruenberg, Sitt, Kayser, Bohm.

5c-6c VIOLIN-PLAYING 1 or 2 credits Each semester

Scales and chords within the first five positions and in all keys. Books by Rodin, Dont, Mazas, Gruenberg. Pieces by Handel, Accolay, Hollander, Sinding, Gruenberg, Kreisler.

7c-8c VIOLIN-PLAYING 1 or 2 credits Each semester

Exercises in seven positions, double stops, and chords with shifting advanced work in bowing. Books by Gruenberg, Mazas, Kreutzer, Fiorillo. Pieces by Beethoven, Saint-Saens, Ries, Beriot. Concertos by Kreutzer, Mozart, Bach, Rode, Spohr, Viotti.

Wind Instruments of the Band and Orchestra

Mr. NIELSEN

Instruction upon the wind instruments of the Band and Orchestra

will be given by the Band Master. Arrangements for this work will be made with him. No University credit will be given.

Organized Music

- 101-102 UNIVERSITY GLEE CLUB 1 credit Each semester
Try-outs for admission to membership in the club are held in the fall. The membership is limited. All male students of the University are eligible. A special fee of one dollar per semester is charged. (BANGS).
- 103-104 TREBLE CLEF CLUB 1 credit Each semester
This is the Women's Glee Club of the University. The same rules apply to this organization as apply to the Men's Club. (BANGS).
- 105-106 UNIVERSITY ORCHESTRA 1 credit Each semester
The orchestra is open to all students of the University and is required of students majoring in the violin. (DICKINSON)
- 107-108 THE BAND 1 credit Each semester
Credit is given to members of the R. O. T. C. who register in this course in addition to their credits in Military Art but the course is open to other students also. (NIELSEN)

The Choral Society.—The membership of this society consists of the members of both Glee Clubs, and other qualified students and townspeople. Rehearsals are held for the study and rendition of oratorios and mixed choruses. (BANGS).

Public School Music

Professor BANGS

Many students wish to prepare themselves to teach or supervise music in public schools. For them a special two-year course is planned. Those satisfactorily completing the course are granted a special certificate from the University and a certificate to teach from the State of Idaho. The object of the course is to make of these students as good musicians as possible in the time allowed, and to teach them the principles and methods of teaching that they may become good supervisors or teachers.

As many of the school boards of Idaho request that their supervisors and teachers of Public School Music teach or supervise a secondary subject, it is advised that students prepare themselves for this secondary work. Students will do well to use for this purpose the numerous electives in the course outlined below. They will require a Provisional Certificate, the requirements for which will be met by the Educational courses outlined below.

Public School Music Course**FIRST YEAR**

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Comp. and Literature	3	Eng. 2, Comp. and Literature....	3
Mus. 1b, Voice	1	Mus. 2b, Voice	1
Mus. 1a, Piano	1	Mus. 2a, Piano	1
Mus. 3, Harmony	1	Mus. 4, Harmony	2
Mus. 1, Sight Singing	2	Mus. 2, Sight Singing	2
Mus. 101 or 103, Glee Club ..	1	Mus. 102 or 10b, Glee Club ..	1
Phys. Ed. 1, Physical Education	2	Phys. Ed. 2, Physical Education	2
Ed. 1, Introductory Course ..	3	Ed. 2, School Management	2
Elective	3	Elective	3
Total	17	Total	17

SECOND YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Mus. 5, Harmony	2	Mus. 6, Harmony	2
Mus. 11, History of Music	2	Mus. 12, History of Music	2
Mus. 13, Appreciation	2	Mus. 14, Appreciation	2
Mus. 3b, Voice	1	Mus. 4b, Voice	1
Mus. 3a, Piano	1	Mus. 4a, Piano	1
Phys. Ed. 3, Physical Education	2	Phys. Ed. 4, Physical Education	2
Mus. 101 or 103, Glee Club	1	Mus. 102 or 104, Glee Club ..	1
Mus. 15, Methods	2	Mus. 16, Methods	2
Ed. 3, Social Aspects	3	Ed. 16, Observation	1
		Elective	2
Total	16	Total	16

Recitals.—Recitals will be given from time to time by students capable of appearing in public. Candidates for Diploma in Music will be required to appear frequently that their instructors may be assured of their ability in public performance. Recitals will be given during the year in the University Auditorium by the Faculty of Music and by artists of note who can be secured to appear.

Departmental Regulations.—No student is permitted to register for a shorter period than a full semester.

No student is permitted to appear in public performance without the consent of the instructor.

No deduction will be made for lessons missed, nor will they be made up. In case of serious illness, special arrangements will be made by the department. No lessons lost because of University holidays will be made up.

Tuition is payable in advance for the semester or unexpired portion of it. Special arrangements may be made with the Bursar to pay the semester fees in two equal installments at the beginning and end of the first nine weeks. Students entering after the opening of the semester are charged pro rata, except that no allowance will be made on account of absence from the first week in any semester.

All students will be required to do their practising in the regular practise rooms of Liszt Hall, unless special permission is given to practise elsewhere.

Students in any department of the University may take any course

in Music and receive credit for it. Students not of University rank may register in Music and receive no credit.

Tuition.—The following is a table of fees for lessons in Music payable at the Bursar's office and subject to the rules stated above:

Piano, Voice, and Violin

Two lessons per week, 30 minutes each.....	\$48.00
One lesson per week, 30 minutes.....	25.00

Piano Rentals

One hour a day per semester.....	\$3.75
Two hours a day per semester.....	6.00
Three hours a day per semester.....	7.00

PHILOSOPHY AND PSYCHOLOGY

Assistant Professor REED, President LINDLEY

- 1 **GENERAL PSYCHOLOGY** 3 or 4 credits First semester
This course is open to Freshmen and other students, and is intended as an introduction to psychology and as a first aid to effective study. It includes lectures, recitations, and laboratory work dealing in an elementary way with the following topics: lessons from animal learning, habit, progress in learning, economical methods of study, aids to memory, and effective study as influenced by bodily conditions, fatigue, drugs, weather, sex, and heredity. (REED, LINDLEY).
- 2 **EDUCATIONAL PSYCHOLOGY** 3 or 4 credits Second semester
Continuation of course 1. The topics for study will be: association, reasoning, attention, nervous system, sensation, perception, feeling, emotion, instinct, measurement of intelligence, reading of character, teaching, advertising, and salesmanship. (REED, LINDLEY). Prerequisite: course 1.
- 3 **APPLIED PSYCHOLOGY** 3 or 4 credits First semester
A study of the applications of psychology to special fields, lectures, recitations, advertising, laboratory exercises on salesmanship, selection of employes for particular jobs, law and testimony, social work, and medicine. Prerequisite: courses 1 and 2. (REED).
- 4 **MENTAL TESTS** 3 or 4 credits Second semester
In this course the student learns the science and technique of mental testing. Lectures, recitations, and laboratory exercises on the following topics: the making of a scale, individual tests, group tests, relation of intelligence tests to school work, efficiency in particular occupations, crime and social delinquency. Prerequisite: courses 1 and 2. (REED).
- 5 **ANIMAL BEHAVIOR** 3 credits First semester
Lectures, discussions, and laboratory work on the sensory

capacity, reactions, and habit formation of the earthworm and white rat. (REED)

6 LEARNING AND THINKING 3 credits Second semester

A detailed study of habit formation and thought process. Lectures, recitations, and laboratory exercises. (REED).

7 SOCIAL PSYCHOLOGY 3 credits First semester

A study of the behavior of individuals in groups. Topics for study: instincts as the basis of social instructions; their relation to nationality and conquest; their relation to custom and morality; imitation, suggestion, belief, and processes of social control. (———)

9-10 PSYCHOLOGICAL RESEARCH 2 credits Each semester

11 HISTORY OF GREEK PHILOSOPHY 3 credits First semester

A comparative study of the development of thought from the sixth century B. C. to the fourth century A. D. (———)

12 HISTORY OF MODERN PHILOSOPHY 3 credits Second semester

A comparative study of the development of thought from the fourth to the twentieth centuries. (———)

13-14 ETHICS OF RECONSTRUCTION 3 credits Each semester

This course studies the moral issues involved in the current problems of reconstruction. The topics for the first semester are: industrial revolution, corporations and trusts, principles of business, fair and unfair competition, fair prices, fair wages, labor unions, aims of labor, strikes, boycotting, and blacklisting. For the second semester the topics will be: marriage, divorce, woman suffrage, prohibition, minimum wages and hours, free speech, liberty, union, self-government, and war. Open to all students. (REED).

15 LOGIC 3 credits First semester

The purpose of this course is to train the student in methods of correct reasoning and enable him to detect fallacies. The topics for discussion will be: classification, fallacies and ambiguities, propositions, syllogisms, methods of proof, probability, circumstantial evidence, the test of truths, and the motive of reasoning. (———)

16 INTRODUCTION TO PHILOSOPHY 3 credits Second semester

This course is designed to give the student an appreciation of common problems about the nature of religion, God, truth, reality, beauty, and goodness. (———)

PHYSICAL EDUCATION

Director BLEAMASTER, Assistant Professor HUTCHINSON, Assistant Professor WATSON, Mr. MATTHEWS, Mr. DINGLE

The department of Physical Training endeavors to meet the needs of the students in three ways: First, by giving each student a thoro

physical examination and advice in matters of well-being; second, by offering a means of systematic exercise and body building; and third, by offering instruction suitable for teachers who may desire to carry on work in the grade schools, in the high schools, or in the public playgrounds.

Provision is made for the study and practice of the hygiene or exercise in the classes organized for that purpose in the Gymnasium. These classes are intended to check and correct abnormal tendencies and to promote the general health of the students.

The Gymnasium is unusually well equipped for this work. All students have access to the classes. All new students are required to have a physical examination.

Courses for Women

Work in this department is required of Freshmen and Sophomores. Juniors and Seniors are encouraged to continue by receiving credits toward graduation for the courses elected. Those who wish to specialize in Physical Education or to prepare for play-ground work must consult Assistant Professor Watson before arranging a schedule.

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|------|--|-----------|-----------------|
| 1-2 | FRESHMAN COURSE | 2 credits | Each semester |
| | Three hours per week. The work of this course is arranged with reference to the needs of the individual student as indicated by the physical examination and study of personal tendencies. It includes a. <i>Physical Training</i> , two practice hours a week of exercise with and without apparatus, social and folk dancing, gymnasium games, and games of skill, and b. <i>Personal Hygiene</i> , one lecture a week on health and its care. | | |
| 3-4 | SOPHOMORE COURSE | 2 credits | Each semester |
| | Three hours per week. This is a continuation of 1-2, the work being of an intermediate and advanced character. This course includes a. <i>Physical Training</i> : two hours a week in instruction in gymnastics, competitive games, athletic sports, elementary classic dancing; and one lecture hour in b. <i>Educational Hygiene</i> . | | |
| 5 | PLAYGROUND SUPERVISION | 2 credits | First semester |
| | One lecture and two practice hours per week. In addition to the technical knowledge and skill required by the director of a playground, this course is designed to give a broad view of the other influences at work in this field and to show the possibilities of play as an educational force in the community. (WATSON) | | |
| 6 | FESTIVALS AND PAGEANTRY | 2 credits | Second semester |
| | Two lecture hours per week. This course includes a study of festival material adapted to school and playground use. (WATSON) | | |
| 7-8 | FOLK AND NATIONAL DANCING | 1 credit | Each semester |
| | Two practice hours per week. (WATSON) | | |
| 9-10 | ESTHETIC DANCING | 1 credit | Each semester |
| | Two practice hours per week (WATSON) | | |

- 11-12 ADVANCED ESTHETIC DANCING 1 credit Each semester
Two practice hours per week. (WATSON)
- 13 METHODS AND TEACHING OF PHYSICAL EDUCATION 2 credits First semester
One lecture and two practice hours per week. This course includes a study of subject matter and method adapted to grade schools, high schools, and colleges. (WATSON)
- 14 MEDICAL GYMNASTICS 2 credits Second semester
This is a course in exercise and its relation to education and medicine. It will endeavor to enlighten the student of Physical Education on the real educational value of neuromuscular training. (WATSON)
- 15 CORRECTIVE GYMNASTICS 1 credit Each semester
Two practice hours per week. This course may be substituted for required work. Adapted to the needs of those having lateral curvature or faulty posture. (WATSON)

Courses for Men

- 101-102 INTRODUCTORY COURSE $\frac{1}{2}$ credit Each semester
Two hours per week. Light apparatus work, including dumbbells, Indian-clubs, bar-bells, and tactics. (BLEAMASTER)
- 103-104 ADVANCED WORK $\frac{1}{2}$ credit Each semester
Two hours per week. Light and heavy gymnastics, athletics, field sports, etc. (———)
- 105 PERSONAL HYGIENE 2 credits Second semester
Two hours per week. Pyle's *Personal Hygiene* will be used as a text-book. (BLEAMASTER)
- 106 MEDICAL GYMNASTICS 2 credits Second semester
This is a course in exercise and its relation to education and medicine. It will endeavor to enlighten the student of Physical Education on the real educational value of neuromuscular training. (BLEAMASTER)
- 107 PLAYGROUND SUPERVISION 2 credits First semester
One lecture and two practice hours per week. This course will consist of the teaching and directing of plays and games. The playground and its relation to civics and health, and the importance of the playground as a social center are discussed. (BLEAMASTER)
- 108 SCHOOL ROOM GYMNASTICS 1 credit Second semester
One lecture and one practice and observation hour each week. This is a study of physical education and organization in grade schools. (BLEAMASTER)
- 109 TEACHER'S COURSE IN ATHLETIC TRAINING 1 credit Each semester
A course in athletic training for the care of men in all branches of athletics. (———).

- 110 TEACHER'S COURSE IN COACHING OF FOOTBALL
1 credit First semester
Two lectures each week. The course consists of the theory of offense and defense; the value of different equipment; the care of men. Demonstrations will be given in the execution of plays. This course will be open to men who have not played football. (BLEAMASTER)
- 111 TEACHER'S COURSE IN COACHING OF BASKETBALL
1 credit First semester
Two hours per week. Lectures and practical work in throwing, team play, and conditioning will be given. (———).
- 112 TRACK AND FIELD 1 credit Second semester
Two hours per week. Lectures and practical work. The correct form in the various standard track and field events will be given careful consideration as will also the amount of work necessary for the individual's best condition and health. (———).

PHYSICS

Professor ANGELL, Professor SNOW, Mr. ELLER

MAJOR AND MINORS

Prerequisites:

- 1.
- General Physics*
- (Phys. 1-2 or 101-102)

Major. (16 credits from the following:)

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|--|-------|
| 1. <i>Advanced Heat</i> (Phys. 3)..... | 4 cr. |
| 2. <i>Advanced Light</i> (Phys. 4)..... | 4 cr. |
| 3. <i>Analytic Mechanics</i> (Phys. 5-6)..... | 6 cr. |
| 4. <i>Electricity and Magnetism</i> (Phys. 7-8)..... | 4 cr. |
| 5. <i>Electrical Measurements</i> (Phys. 9)..... | 2 cr. |

Minors.

- a. IN MATHEMATICS.

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|--|-------|
| 1. <i>Differential and Integral Calculus</i> (Math. 3-4) | 8 cr. |
| 2. <i>Differential Equations</i> (Math. 5)..... | 3 cr. |

- b. IN CHEMISTRY.

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|---|-------|
| <i>Theoretical and Physical Chemistry</i> (Chem. 13-14) | 6 cr. |
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- c. IN GEOLOGY.

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|---|-------|
| 1. <i>General Geology</i> (Geol. 1)..... | 3 cr. |
| 2. <i>Determinative Mineralogy</i> (Geol. 3-4)..... | 4 cr. |

- d. IN ELECTRICAL ENGINEERING.

- | | |
|---|-------|
| <i>Electrical Engineering</i> (E.E. 31-32)..... | 8 cr. |
|---|-------|

- 1-2 GENERAL PHYSICS 4 or 5 credits Each semester

An elementary course, including the fundamentals of mechanics, heat, light, sound, electricity, magnetism, and radioactivity. Presents the principles of the science while avoiding the difficulties of a mathematical treatment of the subject. Demonstration lectures, recitations, text-book, and laboratory work.

General Physics 1-2 or 101-102 is required of all Sophomores in the Bachelor of Science course. Students intending to major in Physics or Mathematics are advised to select course 101-102. (ANGELL, CONWELL)

- 101-102 GENERAL PHYSICS 5 credits Each semester
An elementary course similar to 1-2, but giving a more mathematical treatment of the subject. This course must be preceded by, or accompanied with, the calculus. Required of all Sophomore engineers. (ANGELL, CONWELL)
- 3 ADVANCED HEAT 4 credits First semester
Conduction, convection, radiation, and the principles of thermodynamics, with a study of the methods of measuring high and low temperatures. One laboratory period each week. Prerequisite: Phys. 1-2, Math. 3-4. (ANGELL)
- 4 ADVANCED LIGHT 4 credits Second semester
Theoretical and experimental optics. One laboratory period each week. Prerequisite: Math. 3-4. (SNOW)
- 5-6 ANALYTIC MECHANICS 3 credits Each semester
Statics, friction, kinematics, and kinetics. Prerequisite: General Physics and a knowledge of the calculus. Required of all engineers and those majoring in Physics or Mathematics. (SNOW)
- 7-8 ELECTRICITY AND MAGNETISM 2 credits Each semester
An advanced course dealing with the important principles and theories of electricity and magnetism. Prerequisite: Math. 3-4. (ANGELL)
- 9-10 ELECTRICAL MEASUREMENTS 2 credits Each semester
A laboratory course in electrical and electromagnetic measurements; including the calibration of electrical measuring instruments, measurement of magnetization, inductance, and capacity. Designed to accompany 7-8. Courses 7 and 9 required of Electrical Engineers. (ANGELL)
- 11 ELECTRON THEORY 2 credits First semester
A course presenting the modern views concerning the constitution of matter. (ANGELL)
- 12 KINETIC THEORY OF GASES 2 credits Second semester
An advanced course in the theory of the motion of the molecules. (ANGELL)
- 13-14 ADVANCED MECHANICS 4 credits Each semester
A mathematical treatment of the dynamics of rigid bodies, gyroscopic motion, hydrodynamics, and elasticity. Prerequisite: Phy. 5-6. (SNOW).
- 15-16 RESEARCH 4 credits Each semester
A course for advanced students who desire to pursue a special line of investigation under the supervision of an instructor. (ANGELL, SNOW)

- 17 **CELESTIAL MECHANICS** 3 credits First semester
A study of the motion of the planets, central forces, and energy. Prerequisite: Phys. 5-6. (CONWELL).
- 18 **HEAT CONDUCTION** 3 credits Second semester
A mathematical study of heat conduction with application to many practical problems. (CONWELL)
- 19-20 **METEOROLOGY** 3 credits Each semester
In addition to a broad survey of meteorology, special attention will be given to meteorological conditions of this region and their bearing on local climatic conditions. Prerequisite: General Physics. (ANGELL).
- 21 **PHYSICS OF THE HOUSEHOLD** 4 credits First semester
A course for students in Home Economics, giving the application of Physics to household appliances. Prerequisite: High School Physics or Physics 1-2 (ANGELL)
- 22 **THE TEACHING OF PHYSICS** 3 credits Second semester
A course intended for those who desire to teach physics in the high schools, consisting of lectures and discussions upon the choice of subject matter and the method of presentation best suited to elementary courses. The choice of text-books, reference books, suitable equipment, how to order apparatus, methods of laboratory procedure and other practical matters will be considered. (ANGELL)

ROMANCE LANGUAGES

Professor SCHELL, Mr. MEDICI, Miss INGERSOLL, Miss MATHIEU

Students who present two years of high-school French for admission will continue in course 3-4. Those who have had no French, and those who have had one year in high school, will take course 1-2. No credit is given for French until French 2 is completed.

Those who expect to teach French should take Composition and Conversation 13-14 and the Teachers' Course 17, and 10 credits in advanced literature courses.

MAJOR AND MINORS

Prerequisites:

1. *Elementary French* (Fr. 1-2).
2. *Intermediate French* (Fr. 3-4).

Major—(18-20 credits)

1. *Survey of French Literature*..... 4 credits
2. *The Novel of the Nineteenth Century*, or..... 6 credits
The Drama of the Nineteenth Century..... 6 credits
3. *The Drama of the Seventeenth Century*..... 6 credits
4. *Composition and Conversation*..... 4 credits

Minors.—Six to ten credits in advanced courses in Spanish, Latin, English, German, or History.

- 1-2 ELEMENTARY FRENCH 5 credits Each semester
 In this course stress is laid upon the following points: (1) The acquisition of a good pronunciation, (2) a thoro grounding in the essentials of French grammar, (3) facility to understand and take part in simple idiomatic conversation, (4) simple prose composition.
 Fraser and Squair, *French Grammar*; Roux, *Elementary Reader*, Daudet, *Huit Contes Choisis*; Labiche, *La Poudre aux Juix*. (INGERSOLL, MATHIEU)
- 3-4 INTERMEDIATE FRENCH 3 credits Each semester
 The aim of this course is to give the student an accurate and fluent reading knowledge of French prose. Idioms, irregular verbs, syntax, and conversation based on the text. This course is conducted in French so far as possible. (INGERSOLL, MATHIEU)
- 5-6 THE NOVEL OF THE NINETEENTH CENTURY 3 credits Each semester
 Prerequisite: French 3-4. Lectures, reading, and reports. (Not given 1920-21). (SCHELL)
- 7-8 THE DRAMA OF THE NINETEENTH CENTURY 3 credits Each semester
 Lectures, reading, reports. (INGERSOLL)
- 9-10 THE DRAMA OF THE SEVENTEENTH CENTURY AND ITS ORIGINS
 Prerequisite: French 3-4. Lectures, reading, reports, with special emphasis upon the drama of Corneille, Racine, Moliere. (Not given 1920-21). (SCHELL)
- 11-12 A SURVEY OF FRENCH LITERATURE 2 credits Each semester
 A study of the development of French literature from its origins to our day. Lectures, reading, reports. Open to students in all departments above Freshman standing. A reading knowledge of French is not required. (MATHIEU)
- 13-14 COMPOSITION AND CONVERSATION 2 credits Each semester
 This course deals with a thoro study of French grammar, verbs, and idiomatic construction. Its aim is to teach the student self-expression in the foreign tongue. Required of those expecting to teach French. Open to students who have had French 3-4 and to others by special permission. (SCHELL)
- 15-16 ADVANCED COMPOSITION AND CONVERSATION 2 credits Each semester
 This course deals with a study of syntax and idiomatic prose. Prerequisite: Course 17-18. (Not given 1920-21). (———)
- 17-18 TEACHERS' COURSE 2 credits Each semester
 This course is open only to students intending to teach. Phonetics and pronunciation, grammar review, a study of methods, course of study, practice teaching and observation. (SCHELL)

19-20 SCIENTIFIC FRENCH 3 credits Each semester

A special reading course open only to students majoring in science. Prerequisite: French 1-2.

A French scientific reader and collateral reading in French scientific journals. (MATHIEU)

Spanish.

Students who present two years of high-school Spanish for admission will continue in course 3-4. Those having less than two years of high school, or one year of college Spanish will take Spanish 1. No student may elect French 1 and Spanish I the same year.

1-2 ELEMENTARY SPANISH 5 credits Each semester

The aim of the course is to give the student a good pronunciation, facility in reading easy prose, and ability to understand and speak simple Spanish. (SCHELL, MEDICI)

3-4 INTERMEDIATE SPANISH 3 credits Each semester

Reading of modern authors, conversation, review of grammar and irregular verbs, and a study of idioms. The aim of this course is to give the student an accurate reading knowledge of modern Spanish. (SCHELL)

5-6 COMMERCIAL SPANISH 3 credits Each semester

Prerequisite: Spanish 1-2.

This course is designed to familiarize the student with the vocabulary of business and with the form of Spanish commercial correspondence.

Readings, illustrating the daily life, customs, habits, and conditions of the Spanish-American peoples. Emphasis on the natural resources, physical conditions, commerce, markets, agricultural and industrial products of Spanish-America.

Open to students specializing in commerce, and to others by permission of the instructor. (MEDICI)

7-8 COMPOSITION AND CONVERSATION 2 or 3 credits Each semester

This course deals with a thoro study of grammar and idiomatic construction. Its aim is to teach the student self expression in the foreign tongue.

Open to students who have completed Spanish 3-4 and to others by permission of the instructor.

Wilkin's Elementary Prose Book; reading of modern authors.

9-10 SPANISH CLASSICS OF THE SIXTEENTH AND SEVENTEENTH

CENTURIES 2 credits Each semester

The novel and drama of the "Golden Age." A study of Cervante's *Novelas Exemplares*, selections from *Don Quixote*, *Lazarillo de Tormes*, and other picaresque novels. A careful study of selected plays of such authors as Lope de Vega, Calderon, Lope

THE COLLEGE OF LETTERS AND SCIENCE

- de Rueda, Tirso de Molino and Ruiz de Alarcon. Lectures, readings, reports. Given upon request of major students. (SCHELL)
10-11 A SURVEY OF SPANISH LITERATURE 2 credits Each semester
(Not given 1920-21). (MEDICI)

Italian.

- 1-2 ELEMENTARY ITALIAN 3 credits Each semester
The aim of this course is to give the students a good pronunciation, a knowledge of the grammar, and facility in reading simple modern prose. (Not given 1920-21). (MEDICI)
3-4 INTERMEDIATE ITALIAN
Reading of modern authors. (Given only upon request). (MEDICI)

SOCIOLOGY

(See Economics and Political Science)

ZOOLOGY AND ENTOMOLOGY

Professor WODSEDALEK, Assistant Professor MUTTKOWSKI

MAJOR AND MINORS

Prerequisite:

General Zoology (Zool. 1-2).....3-4 credits

Major I. IN ZOOLOGY.

1. *Histology and Organology* (Zool. 13)..... 5 cr.
2. *Embryology* (Zool. 14)..... 4 cr.
3. *Cytology* (Zool. 15-16)..... 10 cr.

Minors. Eight to ten credits in advanced courses in Entomology, Bacteriology, Botany, Chemistry, or Geology.

Major II. IN ENTOMOLOGY.

1. *Advanced Entomology* (Zool. 11)..... 4 cr.
2. *Research* (Zool. 19-20)..... 16 cr.

Minors:

Advanced courses in Zoology, Horticulture,
or Forestry8-10 cr.

- 1-2 GENERAL ZOOLOGY 3 or 4 credits Each semester
Lectures, discussions, and laboratory work dealing in an elementary way with the general problems of animal structures, physiology, activities and adaptations, sex, development, heredity, evolution, and life-histories of representative and economic forms. Two lectures and one three-hour laboratory period per week for those who take three credits and an additional laboratory period for those who take four credits. (WODSEDALEK) *MuttKows R.*
3 INVERTEBRATE ZOOLOGY 4 credits First semester
A study of the structure, development, classification, relationships, instincts, and life-histories of invertebrate animals. Special

attention is given to the more important parasites and economic forms. One lecture and three three-hour laboratory periods per week. (WODSEDALEK)

4 COMPARATIVE ANATOMY OF VERTEBRATES 4 credits Second semester

Dissection and study of types of vertebrates together with lectures and discussions on general vertebrate anatomy with special reference to the evolution of the various organ systems. One lecture and three three-hour laboratory periods per week. (WODSEDALEK)

5 THE TEACHING OF ZOOLOGY 2 credits First semester

A consideration of the aims, methods, and subject matter of Zoology in the schools. Discussion of laboratory and equipment, technique, and specific hints on other points. Laboratory work dealing with reagents; the preparation of slides, charts, and museum specimens; class preparations; collecting; making cultures, aquaria, etc. One lecture and two three-hour laboratory periods per week. (WODSEDALEK)

6 PHYSIOLOGY 3 credits Second semester

Recitations, demonstrations, and laboratory work giving a general knowledge of the more important physiological problems, and of the structure and functions of the human body. Two recitations and one three-hour laboratory period per week. (MUTTKOWSKI)

7 ORGANIC EVOLUTION 3 credits First semester

A critical discussion of the facts and theories of organic evolution, and the general development of evolutionary speculation since Darwin. Three lectures per week. (A considerable amount of reading is also required.) (WODSEDALEK)

8 HEREDITY AND EUGENICS 2 credits Second semester

A scientific study of the main facts and theories of heredity and its mechanism, with emphasis on the phases pertaining to human welfare. Two lectures per week. Prerequisite: Zoology 1. (WODSEDALEK)

10 SOCIAL HYGIENE 2 credits Second semester

This course is offered in harmony with the national movement directed by the Inter-Departmental Social Hygiene Board of the United States. Especial emphasis on the great problems of sex and conservation of mankind. One lecture and three hours per week of study of select literature. Open to all students. Zoology 1 makes a good foundation for this course. (WODSEDALEK)

13 EMBRYOLOGY 4 credits Second semester

Lectures on general problems. The laboratory work deals with studies on maturation, fertilization, segmentation, and with serial sections and entire embryos of the chick, pig, and human being with reference to the origin of the various types of tissues and the development of the different organs. Attention is given

to the technique of fixing, sectioning, and staining embryological material. One lecture and three three-hour laboratory periods per week. Prerequisites: Zoology 1-2, and 3. (MUTTKOWSKI)

14 VERTEBRATE HISTOLOGY AND ORGANOLOGY
5 credits

Second

~~First~~ semester

Histology, the study of the various tissues, is first taken up, and this is followed by the study of the minute structure of the chief mammalian organs. Some time will be devoted to the technique of preparing permanent slides of the various tissues and sections of the more important organs. One lecture and four three-hour laboratory periods per week. Prerequisites: Zoology 1-2, and 3. (MUTTKOWSKI)

15-16 CYTOLOGY 5 credits

Each semester

Particular attention is given to the physics and chemistry of the cell, the colloidal nature of protoplasm, the effect of electrolytes on the living substance, and the phenomena of metabolism, stimulation, and transformation of energy. In laboratory work especial emphasis is placed on the study of the cell, and the relation of cytological phenomena to normal and abnormal growth, to differentiation, to sex, and to the theories of heredity and evolution. Considerable time is devoted to the methods of fixation, sectioning, and staining of tissues for detailed microscopical examination. One lecture and four three-hour laboratory periods per week. Prerequisites: Zoology 1-2, 3, 8, 13, and 14; ~~Physics 1-2; Chemistry 1, 2, 3, 4, 5 and 6.~~ (WODSEDALEK)

18 ORNITHOLOGY 2, 3 or 4 credits

Second semester

Those earning two credits will become acquainted with our common birds and their use on the farm or home grounds. Those taking four credits will go into the practical methods of getting birds to nest about the farm or city homes, will build certain types of bird houses, food boxes, baths, etc.; will improve on present patterns biologically; and will demonstrate the use of wild birds in the University arboretum and estates. One lecture and one or three three-hour laboratory periods per week. (MUTTKOWSKI)

19-20 RESEARCH

Problems will be assigned, and students prepared for independent investigation in any phase of zoology or entomology will be given all the opportunities available for carrying on their work. (WODSEDALEK)

101 ELEMENTARY ENTOMOLOGY 4 credits

Second

~~First~~ semester

Morphology, anatomy, physiology, classification and life histories of insects, and the more general problems of insect ecology. Special attention is devoted to type forms of economic species, thus covering the relation of insects to agriculture, horticulture, and

public health. Two lectures and two three-hour laboratory periods per week. Zoology 1 prerequisite. This course or an equivalent is prerequisite to 105, 106, 107, and 109-110. (MUTTKOWSKI)

104 FOREST ENTOMOLOGY 4 credits Second semester

Classification work of course 101 will be reviewed in brief with special emphasis on forest insects. A collection will be made of forest and shade-tree insects and forms of injury produced. Methods of control of forest insects in both Europe and America will focus on parasitic and other enemies in order to develop a rational policy for the control of these natural enemies. Two lectures and two three-hour laboratory periods. (MUTTKOWSKI)

105 HORTICULTURAL ENTOMOLOGY 2, 3, or 4 credits Second semester

A course preparing for commercial fruit-growing. It treats of insecticides and the machinery needed to destroy fruit pests; insects of tree and bush fruits in the northern states (strawberry, cranberry, citrus, and nut pests included if requested); outlining spray calendars to adapt the practice of spraying to the life histories of insects; collecting fruit pests and samples of their damage. One lecture and one or three three-hour laboratory periods. (MUTTKOWSKI)

106 FARM CROP AND GARDEN ENTOMOLOGY

2, 3, or 4 credits

Second semester

One-half the time is devoted to insects of field crops, the other half to insects of the home garden. Laboratory work may be taken wholly in one or the other phase of the subject, forming a collection of pests for the crops studied, pressing samples of leaf injury, etc., for exhibits for school-rooms, fairs, and museums. One lecture and one or three three-hour laboratory periods. (MUTTKOWSKI)

107 HOUSEHOLD AND MILL PESTS 2, 3, or 4 credits First semester

Intended for housekeepers, grocers, warehousemen and millmen, and students in domestic science, and agronomy. The importance of several household pests in the spread of various diseases is included. A collection of grain, dry groceries, fabric-eating and household pests will be formed. One lecture and one or three three-hour laboratory periods. (MUTTKOWSKI)

108 BEEKEEPING 2 credits

Second semester

Bee culture and honey production with Italian strain of bees. One lecture and one three-hour laboratory period per week. (MUTTKOWSKI)

109-110 ADVANCED ENTOMOLOGY 2, 3, or 4 credits Each semester

Advanced work in special lines, economic, histologic, or taxonomic. Two or four laboratory and recitation periods per week. (MUTTKOWSKI)

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THE COLLEGE OF AGRICULTURE

ADMISSIONS AND CURRICULUM

The purpose of the College of Agriculture is to provide a thorough education in the various branches of agriculture, including the theory and practice of farming, horticulture, and animal husbandry. The curriculum is designed to prepare students for the various occupations connected with the agricultural industry. The college is open to both men and women, and the admission requirements are the same for both sexes. The course of study is divided into two years, and the students are required to complete a certain number of credits in each year. The first year is devoted to the study of the fundamentals of agriculture, and the second year is devoted to the study of the various branches of the industry. The students are also required to complete a certain number of practical exercises, and to attend lectures and demonstrations. The college is located on a large tract of land, and the students have access to a large number of experimental farms and gardens. The college is also equipped with a large library, and the students have access to a large number of books and papers. The college is open to all students who are qualified by their previous education and by their physical and mental abilities. The admission requirements are the same for both men and women, and the course of study is the same for both sexes. The students are required to complete a certain number of credits in each year, and to attend lectures and demonstrations. The college is located on a large tract of land, and the students have access to a large number of experimental farms and gardens. The college is also equipped with a large library, and the students have access to a large number of books and papers.

PART IV.

THE COLLEGE OF
AGRICULTURE

FIRST SEMESTER	
English	1
Mathematics	1
Science	1
History	1
Physical Education	1
Agriculture	1
Art	1
Music	1
Foreign Language	1
Elective	1
Total Credits	
12	
SECOND SEMESTER	
English	1
Mathematics	1
Science	1
History	1
Physical Education	1
Agriculture	1
Art	1
Music	1
Foreign Language	1
Elective	1
Total Credits	
12	

THE COLLEGE OF AGRICULTURE

ADMISSIONS AND CURRICULA

For requirements for admission to all courses in the College of Agriculture, see page 65, and for further details see pages 64-66. The requirements for admission to the School of Practical Agriculture are stated under that section.

Curricula of study are offered toward the degrees of Bachelor of Science in Agriculture and Master of Science in Agriculture. All students pursue the same curriculum thru the Freshman and Sophomore years. At the beginning of the Junior year a major agricultural subject is chosen. Majors may be chosen in Animal Husbandry, Dairy Husbandry, Farm Crops, Horticulture, or Agricultural Education.

The Teacher-Training Curriculum in Vocational Agriculture is the course approved by the State Board for Vocational Education for the preparation of Smith-Hughes high-school agriculture teachers. Graduates from this course are eligible for a State Teachers' Certificate valid for eight years.*

Those who desire a general course in agriculture, such as will especially fit for county-agent and other extension work, will find it possible so to choose electives in one of the four major curricula as to prepare for work in these fields.

Common Freshman and Sophomore Years

Students in all four-year curricula in the College of Agriculture take the same work in the Freshman and Sophomore years.

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Comp. and Literature	3	Eng. 2, Comp. and Literature	3
Chem. 1, General Chemistry...	4	Chem. 2, General Chemistry...	4
Bot. 101, General Botany....	3	Bot. 102, General Botany....	3
Farm Crops 1, Grain Crops...	3	D. H. 2, Elements of Dairying	1½
An. Hus. 1, Market Types of		Hort. 2, Elements of Hort....	3
Live-Stock	2½	Shop 22, Forge Work.....	1
Mil. 1, Freshman Military....	2	Mil. 2, Freshman Military....	2
Total	17½	Total	17½

* Any graduate of the college or undergraduate having completed at least 60 hours of college work, providing he has included in such work at least ten credits in education as specified on page 80 and provided his average grade does not fall below 4.00, is eligible for a Provisional Teachers' Certificate valid for two years. Graduates, or undergraduates having satisfactorily completed two years of work in the college may be granted a Specialist's Certificate entitling them to teach agriculture only. Holders of Provisional and Specialists' Certificates will be approved as Smith-Hughes teachers only in case the supply of fully qualified teachers is inadequate.

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5, Composition.....	2	Eng. 6, Composition.....	2
Chem. 9, Quantitative and Qualitative Analysis	4	† Chem. 6a, Organic Chemistry	4
Zool. 1, General Zoology.....	4	or	
Farm Crops 3, Forage Crops..	3	Agr. Chem. 2, Gen. Agr. Chem.	2
D. H. 3, Milk Production..	3	and	
Mil. 3, Sophomore Military..	2	Agr. Chem. 2a, Applied Agricultural Analysis ..	2
		Soils 2, Soil Physics and Fertility	4½
		An. Hus. 4, Breed Types of Live-Stock	3½
		Hort. 4, Vegetable Gardening.	2
		Mil. 4, Sophomore Military...	2
Total	18	Total	17½

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Agriculture, (B.S. Agr.) the student must, in addition to completing the regular courses of study prescribed by the department in which his major lies, present evidence of having spent at least one summer after his first year in residence at the University in practical farm work on an approved farm; those enrolled in the teacher-training course in agricultural education must present also evidence of having had a total of two years of practical farm experience subsequent to becoming fourteen years of age.

Major in Animal Husbandry

(For the Freshman and Sophomore years see pages 138-139.)

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
A. E. 21, Farm Surveying..	1½	* Agr. Chem. 2, General Agricultural Chemistry	2
A. E. 31, Farm Machinery..	1½	* Agr. Chem. 2a, Applied Agricultural Analysis	2
An. Hus. 5, Live Stock Judg.	1½	An. Hus. 6, Animal Nutrition	3
An. Hus. 21, Veterinary Anatomy	3	An. Hus. 22, Veterinary Physiology	3
Bac. 1, Gen. Bacteriology....	4	Elective	8
Elective	6½		
Total	18	Total	18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
An. Hus. 15, Seminar and Practicums	1	A. E. 52, Farm Bldgs.....	3
An. Hus. 17, Thesis.....	1	An. Hus. 14, Hist. of Breeds	3
An. Hus. 27, Animal Diseases	3	An. Hus. 16, Seminar and Practicums	1
Elective	13	An. Hus. 18, Thesis	1
		Elective	9
Total	18	Total	17
		Total credits required	142

† Those students preparing for professional work in Agriculture will take Chem. 6a in the Sophomore year and Agr. Chem. 2 and 2a in the Junior year. Agr. Chem. 2 and 2a may be taken in the Sophomore year, without Chem. 6a, by special permission.

Students majoring in Animal Husbandry will elect $36\frac{2}{3}$ credits subject to the approval of the head of the Department.

Major in Dairy Husbandry

(For the Freshman and Sophomore years see pages 138-139.)

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
D. H. 5, Creamery Butter-making	2 $\frac{3}{4}$	* Agr. Chem. 2, General Agricultural Chemistry	2
A. E. 21, Farm Surveying....	1 $\frac{1}{2}$	* Agr. Chem. 2a, Applied Agricultural Analysis	2
A. E. 31, Farm Machinery....	1 $\frac{1}{2}$	D. H. 6, Ice Cream and Ices	1 $\frac{3}{4}$
Bac. 1, General Bacteriology..	4	D. H. 8, History of Dairy Breeds	1
Elective	8 $\frac{1}{4}$	D. H. 10, Cheese Making	2 $\frac{3}{4}$
		An. Hus. 10, Animal Breeding or Zool. 8, Heredity & Eugenics	2
		A. E. 40, Farm Motors	3
		Elective	3 $\frac{2}{3}$
Total	18	Total	18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
D. H. 11, Factory Management ..	3	D. H. 12, Dairy Cattle Feeding & Management	4
D. H. 13, Judging Dairy Products	1	D. H. 18, Thesis	1
D. H. 15, Milk Technology..	2 $\frac{3}{4}$	D. H. 20, Seminar	1
D. H. 17, Thesis	1	Elective	11
D. H. 19, Seminar	1		
Elective	9 $\frac{1}{4}$		
Total	18	Total	17
		Total Credits Required ...	142

Students majoring in Dairy Husbandry will elect $32\frac{1}{3}$ credits, subject to approval of the head of the Department.

Major in Farm Crops

(For the Freshman and Sophomore years see pages 138-139.)

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
A. E. 21, Farm Surveying ..	1 $\frac{1}{2}$	* Agr. Chem. 2, General Agricultural Chemistry	2
A. E. 31, Farm Machinery..	1 $\frac{1}{2}$	* Agr. Chem. 2a, Applied Agricultural Analysis	2
Bac. 1, General Bacteriology ..	4	Bot. 4, Plant Physiology....	4
Soils 5, Origin and Class....	2	Farm Crops 2, Farm Management	3
Elective	9	Soils 4, Soil Management....	2 $\frac{3}{4}$
		Zool. 102, Ele. Entomology..	3
		Elective	1 $\frac{1}{2}$
Total	18	Total	18

* For special provisions regarding these courses see footnote page 139.

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bot. 9, Plant Pathology	4	Farm Crops 6, Crop Improvement	2 $\frac{2}{3}$
Farm Crops 5, Plant Breeding	2 $\frac{2}{3}$	Farm Crops 10, Thesis	1
Farm Crops 9, Thesis	1	Farm Crops 12, Seminar	1
Farm Crops 11, Seminar	1	Elective	12 $\frac{1}{3}$
Soils 3, Soil Chemistry	2 $\frac{2}{3}$		
Elective	7		
Total	18	Total	17
		Total credits required	142

Students majoring in Farm Crops will elect 29 $\frac{2}{3}$ credits subject to the approval of the head of the Department.

Major in Horticulture

(For the Freshman and Sophomore years see pages 138-139.)

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
A. E. 21, Farm Surveying ..	1 $\frac{1}{2}$	* Agr. Chem. 2, General Agricultural Chemistry	2
A. E. 31, Farm Machinery ..	1 $\frac{1}{2}$	* Agr. Chem. 2a, Applied Agricultural Analysis	2
Bac. 1, General Bacteriology ..	4	Bot. 4, Plant Physiology	4
Hort. 5, Practical Pomology ..	3 $\frac{2}{3}$	Hort. 5, Practical Pomology ..	3 $\frac{2}{3}$
Elective	7 $\frac{1}{3}$	Hort. 12, Truck Gardening ..	3
		Zool. 102, Ele. Entomology ..	3
		Elective	1 $\frac{1}{3}$
Total	18	Total	18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bot. 9, Plant Pathology	4	Hort. 10, Spraying	2 $\frac{2}{3}$
Hort. 13, Thesis and Seminar ..	2	Hort. 14, Thesis and Seminar ..	2
Hort. 15, Com. Pomology	2 $\frac{2}{3}$	Hort. 16, Landscape Gard	2 $\frac{2}{3}$
Elective	9 $\frac{1}{3}$	Elective	9 $\frac{2}{3}$
Total	18	Total	17
		Total credits required	142

Students majoring in Horticulture will elect 26 $\frac{2}{3}$ credits, subject to approval of the head of the Department.

Teacher-Training Curriculum in Vocational Agriculture

(For the Freshman and Sophomore years see pages 138-139.)

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bac. 1, General Bacteriology ..	4	An. Hus. 6, Animal Nutrition ..	3
A. E. 23, Drainage and Irrigation ..	3	A. E. 40, Farm Motors	3
Ed. 7, Principles of Teaching ..	3	P. H. 2, General Poultry Husbandry	3
Elective	8	Ed. 14, Vocational Educ.	3
		Zool. 8, Heredity and Eugenics, (or equivalent in plant or animal breeding)	2
		Elective	4
Total	18	Total	18

* For special provision regarding these courses see footnote page 139.

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Agr. Ed. 9, Methods in Teaching High School Agriculture	2	Agr. Ed. 22, Rural Life and Teaching High School Agriculture	2
* Agr. Ed. 17, Observation and Teaching	2	Farm Crops 2, Farm Management	3
Econ. 1-2, Rural Economics..	3	Ag. Ed. 22, Rural Life and Education	3
† Special Elective	3	Elective	9
Elective	8		
Total	18	Total	17
		Total Credits Required	142

Students pursuing the Teacher-Training Curriculum will elect 29 credits subject to the approval of the head of the Department. At least 9 elective credits, or enough to complete a total of 50 must be selected from technical agricultural subjects.

Combination Curriculum in Teacher-Training

Candidates for graduation with a Major in either Animal Husbandry, Dairy Husbandry, Farm Crops, or Horticulture, desiring to qualify for teaching Vocational Agriculture by graduating also from the Teacher-Training curriculum, may do so by meeting requirements 1, 2 and 3 below:

1. The completion of a total of not less than 50 credits in technical agriculture, which must include 3 credits in Farm Management and should also include courses in Animal Nutrition, Poultry Husbandry, and Farm Motors, if possible.
2. The completion of not less than 15 credits in Education as prescribed above.
3. The completion of 3 credits in Rural Economics and 3 credits in Rural Sociology.

AGRICULTURAL CHEMISTRY

Professor NEIDIG, Assistant Professor SNYDER.

Courses 9 and 6a in General Chemistry are prerequisite. For exception see footnote page 139. Courses 2 and 2a are required of all agricultural students for the degrees B.S.(Agr.). Course 6, should be taken during the second semester of the Junior year, while course 12 is open to Seniors.

2 GENERAL AGRICULTURAL CHEMISTRY 2 credits Second semester

Lectures on chemistry as applied to agriculture, including the following topics: the chemical principles that underlie the growth and nutrition of farm crops; their composition and utilization in animal nutrition; milk and dairy products, insecticides and fungicides, and motor fuel and oils. (NEIDIG).

* Agr. Ed. 18 may be substituted for Agr. Ed. 17.

† Elective from group C of requirements for State Certificate, see page 79.

2a APPLIED AGRICULTURAL ANALYSIS 2 credits Second semester

This laboratory course closely supplements course 2. A knowledge of the composition of grains, feeding stuffs, and milk and its products is secured thru analysis; of insecticides and fungicides by their synthesis and analysis; of motor fuel and oils by analysis. Experiments are made with proteins, fats, and carbohydrates, using enzymes to demonstrate the cleavage products formed during digestion. Two laboratory periods of 3 hours each. (SNYDER)

6 CHEMISTRY OF DAIRY PRODUCTS 2 credits Second semester

A laboratory course in the analysis of milk, butter, cheese, and other dairy products, designed to meet the needs of advanced students in dairying. Three three-hour laboratory periods per week. Prerequisite: Chem. 9, 6a, 2, 2a. (NEIDIG)

12 RESEARCH Credits to be arranged

Senior year

Deposits.—To insure reasonable care in the use of laboratory apparatus, a deposit of three to five dollars per semester will be required in all laboratory courses.

AGRICULTURAL EDUCATION

Assistant Professor WILSON, Mr. MATHEW

1 EXTENSION METHODS IN AGRICULTURE 2 credits First semester

A brief study of the methods of agricultural extension in use by county agents, Agricultural College extension staffs, and high school agriculturists. The course is designed to bring together for the benefit of prospective workers in these fields, the accumulated knowledge and experience of the college faculty and extension staff, various members of which will be utilized for purposes of instruction as they may be available. Elective for all Seniors. (WILSON and others).

9-10 METHODS OF TEACHING HIGH-SCHOOL AGRICULTURE

2 credits

Each semester

General methods of high-school teaching applicable to agriculture, special methods of presenting agricultural subject matter and of organizing and conducting laboratory and project work; outlines of typical courses; project-study outlines; texts and reference books; equipment needed for various courses. The second semester's work consists largely of the outlining of type courses and the planning of laboratory exercises, home projects, and project study outlines. Open only to advanced students in agriculture. (WILSON)

17-18 OBSERVATION AND TEACHING IN AGRICULTURE

1-3 credits

Either semester

Observation and practice teaching under supervision in the

agricultural classes of the Moscow High School. Open only to students taking Ag. Educ. 9-10. (MATHEW, WILSON)

22 RURAL LIFE AND EDUCATION 3 credits Second semester

A survey of the problems of rural social life in America and of the various movements for the improvement of rural life conditions: special attention to the problem of improved educational advantages for the country. Required of Seniors in Teacher-Training. (WILSON)

AGRICULTURAL ENGINEERING

Professor WOOLEY, Associate Professor STEWARD

40 FARM MOTORS 3 credits Second semester

The first half of this course is given over to shop work consisting of the care of tools, soldering, babbitting, scraping, and adjusting bearings, filing, use of drills, reamers, taps, and dies. The second half of the semester covers the assembly, adjustment and testing of motors. Resetting and grinding valves. Battery ignition systems. One lecture and two three-hour laboratories per week. (WOOLEY)

41 TRACTORS 2 credits First semester

This course consists of a study of the construction, care and operation of the Gasoline Tractor. The one laboratory period per week is taken up in shop work on machines or in operation. Magnetos and magneto ignition are studied. One lecture and one three-hour laboratory per week. Prerequisites. A.E. 40. (WOOLEY)

42 AUTOMOBILES 2 credits Second semester

The construction, care, and repair of the automobile, including battery ignition systems, generators and starters and storage batteries are included in the work. One lecture and one three-hour laboratory period per week. Prerequisites A. E. 41. (WOOLEY)

80 FARMSTEAD EQUIPMENT 2 credits Second semester

This course will cover the construction and design of concrete structures common to the farm, viz.: feeding floors, walks, posts, foundations, water tanks, septic tanks, manure pits, silos, etc. Lighting plants and water systems. One lecture and one three-hour laboratory period. (WOOLEY)

51 AGRICULTURAL DRAFTING 1½ credits First semester (second half)

Course consists of lettering, representation of different materials used in construction, projection, working drawings, tracing and blue-printing. One lecture and two three-hour laboratory periods. (STEWART)

52 FARM BUILDINGS 1½ credits Second semester (first half)

Planning and arrangement of a typical set of farm buildings, writing specifications and figuring costs. One lecture and two three-hour laboratory periods. Prerequisite A. E. 51. (WOOLEY)

21. FARM SURVEYING 1½ credits First semester (first half)
Use and care of instruments. Elementary surveying. One lecture and two three-hour laboratory periods. (STEWART)
- 30 FARM MACHINERY 1½ credits Second semester (second half)
Construction, care, adjustment, and use of farm machines. One lecture and two three-hour laboratory periods. (WOOLEY)
- 23 IRRIGATION AND DRAINAGE 3 credits First semester
Principles of irrigation practice. Elementary hydraulics, drainage and alkali problems. Elements of water measurement. Two lectures and one three-hour laboratory period. (STEWART)

ANIMAL HUSBANDRY

Professor HICKMAN, Assistant Professor KIDWELL, Mr. JOHNSON

- 1 MARKET TYPES OF LIVE STOCK 2½ credits First semester
A study of the various types of horses, cattle, sheep, and swine from a market and producer's standpoint. The classes and grades of animals recognized by the market are outlined in lectures, and in connection laboratory work is given in the scoring of individuals and judging of groups representing the more important market classes. Two lectures and one two-hour judging period per week. Required of Freshmen in Agriculture. (JOHNSON)
- 4 BREED TYPES OF LIVE STOCK 3½ credits Second semester
Includes a brief study of the early history, development, and breed characteristics of the various improved breeds of domestic animals. Considerable time is given to practice work in judging representatives of the various breeds according to standards set by breed associations and by the show-ring. Two lectures and two two-hour judging periods per week. Required of Sophomores in Agriculture. Prerequisite: Animal Husbandry 1. (JOHNSON)
- 5 LIVE STOCK JUDGING 1½ credits First semester
The judging of horses, cattle, sheep, and swine in groups with reference to breed and market types. Two two-hour judging periods per week. Required of Juniors in Animal Husbandry. Prerequisites: Animal Husbandry 1 and 4. (HICKMAN).
- 6 ANIMAL NUTRITION 3 credits Second semester
A study of the composition and feeding value of the various grains, grasses, fodders, root crops, etc., following which the compounding of rations is explained and practice work in determining the nutritive value of a number of rations is given. The principles and practice of feeding the different classes of live stock for growth, maintenance, and fattening are explained and discussed. Three recitation periods per week. Required of Juniors in Animal Husbandry. (HICKMAN)
- 7 BEEF PRODUCTION 2 credits First semester
Breeding, feeding, and management of pure-bred and grade

tion of disease. The simple surgical operations are also considered. The purpose of this course is to familiarize the student with veterinary science to an extent sufficient for his own needs as an agriculturist. Prerequisite: An. Hus. 22. Three recitations per week.

- 28 VETERINARY OBSTETRICS 2 credits Second semester
Elective for Seniors in Animal Husbandry and Dairying. The common diseases and accidents of pregnancy and parturition in live stock will be considered from the standpoint of the stock breeder. Prerequisite: An. Hus. 22. Two recitations per week.

BACTERIOLOGY

Professor GIBBS, Mr. WERKMAN

- 1-2 GENERAL BACTERIOLOGY 4 credits Either semester
Comprises a general survey of the field of bacteriology from the biological point of view. Designed for students in the general science courses and as a foundation for advanced work in the subject. Prerequisite: Chem. 1-2, and Bot. 1, or Zool. 1. Two lectures and two three-hour laboratory periods per week. (GIBBS)
- 3 AGRICULTURAL BACTERIOLOGY 3 credits First semester
An advanced course covering the divisions of soil, manure, milk and its products, diseases of animals, and kindred subjects relating to the farm. Prerequisite: Bacteriology 1. One lecture and two three-hour laboratory periods per week. (GIBBS, WERKMAN)
- 4 THE PATHOGENIC BACTERIA 3 credits Second semester
A study of the more important disease-producing organisms, serums, vaccines, etc., concluding with a discussion of the theories of immunity. Prerequisite: Bac. 1. Two lectures and one three-hour laboratory period per week. (GIBBS, WERKMAN)
- 5 HYGIENE AND SANITATION 3 credits First semester
Includes a general discussion of communicable diseases, immunity, heredity and eugenics, foods, air, soil, water, sewage disposal, refuse disposal, vital statistics, industrial hygiene and diseases of occupation schools, disinfection, etc. Lecture. Two three-hour laboratory periods per week. (GIBBS, WERKMAN)
- 6-7 SOIL BACTERIOLOGY 3 credits Either semester
A lecture and laboratory course dealing with the transformations of nitrogen, carbon and sulfur, brought about in the soil by the activities of micro-organisms and including a study of the influence of various farm practices on the number of bacteria in various types of soil. Prerequisite: Bac. 1. One lecture and two three-hour laboratory periods per week. (GIBBS)
- 8-9 RESEARCH Credits to be arranged Each semester
Prerequisite: Bac. 1, 3, 4, 6, and 10. (GIBBS)

Deposits.—To insure reasonable care in the use of laboratory apparatus, a deposit of from three to five dollars per semester will be required in all laboratory courses.

BOTANY

Professor YOUNG, Assistant Professor THOMPSON

For courses in Botany not listed here see under College of Letters and Sciences, pages 75-77.

101-102 GENERAL BOTANY 3 credits First semester

A study of the fundamentals of botany with especial reference to agricultural subjects. The course is designed to serve especially as a basis for the work in Plant Physiology and Plant Pathology and the technical courses of the Agricultural College. One lecture, one quiz, and three or six laboratory hours weekly. (YOUNG, THOMPSON)

4 GENERAL PLANT PHYSIOLOGY 4 credits Second semester

A study of the physics, chemistry, growth, and movements of plants. Should be preceded by Botany 101 and 102. Preparation for the course should include a year of college physics and a year of college chemistry. Two lectures, one quiz, and six laboratory hours weekly. (YOUNG, THOMPSON)

9 GENERAL PLANT PATHOLOGY 4 credits First semester

Introduction to the study of diseased plants, the causal agents inducing disease, and the remedies used in connection with economic plants. Should be preceded by Botany 101 and 102. Two lectures, six laboratory hours weekly. (THOMPSON)

10 METHODS IN PLANT PATHOLOGY 4 credits Second semester

Greenhouse and laboratory studies upon the bacterial and fungus diseases of plants, including technique of cultural methods, inoculation, spore germination, etc. Attention is also given to non-parasitic diseases and to the principles used in the breeding of plants for disease resistance. Should be preceded by course 9. Two lectures and six laboratory hours weekly. (THOMPSON)

DAIRY HUSBANDRY

Professor DAVIS, Associate Professor ———, Mr. MORGAN

2 ELEMENTS OF DAIRYING 1½ credits Second semester

General survey of the dairy industry. Secretion, composition, and properties of milk. Tests for butterfat, specific gravity, and sediment. Methods of separation and handling of milk. Cream ripening and churning. Required of Freshmen. One recitation and one two-hour laboratory period per week. (MORGAN)

3 MILK PRODUCTION 3 credits First semester

Study of the principles and practices involved in the production of milk. General study of dairy breeds and the care and

- management of the dairy herd. Required of Sophomores. Two lectures and one three-hour laboratory period a week. Prerequisites: D. H. 2. (DAVIS, MORGAN)
- 5 CREAMERY BUTTERMaking 2 $\frac{2}{3}$ credits First semester
Factory methods of buttermaking, including grading, pasteurizing, ripening and churning cream, and packing butter. Required of Juniors in Dairy Husbandry. One lecture and five hours of laboratory work per week. Prerequisite: D. H. 2. (———, MORGAN)
- 6 ICE CREAM AND ICES 1 $\frac{1}{3}$ credits Second semester
A study of the principles involved, and practice in the making of ice cream and other frozen products. Required of Juniors in Dairy Husbandry and elective for Home Economics students. One lecture and one two-hour laboratory period a week. Prerequisite: D. H. 2. (———, MORGAN)
- 8 HISTORY OF BREEDS OF DAIRY CATTLE 1 credit Second semester
Study of the history, development and present type of the Ayrshire, Guernsey, Holstein, and Jersey breeds of cattle. One three-hour laboratory period a week. Prerequisite: D. H. 3. (DAVIS)
- 9 DAIRY CATTLE JUDGING 1 credit First semester
A study of the type of the various breeds of dairy cattle with comparative judging. Prerequisite: D.H. 3. (DAVIS)
- 10 CHEESE-MAKING 2 $\frac{2}{3}$ credits Second semester
Methods of manufacture of cheddar, brick, Swiss, Neufchatel, cottage, and other types of cheese. Required of Juniors in Dairy Husbandry. One lecture and five-hour laboratory period a week. Prerequisite: D. H. 2. (———, MORGAN)
- 11 FACTORY MANAGEMENT 3 credits First semester
The location, construction, organization, and management of creameries, cheese, ice cream factories, and city milk plants, including a study of marketing. Required of Seniors in Dairy Husbandry. Two lectures and a three-hour laboratory period a week. Prerequisites: D. H. 2, 5, 6. (———, MORGAN)
- 12 DAIRY CATTLE FEEDING AND MANAGEMENT 4 credits Second semester
A study of the breeding, care, and feeding of dairy stock; the planning and arrangement of dairy buildings; the management of pure-bred herds; fitting for show; and the tabulation and study of pedigrees. Required of Seniors in Dairy Husbandry. Two lectures and three two-hour laboratory periods a week. Prerequisites: D. H. 2 and 3. (DAVIS, MORGAN)
- 13 JUDGING DAIRY PRODUCTS 1 credit First semester
A study of quality in dairy products, market requirements, in-

cluding practice in scoring butter, cheese, ice cream and milk. Required of Seniors in Dairy Husbandry. Three one-hour laboratory periods a week. Prerequisite: D. H. 2. (———, MORGAN)

15. MILK TECHNOLOGY 2 $\frac{2}{3}$ credits First semester
Common tests for dairy products; market milk handling and distribution; methods of manufacture of condensed milk, casein, milk sugar and dairy by-products. Required of Seniors in Dairy Husbandry. Two lectures and one two-hour laboratory period a week. Prerequisites: D. H. 2, 5, and 10. (———, MORGAN)
- 17-18. THESIS 1 credit Each semester
Subjects must be chosen and filed with the head of the department not later than the first Monday in November preceding graduation and typewritten copies must be filed with the librarian on or before the third Monday in May. Required for graduation in Dairy Husbandry. (DAVIS)
- 19-20. SEMINAR 1 credit Each semester
A study of dairy problems and review of literature. Papers are prepared and class reports given. (DAVIS)
- 21-22. RESEARCH Credits to be arranged Each semester
(DAVIS)
23. DAIRY MANUFACTURES 2 $\frac{2}{3}$ credits First semester
A general course dealing with methods of manufacture of butter, cheese, ice cream and other dairy products. Open only to Juniors in Teacher's Training. Two lectures and one two-hour laboratory period a week. Prerequisites: D. H. 2 and 3. (———, MORGAN)
24. DAIRY PRODUCTION 2 $\frac{2}{3}$ credits Second semester
A general course covering the selection, care, feeding and management of the dairy herd. Open only to Juniors in Teacher's Training. Two lectures and one two-hour laboratory period a week. Prerequisites: D. H. 2 and 3. (DAVIS, MORGAN)

FARM CROPS

Professor BONNETT, Assistant Professor HULBERT, Seed Analyst HOBSON

- 1 GRAIN CROPS 3 credits First semester
Lectures, recitations, and laboratory work dealing with history, distribution, classification, botanical characters and relations, structure of seed, cultural methods used in growing the crop, marketing, and general value and uses of grain crops.
Laboratory: The work consists of practice in judging of grain, study of variety characteristics, seed selection, and market grading of grain. Freshman year. Two recitations and one three-hour laboratory period per week. (HULBERT).

2 GENERAL FARM MANAGEMENT 3 credits Second semester

The course deals with the qualifications of the farmer, choice of farming region, comparison of types of farming, crop rotations, arrangements of farms, cost of production, labor, equipment, and capital necessary in farming and land rental. Prerequisite: Farm Crops 1 and 3. (BONNETT).

3 FORAGE CROPS 3 credits Second semester

A detailed study is made of important varieties of forage crops according to the following outline: history, importance, climatic and soil adaptations, seed, preparation of seed bed, seeding, irrigation, time of cutting, yield, seed production and feeding, value of the crop.

Laboratory: Work consists of studies of seed and mounted specimens of the important varieties. The most important types of forage crops are kept growing in the greenhouse for laboratory use. Sophomore year. Two lectures and one three-hour laboratory period per week. Prerequisites: Botany 1 and 2. (BONNETT).

4. SEED ANALYSIS AND IDENTIFICATION 1½ credits Second semester

Lectures cover methods of dissemination of weeds, habits of growth, and control measures; legislative measures for the regulation of the sale of seed and planting. Laboratory periods are devoted to the identification of weed plants, and seeds, and to the analysis of seed for purity and germination. One lecture and one two-hour laboratory period per week. (HOBSON)

5 PLANT BREEDING 2½ credits First semester

A study of the general principles of plant breeding. The theories of evolution, the origin of cultivated plants, variation, heredity, and the technique of pollination are some of the topics considered. Prerequisites: Farm Crops 1-2; Botany 1, 2, and 3. Two lectures and one two-hour laboratory period per week. Senior year. (BONNETT).

6 CROP IMPROVEMENT 2½ credits Second semester

Lectures and recitations on methods and progress made in improvement of farm crops. Detailed study is made of methods of carrying on experimental work along agronomic lines. The history of experimental work is taken up and a study is made of ways of conducting plot work. Senior year. Two lectures and a laboratory period per week. Prerequisites: Farm Crops, 1, 3, and 6; Botany 1, 2, and 3. (BONNETT).

7-8. METHODS OF INVESTIGATION 1-3 credits Either semester

Lectures are given during the first semester on methods of conducting agronomic experiments including legislative measures for experimental work, care and management of experimental plots, correcting for error, technique, project outlines, and report writing. The laboratory time is devoted to working on experi-

mental work carried on by the department. Number of credits to be arranged after consultation. (BONNETT, HULBERT)

9-10 THESIS 2 credits Each semester

All subjects for thesis must be selected and filed with the head of the department by the first Monday in November preceding graduation, and the completed copy of the thesis must be filed with the librarian by five o'clock on the third Monday in May. Required for graduation in Farm Crops. (BONNETT).

11-12 SEMINAR 1 credit Each semester

Students will be required to present papers upon recent research work in farm crops, the object being to keep the student thoroly informed on all problems under investigation. (BONNETT)

13-14. ADVANCED FARM CROPS $1\frac{1}{2}$ credits Each semester

Lectures and assigned readings on special phases of grain and forage crops. The principles of grain judging are taken up the first semester and the laboratory work is devoted to scoring and judging of threshed grain, corn, and forage seeds. The second semester's laboratory work is devoted to the market grading of grains and forage seeds. One lecture and one two-hour laboratory period per week. Prerequisites: Farm Crops 1 and 3. (HULBERT)

HORTICULTURE

Professor VINCENT, Associate Professor LONGLEY

2 ELEMENTS OF HORTICULTURE 3 credits Second semester

This course comprises the fundamentals of horticulture and involves a study of the principles of plant growth and culture. One-half of the semester will be devoted to the theory and practise of multiplying plants by seeds, cuttings, separation, budding, grafting, seed testing, care of trees, shrubs in the nursery, etc. One-half to general horticulture, including fruit growing, pruning, spraying, soil fertility, breeding, evaporation, judging and identifying fruits and vegetables, etc. Freshman year. Two recitations and one three-hour laboratory period per week. (VINCENT).

4. VEGETABLE GARDENING 2 credits Second semester

The work in this course will embrace a study of the classification, culture, requirements, handling and storage of vegetables, with special emphasis on the small home garden. Attention will be given to such topics as vegetable garden soils, tillage implements, fertilizers, hotbeds, transplanting, seeds, seed sowing and varieties. Sophomore year. One recitation and one three-hour laboratory period per week. (LONGLEY).

5-6 PRACTICAL POMOLOGY $3\frac{1}{2}$ credits Each semester

A study of general and fundamental principles of fruit growing. The student is expected to become skillful in planting,

pruning, thinning, harvesting, and packing. Practical problems in growing and handling commercial orchards are made a prominent feature of this course. The small-fruits industry will also receive special emphasis. The strawberry, blackberry, raspberry, gooseberry, etc., will be studied with reference to the following points: classification, propagation, planting, pruning, etc. Junior year. Three recitations and one two-hour laboratory period per week. (VINCENT)

7. FLORICULTURE 2 credits First semester

This course will make a study of a wide range of garden flowers and greenhouse plants from two standpoints. First, their botanical relationship, with considerable attention to their historical origin. Second, cultural requirements, with practical work in propagation and culture of some of the more important greenhouse and garden plants. One lecture and one three-hour laboratory period per week. (LONGLEY).

8 HOME FLORICULTURE 2 credits Second semester

Practical methods of growing flowers and ornamental plants. Actual practice will be given in propagation of the common greenhouse plants, and in starting plants from seed, indoors and outdoors, both in frames and the open. Attention will be given to the following topics: Potting, soils, insect pests, diseases of plants, winter-blooming bulbs, porch boxes, hanging baskets, etc. A study will be made of the various annual, biennial and perennial bedding plants and the summer-blooming bulbs with emphasis on their employment for home decoration. The underlying principles of landscape gardening as applied to the ornamentation of the home place will also be considered. One recitation and one three-hour laboratory period per week. (LONGLEY).

9 SYSTEMATIC POMOLOGY $2\frac{1}{2}$ credits First semester

The description, nomenclature, and classification of our common fruits are carefully studied. An opportunity is given the student for practice in fruit judging and displaying. A large collection of fruit from Idaho and other states enables the student to become skillful in recognizing types. The work consists of lectures, reference reading, and laboratory work. Junior year. One recitation and two two-hour laboratory periods per week. (VINCENT)

10 SPRAYING $2\frac{3}{4}$ credits Second semester

The work of this course covers the essential subjects relative to spraying. Special attention is given to history, materials, apparatus, and various methods employed in combating insects and fungi. Ample time is given for the student to become efficient in spraying by practice in the college orchard. Senior year. Two lectures and one two-hour laboratory period per week. (LONGLEY)

12. TRUCK GARDENING 3 credits Second semester

In this course the growing of vegetables will be taken up from a commercial standpoint. A study will be made of methods of production of vegetables in use in the various trucking and market gardening sections and in localities where vegetables are grown largely for canning factories. There will be considered such subjects as labor, machinery, rotation, fertilizers, marketing, crop diseases and pests. Two recitations and one three-hour laboratory period per week. Prerequisite: Horticulture 4, or equivalent. Junior year. (LONGLEY).

13-14 THESIS AND SEMINAR 2 credits Each semester

The study of advanced problems in horticulture. This work is especially arranged for Seniors and Graduate students. The student is given practice in planning and conducting experiments in horticulture. Initiative ability and a true investigational spirit are given an opportunity for development in this work. Senior year. (VINCENT)

15 COMMERCIAL POMOLOGY $2\frac{2}{3}$ credits First semester

This course deals with problems of packing, marketing, transportation, storage and storage-house construction, markets, formation of fruit growers' associations, and handling by-products. Senior year. Two recitations and one two-hour laboratory period per week. (VINCENT)

16 LANDSCAPE GARDENING $2\frac{2}{3}$ credits Second semester

A study of the elementary principles underlying the use of plants for beautifying private and public grounds. Required in Senior year. Two recitation and one two-hour laboratory period per week. (LONGLEY)

18. POTATO CULTURE 2 credits Second semester

A course designed to meet the needs of those who desire to grow potatoes on a commercial scale. These subjects will be considered: History, acreage, distribution, classification, breeding, climate, soils and rotation, fertilizer, planting, irrigation, diseases, insect pests, etc. One lecture and one three-hour laboratory period per week. Prerequisite: Horticulture 2. (VINCENT).

19-20 PRACTICUMS $1\frac{1}{3}$ credits Each semester

A course designed especially to prepare students for positions as orchard foremen, horticultural advisers, consulting horticulturists, and orchard inspectors. They are expected to become familiar with all the various phases of orchard management such as orchard soils, tillage, operation of by-products establishments, varieties, managing packing houses, handling men, etc. Elective Senior year. Two two-hour laboratory periods per week. (VINCENT, LONGLEY)

22 EVOLUTION OF HORTICULTURAL PLANTS

2 $\frac{2}{3}$ credits

Second semester

This course is especially suited to those who care to engage in the improvement of horticultural plants in a practical way. Theories of evolution are taken up in such a way as to give fundamental knowledge of the requisites for plant improvement. The work will consist of lectures, reference reading, and laboratory work. Elective Senior year. Two recitations and one two-hour laboratory period per week. (LONGLEY).

23 ADVANCED POMOLOGY 3 credits

First semester

Studies of special problems such as the geography of fruit growing showing the adaptations of varieties of fruit to different localities, the improvement of orchard fruits, etc. For graduate students. (VINCENT)

24 EXPERIMENTAL HORTICULTURE 3 credits

Second semester

A course designed for those intending to follow horticulture as a profession or to take up experiment-station work. For graduate students. (VINCENT, LONGLEY)

25 GENERAL HORTICULTURE 2 $\frac{2}{3}$ credits

First semester

This course is open only to students pursuing the Vocational Agriculture Teacher-Training curriculum. It covers the general principles and processes of fruit growing, vegetable gardening, floriculture and landscape gardening. Methods of presenting horticultural subjects to high-school students will be emphasized. Two recitations and one laboratory period per week. (VINCENT)

POULTRY HUSBANDRY

Assistant Professor SMYTH

2. POULTRY PRODUCTION

3 credits

Second semester

This is a general course dealing with poultry production. The class work takes up the study of the breeds of poultry; principles of breeding and mating; poultry housing; appliances; feeding for growth and egg production; incubation and brooding; marketing eggs and poultry; sanitation, disease and parasites. The laboratory work takes up the nomenclature of poultry, class, breed, variety, age, sex, and vigor characteristics; fancy and utility judging; study of feeds; grading, packing, candling and judging eggs; study of the egg's structure; study of incubators and brooders; study and planning poultry house construction; anatomy; sanitary application. Two recitations and one three-hour laboratory period per week. (SMYTH)

3. JUDGING

2 credits

First semester

This course takes up the study of the types and breeds of poultry and their origin; judging fowls from fancy and utility

standpoints; preparing birds for show. Prerequisite: Poultry 1. One recitation and one three-hour laboratory period per week. (SMYTH)

4. INCUBATION AND BROODING 2 credits Second semester

This course will not be scheduled for regular laboratory hours, but will consist of studying and operating incubators and brooders at the poultry farm. It will require from one-half hour to an hour night and morning during the time incubators and brooders are being operated. Prerequisite: Poultry 1. Equivalent to six hours laboratory work per week. (SMYTH)

5. HOUSING 1 credits First semester

This course takes up the planning, estimating, and building of poultry houses and appliances. Prerequisite: Poultry 1. One three-hour laboratory period per week. (SMYTH)

6. POULTRY MANAGEMENT 1 credit Second semester

This course will take up the management, on paper, of the poultry on the farm, for one year. All of the questions such as housing, feeding, egg production, marketing, and reproducing the flock will be considered under different methods of management. A study will also be made of available bulletins on the subjects. Prerequisite: Poultry 1. One recitation per week. (SMYTH)

SOILS

Professor PETERSON

1 SOIL PHYSICS $2\frac{2}{3}$ credits First semester

An advanced course covering in detail the mechanics of soil moisture, temperature, tilth, etc. This course also includes mechanical analysis of soils. Two lectures and one laboratory period. (PETERSON)

2 SOIL PHYSICS AND FERTILITY $4\frac{1}{2}$ credits Second semester

An elementary course dealing with the physics and chemistry of the soil in relation to its fertility. Three lectures and four laboratory periods. Required of all Sophomores in Agriculture. (PETERSON).

3 SOIL CHEMISTRY $2\frac{2}{3}$ credits First semester

This is an advanced course in soil fertility. Careful analysis of different types of soil will be made. One lecture and two laboratory periods. Prerequisite: Quantitative Analysis. (PETERSON)

4 SOIL MANAGEMENT $2\frac{2}{3}$ credits Second semester

A consideration of the plant food content and the fertility of different types of soils; principles underlying the management of soils in the humid, arid, and semi-arid regions, and the utilization of fertilizers and manures. Two lectures and one laboratory period. Prerequisite: Soils 2, or its equivalent. (PETERSON).

5 ORIGIN AND CLASSIFICATION OF SOILS

2 credits

First semester

A study of the rocks and minerals from which soils are derived and a discussion of the processes of soil formation. The latter part of the semester is devoted to a study of the arrangement, classification, and adaptability to various crops, of the soils of the United States. Prerequisite: Soils 2 or its equivalent. (PETERSON).

6 FERTILIZERS AND MANURES $1\frac{2}{3}$ credits

Second semester

In this course the necessity for conserving the manures on the farm is emphasized. The proper time and method of applying manures and the storage of them to conserve their fertilizing value is discussed. The production, use, and composition of commercial fertilizers is also considered in this course.

One lecture and one laboratory period per week. Prerequisite: Soils 2, or its equivalent. (PETERSON)

7-8 THESIS 2 credits

Each semester

Thesis in Soil Physics and Soil Chemistry. Lectures, assigned reading and laboratory work. (PETERSON).

9-10 RESEARCH IN SOIL CHEMISTRY AND FERTILITY

Credits to be arranged

Each semester

Graduate students having sufficient knowledge of soils and chemistry will be assigned special problems. (PETERSON)

11 ADVANCED SOIL CHEMISTRY

Credits to be arranged

First semester

A course of lectures designed especially for those desiring to prepare themselves for experiment station work. (PETERSON).

ZOOLOGY AND ENTOMOLOGY

Professor WODSEDALEK, Assistant Professor MUTTKOWSKI

1-2 GENERAL ZOOLOGY 4 credits

First semester

Lectures, discussions, and laboratory work dealing in an elementary way with the general problems of animal structures, physiology, activities and adaptations, sex, development, heredity, evolution, and life-histories of representative and economic forms. Two lectures and one three-hour laboratory period per week for those who take three credits and an additional laboratory period for those who take four credits. (WODSEDALEK, ———) Muttkowski, ———

8 HEREDITY AND EUGENICS 2 credits

Second semester

A scientific study of the main facts and theories of heredity and its mechanism, with emphasis on the phases pertaining to human welfare. Two lectures per week. Prerequisite: Zoology 1. (WODSEDALEK)

102 ELEMENTARY ENTOMOLOGY 3 credits

First or second semester

Morphology, anatomy, physiology, classification, and life his-

tories of insects and the more general problems of insect ecology. Special attention is devoted to type forms of economic species and control, both in agriculture, horticulture, and public health. Two lectures and one three-hour laboratory period per week. Zoology 1 prerequisite. This course or an equivalent is prerequisite to 105 and 106. (MUTTKOWSKI)

105 HORTICULTURAL ENTOMOLOGY

2, 3, or 4 credits

First semester

For intending commercial fruit-growers: insecticides used and machinery needed (Horticulture 10 had best be taken the same year); tree and brush-fruit pests of the northern U. S.; correlating spray calendars with life histories; collection of fruit pests and their damage, and the insect carriers of fire blight. One lecture and one, two or three three-hour laboratory periods. (MUTTKOWSKI)

106 FARM CROP AND GARDEN PESTS

2, 3, or 4 credits

Second semester

One-half the time devoted to field-crop pests, one-half to home-garden pests. Laboratory work wholly in one or the other phase of the subject as desired; forming collection of pests for the crop studied; preparing exhibits for school rooms, fairs, and museums. One lecture and one, two, or three three-hour laboratory periods. (MUTTKOWSKI)

SPECIAL COURSES

School of Practical Agriculture

The School of Practical Agriculture is an organization within the College of Agriculture maintained for the purpose of providing practical agricultural training for young men who lack the necessary preparation, or the time, for the regular college courses in agriculture. The instruction within the school is made as practical as possible and deals primarily with up-to-date farm practices in the various phases of agriculture. Such foundational and cultural studies are given as are considered necessary for a reasonable understanding of the practices taught and for preparation for intelligent citizenship in the rural community.

Graduates of the course should be qualified to become successful farmers or managers of live-stock ranches, fruit orchards, commercial poultry establishments, or other agricultural enterprises.

Admission. Students who are sixteen years of age or over and have completed satisfactorily the eighth grade, will be admitted without examination. Mature students who have not completed the eighth grade may be admitted upon satisfactory evidence of ability to profit by the instruction offered. Students who have taken work in high

school will be given credit for such work as far as it applies upon the course of study to be pursued.

High School Graduates. Graduates from accredited high schools desiring to take the practical work of the course will be granted the certificate of the school after the completion of two full years of such work.

Ten-weeks' Winter Term. A number of new studies are taken up at the opening of the second term in January so that students desiring to do so may enter at this time and secure ten weeks of practical instruction which will be highly valuable whether followed by further study another year or not. Studies in Farm Crops, Soils, Vegetable Gardening, Poultry Raising, and the Feeding and Care of Livestock will thus be available for the year 1920-21.

COST

There is no charge for tuition but all students pay a Students' Association fee of seven dollars, of which two dollars is a health fee, giving the students free medical attendance under certain conditions. The other necessary expenses will be for room, board, books, laundry, uniform for military drill, railroad fares, and incidentals. Room and board can be obtained for from \$7.50 to \$10.00 per week. Books should not cost over \$15.00 per year. With reasonable economy the cost of one year's attendance, exclusive of clothing and travel expenses, should not exceed \$200.00 or \$225.00. There are some opportunities for energetic students to earn part of their expenses while in school.

CERTIFICATES

A regular certificate of the School of Practical Agriculture is awarded upon the completion of the three-year curriculum.

ADMISSION TO THE UNIVERSITY

The school is not maintained for the purpose of preparing students for admission to college. Fair credit, for all work done in the school will be allowed, however, towards meeting the regular University entrance requirements. Completion of the three-year course in agriculture will be accepted for ten units toward admission into the College of Agriculture. Five additional units will be required for unconditional admission, specified thus: two in English, one and one-half in Mathematics, one-half in Social Sciences, and one in Electives.

Date of Opening.—The school will open for registration of students Monday, October 11, 1920. Classes will begin Wednesday, October 13. School will close Thursday, March 10, 1921.

Special Catalog.—Those who are especially interested in this School should write to the Principal of the School of Practical Agriculture, Moscow, Idaho, for special catalog.

THREE-YEAR CURRICULUM**FIRST YEAR**

Hours per week			Hours per week		
First Term:	Rec.	Lab.	Second Term:	Rec.	Lab.
English I	4	—	English II	4	—
Farm Mathematics	3	—	Soils	2	2
Forge	—	3	Grain Crops	2	2
Market Types of Live-Stock	2	4	Plant Life	2	2
Plant Life	2	2	Vegetable Gardening	2	2
Shop Practice (A.E. 45)	1	2	Farm Motors (A.E. 46)	1	4
Military Science	—	4	Military Science	—	4
Hygiene	2	—	Gymnasium	—	2
Gymnasium	—	2			
	14	17		13	18

SECOND YEAR

Hours per week			Hours per week		
First Term:	Rec.	Lab.	Second Term:	Rec.	Lab.
English III	3	—	English IV	3	—
Physics	3	2	Physics	3	2
Breeds and Judging	2	4	Poultry II	2	2
Farm Horticulture I	2	4	Milk Production	2	4
Elem. of Dairying	1	4	Automobiles	1	4
Farm Tractors	1	4	Military Science	—	4
Military Science	—	4	Elective	3	—
	12	22		14	16

THIRD YEAR

Hours per week			Hours per week		
First Term:	Rec.	Lab.	Second Term:	Rec.	Lab.
English V	1	—	English VI	1	—
Crop Pests	2	4	Farm Accounting	—	2
Farm Machinery	1	4	Farm Management	2	—
Farm Buildings	1	4	Principles of Breeding	3	—
Adv. Stock Judging	—	4	Feeds and Feeding	5	—
Forage Crops	2	2	Veterinary Science	3	2
Veterinary Science	3	2	Live Stock Management	—	3
Elective	3	—	Elective	4	—
	13	20		18	7

Electives

Farm Forestry	2	—	Plant Diseases	2	2
Hort. III, Advanced	—	—	Parliamentary Law	2	—
Orcharding	1	2	Irrigation	1	4
			Hort. IV, Spraying and Special Problems	1	2
			Adv. Poultry Management	2	2

Required for graduation, 132 credits

COMMERCIAL DAIRYING

The five-months course in Commercial Dairying is planned to give a practical working knowledge of modern dairy manufacturing methods. That the factory man may appreciate the producers' problems some attention is also given to milk production and allied subjects. The primary object of the course is, however, to train men who will be able to successfully fill responsible positions in dairy manufacturing plants. Worthy men are placed in desirable positions by the department.

A three-story brick building devoted entirely to the work in dairying provides space for class-rooms and laboratories. The equipment includes the necessary machinery for the manufacturing of butter,

cheese, and ice-cream by modern commercial methods. The machinery includes a power separator, continuous and vat pasteurizers, combined churns, cheese vats and presses, brine and tub ice-cream freezers. Refrigeration for cold rooms and other purposes is furnished by a five-ton mechanical refrigerating plant. The testing laboratory is equipped for making tests of fat, acidity, moisture, salt, etc upon dairy products.

Students who are 16 years of age or over and who have completed the eighth-grade work will be admitted without examination. Others will be admitted upon submitting evidence of sufficient previous training to undertake the work. The work of the course covers two terms of ten weeks each, beginning October 12th and ending March 10th.

Five Months Creamery Course

FIRST TERM		SECOND TERM	
Course	Credits	Course	Credits
Butter Making	3	Cheese Making	4
Dairy Bacteriology	3	Creamery and Dairy Records ..	1
Dairy Calculations	2	Dairy Practice	4
Dairy Practice	4	Dairy Engineering	2
Milk Production	3	Factory Management	4
Milk Testing	2	Ice Cream and Ices	2
Scoring Dairy Products	1	Veterinary Science	2
Total	18	Total	19

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PART V.

THE COLLEGE OF
ENGINEERING

THE COLLEGE OF ENGINEERING

EQUIPMENT

Civil Engineering

The department has an adequate equipment of field instruments. It includes a triangulation theodolite; seven transits; three wye levels; dumpy level; architect's level; two plane tables; aneroid barometer; compasses; sextant; current meter; artificial horizon and chronometer.

There is a well equipped cement laboratory with two Fairbanks cement-testing machines; slate damp closet; Vicat needles, standard steaming-apparatus; and the usual accessories for cement testing. There is also an Olsen standard abrasion machine.

The department has a 200,000-lb. capacity Olsen universal testing machine, completely equipped for tension and compression tests, and with beam extensions for transverse tests of full-sized beams up to sixteen feet in length.

A properly equipped road materials laboratory, prepared to test stone, gravel, cement and bituminous materials entering into modern road construction, has been installed and is ready for operation.

The department drafting room in the Administration Building is admirably adapted to its use. It is equipped with nineteen Economy desks having provision for one hundred and fourteen students. There is an electrical blue-printing apparatus.

Electrical Engineering

The main electrical laboratory is well equipped for demonstrating and conducting all the usual tests of direct and alternating-current machinery. All the equipment is of a convenient commercial size and consists of the following: Shunt, series, and compound-wound direct-current motors and generators (both constant speed and variable speed interpole), rotary converters, synchronous motors and condensers, alternators of from one to twelve phases, squirrel-cage and wound rotor induction motors for one, two, and three phases, repulsion-induction motors; welding and auto-transformers, static transformers with both the usual and special taps, a high-tension transformer; oil switches, compensators, relays, circuit breakers, and other control apparatus. A convenient number of ammeters, voltmeters, indicating and integrating wattmeters, frequency meters, power-factor meters, etc., are available for class use. The three-element oscillograph is used for intensive studies of alternating-current phenomena and transients. Prony brakes, lamp banks, reactance banks, rheostats, and other control apparatus furnish means for regulating and loading the machinery.

The main laboratory also contains the telephone equipment, consisting of a private exchange, arranged for either magneto or common

battery work and all the usual kinds of telephone sets, connected by suitable lines.

In an adjacent room is the electrical standardizing laboratory which is equipped with imported and domestic precision instruments for direct comparison as secondary standards, while a complete potentiometer equipment for both continuous and alternating current, shared with the Department of Physics, is available as a primary standard. A rotating standard, together with a phantom load and phase shifter, affords a convenient means for commercial tests on watt-hour meters.

The photometry laboratory, also on the first floor, offers conveniences for making the usual photometric tests and is equipped with a photometer, a foot-candle meter, standard lamps, rotating base, rheostats, meters, and the like on an especially wired bench.

On the second floor is the radio laboratory which is equipped with apparatus for sending with small power, using different types of transmitters. Several types of receivers are also available and may be used to illustrate the various methods of reception. A Paulsen arc is now under construction and will be available for either radio-telephony or radio-telegraphy.

Power for the electrical laboratories is secured, as desired, from the three-phase, sixty-cycle mains of the Washington Water Power Co. at 110, 220, or 2300 volts; from a 20 H. P. motor-generator set; or a 50 H. P. Skinner engine belted to a 25 K. W. Westinghouse compound-wound, D. C. generator and is distributed to the various laboratories thru convenient switchboards, located in each room.

Mechanical Engineering

This department has its office, recitation and drafting rooms in the Engineering Building; its laboratory, wood and metal shops in the Engineering Shop Building.

The steam equipment consists of a 45 H. P. Skinner automatic medium-speed steam engine, a 7 H. P. Bulluck throttling steam engine, and a 5 H. P. Sturtevant steam turbine, all arranged to exhaust into the atmosphere or into a double-flow Wheeler surface condenser. The condenser is connected with a 5½ in. x 8 in. x 7 in. steam-driven simplex air and condensate pump. In addition there is apparatus for testing radiators, injectors, steam calorimeters, etc.

For testing flow of air there is available a 7½ in x 6 in. Ingersoll-Rand belt-driven air compressor arranged to pump into a pipe system suitably arranged with Pitot tubes and other measuring apparatus; also a 14 in. outlet Buffalo forge fan connected to suitable test ducts. The fan is arranged for variable speed.

The gas-engine section contains a 21 H. P. Fairbanks-Morse suction gas producer, an 8 H. P. Fairbanks-Morse kerosene oil engine, a 35

H. P. Case automobile engine with starting apparatus and a Hall-Scott A-7-A aviation engine. In addition the department has the necessary indicators, calorimeters, explosion bombs, etc., for the usual fuel and oil tests.

The hydraulic section consists of a steam-driven duplex pump and weir box arranged with different notches, venturi, and piston meters and standard flow orifices. Calibration is secured by means of weighing barrels. In addition there are centrifugal pumps, a hydraulic ram, and a small Pelton wheel.

Chemical Engineering

For the equipment of the Chemistry Department see page 53 of the current catalog; for the work required in the different lines of engineering, note the equipment of the various departments concerned.

In the quarters of the Chemistry Department ample provision is made both for the fundamental courses in Chemistry for all engineering students and for the specialized chemical subjects for the students of Chemical Engineering. These quarters are provided with the necessary water, gas, reagents, and apparatus. The laboratory equipment includes a good supply of analytical balances of standard makes.

ADMISSION AND DEGREES

Admission.—The requirements for admission to the Freshman class of all engineering curricula are:

English	3 units
Social Science, including History	2 units
Physics	1 unit
Additional Natural Science.....	1 unit
Mathematics	3 units
a. Elementary Algebra.....	1 unit
b. Advanced Algebra.....	½ unit
c. Plane Geometry.....	1 unit
d. Solid Geometry.....	½ unit
One additional academic unit*	1 unit
(English, Foreign Language, Social Science, Botany, Zoology, or Chemistry)	
Elective	4 units
<hr/>	
Total	15

Degrees.—Curricula are offered in the College of Engineering leading to the degrees of Bachelor of Science in Civil Engineering, B.S. (C.E.); Bachelor of Science in Electrical Engineering, B.S.(E.E.);

* Students planning to take the curriculum in Chemical Engineering should offer at least two units in French or German.

Bachelor of Science in Mechanical Engineering, B.S.(M.E.); Bachelor of Science in Chemical Engineering, B.S.(Chem.E.)

For the requirements for the advanced degrees of Master of Science in the respective branches of engineering, M.S.(C.E.), etc., see page 67.

Requirements for Graduation

Students in all four-year curricula in the College of Engineering take the same work in the Freshman year, as follows:

COMMON FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Comp. and Literature	3	Eng. 2, Comp. and Literature	3
Math. 101. Engineering Math.	5	Math. 102 Engineering Math...	5
Chem. 1. General Chemistry..	4	Chem. 2. General Chemistry..	4
C.E. 1. Engineering Drafting	2	C.E. 2. Engineering Drafting	2
C.E. 3. Descriptive Geometry..	2	C.E. 4. Descriptive Geometry..	2
M.E. 1. Wood Work.....	1	M.E. 2. Pattern Making and	
Engineering Lectures	0	Molding	1
Mil. 1. Freshman Military....	2	Mil. 2. Freshman Military....	2
		Engineering Lectures	0
Total	19	Total	19

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in any of the several branches of engineering the candidate must have completed, in addition to the common Freshman year above, the curriculum corresponding to that degree as outlined below.

Curriculum in Civil Engineering

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5, Adv. Composition...	2	Eng. 6, Adv. Composition.....	2
Math. 3. Calculus	4	Math. 4. Calculus	4
Phys. 101. Engineering Phys	5	Phys. 102. Engineering Phys.	5
C.E. 15 and 15a. Surveying..	4	C.E. 16. and 16a. Surveying	4
Geol. 1. General Geology	3	M.E. 30. Forge Work and Ma-	
Mil. 3. Sophomore Military..	2	chine Work in Iron and	
		Steel	2
		Mil. 4. Sophomore Military ..	2
Total	20	Total	19

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
C.E. 23. Analyt. and Applied		C.E. 24. Analyt. and Applied	
Mechanics	5	Mechanics	5
C.E. 21. Testing Laboratory..	2	C.E. 22. Testing Laboratory..	2
C.E. 25. R. R. Engineering..	4	C.E. 26. Railroad Engineering	
C.E. 27. Roads and Pavements	3	and Economics	3
M.E. 23. Thermodynamics....	3	C.E. 28. Hydraulics	3
E.E. 21. Direct Cur. Machinery	2	M.E. 24. Thermodynamics....	2
		E.E. 22. Alt. Current Mach... 2	
		E.E. 26. Elect. Laboratory.. 2	
Total	19	Total	19

SENIOR YEAR

Course	Credits
Min. 3. Earth and Rock Excavation	2
C.E. 31. Reinforced Concrete	2
C.E. 33. Roof and Bridge Design	2
C.E. 35. Steel Frame Design	1
C.E. 37. Sewers and Sewerage	2
C.E. 43. Framed Structures	4
* Elective	5
Total	18

Course	Credits
Met. 6. Metallurgy of Iron and Steel	1
C.E. 38. Irrigation	4
C.E. 42. Arch Design	1
C.E. 44. Scientific Management	1
C.E. 46. Masonry and Foundations	3
C.E. 48. Contracts and Specif.	2
C.E. 50. Thesis	3
* Elective	3
Total	18

Total Credits required151

Curriculum in Electrical Engineering

SOPHOMORE YEAR

Course	Credits
Eng. 5. Adv. Composition	2
Math. 3. Calculus	4
Phys. 101. Eng. Physics	5
M.E. 15. Machine Shop	2
M.E. 11. Mech. Drawing	2
C.E. 15 and 15a. Surveying	3
Mil. 3. Soph. Military	2
Total	20

Course	Credits
Eng. 6. Adv. Composition	2
Math. 4. Calculus	4
Phys. 102. Eng. Physics	5
M.E. 30. Forge Shop	1
M.E. 12. Mechanism	4
E.E. 12. Elect. Eng. Lab.	2
Mil. 4. Soph. Military	2
Total	20

JUNIOR YEAR

Course	Credits
C.E. 23. Analytic and Applied Mechanics	5
M.E. 23. Thermodynamics	3
Math. 5. Diff. Equations	3
Phys. 7. Elect. and Magnetism	2
Phys. 9. Elect. Measurements	2
E.E. 23. Direct Current Machinery	3
Total	18

Course	Credits
C.E. 24. Analytic and Applied Mechanics	5
M.E. 24. Thermodynamics	2
C.E. 28. Hydraulics	3
M.E. 26. Mech. Lab.	2
E.E. 24. Alternating Current Machinery	3
E.E. 26. Elect. Eng. Lab.	2
* Elective	2
Total	19

SENIOR YEAR

Course	Credits
M.E. 41. Machine Design	2
M.E. 33. Steam Power Plants	3
E.E. 31. Elect. Engineering	4
E.E. 35. Elect. Eng. Lab	2
E.E. 39. Seminar	1
E.E. 41. Industrial Applications	2
E.E. 49. Thesis	1
* Elective	3
Total	18

Course	Credits
C.E. 44. Scient. Management	1
C.E. 48. Contracts and Specifications	2
E.E. 32. Elect. Engineering	4
E.E. 36. Elect. Eng. Lab.	2
E.E. 40. Seminar	1
E.E. 48. Elect. Ry. Eng.	2
E.E. 50. Thesis	3
* Elective	3
Total	18

Total Credits Required151

* Electives must be approved by the Dean of the College of Engineering.

Curriculum in Mechanical Engineering**SOPHOMORE YEAR**

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5. Adv. Comp.	2	Eng. 6. Adv. Comp.	2
Math. 3. Calculus	4	Math. 4. Calculus	4
Phys. 101. Eng. Physics ...	5	Phys. 102. Eng. Physics ...	5
C.E. 15 and 15a. Surveying..	3	M.E. 12. Mechanism	4
M.E. 11. Mech. Drawing	2	M.E. 20. Forge Shop	2
M.E. 15. Machine Shop	2	Mil. 4. Sophomore Military..	2
Mil. 3. Soph. Military	2		
Total	20	Total	19

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
C.E. 23. Analyt. and Applied Mechanics	5	C.E. 24. Analyt. and Applied Mechanics	5
M. E. 23. Thermodynamics ..	3	C.E. 28. Hydraulics	3
M.E. 21. Engines and Boilers	2	M.E. 24. Thermodynamics ...	2
M.E. 27. Elementary Machine Design	2	E.E. 24. A. C. Machinery ..	3
E.E. 23. D. C. Machinery..	3	E.E. 26. E. E. Laboratory ..	2
M.E. 25. Machine Shop	2	M.E. 28. Machine Design ..	2
* Elective	1 or 2	M.E. 26. M. E. Laboratory ..	2..
Total	18 or 19	Total	19

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
M.E. 33. Steam Power Plants	3	Met. 6. Met. of Iron and Steel	1
M.E. 35. M. E. Laboratory ..	2	M.E. 34. Power Plant Design	2
M.E. 37. Gas Power Eng. ..	3	M.E. 36. M. E. Laboratory ..	2
M.E. 39. M. E. Seminar	1	M.E. 40. M. E. Seminar	1
M.E. 41. Machine Design	2	M.E. 44. Heating, Refrigeration and Ventilating	2
E.E. 35. E. E. Laboratory ..	2	M.E. 50. Thesis	3
C.E. 35. Steel Frame Design	1	C.E. 44. Scient. Management	1
M.E. 31. Machine Shop	2	C.E. 48. Cont. and Specifications	2
* Elective	3	C.E. 22. Testing Laboratory..	1
		* Elective	3
Total	19	Total	18
		Total credits required, 151 or 152	

Curriculum in Chemical Engineering**SOPHOMORE YEAR**

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5. Adv. Composition....	2	Eng. 6. Adv. Composition....	2
Math. 3. Calculus	4	Math. 4. Calculus	4
Ger. 3. Intermediate German, or	3	Ger. 4. Intermediate German, or	3
Fr. 3. Intermediate French		Fr. 4. Intermediate French	
Chem. 3. Qualitative Analysis	4	Chem. 4. Quantitative Analysis	4
Phys. 101. Engineering Phys.	5	Phys. 102. Engineering Phys.	5
Mil. 3. Sophomore Military..	2	Mil. 4. Sophomore Military..	2
Total	20	Total	20

* Electives must be approved by the Dean of the College of Engineering.

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Ger. 23. Scientific German,	3	Chem. 6. Organic Chemistry ..	3
or		Chem. 8. Special Quant. Anal.	2
Fr. 15. Scientific French..		C. E. 24. Analyt. and Applied	
C.E. 23. Analyt. and Applied		Mechanics	5
Mechanics	5	E.E. 22. Altern. Cur. Mach...	2
Chem. 5. Organic Chemistry ..	5	M.D. 12. Mechanism	4
Chem. 7. Adv. Quant. Analysis	4	E.E. 26. Elect. Eng. Lab. ..	2
E.E. 21. Direct Current Mach.	2		
Total	19	Total	18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Chem. 11. Industrial Chemistry	3	Chem. 12. Industrial Chemistry	3
Chem. 13. Theoretical and		Chem. 14. Theoretical and	
Physical Chemistry	3	Physical Chemistry	3
Chem. 15. Thesis	3	Chem. 16. Thesis	1
Geol. 3. Crystallography.....	2	Geol. 4. Det. Mineralogy....	2
M.E. 43. Design of Chemical		M.E. 24. Thermodynamics	2
Machinery	2	M.E. 26. Mech. Laboratory..	2
M.E. 23. Thermodynamics....	3	C.E. 28. Hydraulics	3
C.E. 21. Testing Laboratory..	2	Met. 2. Fire Assaying.....	3
Total	18	Total	19
		Total credits required.....	152

DEPARTMENTS OF INSTRUCTION

CIVIL ENGINEERING

Professor LITTLE, Assistant Professor WEBB, Mr. HARSCH

- 1-2. ENGINEERING DRAFTING 2 credits Each semester
 Freehand lettering; use of drafting instruments; elementary orthographic projections; isometric and oblique drawings; working drawings; conventional signs. Six hours in drafting room.
- 3-4 DESCRIPTIVE GEOMETRY 2 credits Each semester
 Problems on point, line, and plane; classification of surfaces; tangent planes; sections; intersections; developments; warped surfaces. Applications to engineering problems. Theory of shades and shadows. One recitation and three hours in drafting room.
- 15-16 SURVEYING 2 credits Each semester
 Theory and use of transit, level, plane table, and minor instruments. Land surveying. Government method of laying out public lands. Topographic, hydrographic, city, and mining surveying. Recitations, two hours. Prerequisite: Math. 101-102.
- 15a-16a SURVEYING 2 credits Each semester
 To go with 15-16 and not otherwise. Field work, computations, topographic drawing, and mapping, six hours.
- 21-22 TESTING LABORATORY 2 credits Each semester
 Experimental study of strength and other qualities of cement,

brick, stone, asphalt and other road materials; timber, iron, and steel.

- 23-24 ANALYTIC AND APPLIED MECHANICS 5 credits Each semester
Statics, kinematics and kinetics; strength and elasticity of materials of construction; theory of flexure of beams and columns; shock and resilience. Prerequisite: Math. 3-4.

- 25-26 RAILROAD ENGINEERING 4 credits First semester
3 credits Second semester
Railroad field geometry: Simple curves, compound curves, spirals, earthworks, switches, and crossings. Railroad construction and maintenance: Track, trestles, culverts, tunnels, yards and terminals, block signaling. The field work includes reconnaissance, topography, location surveys, cross-sectioning, special problems in curves and turnouts, practical work on track. The office work includes right-of-way mapping, profiles, estimates; detailing of trestles, culverts, and other special structures; design of terminal layouts. Economic theory of railroad location. Cost of distance, curvature, rise and fall; virtual profile; improvement of old lines; railroad organization and maintenance. Prerequisite: C.E. 15-16.

- 27 ROADS AND PAVEMENTS 3 credits First semester
Location and surveys of highways. Earth, sand-clay, gravel and broken stone roads; bituminous surface; black, concrete, brick, wood, stone and asphalt pavements.

- 28 HYDRAULICS 3 credits Second semester
Hydrostatics and hydrodynamics; orifices; weirs; flow in pipes, conduits, and canals.

- 31 REINFORCED CONCRETE 2 credits First semester
Theory of the reinforced concrete beam and column. Design of floor slabs and girders. Prerequisites: C.E. 23-24.

- 33 ROOF DESIGN 2 credits First semester
Design of wooden and steel roof trusses and of plate girder bridge. Prerequisite: C.E. 23-24.

- 35 STEEL FRAME DESIGN 1 credit First semester
Study of floor systems, roof construction, girders, columns, walls, foundation. Building laws and specifications. Complete design of fireproof building; column-schedule and detail drawings. Prerequisites: C.E. 23-24.

- 37 SEWERS AND SEWERAGE 2 credits First semester
The principles involved in the design, construction, and maintenance of sewers and sewerage systems. Prerequisite: C.E. 28.

- 38 IRRIGATION 4 credits Second semester
Brief comparative study of the irrigation institutions and laws of the different states and foreign countries. General survey of

- irrigation practice. Detailed study of structures, as pipes, flumes, head gates, and dams. Prerequisite: C.E. 28.
- 42 ARCH DESIGN 1 credit Second semester
Theory of arches. Complete design of masonry arch. Design of reinforced concrete arch by the elastic theory.
- 43 FRAMED STRUCTURES 4 credits First semester
Stress analysis and computations for framed structures. Bridge trusses. Prerequisites: C.E. 23-24.
- 44 SCIENTIFIC MANAGEMENT 1 credit Second semester
Principles and examples of efficiency engineering.
- 46 MASONRY AND FOUNDATIONS 3 credits Second semester
Classification of masonry, standard specifications. Ordinary pile and subaqueous foundations; coffer-dam, open-caisson, pneumatic, open-dredging, and freezing processes. Bridge-piers and abutments. Theory of retaining walls. Culverts, arches. Complete design of bridge-pier and foundation. Design of retaining walls by analytic and graphic methods. Two recitations and three hours in drafting room.
- 48 CONTRACTS AND SPECIFICATIONS 2 credits Second semester
Brief statement of law of contracts, and consideration of examples of general technical clauses in engineering specifications. (COCKERILL)
- 50 THESIS 3 credits Second semester
To engineering students the following courses in law are open:
- 47 MINING LAW 2 credits First semester
Lode and placer claims; possessory rights prior to location; extralateral rights; assessment work; railroad lands; patent. *Costigan's Cases on Mining Law*. (GILL)
- 48 IRRIGATION 2 credits Second semester
Appropriation of water and its incidents; means and accessories for conveying and holding water; state and federal control, irrigation companies, property and titles, contracts, sales, conveyances, remedies, eminent domain, taxation, *Idaho Code*. Bingham's *Cases on Water Rights*. (EVANS)

Department Library.—The department library consists of over 500 volumes including the more useful texts, and bound volumes of engineering serials. The important engineering journals and serials in English are kept on file.

ELECTRICAL ENGINEERING

Professor JOHNSON, Mr. MURRAY

- 12 ELECTRICAL ENGINEERING LABORATORY 2 credits Second semester
Study and exercises in the fundamentals of electrical construction.

- 21 **DIRECT CURRENT MACHINERY AND DISTRIBUTION** 2 credits First semester
A study of the theory, construction, and operation of direct-current generators and motors, and the calculation of distribution systems for light and power. A general introductory course for Civil, Chemical, and Mining engineering students. Prerequisite: Phys. 101-102.
- 22 **ALTERNATING CURRENT MACHINERY AND DISTRIBUTION** 2 credits Second semester
A general course in continuation of E.E. 21, treating of alternating current machinery and circuits. Prerequisite: E.E. 21.
- 23 **DIRECT CURRENT MACHINERY** 3 credits First semester
An elementary course similar to E.E. 21 but giving a more intensive study of the theoretical side of the subject. Required of Junior Electrical and Mechanical Engineers. Prerequisite: Phys. 101-102.
- 24 **ALTERNATING CURRENT MACHINERY** 3 credits Second semester
A continuation of E.E. 23, dealing with alternating current machinery and transmission. Prerequisite: E.E. 23.
- 26 **ELECTRICAL ENGINEERING LABORATORY** 2 credits Second semester
The use of instruments, the testing and operation of direct current machinery and apparatus. To accompany E.E. 21-22, or 23-24.
- 31 **ELECTRICAL ENGINEERING** 4 credits First semester
An advanced course in the theory and operating characteristics of direct and alternating-current machinery, apparatus, and transmission. The use of the complex quantity in the calculation of alternating-current phenomena. Prerequisites: E.E. 21 to 26 inclusive.
- 32 **ELECTRICAL ENGINEERING** 4 credits Second semester
A continuation of E.E. 31, taking up the theory of the special alternating-current machines and their operation on transmission systems. Prerequisite: E.E. 31.
- 35 **ELECTRICAL ENGINEERING LABORATORY** 2 credits First semester
Work in the laboratory on alternators, synchronous and induction motors, transformers, meters, and polyphase systems. Prerequisite: E.E. 26.
- 36 **ELECTRICAL ENGINEERING LABORATORY** 2 credits Second semester
A continuation of E.E. 35 with intensive tests upon the equipment studied in E.E. 31 and 32. Some work with the oscillograph.
- 38 **HYDRO-ELECTRIC PLANTS** 3 credits Second semester
A course in water-power engineering, dealing with stream

flow, reservoirs and their relation to power demands, selection of machinery and accessories, and the design of hydraulic plants with special reference to electric power. Elective. Prerequisite: C.E. 28.

- 39-40 POWER SEMINAR 1 credit Each semester
Discussions of typical powers and industrial applications, with problems and reviews of current articles in the technical press. The preparation and presentation of papers on assigned subjects. Required of Seniors in Electrical Engineering.
- 41 INDUSTRIAL APPLIANCES 2 credits First semester
A course covering the underlying principles and applications of the telephone, telegraph, storage battery and switchboard construction.
- 43 TELEPHONE CONSTRUCTION 1 credit First semester
A special course for students in Forestry. Prerequisite: At least high-school physics.
- 44 ELEMENTS OF RADIO-TELEGRAPHY 2 credits Second semester
An elementary course dealing with the fundamentals of direct and alternating currents in their application to radio-telegraphy, and practical work in the handling of radio apparatus. One recitation and one laboratory period per week. Open to all students who have completed high-school physics. Elective.
- 45 ADVANCED RADIO-TELEGRAPHY 2 credits First semester
A theoretical course in radio-telegraphy involving a mathematical treatment of circuits and apparatus. Open only to students of electrical engineering and physics with Senior standing. Elective.
- 48 ELECTRIC RAILWAY ENGINEERING 2 credits Second semester
A study of electric railway economics, construction, and operation. Prerequisite: E.E. 21 or E.E. 23.
- 49-50 THESIS 1 credit First semester
3 credits Second semester
An original investigation or dissertation upon some subject in electrical engineering.
- 52 ILLUMINATION AND PHOTOMETRY 1 credit Second semester
A general course treating of the principles of illumination and photometry; the comparison of illuminants; a study of the proper lighting of homes, public buildings, and factories. Prerequisite: A knowledge of elementary physics. Elective.

Department Library.—The leading texts and reference books pertaining to various branches of electrical engineering are available, together with the more important journals, American and foreign, and the proceedings of electro-technical organizations.

Branch of A. I. E. E.—The Student Branch of the American Institute of Electrical Engineers is composed of men pursuing studies in electrical engineering. Meetings are held monthly during the college

year, at which papers are presented and discussed by students or faculty members and by engineers in outside practice.

MECHANICAL ENGINEERING

Professor MACINTIRE, Mr. MARSHALL, Mr. MARDEN

- 1 **WOODWORK** 1 credit First semester
In this course the work given is of such nature as to require the use of the wood-working machines. Lectures are given on the proper selection, use and care of the machinery, and on the selection of woods, paints, and preservatives.
- 2 **PATTERN MAKING AND MOLDING** 1 credit Second semester
This course comprises a series of exercises embodying the principles governing pattern construction in making plain and split patterns, including core prints and core boxes, after which practical patterns are made of machine parts and molds are made therefrom. Prerequisite: M.E. 1.
- 11 **MECHANICAL DRAWING** 2 credits First semester
Freehand sketches are made of simple machine parts followed by complete working drawings from these sketches without further reference to the objects. Special emphasis is laid upon the proper selection of views to present the necessary information in convenient form and to give the proper dimensioning of the drawings. Two three-hour drafting periods per week. Prerequisite: C.E. 1.
- 12 **MECHANISM** 4 credits Second semester
Kinematics: Under this head are studied the principles underlying the actions of the elementary combinations of which all machines are composed; the communication of motion by gear-wheels, belts, cams, screws, and link work; the various means of producing changes of velocity; and the principles of epicyclic trains, parallel and quick return motions. The solution of a large number of graphical and mathematical problems is required in this course. Two recitations and two three-hour drafting periods per week. Prerequisite: M.E. 11.
- 15 **MACHINE SHOP** 2 credits First semester
The first part of the semester is devoted to a study of modern foundry equipment and methods. Practice is given in floor and bench molding and in core making. During the second half of the semester practice is given in chipping, filing, scraping, drilling, and turning on the lathe. Two three-hour periods per week.
- 20 **FORGE WORK** 2 credits Second semester
This is a course in the forging of iron and steel. Lectures and instructions are given on the proper method of making forgings, tools, hardening, tempering, casehardening and annealing, and heat treating. Two three-hour periods per week.

- 21 **ENGINES AND BOILERS** 2 credits First semester
A study of the design and details of modern steam engines and steam boilers. Two recitations per week. Must follow or be taken in conjunction with M.E.23.
- 22 1 credit Second semester
For Agricultural students. Similar to but shorter than M.E. 20.
- 23 **THERMODYNAMICS** 3 credits First semester
This course is a detailed study of the principles of thermodynamics; a discussion of the properties of gases, saturated and superheated vapors, especially of air and steam; of the flow of gases thru orifices, nozzles, pipes, and meters; a discussion of the action of the steam injector; a study of the various cycles of the hot air, internal combustion, and steam engines, of the turbine, air compressor, and refrigeration systems. The mastery of principles and the discussion of data are much simplified by an extensive use of both the pressure volume and the temperature entropy diagrams. The theoretical work of the course is paralleled by a suitably graded set of drill and engineering problems to be solved independently by the student. Prerequisites: Math. 3-4; Phys. 101-102.
- 24 **THERMODYNAMICS** 2 credits Second semester
Continuation of M.E. 23. Prerequisite: M.E. 23.
- 25 **MACHINE SHOP** 2 credits First semester
Instruction is given in general machine tool work, consisting of centering, straight and taper turning and fitting, screw cutting, chucking, finishing, tapping, cylindrical grinding and shaping. Two three-hour periods per week. Prerequisite: M.E. 15 and 20.
- 26 **MECHANICAL ENGINEERING LABORATORY** 2 credits Second semester
A study of experimental investigation, reduction of data, and the preparation of neat, concise and accurate reports. The experiments involved include a study of the various auxiliary apparatus used in connection with steam, gas, and hydraulic machinery, calibration of instruments such as pyrometers, pressure gauges, steam and gas engine indicators, tests of fuels, oils, and belting; flue gas analysis, etc. One four-hour laboratory period and one report required per week. Prerequisite: M.E. 23.
- 27 **MACHINE DESIGN** 2 credits First semester
Elementary machine design, including the design of the most essential machine elements. Two three-hour laboratory periods per week. Prerequisite: M.E. 12.
- 28 **MACHINE DESIGN** 2 credits Second semester
Intermediate machine design. A complete machine is calculated for stress and velocity ratios, and is then detailed. A complete set of drawings is required. Two three-hour laboratory periods. Prerequisite: M.E. 27.

- 30 **FORGE WORK AND MACHINE SHOP** 1 and 2 credits Second semester
For Civil and Electrical engineering students, and Forestry students, giving the essentials of M.E. 15 and M.E. 20.
- 31 **MACHINE SHOP** 2 credits First semester
A continuation of machine tool work including plain and index milling and gear cutting. Practice is given in overhauling and repairing machinery. Lectures on modern shop methods are included in this course. Two three-hour periods per week. Prerequisite: M.E. 25.
- 33 **STEAM POWER PLANT** 3 credits First semester
This course is devoted to the study of fuels, combustion, boilers, stokers, pumps, coal and ash, handling machinery, boiler-room auxiliaries, engines, turbines, condensers, lubrication, and piping systems with reference to their use in steam-power plants. Prerequisite: M.E. 23 and 24.
- 34 **POWER PLANT DESIGN** 2 credits Second semester
This course consists largely of work in drawing and calculations with such lectures as may be needed from time to time. The work of the course consists of making the working drawings necessary to show location of boilers, engines, auxiliaries, piping, coal bunkers, etc., for a power house, and also drawings and calculations of some of the details. Two three-hour periods per week. Prerequisite: M.E. 33.
- 35 **MECHANICAL ENGINEERING LABORATORY** 2 credits First semester
The work of this course includes the use of the indicator; the method of obtaining power and steam consumption of steam engines and turbines; the measurement of the flow of steam, air, and water thru orifices and pipes; the determination of the clearance of an engine; test of hydraulic ram; test of duplex steam pump and centrifugal pump; injector test; tests of gas engines. One four-hour laboratory period and one report per week. Prerequisite: M.E. 23.
- 36 **MECHANICAL ENGINEERING LABORATORY** 2 credits Second semester
Continuation of M.E. 35. Testing of steam boilers, gas producer, automobile power plant, fans, steam turbine, airplane motor, steam condenser, radiators, high-speed air compressor, and steam traps. The latest methods of testing, as standardized by the American Society of Mechanical Engineers, are used thruout all mechanical engineering laboratory courses. One four-hour laboratory period and one report per week. Prerequisite: M.E. 23 and M.E. 35.
- 37 **GAS AND POWER ENGINEERING** 3 credits First semester
The study of gas producers, gas production and transmission,

gas and oil engines, and also of oil and gas fuels. Prerequisite: M.E. 23 and 24.

39-40 MECHANICAL ENGINEERING SEMINAR

1 credit

Each semester

Opportunity is given for the study and discussion of engineering and industrial problems which are not included in other courses. Papers prepared by members of the class are read and discussed at the meetings. One one-hour period per week.

41 MACHINE DESIGN 2 credits

First semester

Advanced machine design. A complete design is required. Similar to but more advanced than in M.E. 28. Two three-hour laboratory periods. Prerequisites: M.E. 27 and M.E. 28.

43 DESIGN OF CHEMICAL MACHINERY 2 credits

First semester

A complete design is required. Two three-hour laboratory periods. Prerequisite: M.E. 12.

44 HEATING, VENTILATING, AND REFRIGERATION

2 credits

Second semester

During the first half of the semester the work of this course takes up the following: loss of heat from buildings, radiation surfaces, design and operation of heating systems. The last half of the semester is devoted to the study of standard types of refrigeration machines and systems, and a consideration of cold storage refrigeration, insulation and operation; also ice making. Prerequisites: M.E. 23 and 24.

50 THESIS

3 credits

Second semester

CHEMICAL ENGINEERING

For the outline of the curriculum in Chemical Engineering see page 169; for the description of the courses in chemistry see pages 85-88; for the description of the other required courses see the various departments concerned.

Engineering Lectures

The following practicing engineers and others have lectured to the students and faculty of the engineering college since the last catalog went to press:

Mr. Calvin W. Rice, Secretary, American Society of Mechanical Engineers, March 31st, 1919, "Qualifications of an Engineer."

Mr. J. C. Ralston, Consulting Engineer, Spokane, Washington, afternoon of May 28th, 1919, "Aviation;" evening of May 28th, 1919, "Big Bend-Pend Oreille Irrigation Project."

Dr. L. R. Hewes, General Inspector, Office of Public Roads, October 29, 1919, "Federal Aid to Highways."

Dr. W. F. Durand, Head of Department of Mechanical Engineering, Stanford University, November 11, 1919, "Science in the Service of War."

PART VI.

THE COLLEGE OF LAW

THE COLLEGE OF LAW

(The Idaho Law School)

HISTORY

The Idaho Law School was established by the Board of Regents of the University at its April meeting in 1909. The attendance during the first years, and the interest shown by the students and public, have justified the action of the Regents in establishing the school. The first year's course alone was offered during the academic year 1909-10, the school being under the direction and instruction of Hon. John F. MacLane, and much of the succeeding prosperity of the school may be attributed to his efficient personal efforts. The school is now offering its instruction to students in all three classes.

EQUIPMENT AND FACILITIES

Rooms.—The Law School occupies rooms set apart for its use in the Administration Building, near the General Library at the University. These rooms include recitation rooms, the Dean's office, and an office for the other members of the Law Faculty, the Law Library and Study Room, and Court Room.

Library.—The Law Library and Study Room includes ample table space for the use of law students. It contains a law library of over five thousand volumes of law books, including the standard digests, text-books and cyclopedias of law, the statutes of the United States, Idaho, California, Washington, Montana, and other Western and some Eastern States, and the reports of the Supreme Court of the United States, Idaho, California, Washington, Oregon, Montana and other Western States; the so-called "Trinity Series," including "American Decisions," "American Reports" and "American State Reports." It also contains "Lawyers Reports Annotated," "American and English Cases Annotated," "English Ruling Cases," "British Ruling Cases," the Lawyers' Cooperative Publishing Company's Edition of New York Common Law and New York Chancery Reports, the American Edition of English Common Law Reports and of English Chancery Reports, "Moak's English Reports" and other English Reports, and the "National Reporter Series" including "Federal Cases" and the Federal Reporter. In addition it contains the leading legal periodicals, and such works as are adapted to general legal instruction, including legal history and development. The general library close at hand, on the same floor, contains a good selection of works on International Law and Roman Law.

Moot Courts and Practice.—The Law School has a well organized "Law Club," divided into "First-Year," "Second-Year," and "Third-Year" Courts, in which moot points of law are briefed and argued under the supervision of the faculty. Also, the Third-Year course includes courses in Practice under the supervision of Mr. Frank L. Moore. In these courses the Third-Year students try cases before juries taken

from the Second- and First-Year students upon pleadings and argue questions of law before judges taken from the Third-Year class. The curriculum also includes a course in the Drafting of Legal Instruments. Indeed thruout the entire curriculum effort is made to apply what in courses in science, is called "the Laboratory Method." In other words, the study of legal principles is coupled, so far as circumstances will allow, with practical application, so as to make legal studies pointed and definite. The so-called "case system" which has proved so successful in American law schools lends itself well to the methods pursued in the College of Law.

Association of American Law Schools

The College of Law is a member of The Association of American Law Schools.

Courts.—Moscow is the county seat of Latah County, Idaho, and is also the seat of the United States District Court for the Northern Division of the State. Students will therefore have ample opportunity to observe the actual workings of the courts.

ADMISSION REQUIREMENTS

Registration for the academic year 1920-21 will occur on September 13th and 14th, 1920. Late registration should be avoided.

It is important that students entering the Law School should have learned to think clearly and to express themselves well, both orally and in writing, in correct and lucid English. It also is important that they should have, so far as possible, that breadth of view which comes from culture. A good working knowledge of Latin is helpful, because a broad and thoro study of legal principles thru law reports involves, in some branches of the law, an examination of early cases, written partly in Law Latin and Law French.

A course in Latin, which is adapted to the needs of law students, is offered in the College of Letters and Science of the University. (See general catalog, page 111, Latin 1a-2a). All pre-legal students and particularly those taking one year only of pre-legal work are urged to register for this course in preference to other courses in foreign languages. A greater knowledge of history, sociology, economics, and of natural science, than can be obtained in a high-school course alone, is desirable for anyone entering upon the study of law.

At Least One Full Year of College Work Required for Admission.—Applicants for admission as candidates for a degree shall be required previously to have obtained credits showing completed work in the Freshman year of the B.A. or B.S. curriculum in the College of Letters and Science of the University of Idaho, or in courses that in the judgment of the Law Faculty are equivalent thereto in other colleges or institutions of learning. As soon as practicable, credits showing two full years of such previous college work will be required. Due

notice of the imposition of the two years' prerequisite will be given. In the meantime, however, students are urged to take at least two full years of college work, wherever it is possible for them to do so before entering the Law School.

Pre-Legals.—All students taking courses in the College of Letters and Science preparatory to their entrance into the College of Law are requested to consult the Dean of the latter college before making their final choice of electives to be pursued during such preparatory work.

A student in the University of Idaho taking a curriculum in the College of Letters and Science preparatory to his entrance into the College of Law may be permitted, *after conference with the Dean of the College of Law and with his consent*, to substitute for courses having an equal number of credits in the College of Letters and Science one course in Law in each semester for one year only, for which not more than six credits in all shall be allowed, for the express purpose of familiarizing himself with the methods of studying Law under the "Case System." It must, however, be understood distinctly, *that no credit whatever for any course in Law so taken will, under any circumstances whatever, be allowed in his course in the College of Law itself; and it will not be counted among his credits in Law which shall entitle him to his Law degree.* Otherwise, the taking of such a course in Law before entrance into the College of Law would result in rendering nugatory, to the extent indicated, the requirement of at least one full year of other college work as a prerequisite to admission into the Law School.

Course Preparatory to the Course in Mining Law.—No student in the Law School will be allowed to elect the course in Mining Law until he shall first have qualified himself therefor by such a course or courses in Geology and Mining as is satisfactory to the professor in charge of the course in Mining Law.

Special Students.—Persons unable to comply with the entrance requirements may apply for admission as special students, not candidates for a degree. Such applications will be received in the case of persons over twenty-one years of age, who appear to the faculty qualified by general training and business experience to pursue legal studies.

Minimum Age for Entering the Law School.—An applicant for admission to the Law School must be at least eighteen years of age.

Advanced Standing.—Students having completed courses in law in law schools which are members of the Association of American Law Schools and other standard law schools, will be given credit in such courses towards a degree. The time spent in other schools, when added to the time spent in this school, must equal three full academic years of nine months each.

No credit will be given for work completed elsewhere than in standard law schools, while in residence at such schools.

Tuition Fee and Expenses.—A tuition fee of twenty-five dollars per year, payable in advance for the full year, and not subject to rebate in case of failure from any cause to complete the year's work, is required of all students. While tuition in other departments of the University is free and it is the policy of the University to afford an opportunity for education free of cost, it is believed that for professional students the payment of a small fee, as an earnest of good faith and serious purpose, is advisable. The proceeds of these fees are devoted primarily to the expansion of the law library. A fee of \$6.25 per semester is collected for the support of the various enterprises of the student body known as the "Associated Students of the University of Idaho," and at the end of the Senior year a diploma fee of five dollars must be paid. Board and room average from seven to ten dollars per week. Other expenses are within the control of the individual student.

CURRICULUM

The course of study covers three years, divided into two semesters of eighteen weeks each. The class-room work for the first two years occupies fifteen hours per week, the unit of instruction and credit being one hour per week per semester, with an additional credit for attendance at Practice Court, whenever required, as explained below, and the work in the Law Club which is required in the case of First- and Second-Year students, thus making a total of sixteen credits for each semester. The class-room work for the third year, which includes the Practice Court work, occupies sixteen hours per week also, with a total of sixteen credits per semester. The following table gives the arrangement of the courses:

Prescribed Courses

FIRST YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
1 Contracts I	3	2 Contracts II	3
5 Torts I	2	10 Property II	4
7 Persons	2	6 Torts II	2
9 Property I	2	4 Carriers	2
11 Criminal Law	3	12 Pleading and Procedure I ..	3
13 Agency	3	14 Argumentation	1
Law Club	1	Law Club	1
Total	16	Total	16

SECOND YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
21 Property III	2	22 Property IV	2
23 Negotiable Instruments...	3	24 Sales	2
25 Equity I	3	26 Equity II	2
27 Pleading and Procedure II ..	3	30 Evidence II	3
29 Evidence I	3	32 Suretyship and Mortgages ..	4
31 Drafting Legal Instruments ..	1	34 Public Service Corpora-	
Law Club	1	tions	2
Total	16	Law Club	1
		Total	16

THIRD YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
43 Corporations I	2	44 Corporations II	2
47 Mining Law	3	46 Municipal Corporations..	2
51 Constitutional Law I....	2	52 Constitutional Law II....	2
55 Practice I	2	50 Damages	2
57 Trusts I	2	56 Practice II	2
61 Conflict of Laws	3	58 Trusts II	2
Electives	2	48 Irrigation	2
		Electives	2
Total	16	Total	16

Electives

FIRST SEMESTER		SECOND SEMESTER	
59 Partnership	2	64 Quasi Contracts	2
63 International Law	3	54 Medical Jurisprudence....	1
53 Medical Jurisprudence....	1	42 Property VI	2
41 Property V	2		

Until such time as the size of the classes makes the system impracticable, the required work of the second and third years, with the exception of the courses in Evidence, Pleading and Procedure, Constitutional Law, Irrigation, Drafting of Legal Instruments and Conveyancing, and the courses in Practice, will be given interchangeably in alternate years. The courses in Evidence, Pleading and Procedure, Constitutional Law, Irrigation, Drafting of Legal Instruments and Conveyancing, and the courses in Practice will be given every year.

During the year 1920-21 such adjustments will be made in courses offered as to enable Senior students, whose study was interrupted by military service, to complete their courses without interruption.

Court attendance and work in the Law Club will be required of all first- and second-year men. This means that each man will be required to respond to writs and processes of the Practice Court, in the same manner as in a regular court, and must appear and serve or offer a good and sufficient excuse when such demand is made upon him, and must do the regular work of the Law Club. One credit will be allowed for such attendance and law-club work in each semester of the first two years.

MILITARY SCIENCE AND TACTICS

All first-year law students will be required to take work in Military Art and Tactics, under the same conditions and at the same hours which apply to students in other departments of the University, unless they already have completed satisfactorily two full years in that subject.

DESCRIPTION OF COURSES

For purposes of description the foregoing courses, grouped according to number, are as follows:

- 1 CONTRACTS 3 credits First semester
Formation of simple contracts; offer and acceptance, reality of consent; consideration; legality of object; statute of frauds; construction and operation. Williston's *Cases*. (GILL)

- 2 CONTRACTS II 3 credits Second semester
Discharge of contracts; modes of enforcement; actions and remedies; what law governs; quasi contracts. Williston's *Cases*. (GILL)
- 4 CARRIERS 2 credits Second Semester
Law of carriers. Green's *Cases*. (COCKERILL)
- 5-6 TORTS I AND II 2 credits Each semester
The general principles of delictual liability, specific torts, negligence, nuisance, master and servant, quasi-torts. Simpson's *Cases*. (GILL)
- 7 PERSONS 2 credits First semester
Natural persons; aliens, infants, insane persons, married women, convicts, their powers and disabilities; husband and wife, parent and child, and guardian and ward. Kale's *Cases on Persons*. Vernier's *Cases on Marriage and Divorce*. (COCKERILL)
- 9 PROPERTY I 2 credits First semester
Classes of property; personal property; acquisition of rights; possession, bailment, liens; real property, including a study of the feudal system, tenures, estates, fixtures, improvements. Warren's *Cases on Property*. (EVANS)
- 10 PROPERTY II 4 credits Second semester
Natural rights; easements; covenants running with the land; public rights; franchises; rents. Warren's *Cases on Property*. (EVANS)
- 11 CRIMINAL LAW 3 credits First semester
The general principles of the law of crimes; study of specific crimes; essentials of criminal procedure. Mikell's *Selected Cases on Criminal Law*; Idaho Penal Code, and illustrative Idaho cases. (GILL)
- 12 PLEADINGS AND PROCEDURE 3 credits Second semester
Procedure and Pleading at the Common Law, and under later statutory modifications. Analysis of the logical basis of Common Law Pleading in its relation to orderly legal procedure and as a foundation for Code Pleading. Scott's *Cases on Civil Procedure*. (COCKERILL)
- 13 AGENCY 3 credits Second semester
The law of principal and agent, formation of the relation; liabilities of the parties *inter se* and third persons; terminations of agency. Wambaugh's *Cases*. (COCKERILL)
- 14 ARGUMENTATION 1 credit Second semester
This course deals with the nature of argument, the kinds of argument, the common fallacies and the science of brief-making. *Principles of Argumentation*, by Baker and Huntington.

- 21 PROPERTY III 2 credits First semester
Statute of limitation; prescription; form of conveyances; description of property; estates created; creation of easements and profits; covenants for title; estoppel; execution of deeds; dedication. *Gray's Cases on Property*, Vol. III. (EVANS)
- 22 PROPERTY IV (Wills) 2 credits Second semester
Descent; making revocation, and republication of wills; lapsed, void and adeemed devises and legacies; probate and administration; powers of executors and administrators; payment of debts, legacies, and distributive shares. *Gray's Cases on Property*, Vol. IV. (EVANS)
- 23 NEGOTIABLE INSTRUMENTS 3 credits First semester
The law of bills, notes, and checks at Common Law and under negotiable instruments law. Case book, Smith and Moore. (GILL)
- 24 SALES 2 credits Second semester
The contract of sale, including the Seventeenth Section of the Statute of Frauds; conditions, warranty, remedies, and damages. *Erwin's Cases*. (COCKERILL)
- 25-26 EQUITY I AND II 3 and 2 credits First and second semesters
Historical development, rights and remedies, procedure relative to common law and Code. *Ames' Cases*. (EVANS)
- 27 PLEADING AND PROCEDURE II 3 credits First semester
Pleading and Procedure, Historical Development, Demurrers, Pleas and Answers. Code Pleading, as a statutory modification of Pleading at Common Law and in Equity and as construed by the courts; formal and substantial requirements of statement; complaint, answer and demurrer, motions and amendments. *Sunderland's Cases on Code Pleading*, selected cases. Practical exercises. (COCKERILL)
- 29-30 EVIDENCE I AND II 3 credits Each semester
Study and analysis of the value of the different kinds of evidence, practice in jury argument based upon evidence reported in actual cases. Discussion of these arguments and of the cases themselves. *Wigmore's Principles of Judicial Proof*. Origin, history, and logical nature of judicial evidence; witnesses, competency, duties and privileges, principal rules of evidence; practical exercises. *Wigmore's Cases on Evidence*, 2d Edition. (COCKERILL)
- 31 DRAFTING LEGAL INSTRUMENTS AND CONVEYANCING 1 credit First semester
Practical exercises in drafting of all forms in use in Idaho of deeds, wills, and various forms of contracts; examination of abstracts of title under the personal supervision of the instructor. (GILL)

- 32 SURETYSHIP AND MORTGAGES 4 credits Second semester
Law relative to the obligation of sureties; discharge of sureties. Ames' *Cases on Suretyship*. (COCKERILL)
Elements of mortgages; position of the mortgagor and mortgagee; transfer of the mortgaged interest; priority of mortgages; marshalling of assets. Particular study will be made of the Idaho law relating to mortgages by special assignments of cases. Wyman's *Cases on Mortgages*. (COCKERILL)
- 34 PUBLIC SERVICE CORPORATIONS 2 credits Second semester
Historical development; duties and service to be rendered; rules, rates and commissions; duty to furnish adequate facilities; discrimination. Burdick's *Cases*. (COCKERILL)
- 41 PROPERTY V 3 credits First semester
Conditions; future interests; remainders and reversions; rule against perpetuities. Gray's *Cases on Property*, Vol. V. (EVANS)
- 42 PROPERTY VI 2 credits Second semester
Illegal conditions and restraints; restraints on alienation; fraudulent conveyances; registration; joint ownership. Gray's *Cases on Property*, Vol. VI, and selected cases. (EVANS)
- 43-44 CORPORATIONS 2 credits Each semester
Organization, management, powers of corporations; rights of stockholders; duties and liabilities of officers and directors. A theoretical and practical course in corporation law. In addition to the study of text and cases, the students will be formed into groups, each of which will organize, conduct, and wind up a corporation. Warren's *Cases on Private Corporations*. (GILL)
- 46 MUNICIPAL CORPORATIONS 2 credits Second semester
Governmental functions, powers and restrictions, liabilities for torts, bond issues, and property rights. Beale's *Cases on Municipal Corporations*. (GILL)
- 47 MINING LAW 2 credits First semester
Lode and placer claims; possessory rights prior to location; extralateral rights; assessment work; railroad lands; patent. Costigan's *Cases on Mining Law*. (GILL)
No student will be permitted to elect Mining Law until he first shall have qualified himself therefor by such a previous course in Geology and Mining as is satisfactory to the professor in charge of the course in Mining Law.
- 48 IRRIGATION 2 credits Second semester
Appropriation of water and its incidents; means and accessories for conveying and holding water; state and federal control, irrigation companies, property and titles, contracts, sales, conveyances, remedies, eminent domain, taxation, *Idaho Code*. Bingham's *Cases on Water Rights*. (COCKERILL)

- 50 DAMAGES 2 credits Second Semester
The law of damages. Russell's *Cases*. (GILL)
- 51 CONSTITUTIONAL LAW I 2 credits First semester
Distribution of powers between State and Federal government; jurisdiction of the United States; police powers; Fourteenth Amendment; taxation; *ex post facto* and retroactive laws; state laws impairing the obligation of contracts; regulation of commerce, foreign, interstate, and with the Indian tribes; weights and measures; military law. No examination will be given until the end of the year. Hall's *Cases on Constitutional Law*. (EVANS)
- 52 CONSTITUTIONAL LAW II 2 credits Second semester
Continuation of course 51. (EVANS)
No credit will be given for courses 51 and 52 unless the entire year's work be taken.
- 53-54 MEDICAL JURISPRUDENCE 1 credit Each semester
(BARROWS)
- 55-56 PRACTICE I AND II 3 credits Each semester
Practice: (a) Theory of an action; choice of remedy; ascertainment of parties; drafting the pleadings; issuance of process; obtainment of provisional remedy; preparation for trial. First eight weeks of fall semester. (b) Four terms of District Court will be held convening respectively in December, January, February, and March. Students will be required to prosecute and defend one case each term. (c) Appellate practice. A term of the Supreme Court will be held in May; each student will be required to appeal, and defend on appeal, one case in this court, in which appropriate transcripts and briefs must be prepared and filed. (MOORE)
- 57-58 TRUSTS I AND II 2 credits Each semester
Creation, construction, and operation; liabilities of trustees and relation to cestui que trust with reference to allied subjects. Ames' *Cases on Trust*, 2nd Edition, and Scott's *Cases on Resulting and Constructing Trusts*. (EVANS)
- 61 CONFLICT OF LAWS 3 credits First semester
Beale's *Cases on Conflict of Laws*. (GILL)
- 63 INTERNATIONAL LAW 3 credits First semester
(EVANS)
- 64 QUASI-CONTRACTS 2 credits Second semester
Law of Quasi-Contracts. Thurston's *Cases*. (GILL)

METHODS OF INSTRUCTION

The foundation of the work in the College of Law is the "Case System," which includes not merely the study of law from cases actually decided by the courts, but also active discussion and criticism in the class room under the guidance of the instructors, supplemented

wherever necessary by explanation and lectures. This system is generally recognized now as the best method of giving thoro instruction in the Common Law.

In addition, much attention is given to practice, not only in the courses in Practice in the Practice Court, but also by instruction in the preparation of pleadings and other court papers, in the introduction of evidence, in the addressing of court and jury, in the preparation of briefs, the drafting of legal instruments, and the organization of corporations. The greatest pains are taken with the students, both individually and collectively, and the students are encouraged to hand on, under the suggestion of and guidance by the faculty, to lower classmen in the Law School, the assistance which they themselves received from members of the faculty. Precaution is taken that the upper-classmen shall not be "crutches" to those below them, but that nevertheless they shall enlarge their conceptions by developing in themselves the spirit of helpfulness and shall clarify their understandings by themselves assisting others to legal knowledge. In addition to the opportunities furnished for practical work in the Practice Court and in the various courses as described, still another is given in a law club which has been founded, modeled on the plan of the famous law clubs of the Harvard Law School for practice in the preparation of court pleadings and briefs and arguments of law points. Other law clubs will be formed as fast as the needs of the growing school require them. Every effort is made to imbue the entire body of faculty and students with the feeling of mutual helpfulness, solidarity, and loyalty. It is believed that by this method the largest and most far-reaching results are obtained.

COURSES IN OTHER DEPARTMENTS

Law students may, with the approval of the faculty, take such courses in other departments of the University as they are able to carry without conflicting with their legal studies. No additional fee is required for such courses. Students are especially advised to take work in History, Political Science, English, Public Speaking and Argumentation, Geology, and Mining Law.

SIX-YEAR COLLEGE CURRICULA

Students in the College of Letters and Science may combine work in that college with work in the Law School, and complete the requirements of both the B.A. and LL.B. degrees in six years. A student desiring to pursue such a course must, upon entering the senior class in college, file with the law faculty a notice of his intention and pay the regular law school tuition. He must then complete law courses 1, 2, 4, 5, 6, 7, 9, 10, and 11. This combination will afford a total of twenty-three credits, which with two credits of Law Club work and Court Attendance during the Senior year in the College of Letters and

Science will give a total of twenty-five credits. These will be allowed toward both degrees, leaving a deficiency of seven credits in the first year's law work, which may be made up in the following years. Substitutions may be allowed when for some reason the student is unable to take the courses as outlined in this paragraph.

Students in the College of Letters and Science may major in Law, according to the regulations stated on page 75 of the University catalog.

GRADES AND SCHOLARSHIP

Students are required to do satisfactory daily work and to pass written examinations in the various courses. For the present the general university system of grading is used. Those whose work appears deficient may be conditioned if they give promise of marked improvement, otherwise the course in which the failure is recorded must be repeated. Examinations to remove conditions must be taken by the opening of the fall semester in the succeeding year. Students must obtain at least ten credits in the work of each semester, and twenty-two credits in the work of the year, in order to continue with the class.

PRIZES

Hon. Samuel H. Hays, of Boise, has offered two prizes, as follows: "Benjamin on Contracts" to the law students in any course in which practice is had in drafting contracts who show the greatest skill, neatness, and general proficiency in the drafting of contracts in each year for which the prize is offered. Also Jury's "Adjudicated Forms of Pleading and Practice" to the law student showing the greatest proficiency in taking courses in Pleading, both Common Law and Code, and those drafting pleadings in the Practice Court and in the Law Club.

The Bobbs-Merrill Company, of Indianapolis, Ind., also offers a prize to be given each year, consisting of Jones' Legal Forms, to the third-year student showing the greatest skill, neatness and general proficiency in the drafting of some legal instrument or instruments assigned for the purpose.

The Bancroft-Whitney Company, of San Francisco, Cal., offers this year two prizes, one of Lindley on *Mines* to be given to the student having the highest grade in the course on Mining Law, and the other of Weil's *Water Rights in the Western States* to be given to the student having the highest grade in the course on Irrigation.

Similar prizes, not necessarily the same as to the books given or the particular object of the prize, but prizes for good scholarship nevertheless, will be offered by the Bancroft-Whitney Company in succeeding years.

GRADUATION AND DEGREE

Subject to the stipulation hereinafter stated regarding final examinations in the entire three years' work of the course, and the thesis re-

quired before graduation, matriculated students who have obtained ninety-six credits as prescribed by the above courses, or equivalents from other schools, or who have spent three years in the study of law at standard law schools, the last year at least being spent in this school, will receive the degree of Bachelor of Laws (LL.B.) from the University.

Final Examination Covering the Entire Three-Year Course at the End of the Third Year.—In addition to the regular examinations given at the close of each semester in each subject, which are for promotion from class to class, an examination based on the work of the entire three years, is required of all candidates for the degree of Bachelor of Laws. The examination may be written or oral, or both, and may include practical work in the library. This examination will be given each year at a time fixed by the faculty of the law school, shortly before Commencement. No person can graduate who cannot satisfy the faculty in such examination that he is qualified. The purpose of this examination is not to test the student's memory, nor will it require detailed knowledge, nor ability to cram. The purpose is only to test the ability of the student to correlate the subject studied, formulate general principles, interpret statutes and decisions, and apply his entire knowledge of the law in all its branches to concrete cases. There is no intention to require the student to answer complex and intricate questions, such as will be given at the end of each semester when a course is completed. But it will be a thoro test of the student's power to reason, and of his knowledge of elementary principles, and his power to correlate.

Special students whose work is satisfactory and who complete the whole or any part of the course will receive a certificate stating the work done. Students in other colleges of the University who elect law studies will receive appropriate credits toward their degrees under the regulations prescribed by the several Colleges.

CATALOGS AND INFORMATION

University catalogs or bulletins of the College of Law, and special information concerning the Law School or the general University, may be had by addressing either "The Bursar," or "Idaho Law School," Moscow, Idaho. Letters so addressed will receive prompt attention by the proper office, and will not be confused with private mail as personally addressed letters might be, especially in the summer during the absence of individual professors from Moscow.

THE SCHOOL OF MINES

ORGANIZATION

From its beginning the University of Illinois has been one of the foremost centers of the study of the sciences and the arts. The School of Mines, which was organized in 1897, has since that time been a part of the University and has been one of the most successful of its departments. The School of Mines is organized into four divisions: the Division of Mining, the Division of Metallurgy, the Division of Civil Engineering, and the Division of Chemical Engineering. The Division of Mining is the largest and is headed by the Dean of the School of Mines. The Division of Metallurgy is headed by the Professor of Metallurgy. The Division of Civil Engineering is headed by the Professor of Civil Engineering. The Division of Chemical Engineering is headed by the Professor of Chemical Engineering.

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PART VII.

THE SCHOOL OF MINES

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DEPARTMENT OF MINING

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THE SCHOOL OF MINES

ORGANIZATION

From its beginning the University of Idaho, situated as it is in one of the premier mining districts of the Union, has appropriately maintained courses in the technology of the mineral industries, and men trained in these courses have gone forth to render valuable service in the the development of the state's great mineral wealth. In order further to strengthen this work the Commissioner and Board of Education, acting upon the recommendation of the President of the University, announced in August, 1917, the creation of a School or College of Mines as an administrative unit of the University. The field of the School of Mines is thus indicated:

"Within this school will be included the work in mining proper, in metallurgy, and in geology; and it shall include the exploitation of the non-metalliferous minerals (except road-making material) as well as that of the precious and useful metals."

In compliance with this instruction the School of Mines offers courses and curricula leading to the degrees of Bachelor of Science in Geology, Mining, and Metallurgy. Graduate work leading to the degree of Master of Science in these respective branches is also offered.

EQUIPMENT AND FACILITIES

The School of Mines equipment is conveniently described under the three heads of geology, mining, and metallurgy. In addition to the facilities here described the student has the advantage of the well equipped laboratories of the departments of Chemistry, Physics, Mechanical, Electrical, and Civil Engineering as well as opportunity for studies in English, Economics, History, Languages, and other branches, in the College of Letters and Science.

GEOLOGY AND MINERALOGY

The geological laboratory and museum are on the third floor of the Administration Building.

The laboratory contains seven high-grade petrographic microscopes, blow-pipe apparatus, reflecting apparatus for the study of polished ores, a grinding and polishing machine, and other modern appliances. In addition to this it contains extensive collections of models and specimens for lecture purposes and identification.

For the work in mineralogy there are both natural and artificial crystal models and over 3000 mineral specimens. For petrography there are over 2000 rock specimens including the U. S. Geological Survey educational series and a collection of Idaho rocks. For economic geology there are 1000 specimens illustrative of the structural features of ore-deposits, and the ores and associated rocks of important mining

districts. For paleontology there is a representative collection of fossils and casts, including the Krantz and Ward collections. The department is also equipped with a projecting lantern and several hundred slides; models illustrating faulting, erosion, etc., and several hundred topographic and geologic maps for class work. The library includes all the publications of the U. S. Geological Survey, the publications of the State Surveys relating to economic geology, all of the recent text and reference books, and many of the important older volumes. All of the American geological periodicals are received.

MINING

The mining laboratory contains one 12 x 12 x 12 straight-line steam-driven air compressor with adequate receiver, rock-drill testing machine with displacement tanks for determining work done and air consumed, and a number of the best known air-hammer and piston rock-drills.

Surveying instruments, drafting tables, blue prints, mine models, and other facilities for work in the engineering phases of mining are available. The library facilities include all standard works of reference, files of the standard mining periodicals, and proceedings of the English and American mining organizations.

METALLURGY

Assay Laboratory.—In the central portion of this building is the furnace room, 70 x 50, which contains ten double-muffle furnaces, besides gasoline and melting furnaces. In the east end there is a chemical laboratory for wet assays, a lavatory and change-room, and a large store-room in which there is a dark-room for photographic work. In the west end there is an office, a parting-room, and a balance room. Fine assay, analytical, and pulp balances, together with bullion-rolls, and other assay and chemical apparatus, make a very complete equipment.

Metallurgical Laboratory.—The ore-dressing laboratory is replete with apparatus for large- and small-scale testing of ores. In addition to the usual laboratory crushers, bucking-boards, and disc pulverizer a large-scale crushing and sampling equipment, including a 3-D Gates gyratory, samplers, elevators, bins, etc., is also available.

A 1000-lb. two-stamp mill with amalgamating plate so arranged that it may feed either to a Wilfley, Card, or Deister concentrating table, or to a 4-ft. Frue Vanner, forms an important part of the equipment. The concentration section in addition to classifiers, dewatering cones, and other accessories, includes several multiple compartment half-size hartz jigs, and a complete miniature concentrator built by the General Engineering Works of Salt Lake City.

For flotation work there are two large-size Hoover-Varley type machines each with independent electric-drive, one smaller sized Hoover machine built of lead to allow the use of strong chemical solutions, a

glass-sided Hoover machine, two Callow pneumatic flotation machines, a working model of the Zeigler flotation machine, and several others.

There is also apparatus for both leaching and agitation tests by the cyanide or other hydro-metallurgical processes, as well as accessory apparatus for filtering, drying, and otherwise preparing pulps for sampling and assaying.

The pyro-metallurgical equipment includes LeChatelier and Fery pyrometers, Mahler and Parr calorimeters, as well as other instruments. For dry metallurgy, roasting and smelting furnaces fired with crude oil give exact temperature regulation and an oxidizing, reducing, or neutral atmosphere. The department also has Sauveur and Leitz apparatus for the microscopic and photomicroscopic study of metals, alloys, slags, etc.

EXPENSES

No charge is made for tuition in the School of Mines, and the necessary laboratory fees and deposits will usually not exceed \$5 per semester. The necessary total expenses for attendance during the entire collegiate year, exclusive of clothing will vary from a minimum of \$300 upward according to the means and habits of the individual. There is opportunity about the University for a limited amount of student employment. Students should in every case, however, have means to meet at least the expenses of one semester, before attempting to enter the School of Mines.

Special Courses.—Special courses will be arranged for students of mature years according to their individual needs and ability.

Practical Mining.—Every student taking the regular mining curriculum is required to spend at least three months of the summer vacation at mines, mills, or smelters. A written report with sketches and photographs must be submitted to the professor of mining the first week of the first semester, detailing the observations of the summer work regarding methods, machinery, and costs.

Mining Trips.—During the spring vacation, a visit is made to one of the large mining districts for detailed study of mining and metallurgical practice. This trip is required of Junior and Senior students. The opportunities for mining and metallurgical trips of this kind are unusually good. Within easy reach are some of the greatest lead and copper mines and smelters in the world, affording excellent examples of current practice. Thru the courtesy of their managements all of these plants are open to students of the School of Mines, for study and observation.

Graduate Fellowships.—The School of Mines offers each year two graduate fellowships carrying an income of \$720 a year each. The work of these Fellows is carried on as a part of the cooperative arrangement between the State Bureau of Mines and Geology and the

United States Bureau of Mines, by which the latter maintains an ore-dressing station at the University. By this plan the graduate fellows are engaged under the direction of the members of the Bureau of Mines staff in research work planned for the solution of some of the pressing ore-treatment problems of the State of Idaho.

During the past year these fellowships have been held by Arthur M. Piper and Robert B. Elder, the problems under investigation being related to the preferential flotation of zinc and lead in the ores of the Coeur d'Alene.

The Jerome J. Day Scholarships.—Mr. Jerome J. Day of Wallace has established in the School of Mines a scholarship to be awarded every year. Each scholarship runs for four years and has an annual income of \$250. The scholarships are awarded on the following conditions:

(1) The candidates must be chosen from among the high-school students of Shoshone county. (2) They must announce their candidacy to the Dean of the School of Mines of the University of Idaho during their second or Sophomore year in high school. (3) All the candidates will be assembled at Wallace during the first week in June of each year for an examination on a portion of their year's work as follows: *a.* At the end of the Sophomore year examinations will be given in English, geometry, history or general science; *b.* At the end of the Junior year in English, physics or chemistry, algebra, mechanical drawing or manual training; *c.* At the end of the Senior year in English, chemistry or physics, sociology, American history, or high-school arithmetic. (4) These examinations will be qualifying, non-competitive examinations and the final selection at the end of the Senior year will be made by the Day Scholarship Committee consisting of the Commissioner of Education, the President of the University, and the Dean of the School of Mines. (5) In accordance with the wishes of Mr. Day, the committee in electing the scholar will have regard to: *a.* His general scholastic ability as demonstrated by the three annual examinations; *b.* His fondness for athletics and outdoor sports as demonstrated by his participation therein; *c.* His qualities of leadership and of ability to cooperate with his fellow students and his teachers in all matters touching the welfare and spirit of his school. The holder of the Scholarship for 1919-20 is Robert M. Cummins of Wallace.

ADMISSION

For admission to the regular curricula of the School of Mines graduation from a standard four-year high school or equivalent preparation is required.

For unconditioned admission to the Freshman class fifteen units* are required as follows:

	UNITS
English	3
Social Sciences (including History).....	2
Natural Sciences (Physics and Chemistry are advised)....	2
Algebra	1½
Geometry	1½
Elective	5

(2 units in foreign language are strongly urged.)

Special Students.—Mature persons who desire to take special studies may be admitted under certain conditions as special or unclassified students.

CURRICULA

Students in all three curricula, viz., Geology, Mining, and Metallurgy, take the same work in the Freshman year. It will be unnecessary for the student until the beginning of his Sophomore year to indicate which curriculum he expects to follow. In this way he can gain an idea of the field and make his choice with greater knowledge and foresight.

COMMON FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Comp. and Literature	3	Eng. 2, Comp. and Literature	3
Math. 1, Freshman Math.....	4	Math. 2, Freshman Math.....	4
Chem. 1, General Chemistry..	4	Chem. 2, General Chemistry..	4
C.E. 1, Engineering Drafting	1½	C.E. 2, Engineering Drafting	1½
C.E. 3, Descriptive Geometry	2	C.E. 4, Descriptive Geometry	2
Mil. 1, Freshman Military....	2	Mil. 2, Freshman Military....	2
Total	16½	Total	16½

Geological Option

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
History or Economics.....	3	History or Economics.....	3
Chem. 3, Qualitative Analysis.	4	Chem. 4, Qualitative Analysis.	4
C.E. 15-15a, Surveying	4	C.E. 16-16a, Surveying	4
Geol. 1, General Geology.....	2	Geol. 2, Historical Geology....	2
Mil. 3, Sophomore Military....	2	Mil. 4, Sophomore Military....	2
Foreign Language	5	Foreign Language	5
Total	20	Total	20

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Geol. 3, Crystallography	2	Geol. 4, Mineralogy	2
Foreign Language	3	Foreign Language	3
Met. 1, Ore Dressing, or Chem. 7, Adv. Quan. Analysis }	2(3)	Met. 2, Fire Assaying, or Chem. 8, Spl. Quant. Analysis }	2(3)
Mining	3	Mining	3
Phys. 1, General Physics.....	4	Phys. 2, General Physics.....	4
Electives (Science)	2	Electives	2
Total	16 or 17	Total	16 or 17

* A "unit" represents a high-school subject taught five times a week in periods of not less than forty minutes (laboratory, eighty) for a school year of at least thirty-six weeks.

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Geol. 9, Economic Geology....	2	Geol. 10, Economic Geology...	2
Geol. 11, Petrography	2	Geol. 12, Petrography	3
Geol. 13, Structural Geology..	1	Geol. 14, Geology of Idaho....	1
Geol. 17, Thesis	2	Geol. 18, Thesis	2
Mining or Metallurgy	5	Mining or Metallurgy	5
Electives	4	Electives	4
Total	16	Total	17
		Total	137½ or 138½

Mining Option

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Geol. 1, General Geology....	2	Geol. 2, Historical Geology....	2
Math. 3, Calculus	5	Math. 4, Calculus	5
Phys. 101, Engineering Physics.	4	Phys. 102, Engineering Physics	4
Chem. 3, Qualitative Analysis..	4	Chem. 4, Quantitative Analysis	4
C.E. 15 and 15a Surveying ..	4	C.E. 16 and 16a. Surveying....	4
Mil. 3, Sophomore Military..	2	Mil. 4, Sophomore Military..	2
Total	21	Total	21

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
C.E. 23, Mechanics	5	C.E. 24, Mechanics	5
Chem. 7, Adv. Quan. Analysis	3	Geol. 4, Det. Mineralogy	2
Geol. 3, Crystallography.....	2	Met. 2, Fire Assaying.....	3
Met. 1, Ore Dressing	2	Met. 4, General Metallurgy...	2
Min. 3, Excavation	2	Electives	5
Elective	3		
Total	17	Total	17

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Geol. 9, Economic Geology....	2	Geol. 10, Economic Geology..	2
Geol. 11, Petrography	2	Geol. 12, Petrography	2
Mng. 3, Met. of Gold and Sil- ver	2	C.E. 28, Hydraulics	3
Min. 5, Mining Methods.....	3	C.E. 44 Scientific Management	1
Min. 7, Mining Economics....	2	Met. 8, Met. of Copper and Lead	2
Met. 9, Ore Dressing and Metallurgical Lab.	3	Met. 6, Metallurgy of Iron and Steel	1
Min. 9, Mine Plant	3	Min. 6, Mine Plant	2
Min. 21, Thesis or		Min. 8, Underground Survey- ing	2
Elective	2	Min. 22, Thesis	2
Total	19	Total	17
		Total credits required	145½

Metallurgical Option

SOPHOMORE YEAR

(Same as Mining)

Credits		Credits	
Total	21	Total	21

JUNIOR YEAR

(To be announced in 1920-21 Catalog.)

SENIOR YEAR

(To be announced in 1920-21 Catalog.)

DEPARTMENTS OF INSTRUCTION

GEOLOGY AND MINERALOGY

Professor LIVINGSTON, Mr. VER STEEG

1 GENERAL GEOLOGY 3 credits First semester

A foundational course in structural and dynamical geology, open to all students. It deals with the minerals and rocks making up the earth's crust; rock weathering and the formation of soil; the work of the wind, streams, glaciers, and ocean; earth movements and mountain making. Examples are taken from Idaho and adjacent states and illustrated by lantern slides. Text: Chamberlain and Salisbury's *College Geology*.

Two lectures, a quiz, and a two-hour laboratory period per week.

The laboratory work consists of simple blowpipe tests on minerals, the sight recognition of the more important economic and rock-forming minerals, recognition of type rocks and interpretation of topographic and geologic maps, and continues thru the year.

2 HISTORICAL GEOLOGY 3 credits Second semester

Deals with the history and evolution of the earth, and a study of the evolution of life forms, as recorded by fossils in the rocks of the different geological ages. Particular attention is given to the growth and development of the North American continent. Text: Chamberlain and Salisbury's *College Geology*.

Two lectures, a quiz, and a two-hour laboratory period per week.

The laboratory work is a continuation of the work in geology with the addition of the study of the more important index fossils.

3 CRYSTALLOGRAPHY AND BLOWPIPE ANALYSIS

2 credits

First semester

A study of the different crystal systems and forms, with laboratory practice in their identification on models and natural crystals. The second part of the course deals with blowpipe analysis and the determination of minerals by their physical and chemical properties. Text: Rogers' *Study of Minerals*.

One recitation and one three-hour laboratory period per week. (LIVINGSTON)

4 DETERMINATIVE MINERALOGY 2 credits Second semester

A continuation of Geology 3. Particular emphasis is placed upon sight recognition of minerals, the student being required to familiarize himself thoroly with all the common and important minerals and most of the rarer ones. Several thousand specimens both labeled and unlabeled are available for this work.

(LIVINGSTON, VER STEEG)

- 9 ECONOMIC GEOLOGY 3 credits First semester
Lectures and recitations dealing with the process of mineral deposition, both metallic and non-metallic, and examples of the different ore deposits of the world. The course includes the occurrence of coal, petroleum, building stone, clay, salt, gypsum, abrasives; minor metals; genetic classification of the metallic ores; theories of ore deposition; secondary enrichment; and the occurrence of iron, copper, lead, zinc, gold, silver, etc. Particular attention is given to ore deposits of the western United States.
Text: Ries's *Economic Geology*. Prerequisites: Geol. 1-2, 3-4; Chem. 1-2; Physics 1-2 or 101-102. (LIVINGSTON)
- 10 ECONOMIC GEOLOGY 2 credits Second semester
Continuation of Geol. 9. (LIVINGSTON)
- 11-12 PETROGRAPHY 2 credits Each semester
The first part of the course consists of a study of the optical properties of minerals in thin sections, and the principles and use of the petrographic microscope. The second part of the course consists of lectures on the origin and identification of rocks, with special reference to the meaning of rock structures as revealed by the microscope.
The laboratory work consists of the megascopic and microscopic determination and description of rocks.
One lecture and one laboratory period per week, usually given in two periods of two hours each. Texts: Kemp's *Handbook of Rocks*, and Findlay's *Igneous Rocks*. Prerequisites: Geol 1-2, 3-4; Physics 1-2, Chem. 1-2. (LIVINGSTON)
- 13 STRUCTURAL GEOLOGY 1 credit First semester
A special laboratory course for Senior mining students consisting of the interpretation of physiographic forms from topographic maps; the study of geologic maps and sections and the graphic solution of fault problems. One laboratory period per week. (LIVINGSTON)
- 14 GEOLOGY OF IDAHO 1 credit Second semester
A course of lectures, accompanied by reading, on the topography, geography, geology, and mineral resources of the State of Idaho. Prerequisites: Geol 1-2. Given at option of instructor.
- 17-18 THESIS 2 credits Each semester
Must be taken by all students taking the geological option. As this course will in most cases require field work, it will be necessary to consult the instructor in regard to this in the month of June preceding.
- 19-20 COMMERCIAL GEOGRAPHY 2 credits Each semester
A course primarily designed for students taking their Major in commerce, but open to all students. It covers the surface features of the earth, the relation of land and sea, climate and its

effects upon the natural resources and habitability of countries, and takes up in detail the physical conditions and resources, both utilized and latent, of the different countries. Emphasis is laid upon the economic resources of the North American continent, particularly of the western United States.

Two recitation periods per week. Geol. 1 and 2 are advised, but not demanded, as prerequisites. (LIVINGSTON, VER STEEG)

MINING

Professor THOMSON, Professor LIVINGSTON

2 THE MINERAL INDUSTRY 2 credits Second semester

A general study of the methods used in the prospecting and exploitation of mineral deposits and of the more important metallurgical operations and kindred processes employed in preparing mineral products for industrial use. This course is planned for persons who, altho not intending to follow mining as a profession, desire a general acquaintance with our important mineral resources and their utilization. (THOMSON)

3 EARTH AND ROCK EXCAVATION 2 credits First semester

Methods and costs of handling earth and rock by hand and mechanical excavation. Ditching, trenching, dredging; machines and costs. Explosives; composition, principles, determining the force of an explosion, blasting. Drilling, hand drilling, construction of the different types of rock drills and their suitability for certain classes of work, shape of drill bits, sharpening and tempering drills, principles of tunnel driving and shaft sinking methods thru soil, rock, and water-bearing formations. (THOMSON)

5 MINING METHODS 3 credits First semester

Prospecting: Prospecting ground by boring, different types of boring machines, survey of bore holes, calculation of strike and dip of veins, etc., from bore holes.

Development: Comparison of mine entries, vertical shafts, inclines, tunnels, etc.; drifts, cross cuts, raises and winzes.

Support of excavations: Principles of mine support, classification of mine supports, timbering of shafts, drifts, and support of stopes, etc.

Method of ore extraction: Open cuts, overhand and underhand stoping, square-set, shrinkage stoping, and methods employed for large ore bodies, caving, coal-mining methods, etc.

Placer mining: Gravel washing by hand, principles of hydraulic mining and dredging. (THOMSON)

6 MINE PLANT DESIGN 2 credits Second semester

The student either chooses or is assigned a mine with certain output and conditions, and designs a plant and machinery necessary from these data. This includes design of shaft or entry, head

frame, hoist, compressor, air-pipe line, pumps and connections, boilers, electric installation, method of mining, etc. A detailed drawing of the head frame and ore bin is required, and specifications for the other machinery. This course is taken in combination with Min. 19. (THOMSON)

7 MINING ECONOMICS 2 credits First semester

Mine sampling, including the principles involved and the different methods used in sampling veins, placer deposits, disseminated deposits, coal, etc.; mine valuation; calculation of value in sight from width and assays; probable and prospective ore; amortization of capital invested; cost of production, simple cost keeping; the more important points in the mining law of the United States; essential features of reports by mining engineers. (THOMSON)

8 MINE SURVEYING 2 credits Second semester

Lectures on the standard methods of surveying practiced in the large mining districts of this country, including instruments and equipment; carrying the meridian underground; measurement of angles and distances; underground stations and methods of marking; note-books and office records; maps required; stope surveying; mappings and calculation of tonnage extracted. Drafting-room work consists of the calculation and reduction of notes from a mine survey and the plotting of same by coordinates. Claim surveying. Mine surveying on spring trip. (LIVINGSTON)

9 MINE PLANT 3 credits First semester

Hoisting: Calculation of size of wire ropes, types of head-frames and principles of design, different types of hoisting engines, calculation of size of hoisting engines for certain depth and output, comparison of steam, compressed air, and electricity for hoisting; cages, skips, and safety appliances.

Drainage: Flow of surface and underground water and principles of drainage, different types of pumps, calculation of size of pump for certain conditions.

Air transmission and compression: Calculation of pipe line and distribution, types of air compressors and calculation of size and capacity for certain conditions.

Haulage: Underground and surface, including electric, compressed air, endless rope, tail rope, and wire rope tramways.

Mine ventilation, by natural and artificial means.

Bins and retaining walls: Underlying principles of design for bins and retaining walls, with examples.

This course is taken in combination with Min. 6. (THOMSON)

15-16 MINING RESEARCH PROBLEMS

Credits to be arranged

Each semester

Special problems and investigations in mining methods, min-

ing machinery, equipment, and design. For graduate students.
(THOMSON)

21-22 THESIS 2 credits Each semester

The first semester is optional and an elective may be substituted if desired. The second semester is required. (THOMSON,
———)

METALLURGY

Professor THOMSON, Associate Professor ———

1 ORE DRESSING 2 credits First semester

General principles of ore dressing; preliminary operations; hand dressing; crushing; sizing; classifying; jigging; tabling; magnetic separation. The flotation process. Flow sheets of typical concentrators.

2 FIRE ASSAYING 3 credits Second semester

This course includes the determination of gold, silver, and lead in ores and metallurgical products according to the most approved methods in use in the mills and smelters of the West. After demonstration and instruction in the general principles and procedure, the student is required to develop skill and technique in the handling of a large number of determinations on pulps previously checked, and a high standard of accuracy is required. (THOMSON)

4 GENERAL METALLURGY 2 credits Second semester

Properties of metals and alloys; metallic compounds; ores and their values; fuels; refractory materials; pyro-metallurgical process and apparatus; electro-metallurgical processes and apparatus; mechanical treatment of alloys; handling of gases; metallurgical products.

5 METALLURGY OF GOLD AND SILVER 2 credits First semester

Gold ores; cyanidation; amalgamation; chlorination. Silver ores; direct amalgamation; hydro-metallurgical processes.

6 METALLURGY OF IRON AND STEEL 1 credit Second semester

Manufacture of iron and steel; blast furnaces; puddling; cementation; crucible process; Bessemer process; open-hearth process; iron and steel founding; heat treatment; malleable cast iron; constitution of iron and steel and relation to physical properties; alloy steels.

8 METALLURGY OF COPPER AND LEAD 2 credits Second semester

Copper; production, uses, consumption; properties of copper and its alloys; ores and distribution; sampling and preparation of ores for treatment; outline of the metallurgy of copper; roasting of copper ores; chemistry; smelting in reverberatory and in blast furnaces; converting of copper matte; hydro-metallurgy; refining.

Lead: properties of lead, its compounds and alloys; ores, production, uses; outline of the metallurgy of lead; smelting in the reverberatory furnace and in the ore-hearth; roasting in hand

and mechanical furnaces; blast-furnace smelting; desilverization of base bullion; cupellation; refining.

- 9 ORE DRESSING AND METALLURGICAL LABORATORY 3 credits First semester
Ore dressing; testing of ore to determine proper method of treatment, using small and large size machines. Milling; cyaniding of gold and silver ores. Metallurgical: calibration of LeChatelier pyrometers; determination of calorific power of fuels by Mahler bomb calorimeter; microscopic study of metals and alloys; roasting of sulphide ore, using pyrometer; heat efficiency of furnace; thermal treatment of steel.
- 10 METALLURGICAL LABORATORY 2 credits Second semester
For chemical engineers; elective for all engineers other than mining. Subject matter same as (11) condensed.
- 11 ELECTRO-METALLURGY 1 credit First semester
Theory and application of the electric current to the treatment of ores and the refining of metals. Electrolytic refining of copper, lead; parting of silver and gold; treatment of sulphide ores; electrolysis of fused salts.
- 12 PHYSICAL METALLURGY 2 credits Second semester
Constitution and properties of alloys. Pyrometry and cooling curves. Binary alloys. Ternary alloys. Phase rule. Methods of metallographic research.
- 13-14 METALLURGICAL DESIGN 3 credits Each Semester
The solution of problems in the design and construction of concentration and reduction works, with working drawings, bills of material, specifications, and estimates. For graduate students.
- 15-16 METALLURGICAL INVESTIGATION Credits to be arranged Each semester
Laboratory work on some problems in the metallurgical treatment of gold, silver, copper, lead or zinc ores. For graduate students. (THOMSON, ———)
- 21-22 THESIS 2 credits Each semester
The first semester is optional and an elective may be substituted if desired. The second semester is required. (THOMSON)

THE MINERS' SHORT COURSE

Every winter the School of Mines throws open its laboratories and class-rooms for the use and instruction of the prospectors, the miners, the mill men, and the smelter men of Idaho and the Northwest. Business men interested in various phases of the mining industry also frequently avail themselves of the opportunity thus afforded to gain a more exact knowledge of ores, their occurrence and treatment.

This "Miners' Short Course," as it is termed, opens in January and runs for eight weeks.

The entrance requirements are simple. Seriousness of purpose and ability to read and write intelligently and to work ordinary problems in arithmetic are the necessary qualifications. There is no age limit.

FACILITIES AND COST

The equipment of the University for mining and metallurgical work is excellent; the assay laboratory is one of the most complete in the west and the milling and metallurgical laboratories are unexcelled. The short-course student not only has the advantage of studying and using this equipment, but has also the opportunity of observing at close range the experimental work being carried on by the local staff of the State Bureau of Mines and Geology and the United States Bureau of Mines on treatment methods for Idaho ores.

The tuition and the use of the laboratories are free to all. A deposit amounting to \$25.00 is required to defray the cost of coal burned, fluxes and chemicals used, and apparatus broken. The unexpended balance is returned at the end of the course. Other than this the only expense is for room and board.

PRACTICAL INSTRUCTION

The instruction is given by members of the regular faculty of the School of Mines and is entirely practical in character, a large portion of the work being done in the laboratory. For example, in mineralogy the actual minerals are studied, first in the type collection with labeled specimens until the appearance of the mineral is well known; and then the short-course student tests his knowledge by identifying unlabeled specimens. The same procedure is followed in work with blow-pipe determination of minerals not readily identified by appearance.

In assaying, the short-course student first learns the method of preparing the sample, of fluxing the ore, and of firing the furnace. Weighing operations are then studied and the entire process is learned step by step until the student can work by himself and check results obtained by the smelter.

In ore treatment, the principles of each process are explained and if feasible each student tries each process himself. If this cannot be done, then the class acts as a squad or shift in operating the particular machinery necessary for the process. For instance, in the stamp mill run, one man takes care of the rock crusher, another the sampling, a third the amalgamating plate and stamps, a fourth the concentrator, and so on.

A certain amount of class or lecture work is, of course, necessary, as for instance in the discussion of ore deposits, or in the explanation of mining methods, or of principles of ore treatment, and in all cases these discussions relate themselves closely to current practice and especially to conditions in the western states.

SUBJECTS TAUGHT

The courses offered are as follows:

MINERALOGY AND GEOLOGY

The work is planned to give the prospector and mine owner a thoro knowledge of at least one hundred common and important minerals, and the principal rocks.

Blowpiping is taught as an aid to determining minerals, but sight recognition of minerals and rocks is considered as of great importance and this part of the work is strongly emphasized.

ASSAYING

The determination of gold, silver, and lead in ores by fire methods, and the determination of lead, copper, iron, zinc, silica, lime and other constituents by wet methods is taught.

This course is entirely of a laboratory character, and each student is given individual instruction and does his work under the immediate supervision of an experienced instructor.

ORE TREATMENT

The underlying principles involved in the treatment of ores are studied and explained. Special emphasis is laid upon concentration, including flotation. Other methods, such as stamp-milling, amalgamation, and cyanidation, are also studied. Work is first done on small-scale testing machines and later on the larger units.

Designs of some of the larger mills will be studied, and such problems as are met with in the state investigated.

Opportunity will be given for persons enrolled in the course to test their own ores.

REMARKS

The following remarks are taken from the

minutes of the meeting.

It was decided to give the subject of the meeting to the members of the committee to prepare a paper on the subject and to present it at the next meeting.

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THE SCHOOL OF FORESTRY

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HISTORY

The Idaho School of Forestry was established in 1909, and was administered as a Department till August, 1917, when on the recommendation of the Commissioner of Education and the President of the University, it was organized as an independent School, thus placing the work on a par with the other independent divisions of the University.

EQUIPMENT

Arboretum and Nursery

The School of Forestry maintains an arboretum and forest nursery adjoining the University campus. This tract comprises some twelve acres, in which are growing about one hundred and eighty species of trees. Parts of the arboretum are already beginning to show natural pruning and thinning. There is thus afforded right at hand an exceptional opportunity to forestry students and others for making studies in dendrology and silviculture. To encourage the establishment of woodlots and windbreaks and the planting of shade and ornamental trees, the School supplies forest and shade trees to the people of the state at approximate cost.

Departmental Library

The School has set aside a large, well lighted room in connection with its quarters in Morrill Hall for the department library. The library contains a set of government and state publications, as well as a collection of reference books on forestry. The leading forestry and lumber-trade journals are regularly received. The library is the study and reading room for the students and is available at all hours.

Laboratories

Mensuration.—This laboratory is equipped with transit, levels, plane tables, calipers, hypsometers, compasses, etc., in numbers sufficient to meet the demands of the School in cruising, and in making growth and yield studies.

Silviculture.—Excursions to nearby forests are made at all seasons of the year for field laboratory work in silviculture. The arboretum and nursery plot afford excellent opportunity for studies in nursery practice and methods of planting.

Dendrology.—The laboratory in dendrology is provided with a tree herbarium, and a large collection of tree seeds and cones. Constant use is also made of the arboretum, and frequent excursions are made to the forests.

Wood Technology.—A complete line of wood samples is avail-

able for the identification of woods; also a set of microscopic slides of native woods. This laboratory is equipped with compound microscopes, and ample facilities for the preparation of wood sections.

Logging Engineering and Lumbering.—A variety of logging apparatus is available for the use of students in these courses; also a large collection of lumber showing grades and standard sizes. Ample equipment is provided for all phases of field work in logging engineering.

By-Products.—A by-products laboratory has been fully equipped with a large semi-commercial distillation retort, a super-heater, two small retorts, together with a full line of chemicals and apparatus for the analysis and standardization of the various by-products obtained from wood.

Greenhouse.—Greenhouse space is provided for the use of the School, thus making it possible to conduct germination tests and studies in seedling growth at all seasons of the year.

Auto-Truck For Field Trips.—As has been indicated, much of the instruction in forestry is carried on in the field, thus making necessary frequent trips to the forests, logging camps, and mills. To facilitate this work the field trips are made by auto-truck. During the last half of the second semester, the work of the senior class is transferred entirely to the field.

Associated Foresters

This is an organization of the students and faculty of the School of Forestry, which meets once each week to review the current literature on forestry and lumbering, or to hear addresses by men prominent in the forestry profession and the lumber industry. The officers for the year of 1919-20 are: Albert S. Daniels, President; Edward T. Nero, Vice President; James W. Farrell, Secretary-Treasurer.

Summer Work

Students of forestry usually spend their summer vacations in some phase of forestry work. They not only acquire practical experience in this way, but earn enough funds to pay a considerable part of their way thru school. Situated near extensive lumber operations and many national forests as the Idaho School is, unusual opportunity is afforded for summer employment.

EXPENSES

No Tuition.—According to Section IV, of the laws by which the University was created, "No student who shall have been a resident of the state for one year next preceding his admission shall be required to pay any fees for his tuition in the University, except in a professional department or for extra studies." At present no tuition is charged at

the University of Idaho to students from other states (except the regular fees in the College of Law and in the Department of Music).

Annual Expenses.—The necessary expenses of residence include the A. S. U. I. fee (\$12.50), room (\$45-\$135), and board (\$216 to \$288). In addition to these, a students' expenses will include charges which vary with the means and habits of the individual—as, for example, laundry, (\$18 to \$30), books and stationery (\$10 to \$30), clothing, membership in societies, and subscriptions.

Employment.—There are the usual opportunities for making money to be found in a small town, and many students earn a portion of their expenses. The Faculty has organized a special committee to assist students to find remunerative employment. Many students pay a large part of their expenses in this way. It is, however, strongly advised that before entering the University students have means to meet the expenses of at least one semester.

Rooms.—The cost of rooms occupied by two students in private houses is \$5 or more for each person monthly, the average, with fuel and light included, being \$6. Many students live in the fraternity and sorority houses, the price per month for board and room ranging from \$30 to \$35. Board and room in private families can be occasionally arranged for, the minimum cost being approximately \$25 per month.

ADMISSION AND DEGREES

Admission

The requirements for admission to the Freshman class of all Forestry curricula are:

	UNITS
English	3
Social Sciences, including History	2
Natural Sciences	2
Mathematics	
a. Algebra to Quadratics	1
b. Plane Geometry	1
Electives	6
Total	15

A student who presents fourteen units may be *conditionally* admitted by the Committee on Admissions, but the deficiency must be made up as soon as possible, and in any case before the beginning of the Junior year.

Degrees

Curricula are offered in the School of Forestry leading to the degrees of Bachelor of Science in Forestry, and Master of Science in Forestry.

Curricula

Owing to the demands made on the School of Forestry for men

trained in special lines of forestry work it has been necessary to differentiate the subjects taught into three four-year curricula. The first is known as the curriculum in General Forestry and is designed to prepare students for work in the Forest Service as rangers or forest assistants, or to assist lumber companies in general forestry or by-products work. The second is known as the Curriculum in Logging Engineering and is designed to prepare young men to be of service with lumber manufacturers and loggers, or with timber owners who desire to secure foresters who have had more than the usual amount of training in mechanics and allied subjects, thus fitting themselves to become logging engineers. The third is the Curriculum in Grazing and is designed to prepare young men for all lines of grazing work with the Forest Service and with live-stock companies. A two-year Ranger Course is also maintained for those who desire a shorter course.

For the requirements for the advanced degree of Master of Science in Forestry, see page 67 of the general catalog.

Students in all four-year curricula in the School of Forestry take the same work in the Freshman year, as follows:

COMMON FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 1, Comp. and Literature	3	Eng. 2, Comp. and Literature	3
Math. 101, Engineering Math.	5	Math. 102, Engineering Math.	5
For. 1, General Forestry.....	3	For. 2, Dendrology	3
Bot. 1, General Botany.....	3	Bot. 2, General Botany	3
C.E. 1, Engineering Drafting	1½	C.E. 2, Engineering Drafting	1½
Mil. 1, Freshman Military...	2	Mil. 2, Freshman Military...	2
Total	17½	Total	17½

Curriculum in General Forestry

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5, Adv. Composition	2	Eng. 6, Adv. Composition	2
Chem. 1, General Chemistry....	4	Chem. 2, General Chemistry	4
C.E. 15, Surveying	2	C.E. 16, Surveying	2
C.E. 15a, Surveying	2	C.E. 16a, Surveying	2
For. 5, Forest Mensuration....	3	For. 6, Forest Mensuration....	3
Econ. 1, Prin. of Economics....	4	For. 38, Forest Protection.....	2
Mil. 3, Sophomore Military....	2	Mil. 4, Sophomore Military	2
Total	19	Total	17

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Phys. 1, General Physics	4	Phys. 2, General Physics.....	4
Bot. 3, Plant Physiology.....	4	For. 4, Silviculture	6
For. 40, Wood Technology....	4	For. 30, Grazing or	
Econ. 43, Business Law.....	3	For. 50, Wood Preservation....	2
For. 29, Grazing or		Elective	6
Geol. 1, General Geology	3		
Total	18	Total	18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Zool. —, Forest Zoology.....	2	Zool. 104, Forest Entomology..	2
E.E. 43, Telephone Construction	1	Bot. 14, Forest Pathology ...	3
For. 7, Forest Management....	3	For. 10, Forest Engineering..	3
For. 17, Forest Utilization.....	3	For. 8, Forest Management....	3
For. 31, Forest History and Policy	3	For. 12, Lumbering.....	4
For. 33, Forest Economics.....	2	For. 22, Thesis.....	4
For. 51, Adv. Dendrology	2		
For. 53, For. By-Products.....	3		
Total	19	Total	19
		Total credits required.....	144 $\frac{2}{3}$

Curriculum in Logging Engineering.

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5, Adv. Composition....	2	Eng. 6, Adv. Composition....	2
Chem. 1, General Chemistry..	4	Chem. 2, General Chemistry..	4
C.E. 15, Surveying.....	2	C.E. 16, Surveying.....	2
C.E. 15a, Surveying.....	2	C.E. 16a, Surveying.....	2
For. 5, Forest Mensuration..	3	For. 6, Forest Mensuration..	3
Math. 3, Calculus.....	5	Math. 4, Calculus.....	5
Mil. 3, Sophomore Military..	2	Mil. 3, Sophomore Military..	2
Total	20	Total	20

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Phys. 101, Engineering Physics	4	Phys. 102, Engineering Physics	4
C.E. 25, Railroad Engineering	4	C.E. 26, Railroad Engineering	4
Phys. 5, Analytic Mechanics..	3	For. 4, Silviculture.....	6
Min. 3, Earth and Rock Ex- cavation	2	Shop 20, Forge Work.....	1
M.D. 11, Mechanical Drawing	2	For. 50, Wood Preservation..	2
For. 41, Wood Technology..	4		
Total	19	Total	17

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
E.E. 21, Direct Current Ma- chinery	2	E.E. 22, Alternating Current Machinery	2
M.E. 24, Thermodynamics...	3	For. 8, Forest Management..	3
For. 7, Forest Management..	3	For. 10, Forest Engineering	3
For. 15, Timber Physics.....	3	For. 12, Lumbering.....	4
For. 17, Forest Utilization...	3	For. 22, Thesis.....	3
For. 31, Forest History and Policy	3	For. 38, Forest Protection...	2
For. 33, Forest Economics...	2		
Total	19	Total	17
		Total credits required.....	146 $\frac{2}{3}$

Curriculum in Grazing**SOPHOMORE YEAR**

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Eng. 5, Adv. Composition....	2	Eng. 6, Adv. Composition....	2
Chem. 1, General Chemistry..	4	Chem. 2, General Chemistry..	4
C.E. 15, Surveying.....	2	C.E. 16, Surveying.....	2
C.E. 15a, Surveying.....	2	C.E. 16a, Surveying.....	2
For. 5, Forest Mensuration..	3	For. 6, Forest Mensuration..	3
For. 29, Grazing.....	3	For. 30, Grazing.....	3
Mil. 3, Sophomore Military..	2	Mil. 4, Sophomore Military..	2
Total	18	Total	18

Reconnaissance during this summer.

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bot. 5, Systematic Botany....	3	Bot. 6, Systematic Botany....	3
Bot. 3, Plant Physiology.....	4	For. 4, Silviculture.....	6
Econ. 43, Business Law.....	3	Bot. 8, Ecology.....	4
An. Hus. 5, Stock Judging... 1½		For. 38, Forest Protection... 2	
For. 41, Wood Tech.....	4	Elective	3
Geol. 1, General Geology.....	3		
Total	18½	Total	18

Reconnaissance during this summer.

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Zool. Forest Zoology.....	2	Zool. 104, Forest Entomology	2
C.E. 43, Telephone Construc- tion	1	Bot. 14, Forest Pathology....	2
For. 7, Forest Management...	3	For. 8, Forest Management..	3
For. 17, Forest Utilization...	3	For. 10, Forest Engineering	3
Soils, 5, Origin and Classifica- tion of Soils.....	2	For. 12, Lumbering.....	3
For. 31, Forest Hist. and Policy	3	For. 22, Thesis	4
For. 33, Forest Economics...	2	For. 32, Grazing Administra- tion	2
For. 51, Adv. Dendrology....	2		
Total	18	Total	19
		Total credits required.....	144

Two seasons' experience a prerequisite to Grazing Assistant Examination.

FORESTRY

Professor MILLER, Assistant Professor BEHRE, Dr. SCHMITZ, Mr. —

1 GENERAL FORESTRY 3 credits First semester

A general course dealing with forestry in its relation to the everyday life of the nation: forest influences, the relation of forestry to transportation, commerce, agriculture and manufacture; measures that must be taken to meet our needs for timber. Two lectures and one laboratory or field period per week.

This course is open to students in other departments, either as a three-credit course, or as a two-credit course without laboratory. (MILLER, SCHMITZ)

2 DENDROLOGY 3 credits Second semester

The object of this course is to enable the student to identify

and classify trees and shrubs in the field. A study is made of the distribution, life history, and principal lumber species in the United States. Various manuals and tree books are available for laboratory, field and class work. The student has access to an arboretum of over 150 species. Two lectures or recitations and one laboratory or field period per week. (SCHMITZ)

4 SILVICULTURE 6 credits Second semester

This course of study covers the following subjects: methods of forest description; influence of site factors upon the forest cover; influence of the forest cover upon climate, stream-flow, soil, and erosion; seed collecting, nursery and planting practice; artificial and natural reproduction and the handling of woodlands as to cutting and improvement. A greenhouse, nursery, and a plantation of 150 species will supplement the field work in our natural forests. Four recitations and two field or laboratory periods per week. Texts: Toumey's *Seeding and Planting in the Practice of Forestry*, and Graves' *Principles of Handling Woodlands*. (SCHMITZ)

5-6 FOREST MENSURATION 3 credits Each semester

The course covers: The various methods of forest measurements such as the measurements of forest products and single trees; timber cruising; growth studies; preparation of yield, volume, and stand tables; form factors; complete stem analysis; method of selecting sample trees and training in making the most useful graphs and charts. Much of this work must be done in the field and complete sets of forest and surveying instruments are available to the student. Graves' *Forest Mensuration* is used as a text-book. Two lectures and one laboratory or field period per week. (BEHRE)

7-8 FOREST MANAGEMENT 3 credits Each semester

A course dealing with the most approved methods of forest administration, forest regulation, forest working plans, forest finance, and forest policies of the various states and the federal government. Special emphasis is placed on forest mathematics with relation to timber taxation and to timber investments and the practice of forestry as business propositions. Two lectures per week. (MILLER)

10 FOREST ENGINEERING 3 credits Second semester

This course deals with the application of the principles of surveying to forest land. The work includes: practice in the forest in using the traverse board and alidade, aneroid barometer, Abney hand level and clinometer, compass, topographic tape, etc.; making topographic maps by the various methods; locating corners; retracing old land lines; meandering; laying out trails and roads; location of logging railroads and laying out railroad curves in

- the forest; practice in commercial methods of timber reconnaissance. One lecture and two field periods per week. (BEHRE)
- 11 FOREST LAW 2 credits First semester
A course dealing with the elements of contracts, and laws relating to public lands and national forests. Special attention is given to the laws applying to grazing, timber cutting, mining, timber claims, leases, homesteads, etc. Two lectures per week.
- 12 LUMBERING 4 credits Second semester
This course includes the organization of logging operations; cutting and transportation methods as driving, rafting, fluming, skidding by horse and steam power, caterpillar tractors and motor trucks; study of saw-mills and logging and mill machinery; the disposition of waste. The whole course is transferred to the field during the latter part of the semester so as to give opportunity for practical work at logging camps and large mills in the vicinity of Moscow. Bryant's *Logging* is used as reference. Four lectures per week. (BEHRE)
- 15 TIMBER PHYSICS 3 credits First semester
A course dealing with the various stresses resisted by structural timbers; the mechanical properties of wood; methods of determining modulus of elasticity, modulus of rupture, specific gravity, toughness, etc.; the relation between moisture and strength; the effects of various preservatives on strength; and the relation between density and strength. Two lectures and one laboratory per week.
- 17 FOREST UTILIZATION 3 credits First semester
The economic uses of the various woods of the United States; manufacture and use of forest products as poles, posts, cross-ties, shingles, fuel wood, veneers and in the minor wood-using industries; the utilization of waste; air and kiln drying of lumber; standard sizes and grades; the organization of the lumber industry; wholesale and retail distribution of lumber and railroad transportation of forest products; domestic and foreign markets for forest products. Three lectures per week. (BEHRE)
- 18 MILL MACHINERY 3 credits Second semester
A course dealing with the machinery found in an up-to-date saw mill, its cost, cost and methods of installation, principal manufactures of standard machines with advantages claimed for various types. Training of men in the use of machinery, handling of saws and methods used in the filing room. A study of dry kilns, their structure and operation. Mill plans and costs of building mills of different capacities. Two lectures per week.
- 19-20 FOREST SEMINAR $\frac{1}{2}$ credit Each semester
Once during each week the entire School of Forestry assembles for the discussion of trade journals and the review of

important bulletins and work relating to forestry. Each student is required, at regular intervals, to contribute papers or reviews. (MILLER)

22 THESIS 4 credits Second semester

Each student before graduation must prepare a thesis on some phase of forestry work. This usually covers some practical work which the student has performed either in the field or in some of the laboratory courses.

26 ADVANCED TIMBER PHYSICS

Credits *pro merito*

Second semester

This course is a continuation of 15. It includes a study of the most approved methods of wood processing by means of heat, steam, and various impregnating media. The forest laboratories are now well equipped, and students may become familiar with the machinery and methods of operating the same necessary for successfully conducting this work. This course is expected to develop along original lines. Open only to those students who are candidates for advanced degrees.

28 ADVANCED FOREST MANAGEMENT

Credits *pro merito*

Second semester

An advanced course in practical forest management. A tract of virgin forest will be assigned to each student for which he will be expected to work out a plan of management. A detailed topographical survey, timber cruise, and growth studies will be required and a general and detailed plan of regulations and management made as to administration, protection, improvement, cutting, planning, logging, etc., based upon the most profitable rotation and methods. (MILLER)

29-30 GRAZING 3 credits

Each semester

The course includes a history of the grazing industry in this country. A study of the principal ranges with their chief grasses, herbs, shrubs, etc., and the poisonous plants of the West. Range problems, such as determining the carrying capacity of the ranges, proper rotation, a study of brands, marks, etc., are taken up; also methods of making allotments for various kinds of stock on the range. Two lectures and one laboratory period per week. (Mr. ———)

31 FOREST HISTORY AND POLICY 3 credits

Second semester

The history of forestry in foreign countries; the forestry movement in the United States; development of forest policies by different states and a study of the different state forest laws and organizations; forest taxation laws in the different states. Fernow's *History of Forestry* is used as a text for the first part of the course. Three lectures per week. (BEHRE)

32 GRAZING ADMINISTRATION 2 credits

Second semester

This course is designed to prepare young men properly to

conduct the office work connected with the business of grazing. It includes a study of all forms, blanks, contracts, and regulations used by forest service officials in dealing with their permittees. The U. S. F. Grazing Manual is also freely drawn upon for information bearing on this subject. Two lectures per week.
(Mr. ———)

- 33 FOREST ECONOMICS 2 credits First semester
A course dealing with the economic value and benefits of forests, the results of abuse of forest resources, the requirements of our nation for forest products, the relation of the forest problem to the different industries of the country, the forest resources of the United States and the results which must be accomplished to meet the needs of the country. Two lectures per week. (BEHRE)
- 34 TIMBER LAW 3 credits Second semester
This course consists of a series of lectures covering the essentials of American timber law. It includes such subjects as the classification of property, trees and timber as property, the doctrine of waste as applied to timber, timber trespass, contracts relating to the sale of timber, logs, and other timber products, timber transfers, transportation and the laws governing damage done to timber by fire or other agencies. Three lectures per week. (MILLER)
- 36 RANGE MANAGEMENT 2 credits Second semester
This course treats the technical methods employed by the Forest Service in managing the western grazing grounds. It includes the methods of handling all kinds of live stock on the range, water development, eradication of poisonous plants, methods of regeneration of the range, etc., and the lines of research work which are known to be most effective in securing accurate data needed for such management. Two lectures per week.
(Mr. ———)
- 38 FOREST PROTECTION 3 credits Second semester
This course deals with the methods of protecting the forest and includes a study of the damages caused by insects, fungi, the natural elements and animals; wasteful and injurious methods practiced by man; the ravages of fire, and the various methods of combating these enemies. Two lectures per week. (BEHRE)
- 41 WOOD TECHNOLOGY 4 credits Second semester
A course dealing with the identification, structural, physical, mechanical and chemical properties of wood; the moisture content, density, swelling, warping and shrinkage of wood; color, grain and texture; the importance and various methods of seasoning. Two lectures or quizzes and one laboratory period per week. Text: *Record's Economic Woods of the United States*. (SCHMITZ)

42 FARM FORESTRY 2 credits Second semester

The relation of forestry to agriculture; the establishment of farm woodlots and windbreaks—what, when, where, and how to plant. Especial emphasis is placed upon the value of windbreaks in the treeless belts. Ornamental planting, and the preservative treatment of farm timbers are other topics considered. Open to students in other departments. (MILLER)

50 WOOD PRESERVATION 2 credits Second semester

The relation between the structural, physical, and chemical properties of wood and durability are considered; the causes of decay; the various methods and theories of preservation; the fire proofing of wood; and the prevention of sap stain. Two recitations per week. Texts: Weiss' *Preservation of Structural Timber* and collateral reading. (SCHMITZ)

51 ADVANCED DENDROLOGY 2 credits First semester

An intensive taxonomic and biologic study is made of the forest trees of the United States. Attention is also given to the principles of nomenclature and to the relative merits of the different "Codes". One lecture or recitation and one laboratory or field trip per week. Text: Sargent's *Manual of the Trees of North America*. (SCHMITZ)

53 FOREST BY-PRODUCTS 3 credits First semester

A course dealing with the chemistry of cellulose; the various processes of the manufacture of paper, viscose, artificial silk, cellulose acetate, etc. The tanning industry, naval stores, maple sugar and the minor forest products are also dealt with. Two lectures or quizzes and one laboratory per week. Text: Brown's *Forest Products*.

Correspondence Course

43 LUMBER AND ITS USES

This is a course offered by correspondence. It deals with the structure of wood; physical properties of wood; identification of the leading commercial species; standard grades and sizes; structural timbers; seasoning and preservation of timber; paints and stains; lumber production; lumber prices; selection and use of wood materials. A prospectus will be sent on request.

Forest Craft

Thruout the entire course the students are taught the ways of woodsmen, such as taking natural trail observations, observing game signs, orientation at night or on cloudy or smoky days, packing, cooking, making and breaking camp, care of horses, camp equipment, care of health, and means of protection against wild animals, insects, and fire; also methods of camping and sleeping in deep snow,

first aid to the injured, and simple remedies for colds and other ailments.

RANGER COURSE

First Term, Nov. 1 to Dec. 18; Second Term, Jan. 3 to March 21

Beginning the year of 1920-21 the Ranger Course will be offered as a two-year curriculum instead of a three-year curriculum as hitherto. This change is made because it has been found that the majority of the students taking advantage of the course cannot remain for a longer time. However, the revised curriculum does not omit any of the essential forestry subjects, and still provides for good fundamental courses in English, botany, and mathematics. It also admits of several electives.

The curriculum as now organized covers two years of five months each, and is given at a time of the year when students can best get away from their regular work. Where at all possible, students should enter the second term of the first year, as a complete schedule of new courses start at that time. The course is of high-school grade, hence any able-bodied man with the equivalent of an eighth-grade preparation is eligible for entrance. High-school training is highly desirable, but not absolutely essential.

The work consists of laboratory and field exercises and lectures by the Forestry faculty, Forest Service officials, lumbermen, and others. Much benefit may be derived by taking a single year or even a single term's work. Those who cannot remain thruout the two years are given all the freedom possible in choosing the subjects in which they wish to specialize. If the entire two years' work is completed, a certificate of graduation will be issued. The subjects offered are:

FIRST YEAR

FIRST TERM		SECOND TERM	
Course	Credits	Course	Credits
English Composition	4	English Composition	4
Plant Life (Botany)	4	Forest Engineering	3
Drafting and Lettering	2	Silviculture	3
Range Grasses or		Forest Mensuration	3
Mathematics	2	Telephone Construction	1
General Forestry	3	Forest Administration	3
Dendrology	3	Animal Life of the Forest ..	1
Electives	2	First Aid to the Injured	1/2
		Elective	2
Total	26	Total	20 1/2

SECOND YEAR

FIRST TERM		SECOND TERM	
Course	Credits	Course	Credits
Forest Utilization	3	Lumbering	4
Forest Grazing	3	Animal Husbandry	1
Forest Management	3	Veterinary Science	2
Wood Technology	3	Forest Engineering	3
Drafting and Lettering	2	Forest Protection	3
Electives	6	Cost Accounting	2
		Electives	5
Total	20	Total	20

ELECTIVES

FIRST TERM		SECOND TERM	
Market Types of Livestock..	4	Live Stock Management	4
Rural Economics	2	Rural Economics	2
Rural Sociology	2	Rural Sociology	2
English III	4	English IV	4
Stock Judging III	4	Plant Life (Botany)	4

Descriptive Courses

- ENGLISH COMPOSITION** 4 credits Either term
 Drill work in sentence structure, capitalization, and punctuation; weekly themes and letter writing; also practice in outlining and writing reports.
- PLANT LIFE** 3 credits First term
 This is a brief course in elementary botany, dealing with the nature of the plant and its growth. The course furnishes a background to the courses in dendrology and silviculture.
- DRAFTING AND LETTERING** First term, each year
 In the first year the student is given practice in lettering, use of drafting tools and drafting methods and problems in orthographic projection. In the second year the student is given exercises in constructing and reading working drawings and blueprints and drawing of timber structures. Two periods per week. (BEHRE)
- RANGE GRASSES** 2 credits First term
 This course includes the distribution and relative forage value of the principal range grasses, and the means of identifying them. (Mr. ———)
- MATHEMATICS** 2 credits First term
 A brief elementary course as a basis for the courses in surveying and forest engineering.
- GENERAL FORESTRY** 3 credits First term
 A general course dealing with forestry in its relation to the economic life of the state. (MILLER)
- DENDROLOGY** 3 credits Either term
 A course primarily designed to meet the requirements of men not having had previous training in botany. Only the more simple characters by which the local trees may be recognized will be considered. Two lectures or recitations and one laboratory period per week. (SCHMITZ)
- FOREST ENGINEERING** 3 credits Second term, each year
 A course covering the methods of forest surveying, including the use of traverse board, Abney hand level and clinometer, compass, topographic maps; locating corners and retracing old land lines. One lecture and two field or office periods per week. (BEHRE)
- FOREST MENSURATION** 3 credits Second term
 This course includes scaling and the measurement of forest

products and single trees, timber cruising, growth studies, the preparation of volume and yield tables and training in making the most useful graphs and charts. Two lectures and one laboratory or field period per week. (BEHRE)

SILVICULTURE 3 credits

Second term

A special course dealing with the practice of silviculture, artificial regeneration including and planting practice; natural reproduction including the handling of woodlands as to cutting and improvement will receive particular emphasis. Methods of forest description, the influence of site factors and forest types will be covered in the field work. Two lectures and one laboratory period per week.

VETERINARY SCIENCE 2 credits

Second term

A course designed to give such instruction as will meet the needs of stockmen in handling common diseases of animals or performing simple surgical operations. The minor ailments met with every few days are given special attention and specific directions given as to the treatment.

ANIMAL HUSBANDRY 1 credit

Second term

This course is intended to assist the men in acquiring a practical knowledge of the stock business. Feeds and feeding, breeding, care, and management of live stock are considered. Stock judging. (HICKMAN)

FOREST UTILIZATION 3 credits

First term

A course dealing with the economic uses of the various woods of the United States; the manufacture and use of forest products, as poles, posts, cross ties, shingles, fuelwood, veneers and in the minor wood using industries; air and kiln drying of lumber; standard sizes and grades; marketing and railroad transportation of forest products. (BEHRE)

FOREST GRAZING 3 credits

First term

History of the grazing industry; range problems; methods of making allotments. (Mr. ———)

FOREST MANAGEMENT 3 credits

First term

Principles of compound interest as applied to standing timber; methods of ascertaining the value of the forest at different ages; plans of management for continuous revenue; timber scales. (MILLER)

WOOD TECHNOLOGY 3 credits

First term

This course deals with the characteristics of wood by means of which the various important species can be recognized. The lectures and recitations will also cover the physical properties of wood, seasoning, preservation, and fireproofing. Two lectures and one laboratory period per week. (SCHMITZ)

LUMBERING 4 credits

Second term

This course deals with the various operations in logging; transportation methods as driving, rafting, fluming, skidding by animal and steam power, caterpillar tractors, and motor trucks; and a study of sawmills and logging and mill machinery. Four lectures per week. (BEHRE)

FOREST ADMINISTRATION 3 credits

Second term

Organization of the Forest Service; regulations governing the uses of the forest; improvement work; uses of forms; supervision of work. (MILLER and Forest Service Officials)

FOREST PROTECTION 3 credits

Second term

A study of the damage to forests caused by insects, fungi, animals, the natural elements and fire and the various methods of combating these enemies. Two lectures per week. (BEHRE)

ANIMAL LIFE OF THE FOREST 1 credit

Second term

Typical forest animals, their habits and economic relations.

FIRST AID TO THE INJURED

What to do in case of accidents, and the use of simple remedies.

For Whom Intended

The Ranger Course is designed to meet the needs of rangers and guards wishing to prepare themselves for more rapid advancement; for young men planning to take the civil service examination for the position of forest ranger in the U. S. Forest Service; also for men connected with some phase of the timber industry who wish to acquire a knowledge of the general principles of forestry, but who cannot spare the time for a fuller course.

Facilities and Equipment

Every facility of the School of Forestry is offered to short-course students just as fully as to the students of the long course. The equipment for handling the work is complete and up to date. Those wishing to specialize in grazing will find unusual opportunity to study the leading types of animals at the University Farm.

Expenses

A. S. U. I. fee, \$7.00; laboratory fees, \$5.00; books, drawing instruments, etc., \$20.00; board and room, \$30.00 to \$35.00 per month. To the above should be added items for laundry and incidentals, which will vary according to the habit and tastes of the student. The total expense for the five months exclusive of the cost of travel, need not exceed \$225 to \$250.

PART IX.

THE AGRICULTURAL EXPERIMENT
STATION

THE AGRICULTURAL EXPERIMENT STATION

OBJECTS

In compliance with an enabling act of Congress approved March 2, 1887, the Idaho Agricultural Experiment Station became an integral part of the State University at the time of its organization. That act, commonly known as the Hatch Act, defines the scope and activities of state experiment stations as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches, or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantage of rotative cropping as pursued in a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaption and value of grasses and forage plants; the composition and digestibility of different kinds of foods for domestic animals; the scientific and economic questions in the production of butter and cheese; and such researches or experiments bearing directly on the agricultural industry in the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories."

The Adams Act, approved March 16, 1906, has now doubled the original federal funds available for experimentation and research. The Hatch Act made possible the beginning of scientific investigation of problems peculiar to Idaho's agriculture; the Adams Act expressly sanctions and encourages original research along agricultural lines. These federal funds are supplemented by state appropriations for the investigation of special problems and for the maintenance of Substation farms where some of the work can be most advantageously carried on. During the present biennium funds have been available for the work of the Experiment Station, derived as follows: Federal appropriation, \$60,000, State appropriation, \$79,000.

ORGANIZATION AND WORK

The organization of the Experiment Station is practically the same as that which prevails in the College of Agriculture. Under the general supervision of a director, the work of investigation is carried on by departments, of which there are twelve at the present time, viz: Agricultural Engineering, Animal Husbandry, Bacteriology, Chemistry, Dairying, Zoology and Entomology, Farm Crops, Horticulture, Plant Pathology, Plant Physiology, Poultry Husbandry, and Soils. Each department has a broad conception of its duties and influence and is

pushing actively the work it has inaugurated for the ultimate benefit of the agricultural industry it represents. Some of the most important lines of investigation in progress are: Feeding experiments with sheep, hogs, and dairy cattle; examination of feeds; a study of the bacterial flora of the cut-over and burned-over lands; experiment for the control of insect pests; investigations of the chemical properties and productive possibilities of the timber soils; variety tests of wheat, oats, barley, peas, and potatoes; a test of soiling crops; experiments in the duty of water; an investigation of alkali soils; factors affecting the elaboration of protein in the wheat kernel; utilization of by-products in fruit and vegetable growing; fruit storage; cabbage culture; spraying and pruning experiments; variety tests in vegetable growing; relation of soil moisture to smut control, and feeds for egg production. Seventy separate projects represent the activity of the Experiment Station staff at this time. The general administration of the pure seed law is entrusted to the Director of the Experiment Station. The actual enforcement of the law, however, is delegated to a Pure Seed Commissioner who has established a laboratory in the State House at Boise with a branch laboratory on the University Campus at Moscow.

LABORATORIES AND OTHER FACILITIES

The departments of Bacteriology, Chemistry, Horticulture, Plant Pathology, and Soils have well equipped research laboratories in Morrill Hall. The entomological laboratories are in the Administration Building. At the foot of the campus greenhouse facilities are provided for such lines of investigation as require them. The college farm of three hundred and eighty-five acres supports splendid herds of beef and dairy cattle, hogs, and sheep, from which individual animals are selected for experimental feeding purposes. This farm also provides experimental fields of ample dimensions for the use of the departments of Farm Crops, Chemistry, Horticulture, and Soils, and breeding-pens for the department of Poultry Husbandry.

Farming conditions within the state are so varied that it is necessary to conduct many lines of investigation away from the central station. The sub-station farms are admirably located for this purpose. On the Sandpoint farm experiments designed to point the way to the profitable utilization of the cut-over and burned-over lands are in progress. The farm at Aberdeen is used for experiments in irrigation farming. The Caldwell sub-station supports a dairy herd and other live stock and is used for investigations and diversified farming. A feeding plant erected there in 1919 provides for 144 head of cattle and from 700 to 1000 head of sheep. The farm at Jerome is given over to the investigation of potato and seed production. The High Altitude Sub-station at Felt is established for the conduct of experiments in the growing of grains and grasses which give promise of adapta-

UNIVERSITY EXTENSION

At present the work of the University Extension Division is devoted mainly to service in Agricultural Extension.

AGRICULTURAL EXTENSION

For many years the College of Agriculture of the University has rendered service to the farmers of the state thru farmers' institutes, judging at fairs, answering of letters of inquiry upon topics of interest to the farmer, and thru special meetings held in widely separated portions of the state.

Extension work, in the way that it is known today, is largely an outgrowth of the Smith-Lever Act of Congress, approved May 8, 1914. With the aid of federal funds supplied by the terms of this act and special appropriations of the state, the Extension Division has made, within the last three years, a most remarkable growth.

General administration of extension work in Idaho is in charge of the Director of Extension. The offices of the Extension Division are at Boise. The County Agricultural Agents, numbering thirty-four, work thru the Farm Bureaus in the various counties. General supervision of the County Agents is entrusted to a County Agent Leader and three Assistant County Agent Leaders. Home Demonstration Agents, numbering twelve, are supervised by a State Leader and an Assistant State Leader. The State Leader and Assistant Leader of Boys' and Girls' Clubs direct the club work of the state, which is most strongly organized in those counties employing a permanent club leader. Fourteen counties have all-year-round club leaders. Field specialists carry on carefully outlined projects of work largely thru the County Agents and the various Farm Bureaus, in horticulture, entomology, farm management, animal husbandry, dairying, agronomy, analysis and improvement of soils, and pure seed production.

Members of the extension staff are the field representatives of the University of Idaho. They are constantly working in the rural communities, assisting in every possible way in the agricultural development and home improvement. Thru the Agricultural Extension service the work of the University of Idaho has become state-wide, and this service is rendered by the institution not only to those near at hand, but also to those sections of the state farthest removed from the campus.

PART XI.

THE SUMMER SESSION

PART XII.

ALUMNI ORGANIZATION

DEGREES CONFERRED

HONOR LIST

BATTALION ORGANIZATION

THE ALUMNI ASSOCIATION

OFFICERS

President.....A. B. Weidel Kjösness, '13, *Moscow*
 First Vice-President.....Guy Wolfe, '99, *Moscow*
 Second Vice-President.....Peninah Newlin, '15, *Moscow*
 Third Vice-President.....J. Henry Christ, '19, *Ames, Ia.*
 Secretary-Treasurer.....Esther Thomas, '19, *Sugar City*

EXECUTIVE COMMITTEE

T. D. Matthews, '07, *Moscow* Belle Willis, '18, *Moscow*
 Mrs. Gertrude Hulme, '03, *Moscow* G. P. Mix, '01, *Moscow*

MEMORIAL COMMITTEE

George Horton, '06, *Moscow* T. D. Matthews, '07, *Moscow*
 Lillian Skattaboe, '05, *Moscow* Mrs. Gertrude Hulme, '03, *Moscow*
 Homer David, '01, *Moscow*

Dues to Alumni Association, including subscription to "The University Argonaut," \$2.00 per year.

DEGREES CONFERRED IN JUNE, 1919

Commencement Address

AURELIA HENRY REINHARDT, Ph.D.
 President of Mills College
 Subject: "College and Commonwealth"

BACCALAUREATE DEGREES

College of Letters and Science

BACHELOR OF ARTS

Glenna Bernadine Adair	Erma Gladys Duthie
John Quincy Biggs	Anna Augusta Glindemann
Bernice Marie Bowers	Andrew Markhus
Angelina Bradley Burns	Kathryn Belle McCormack
Ruth Chapman	Camille McDaniel
Norma Helen Dow	Preston Adelbert Richmond
Walter Edward Sandelius	

BACHELOR OF ARTS IN EDUCATION

Marie Caroline Freehafer	Thekla Beck
Elsa Nina Voss	

BACHELOR OF SCIENCE

Meryl Byron Dunkle	J. Hollis McCrea
Howard Lancing Hatfield	Ronald Curtis Romig
Julia Annette McCallie	Earl Baxter Smith
Frank Heinrich Thomas	

BACHELOR OF SCIENCE IN HOME ECONOMICS

Helga Marie Anderson	Effie Idaho Swanson
Cora Mae Jones	Esther Elizabeth Thomas
Pearl Morgan	Ruth Alice York

College of Agriculture

BACHELOR OF SCIENCE IN AGRICULTURE

Oliver Harold Campbell	John Henry Christ
Arthur Carlisle Horning	

College of Engineering

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Edwin Grosvenor Nettleton

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Victor Emmanuel Pearson

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Leonard Helland

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

John Arthur Almquist

College of Law

BACHELOR OF LAWS

Alvin Denman	Richard B. Ott
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School of Forestry

BACHELOR OF SCIENCE IN FORESTRY

Edwin Clare Rettig	Tom Jackson
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HONOR LIST, AUGUST, 1919

For the conditions upon which honors are awarded, see page 61.
Names are arranged in alphabetical order in each group. Only students carrying at least twelve credits each semester are eligible for the Honor List.

FINAL HONORS, CLASS OF 1919**Highest Honors**

Glenna Bernadine Adair, B.A., *Moscow*
John Arthur Almquist, B.S.(CHEM.E.), *Moscow*
Ruth Chapman, B.A., *Colfax, Wash.*
Walter Edward Sandelius, B.A., *Moscow*

High Honors

Helga Marie Anderson, B.S.(H.Ec.), *Boise*
Angelina Bradley Burns, B.A., *Boise*

Marie Caroline Freehafer, B.A.(Ed.), *Boise*
 Cora Mae Jones, B.S.(H.Ec.), *Portland, Ore.*
 Edwin Grosvenor Nettleton, B.S.(C.E.), *Nampa*
 Ruth Alice York, B.S.(H.Ec.), *Boise*

High Honors

John Quincy Biggs, B.A., *Moscow*
 John Henry Christ, B.S.(Agr.), *Coeur d'Alene*
 Alvin Denman, LL.B., *Des Moines, Ia.*
 Erma Gladys Duthie, B.A., *Troy*
 Anna Glindemann, B.A., *Coeur d'Alene*
 Howard Lancing Hatfield, B.S., *Moscow*
 J. Hollis McCrea, B.S., *Sandpoint*
 Pearl Morgan, B.S.(H.Ec.), *Boise*
 Preston Adelbert Richmond, B.A., *Orofino*
 Esther Elizabeth Thomas, B.S.(H.Ec.), *Moscow*
 Frank Heinrich Thomas, B.S., *Moscow*

BATTALION ORGANIZATION

Commandant

Colonel EDWARD R. CHRISMAN, Infantry, U. S. Army
 Assistants, Sergeant EUGENE NAGELE, Infantry; Sergeant THOMAS
 F. WELDON, Infantry.

Cadet Commissioned Staff

ARTHUR R. THOMPSON, *Cadet Major Commanding Battalion*;
 EDWIN D. PETERSON, *Captain and Adjutant*; Captain RALPH O. SMITH,
Quartermaster.

Cadet Non-Commissioned Staff

HARRY AMUNDSEN, *Sergeant Major*; JOHN T. MCGOVERN, J. M.
 WHITCOMB, *Color Sergeants.*

Band

EDWIN D. PETERSON, *Captain*; BERNT NEILSEN, *Chief Musician and
 Leader*; RALPH I. GLASGOW, *Drum Major*; HOMER H. LIPPS, *Principal
 Musician*; J. GIPSON STALKER, *Sergeant Bugler.*

S. W. ROBINSON, V. B. WALTERS, H. L. BRADLEY, J. W. NICKEL,
Corporals.

Company A

OFFICERS

HOWARD W. STAPLES, *Captain*; THURLYN H. SHRONTZ, *1st Lieuten-
 ant*; JOHN P. DRISSEN, *2nd Lieutenant.*

NON-COMMISSIONED OFFICERS

ABE GOFF, *1st Sergeant*; A. YAGGY, R. M. PARSONS, F. MURPHY,
L. E. BRENNEMAN, *Sergeants*; R. W. KULLBERG, J. A. BROWN, L. CADY,
V. T. PATCH, H. L. TORSER, H. I. MELICK, *Corporals*.

Company B

OFFICERS

LEON PERRINE, *Captain*; CARL A. BURKE, *1st Lieutenant*; PAUL T.
ROWELL, *2nd Lieutenant*.

NON-COMMISSIONED OFFICERS

J. F. CHOD, *1st Sergeant*; A. H. KNUDSON, T. E. SPEEDY, F. N.
HOLLAND, J. R. BURBIDGE, *Sergeants*; L. W. THOMPSON, D. PATTEN,
V. MILLER, M. THOMETZ, O. R. WEAVER, R. A. FOX, *Corporals*.

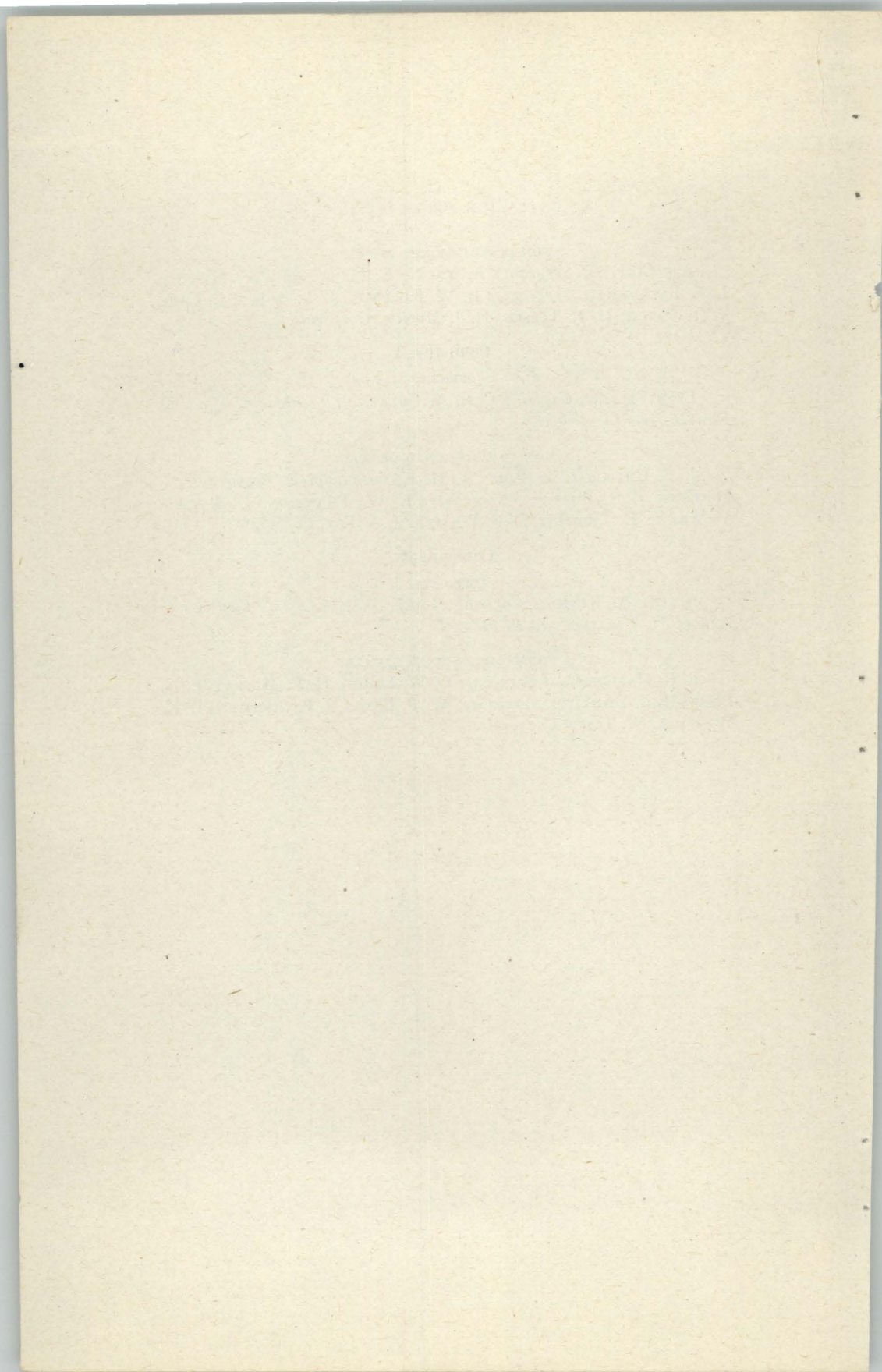
Company C

OFFICERS

ALFRED A. KINNEY, *Captain*; JOHN F. CLINE, *1st Lieutenant*;
ARNOLD H. HALLING, *2nd Lieutenant*.

NON-COMMISSIONED OFFICERS

E. R. HASTINGS, *1st Sergeant*; O. W. LEMON, H. E. MURRAY, F. A.
BROWN, S. I. PHILLIPPI, *Sergeants*, W. P. EATON, I. PACKENHAM, L. K.
WHITTIER, W. TOEVS, *Corporals*.



PART XIII.

LIST OF STUDENTS
SUMMARY OF STUDENTS
GEOGRAPHICAL DISTRIBUTION OF
STUDENTS
INDEX

LIST OF STUDENTS

GRADUATE STUDENTS

NAME	MAJOR	RESIDENCE
Beimfohr, Mary Fogle B.S., University of Idaho, 1904.	<i>English</i>	Aberdeen, Wash.
Boder, Francis Johnston B.S., Pennsylvania State College, 1919.	<i>Agriculture</i>	Pittsburgh, Pa.
Darrah, Alice Hartley B.A., University of Idaho, 1917.	<i>Home Economics</i>	Emmett
Dingle, William Bertram LL.B., University of Idaho, 1917.	<i>Economics</i>	Coeur d'Alene
Elder, Robert Baxter E.Met., Colorado School of Mines, 1908.	<i>Metallurgy</i>	Berkeley, Cal.
Eller, Willard Henry B.S. (E.E.), University of California, 1914.	<i>Physics</i>	Moscow
Gerlough, Tillman Daniel B.S., University of Idaho, 1917.	<i>Chemistry</i>	Moscow
Ingersoll, Julia Day M.S., University of Wisconsin, 1919.	<i>Italian</i>	Denver, Colo.
Kjösness, Madge Whistler Ph.B., Iowa Wesleyan College, 1911.	<i>English</i>	Moscow
Moore, Edmond Eugene B.S., Worcester Polytechnic Institute, 1918.	<i>Chemistry</i>	Ware, Mass.
Palmer, Grace Margaret Ph.B., University of Chicago, 1915.	<i>English</i>	Eureka, Kans.
Piper, Arthur Maine B.S. (Chem.E.), Tufts College, 1919.	<i>Metallurgy</i>	Medford Hillside, Mass.
Vance, Lulu Emily B.S., University of California, 1914.	<i>Bacteriology</i>	Boise
Ver Steeg, Carl S.B., University of Chicago, 1914.	<i>Geology</i>	Moscow
Graduate Students, 14		

SENIORS (Class of 1920)

NAME	CURRICULUM	RESIDENCE
Agee, Ray	<i>Law</i>	Kamiah
Ashton, Nora	<i>Arts</i>	Boise
Atwood, Arden Pittman	<i>Law</i>	Grangeville
Badger, Eula	<i>Arts</i>	Nampa
Barber, James Warren	<i>Agriculture</i>	Emmett
Beckwith, Robert William	<i>Law</i>	Montpelier
Bedwell, Jesse Leonard	<i>Forestry</i>	Council
Blomquist, Ruth Othelia	<i>Home Economics</i>	Shelley
Breshears, Ralph Raymond	<i>Law</i>	Caldwell
Brownell, Helena Maxwell	<i>Arts</i>	Moscow
Byrns, Margaret Ely	<i>Arts</i>	Moscow
Byrns, Marion Louise	<i>Arts</i>	Moscow
Campbell, Eugene Broderick	<i>Agriculture</i>	Bonniers Ferry
Carlson, Carl	<i>Arts</i>	Lewiston
Carlson, Gustav Adolph	<i>Arts</i>	Lewiston

NAME	CURRICULUM	RESIDENCE
Clements, Verner Reed	<i>Law</i>	Boise
Collins, Kenneth Heath	<i>Science</i>	Moscow
Denecke, William Ascan	<i>Agriculture</i>	Richfield
Eagleson, Donald Hale	<i>Agriculture</i>	Boise
Erb, Frederick Charles	<i>Law</i>	Boise
Fleming, Mary Evangeline	<i>Arts</i>	Burke
French, Mildred Pearl	<i>Home Economics</i>	Boise
Gray, Charles Chester	<i>Agriculture</i>	Genesee
Hall, La Dessa	<i>Arts</i>	Moscow
Herington, Wilfred Leslie B.S., University of Idaho, 1908.	<i>Agriculture</i>	Moscow
Horton, Kathleen Magee	<i>Arts</i>	Moscow
Johnson, Ambrose Wilford	<i>Agriculture</i>	Idaho Falls
Jones, John Roscoe	<i>Arts</i>	Potlatch
Keane, Francis Clayton	<i>Law</i>	Moscow
King, Henry Royal	<i>Civil</i>	Nampa
Largent, Ira Elmore	<i>Agriculture</i>	Nampa
Largent, Ralph Newton	<i>Agriculture</i>	Nampa
Lindley, Ernest Kidder	<i>Arts</i>	Moscow
Lyon, Alfred Jefferson	<i>Science</i>	Tippecanoe City, Ohio
McClure, William Robertson	<i>Law</i>	Council
McDevitt, Bernard Aloysius	<i>Law</i>	Burke
McKenna, Mary	<i>Arts</i>	Spokane, Wash.
Morris, Lew Everett	<i>Arts</i>	Moscow
Mow, Susie Elode	<i>Science</i>	Moscow
Nettleton, Sarah	<i>Home Economics</i>	Nampa
Newland, William Kenneth	<i>Arts</i>	Elk River
Oberhansly, Verne	<i>Agriculture</i>	Spokane, Wash.
Oliver, Verl Catherin	<i>Arts</i>	Orofino
Owings, Walter Leon	<i>Agriculture</i>	Moscow
Pechanec, Sylvena Clara	<i>Home Economics</i>	Caldwell
Pechanec, William Earl	<i>Agriculture</i>	Caldwell
Peck, Rupert Leroy	<i>Arts</i>	Troy
Perrine, Leon	<i>Agriculture</i>	Nezperce
Plastino, Felix Anthony	<i>Agriculture</i>	Roberts
Poe, Ernest Winfred	<i>Arts</i>	Moscow
Raney, Chase Washington	<i>Agriculture</i>	St. Maries
Reed, Manilla	<i>Home Economics</i>	Boise
Reierson, Richard Stone	<i>Agriculture</i>	Troy
Scott, Ruth Miriam	<i>Home Economics</i>	Moscow
Smith, Ralph Orace	<i>Arts</i>	Leland
Staples, Howard William	<i>Forestry</i>	Moscow
Stillinger, Otto Rudolph	<i>Law</i>	Moscow
Taggart, Gail Hamilton	<i>Arts</i>	Hay, Wash.
Taylor, Leon B.	<i>Agriculture</i>	Buhl

NAME	CURRICULUM	RESIDENCE
Thomas, Edith Blessing	<i>B.A.(Education)</i>	White Sulphur Springs, Mont.
Thompson, Arthur Roy	<i>Civil</i>	Boise
Warren, Charles Stuart	<i>Agriculture</i>	Moscow
Wehr, Fred Merl	<i>Agriculture</i>	Star
Westover, Richard Melvin	<i>Science</i>	Moscow
Yost, Leonard Joseph	<i>Mechanical</i>	Moscow
		Seniors, 65

JUNIORS (Class of 1921)

NAME	CURRICULUM	RESIDENCE
Amundsen, Harry	<i>Arts</i>	Pocatello
Anderson, Marie Elizabeth	<i>Arts</i>	Moscow
Babcock, Ethel	<i>Home Economics</i>	Coeur d'Alene
Bauer, Margaret Florence	<i>Arts</i>	Boise
Bessee, Alice Williams	<i>Arts</i>	Moscow
Blackinger, Frank Joseph, Jr.	<i>Science</i>	Boise
Borell, Lar Vern Inez	<i>Arts</i>	Rathdrum
Bowers, Russell Dodge	<i>Mining</i>	Kellogg
Brennan, Fleeta	<i>Arts</i>	San Francisco, Cal.
Brigham, Boyd Lyscum	<i>Agriculture</i>	Genesee
Brown, Mary Ernestine	<i>Arts</i>	Moscow
Buescher, Leo Henry	<i>Arts</i>	Clarkston, Wash.
Burgher, Charles Clifford	<i>Mining</i>	Rupert
Burke, Carl Alfred	<i>Law</i>	Star
Butler, William Cook	<i>Civil</i>	Atlanta
Campbell, Howard Lee	<i>Arts</i>	Moscow
Carder, William Henry	<i>Science</i>	Moscow
Chrisman, Ord Gariche	<i>Arts</i>	Moscow
Chubbuck, Marian Ingalls	<i>Arts</i>	Blackfoot
Clark, Jeannette DeArmond	<i>Arts</i>	Meridian
Clark, Mary Lella	<i>B.A.(Education)</i>	Moscow
Clarke, Gladys Louise	<i>Home Economics</i>	Spokane, Wash.
Cline, John Frederick	<i>Agriculture</i>	Moscow
Cornelison, Bernice May	<i>Science</i>	Moscow
Cornelison, Boyde Wallace	<i>Arts</i>	Moscow
Cossitt, Floyd Morgan	<i>Forestry</i>	Council
Darling, Charles Hamilton	<i>Law</i>	Boise
Davis, Gertrude Greiner	<i>Arts</i>	Moscow
Davis, Lucie Helen	<i>Arts</i>	Boise
Dermott, Helen Virginia	<i>Home Economics</i>	Moscow
Dingle, Edith Mae	<i>Arts</i>	Coeur d'Alene
Drissen, John Philip	<i>Forestry</i>	Harrison
Eberle, Herbert Henry	<i>Agriculture</i>	Boise
Edgecomb, Alice	<i>Arts</i>	Wallace

NAME	CURRICULUM	RESIDENCE
Elliott, Lenora Inez	<i>Science</i>	Moscow
Ensign, Harriet Elizabeth	<i>Arts</i>	Clarion, Ia.
Erickson, Frank Morton, Jr.	<i>Science</i>	Moscow
Evans, Grover Cleveland	<i>Agriculture</i>	American Falls
Evans, John Paul	<i>Agriculture</i>	American Falls
Fanning, Margaret Hannah	<i>Arts</i>	Moscow
Felton, James Henry	<i>Law</i>	Troy
Felton, Russell Byron	<i>Civil</i>	Troy
Foran, Edwin Vincent	<i>Mining</i>	Seattle, Wash.
Fox, James Henry	<i>Agriculture</i>	Moscow
Frantz, Helen	<i>Arts</i>	Moscow
Gano, Myrtle Loraine	<i>Arts</i>	Moscow
Gerlough, Charles Wilding	<i>Arts</i>	Moscow
Gerrard, Paul Henry	<i>Forestry</i>	Vancouver, B. C.
Gowen, Justin Byron	<i>Mining</i>	Caldwell
Graf, Fred Edward	<i>Law</i>	Coeur d'Alene
Green, Paul Floyd	<i>Arts</i>	Creswell, Ore.
Hadley, Pearl Snyder	<i>Home Economics</i>	Orofino
Harsch, Raymond	<i>Civil</i>	Washington, D. C.
Herr, Clarence Klehn	<i>Electrical</i>	Priest River
Hibbard, Clarence Robert	<i>Law</i>	Wallace
Hinchliff, Paul	<i>Agriculture</i>	New Plymouth
Hosier, Harmon Eugene	<i>Law</i>	Weiser
Howard, Nelson Jacob	<i>Science</i>	Pocatello
Hunter, Kenneth Melrose	<i>Mining</i>	Coeur d'Alene
Irving, Robert Neil	<i>Agriculture</i>	Rupert
Jacobson, Ralph Severt	<i>Civil</i>	Spokane, Wash.
Johannesen, Robert Eastnor	<i>Science</i>	Rupert
Johnson, Reuben Fredrick	<i>Agriculture</i>	Idaho Falls
Jones, Mercedes	<i>Arts</i>	Portland, Ore.
Junge, Katheryn	<i>Home Economics</i>	Moscow
Kendall, Jean Ingelow	<i>Arts</i>	Spokane, Wash.
Kinney, Alfred Adolphus	<i>Arts</i>	Nampa
Kitch, Antoinette Schott	<i>Arts</i>	Troy
Kitch, Loran Woodworth	<i>Agriculture</i>	Troy
Knudson, Emery Thomas	<i>Law</i>	Coeur d'Alene
Langroise, William Henry	<i>Law</i>	Emmett
Laws, Bernice Brockman	<i>Arts</i>	Coeur d'Alene
LeClair, Titus George	<i>Electrical</i>	Lewiston
MacRae, Kathryn Gladys	<i>Arts</i>	Dinuba, Cal.
McCallie, Walter Horton	<i>Mining</i>	Kamiah
Malige, Marcel Etienne	<i>Arts</i>	Lapwai
Merritt, Olive Muriel	<i>Home Economics</i>	Edgemere
Moe, Leslie Nelson	<i>Arts</i>	Kellogg
Moye, Bertch William	<i>Mining</i>	Spokane, Wash.

NAME	CURRICULUM	RESIDENCE
Musser, Gail F.	<i>Arts</i>	Filer
Nelson, Alfred Sanford	<i>Science</i>	Kendrick
Patch, Carl Leon	<i>Agriculture</i>	Boise
Patch, Lela Mae	<i>Arts</i>	Boise
Patrie, Carthon Roy	<i>Forestry</i>	Plymouth, Wis.
Pearson, Carl Fred	<i>Arts</i>	Moscow
Peterson, Edwin Daniel	<i>Mechanical</i>	Wardner
Povey, Ada Salisbury	<i>Arts</i>	Hailey
Priest, A. J. Gustin	<i>Law</i>	Boise
Proctor, David Thornton	<i>Science</i>	Grand View
Redinger, Clyde Edison	<i>Forestry</i>	Adams Basin, N. Y.
Richardson, Ferol	<i>Arts</i>	Moscow
Roberts, Cyrus Elmer	<i>Agriculture</i>	Boise
Rowell, Ralph Rudolph	<i>Agriculture</i>	Lewiston
Rush, James Clarke	<i>Mechanical</i>	Grangeville
Sabin, Leta Mae	<i>Home Economics</i>	Parma
Sabin, Violet Gertrude	<i>Home Economics</i>	Portland, Ore.
Salter, Cora Senn	<i>Home Economics</i>	Lewiston
Samms, Philip Clarence	<i>Electrical</i>	Pocatello
Sanberg, Linus Walter	<i>Agriculture</i>	Seattle, Wash.
Scott, Russell True	<i>Science</i>	Rupert
Sheffield, Mary Alice	<i>Arts</i>	Rathdrum
Shrontz, Thurlyn Howard	<i>Arts</i>	Longmont, Colo.
Smith, Walter Shoup	<i>Agriculture</i>	Twin Falls
Soulen, Freda Marie	<i>Arts</i>	Moscow
Space, George Christian	<i>Arts</i>	Weippe
Spangler, Raymond Leslie	<i>Agriculture</i>	Longmont, Colo.
Stalker, John Gipson	<i>Arts</i>	Lewiston
Stanford, Kathryn Elaine	<i>Arts</i>	Nampa
Starr, Edith Viola	<i>Arts</i>	Meridian
Starr, Royal Vincent	<i>Agriculture</i>	Spokane, Wash.
Stewart, Frederic Dewey	<i>Agriculture</i>	Moscow
Sutherland, William West	<i>Science</i>	Coeur d'Alene
Swanson, Alice Manilla	<i>Arts</i>	Pocatello
Swanstrom, Carl Hill	<i>Law</i>	Cambridge
Taggart, Grace Loretta	<i>Arts</i>	Hay, Wash.
Tolbert, Jerome Ernest	<i>Agriculture</i>	Buhl
Van Meter, Charlotte Fogle	<i>Arts</i>	Moscow
White, Lillian	<i>Arts</i>	Moscow
Wiley, Frances Evans	<i>Home Economics</i>	Waterville, Wash.
Winegardner, James Henry	<i>Science</i>	Leland
Wood, Arthur Garde	<i>Arts</i>	Payette
Youngs, Francis Ogden	<i>Agriculture</i>	Twin Falls

SOPHOMORES (Class of 1922)

NAME	CURRICULUM	RESIDENCE
Adelmann, Julia Lesetta	<i>Arts</i>	Boise
Aiken, Edwin Herbert	<i>Electrical</i>	Orofino
Albert, Marjorie	<i>Arts</i>	Payette
Allard, Charles Sumner	<i>Civil</i>	Arbon
Allebaugh, Florence Ruth	<i>Arts</i>	Boise
Anderson, Alfred Leonard	<i>Chemical</i>	Moscow
Anderson, Edith Mae	<i>Arts</i>	Moscow
Anderson, Eric Gustav	<i>Electrical</i>	Payette
Anderson, Olga Marie	<i>Arts</i>	Moscow
Augustine, Freda Maurine	<i>Home Economics</i>	Los Angeles, Cal.
Baine, Harry	<i>Arts</i>	Hillyard, Wash.
Baken, Clara	<i>Arts</i>	Moscow
Baker, Ellen Maude	<i>Arts</i>	Orofino
Barrett, Lynn Murray	<i>B.A.(Education)</i>	Portland, Ore.
Bartlett, Francis Emerson	<i>Arts</i>	Orofino
Beach, Gladys Martha	<i>Arts</i>	Burley
Berryman, Carl Wilbur	<i>Agriculture</i>	Burley
Bivens, Ashley Homer	<i>Arts</i>	Payette
Bloom, Helen Lenore	<i>Arts</i>	Spokane, Wash.
Bodler, Clarinda	<i>Arts</i>	Coeur d'Alene
Borden, Leah Mae	<i>Arts</i>	Shoshone
Brandt, Fred Palmer	<i>Science</i>	Pocatello
Breneman, Lauren Elbert	<i>Agriculture</i>	Garfield, Wash.
Brigham, Alfred Curtis	<i>Agriculture</i>	Genesee
Brown, Agnes Mae	<i>B.A.(Education)</i>	Moscow
Brown, Frank Arthur	<i>Forestry</i>	Boise
Buck, Philip Wallenstein	<i>Arts</i>	Filer
Buckingham, William Ellery Morrison	<i>Forestry</i>	Gifford
Bullock, Leonard Warren	<i>Arts</i>	Caldwell
Bundy, Bryan Bertie	<i>Agriculture</i>	Culdesac
Burbidge, John Raymond	<i>Science</i>	Pocatello
Cady, Louis Clyde	<i>Chemical</i>	Moscow
Callaway, Inez Early	<i>Arts</i>	Caldwell
Chamberlin, Gale Bartlett	<i>Forestry</i>	Coeur d'Alene
Chod, Joseph Frank	<i>Agriculture</i>	Salmon
Christen, Gertrude	<i>Arts</i>	Heyburn
Cochran, Helen Virginia	<i>Arts</i>	Emmett
Colborn, Lyle Marcus	<i>Law</i>	Sterling
Collier, Olive Irene	<i>Arts</i>	Seattle, Wash.
Core, Freda Elva	<i>Home Economics</i>	Burley
Cowgill, Norma Andra	<i>Home Economics</i>	Grangeville
Cozier, Robert Virgil	<i>Science</i>	Moscow
Creelman, Clifton Yuill	<i>Science</i>	Lewiston

NAME	CURRICULUM	RESIDENCE
Cutler, Harmon Edgar	<i>Arts</i>	Endicott, Wash.
Dartt, Laura Genevieve	<i>Science</i>	Palouse, Wash.
Davis, Ralph Jefferson	<i>Arts</i>	Boise
Decker, Harold Oliver	<i>Arts</i>	Moscow
Draper, Hazel Gertrude	<i>B.A.(Education)</i>	Moscow
Drury, Neva Ann	<i>B.A.(Education)</i>	Moscow
Dworak, Ernest Martin	<i>Agriculture</i>	Longmont, Colo.
Easley, Ruth	<i>Arts</i>	Chadron, Neb.
Eaton, Walter Purdy	<i>Civil</i>	Mountain Home
Eaves, Elliott Weir	<i>Arts</i>	Lewiston
Edwards, Kenneth Duncan	<i>Forestry</i>	Nampa
Ellis, Paul Marvin	<i>Science</i>	Filer
Fanning, Albert	<i>Agriculture</i>	Moscow
Faris, Leah Eleanor	<i>Arts</i>	Buhl
Faris, Leah Ruth	<i>Arts</i>	Ogden, Utah
Farrell, James William	<i>Forestry</i>	New Meadows
Firkins, Leta Fern	<i>Arts</i>	Nampa
Fox, Richard Anthony	<i>Agriculture</i>	Moscow
Friedman, Gerald William	<i>Arts</i>	Moscow
Friedman, Margaret Madeline	<i>Arts</i>	Moscow
Garrison, Orval Dean	<i>Arts</i>	Moscow
Gill, Gerald James	<i>Arts</i>	Sioux Falls, S. D.
Gill, John Sherwood	<i>Chemical</i>	Moscow
Goff, Abe	<i>Arts</i>	Colfax, Wash.
Gorow, Merl Lewis	<i>Science</i>	Richfield
Gowen, Octavia Louise	<i>Arts</i>	Caldwell
Graf, Albert John	<i>Law</i>	Coeur d'Alene
Green, Adolph Theodore	<i>Arts</i>	Moscow
Gregory, Lee Bryan	<i>Arts</i>	Ilo
Halling, Arnold Herbert	<i>Science</i>	Colfax, Wash.
Hamilton, William E.	<i>Agriculture</i>	Kamiah
Hankinson, Alice Florence	<i>Arts</i>	Moscow
Harding, Bernice E.	<i>Arts</i>	Buhl
Hardman, Lillian Hazel	<i>Science</i>	Amsterdam
Hare, Thelma Lucille	<i>Science</i>	Three Forks, Mont.
Harsh, Lyla Margaret	<i>Arts</i>	Deary
Hart, Eugene Graves	<i>Agriculture</i>	Twin Fall
Hartwell, Harry Howard	<i>Law</i>	Buhl
Hasfurther, John Joseph	<i>Arts</i>	Genesee
Hastie, Gladys	<i>Arts</i>	Seattle, Wash.
Hastings, Earle Robert	<i>Arts</i>	Boise
Haynes, Fletcher Reese	<i>Agriculture</i>	Rupert
Hechtner, Clarence Lloyd	<i>Arts</i>	Lapwai
Hechtner, Howard DeWitt	<i>Agriculture</i>	Lapwai
Hege, Harl Theodore	<i>Arts</i>	Spokane, Wash.

NAME	CURRICULUM	RESIDENCE
Helland, Edna Udellia	<i>Arts</i>	Moscow
Hibner, Lloyd Dewey	<i>Law</i>	Chesterfield
Holland, Fred Nylic	<i>Arts</i>	Pocatello
Horning, William Keith	<i>Mining</i>	Newberg, Ore.
Huff, Laurence Edwin	<i>Law</i>	Cottonwood
Hughes, Edward William	<i>Agriculture</i>	Burley
Hull, John Kenneth	<i>Arts</i>	Pocatello
Hull, Paul Houston	<i>Arts</i>	Colfax, Wash.
Hunt, Eva Phoebe Jane	<i>Arts</i>	Logan, Ia.
Hunt, Everett Earl	<i>Law</i>	St. Maries
Hunter, Elra Lorn	<i>Arts</i>	Moscow
Iler, James Bryan	<i>Civil</i>	Astoria, Ore.
Jackson, Maurice Blanchard	<i>Agriculture</i>	Spokane, Wash.
Jackson, Thora Rosalie	<i>Arts</i>	Spokane, Wash.
Jacobson, Norman Jacob	<i>Arts</i>	Boise
Johnson, Alfred Palmer	<i>Agriculture</i>	Garfield, Wash.
Johnston, Helen Elizabeth	<i>Arts</i>	Portland, Ore.
Johnston, Irene	<i>Home Economics</i>	Boise
Johnston, Laird Lemoyne	<i>Agriculture</i>	Aberdeen
Jones, Frances Kathryn	<i>Home Economics</i>	Emmett
Jones, Genevieve	<i>Home Economics</i>	Palouse, Wash.
Kaufman, Edward Jay	<i>Law</i>	Ritzville, Wash.
Kerin, Raymond Stanton	<i>Science</i>	Lewiston
Knudson, Arthur Howard	<i>Electrical</i>	Spokane, Wash.
Kuhns, Buford E.	<i>Agriculture</i>	Twin Falls
Kullberg, Regner William	<i>Arts</i>	Moscow
Kutnewsky, Ruth Ellen	<i>Arts</i>	Boise
Langroise, Norma Fay	<i>Arts</i>	Emmett
Leighty, Christian Ross	<i>Arts</i>	Caldwell
Lemon, Orange William	<i>Arts</i>	Middleton
Lipps, Homer Hiawatha	<i>Arts</i>	Lewiston
McDougall, Dan Campbell	<i>Science</i>	Pocatello
McEachern, William Cameron	<i>Law</i>	Coeur d'Alene
McFall, Leoma	<i>Arts</i>	Shoshone
McGovern, John Thomas	<i>Mining</i>	Coeur d'Alene
McGowan, Leo Aloysius	<i>Agriculture</i>	Spokane, Wash.
McKay, Ellen Irene	<i>Arts</i>	Mullan
McRae, Virginia	<i>Arts</i>	Spokane, Wash.
Macey, Marshall Babcock	<i>Arts</i>	Boise
Martin, Alonzo Wilbur	<i>Chemical</i>	Coeur d'Alene
Meeker, John Gerald	<i>Arts</i>	Moscow
Melick, Harvey Ivan	<i>Forestry</i>	Nampa
Miller, Darl Vernon	<i>Arts</i>	Payette
Miller, William Byron	<i>Forestry</i>	Stevenson, Wash.
Molloy, Gladys Eileen	<i>Arts</i>	Orofino

NAME	CURRICULUM	RESIDENCE
Moore, Latham Deavitt	<i>Law</i>	Moscow
Morris, Fay La Vigga	<i>Arts</i>	Moscow
Munro, Margaret June	<i>Home Economics</i>	Ogden, Utah
Murphey, Fred	<i>Arts</i>	Pocatello
Murray, Harold Edwin	<i>Agriculture</i>	Nampa
Nagel, Carl Frederick	<i>Arts</i>	Genesee
Nash, Lyn West	<i>Arts</i>	Boise
Neaville, Harriette Myra	<i>Home Economics</i>	Deer Park, Wash.
Neil, Evangeline	<i>Arts</i>	Nampa
Nelson, Stella	<i>Arts</i>	Moscow
Nero, Edward Theodore	<i>Forestry</i>	Moscow
Newman, Bessie Louise	<i>Home Economics</i>	Twin Falls
Nickel, John William	<i>Science</i>	Kamiah
Norlin, Carl Harold	<i>Chemical</i>	Coeur d'Alene
Orford, Phyllis Elkington	<i>Arts</i>	Boise
Oylear, Georgia Elizabeth	<i>Arts</i>	Middleton
Packenhams, Ivan Lee	<i>Agriculture</i>	Boise
Parsons, Russell McCormack	<i>Civil</i>	Moscow
Payne, Donald Edgar	<i>Chemical</i>	Boise
Peasley, Henrietta Marie	<i>Arts</i>	Boise
Penwell, Merritt Vernon	<i>Mechanical</i>	Moscow
Phelps, George Horace	<i>Chemical</i>	Boise
Phillippi, Stanley Isaac	<i>Arts</i>	Boise
Pierson, Waldo Wilson	<i>Agriculture</i>	Appleton, Wash.
Priest, Joel Lambert	<i>Law</i>	Boise
Prout, Lewis LaVake	<i>Science</i>	Council
Putnam, Gladys Mildred	<i>B.A.(Education)*</i>	St. Maries
Ralph, Eugene Edward	<i>Agriculture</i>	Clark Fork
Rieck, Pauline Harriet	<i>Home Economics</i>	Bellingham, Wash.
Roberts, Evadna May	<i>Arts</i>	Nampa
Robertson, Philip Alexander	<i>Mechanical</i>	Bear
Robinson, Sidney Wright	<i>Electrical</i>	Caldwell
Rose, Ernestine	<i>Arts</i>	Salmon
Rowell, Paul Talbot	<i>Agriculture</i>	Lewiston
Ryan, Cecil P.	<i>Forestry</i>	Moscow
Sampson, Myrtle	<i>Arts</i>	Moscow
Sandeliuss, Elizabeth	<i>Arts</i>	Moscow
Sanger, Inez Belva	<i>Arts</i>	Payette
Sargent, Charles Arthur	<i>Mining</i>	Osborne
Sawyer, Arthur Irving	<i>Electrical</i>	Rupert
Schmid, Walter Emmanuel	<i>Agriculture</i>	Payette
Schroeder, August Harold	<i>Mechanical</i>	Cottonwood
Scott, Leland William	<i>Arts</i>	Rupert
Simon, Harold Leslie	<i>Electrical</i>	Cottonwood
Sims, Nadine Lauretta	<i>Science</i>	Spokane, Wash.

NAME	CURRICULUM	RESIDENCE
Smith, LeRoy Augustus	<i>Electrical</i>	Priest River
Smith, Levett C.	<i>Arts</i>	Twin Falls
Smith, Lottie Elizabeth	<i>Arts</i>	Grangeville
Smith, Marjorie Apaline	<i>Arts</i>	Hansen
Soderberg, Paulmer Stanley	<i>Arts</i>	Orofino
Speedy, Thomas Edward	<i>Agriculture</i>	Minneapolis, Minn.
Spencer, Ruby Ellen	<i>Arts</i>	Moscow
Stenger, Lloyd Charles	<i>Arts</i>	Moscow
Sternberg, Carol Lucke	<i>Arts</i>	Rathdrum
Steward, Addie Kathleen	<i>Chemical</i>	Omak, Wash.
Sweeney, Agnes Olivia	<i>B.A. (Education)</i>	St. Maries
Sweeney, Mable Marie	<i>Arts</i>	St. Maries
Tavey, Lorine Allen	<i>Arts</i>	Blackfoot
Tecklenburg, Nathalie	<i>Arts</i>	Wallace
Thomas, Hilda Catharine	<i>Arts</i>	Moscow
Thomas, Polly H.	<i>Home Economics</i>	Malad
Thometz, Michael Anthony	<i>Law</i>	Twin Falls
Thompson, Albert Nesmith	<i>Civil</i>	Mayfield
Thompson, John Oswald	<i>Agriculture</i>	Moscow
Thompson, Leroy Waldmann	<i>Agriculture</i>	Moscow
Thompson, Herbert Wilbur	<i>Mechanical</i>	Boise
Tipton, Marion Lois	<i>Arts</i>	Boise
Toevs, Ernest Walter	<i>Science</i>	Aberdeen
Torsen, Henry Lewis	<i>Arts</i>	Moscow
Van Hoesen, Enderse Gross	<i>Agriculture</i>	Mesa
Veatch, Fred Milton	<i>Civil</i>	Mica
Wagner, Aloysius Joseph	<i>Science</i>	Cottonwood
Warren, Lillian Belle	<i>Science</i>	Moscow
Waterman, Laura Adelle	<i>Arts</i>	Moscow
Watkins, John Hamilton	<i>Science</i>	Caldwell
Weaver, Oscar Rene	<i>Agriculture</i>	Idaho Falls
Wedgwood, George Warren	<i>Science</i>	Gooding
Weisgerber, Chris Bernard	<i>Arts</i>	Lewiston
Werry, Ellwood Robert	<i>Mining</i>	Bellevue
Westover, Clayton Bue	<i>Science</i>	Moscow
Whitcomb, Joseph Marion	<i>Arts</i>	Lewiston
Whittier, Lyman Kenyon	<i>Arts</i>	Moscow
Wiebe, Gustav A.	<i>Agriculture</i>	Aberdeen
Wilkinson, Verna	<i>Home Economics</i>	Salt Lake City, Utah
Williams, William Clyde	<i>Arts</i>	Jayton, Texas
Wohlschlegel, Albert Lee	<i>Agriculture</i>	Boise
Wright, Robert B.	<i>Arts</i>	Nezperce
Yaggy, Arthur Felmley	<i>Arts</i>	Nampa

FRESHMEN (Class of 1923)

NAME	CURRICULUM	RESIDENCE
Addington, Victor Vernon	<i>Arts</i>	Harrison
Adriansen, Edith	<i>Arts</i>	Moscow
Allen, Oscar C.	<i>Science</i>	Twin Falls
Anderson, Charles William	<i>Science</i>	Coeur d'Alene
Anderson, Ethel Mathilda	<i>Arts</i>	Moscow
Anderton, Kenneth	<i>Arts</i>	Moscow
Arthur, Port	<i>Arts</i>	Blackfoot
Asmussen, Harry	<i>Agriculture</i>	Payette
Atkins, Merial Ilda	<i>Arts</i>	Wallace
Babcock, Bernice Lacey	<i>Arts</i>	Twin Falls
Baker, Christena Elizabeth	<i>Arts</i>	Caldwell
Ball, Mary Asthora	<i>Arts</i>	Colorado Springs, Colo.
Barclay, Adam Wayne	<i>Arts</i>	Jerome
Barnes, Wallace Hayden	<i>Electrical</i>	Wallace
Barto, Harold Edwin	<i>Forestry</i>	Spokane, Wash.
Bean, George Elmer	<i>Electrical</i>	Teton
Beaver, Nathaniel Everett	<i>Arts</i>	Harrison
Bedwell, Bryan Butler	<i>Arts</i>	Council
Benoit, Albertine Barbara	<i>Arts</i>	Twin Falls
Benson, Henry Wells	<i>Agriculture</i>	Leadore
Bertholf, Glen	<i>Mechanical</i>	Rockford, Wash.
Bjorn, Theodore Lambert	<i>Arts</i>	Deary
Blackinger, Margaret Ellen	<i>Arts</i>	Boise
Blackledge, Glenn Emil	<i>Agriculture</i>	Delaware, Ohio
Blodgett, Howard Blair	<i>Civil</i>	Gooding
Boas, Louis Alex	<i>Chemical</i>	Boise
Bobb, Arthur Earl	<i>Mechanical</i>	Boise
Bohon, Noble Woodford	<i>Arts</i>	Heyburn
Bradbury, Fred Dewet	<i>Mining</i>	Rathdrum
Bradley, Harold Levi	<i>Electrical</i>	Nampa
Bramhall, Eugene Hulbert	<i>Agriculture</i>	Wallace
Breshears, Arnold J.	<i>Arts</i>	Caldwell
Breshears, Frank Sherman	<i>Arts</i>	Caldwell
Breshears, Howard Reed	<i>Arts</i>	Caldwell
Briscoe, Emery Lloyd	<i>Mining</i>	Grangeville
Briscoe, William Steven	<i>Arts</i>	Troy
Bristol, Ralph Scott	<i>Agriculture</i>	Twin Falls
Brockman, Cecil Clare	<i>Forestry</i>	Seattle, Wash.
Brown, Carl Hamlin	<i>Forestry</i>	Twin Falls
Brown, Geneva Iona	<i>Arts</i>	Moscow
Brown, Harry	<i>Arts</i>	Moscow
Brown, Herbert Esten	<i>Arts</i>	Grangeville
Brown, James Allen	<i>Mining</i>	Boise
Brown, Julia Jane	<i>Arts</i>	Orofino

NAME	CURRICULUM	RESIDENCE
Bullock, Virgil William	<i>Chemical</i>	Boise
Bumgarner, Dorothy Romona	<i>Arts</i>	Nampa
Butz, DeWitt Clinton	<i>Civil</i>	Boise
Cage, Dorothy Davis	<i>Arts</i>	Idaho Falls
Campbell, Kathryn	<i>Arts</i>	Caldwell
Carpenter, William Chester	<i>Science</i>	Boise
Carscallen, Nellie Frances	<i>Arts</i>	Coeur d'Alene
Casey, Jessie Marion	<i>Arts</i>	Rathdrum
Chamberlin, Fred Bishop	<i>Forestry</i>	Coeur d'Alene
Chance, Winifred Eugenia	<i>Arts</i>	Lewiston
Channel, Gladys Celestine	<i>Arts</i>	Twin Falls
Chapman, Naomi	<i>Agriculture</i>	Asotin, Wash.
Chick, Charles Russell	<i>Science</i>	Heppner, Ore.
Chrisman, Edward Edson	<i>Arts</i>	Shoshone
Chrisman, Lola Mary	<i>Arts</i>	Shoshone
Collins, Bethel Martin	<i>Arts</i>	Boise
Collins, Lillian	<i>Science</i>	Lewiston
Compton, Michael Andrews	<i>Chemical</i>	Boise
Core, Glenn Royaltan	<i>Forestry</i>	Burley
Crandall, Fred Nelson	<i>Civil</i>	Salmon
Cross, Sidney William	<i>Forestry</i>	Boise
Cummins, Robert Matthew	<i>Mining</i>	Wallace
Curtis, George Vern	<i>Electrical</i>	Moscow
Curtis, Walter	<i>Agriculture</i>	Boise
Dart, Harold Adolphus	<i>Arts</i>	Coeur d'Alene
Daubert, Henry William	<i>Arts</i>	Endicott, Wash.
DeCamp, Hallie Marie	<i>Arts</i>	Idaho Falls
Dilley, John William	<i>Arts</i>	Moscow
Dow, Orwin Fay	<i>Electrical</i>	Davenport, Wash.
Dowling, Mildred Louise	<i>Science</i>	Moscow
Doyle, Pearl Lillian	<i>Arts</i>	Moscow
Duggan, Sara Gertrude	<i>Arts</i>	Moscow
Durham, Lonnie Joe	<i>Arts</i>	Moscow
Ebert, John Leslie	<i>Mining</i>	Eagle
Edwards, Harry Orman	<i>Agriculture</i>	Moscow
Eggan, Dona Josephine	<i>Home Economics</i>	Moscow
Eichelberger, Floyd Robert	<i>Science</i>	Boise
Eldridge, Robert Walker	<i>Science</i>	Moscow
Ellis, Zella Marguerite	<i>Arts</i>	Filer
Ernsberger, Edward Lester	<i>Electrical</i>	Rathdrum
Fahrenwald, Richard Nicholas	<i>Science</i>	Scenic, S. Dak.
Fallquist, Francis Julius	<i>Science</i>	Spokane, Wash.
Featherstone, Marion	<i>Home Economics</i>	Viola
Field, Frances	<i>B.A.(Education)</i>	Twin Falls
Finegan, Mary Elizabeth	<i>Arts</i>	Boise

NAME	CURRICULUM	RESIDENCE
Fleming, Luke Austin	<i>Mechanical</i>	Burke
Fletcher, Eleanor Gertrude	<i>Arts</i>	Boise
Forest, Alex McKenzie	<i>Arts</i>	Lewiston
Fox, Alexander Jacob	<i>Arts</i>	Moscow
Frahm, Fay John	<i>Agriculture</i>	Hansen
Fredrich, Ruth Vera	<i>B.A.(Education)</i>	Farmington, Wash.
Fredrickson, Rose Lillian Henriette	<i>Arts</i>	Coeur d'Alene
Friedman, Bernard Vincent	<i>Arts</i>	Moscow
Gardner, Wylie Milton	<i>Mechanical</i>	Gem
Garlock, Welcome Dow	<i>Mechanical</i>	Gooding
Gartin, William Woodruff	<i>Arts</i>	Caldwell
Gavin, Clamor Heise	<i>Forestry</i>	Heise
Geyer, Harold Clinton	<i>Agriculture</i>	Burley
Gilman, Emeline Eunice	<i>Arts</i>	Hailey
Gilman, Jennie Eliza	<i>Arts</i>	Hailey
Gittins, Henry Howard	<i>Agriculture</i>	Pocatello
Glasgow, Ralph Irvin	<i>Civil</i>	Twin Falls
Gleason, Bernice Oviette	<i>Home Economics</i>	Boise
Glenn, Frank Dayton	<i>Civil</i>	Moscow
Glindeman, Herbert Leo	<i>Agriculture</i>	Coeur d'Alene
Goddard, Edna May	<i>Home Economics</i>	Palouse, Wash.
Goranson, Charles Eugene	<i>Arts</i>	Pocatello
Graves, Florence Woodman	<i>Arts</i>	Sandpoint
Graybill, Mattie Vernice	<i>Civil</i>	Spokane, Wash.
Green, Giles Samson	<i>Arts</i>	Kooskia
Greene, Arthur Laurence	<i>Electrical</i>	Salmon
Gustafson, Orien Alget	<i>Electrical</i>	Vancouver, Wash.
Harland, Joseph Herbert	<i>Mechanical</i>	Payette
Harris, Mary Ersel	<i>Arts</i>	Boise
Hatfield, Glatha Doris	<i>Arts</i>	Moscow
Haymond, Harold Albert	<i>Agriculture</i>	Genesee
Haymond, Mary Agatha	<i>Home Economics</i>	Genesee
Healy, Margaret Mary	<i>Arts</i>	Coeur d'Alene
Heer, Harold Howard	<i>Arts</i>	Boise
Helland, Ruby May	<i>Arts</i>	Moscow
Henry, Orin Marvin	<i>Electrical</i>	Nampa
Hepton, Mary	<i>Science</i>	Lewiston
Herrington, Curtis Edwin	<i>Agriculture</i>	Boise
Hersey, Lynn Fletcher	<i>Mining</i>	Lenore
Hewes, Laurence Ilsey, Jr.	<i>Science</i>	Pocatello
Hill, Cathrine Amanda	<i>Arts</i>	Colfax, Wash.
Hill, Eva Jean	<i>Arts</i>	Colfax, Wash.
Hoffman, Florence Grace	<i>Arts</i>	Caldwell
Holbrook, Robert Lincoln	<i>Arts</i>	Sweet

NAME	CURRICULUM	RESIDENCE
Holderman, Theodore Edson	<i>Arts</i>	Twin Falls
Horning, Fred Forest	<i>Agriculture</i>	Newberg, Ore.
Howard, Richard Philip	<i>Science</i>	Pocatello
Hummel, Marie Elizabeth	<i>Arts</i>	Boise
Hunt, Marie	<i>Home Economics</i>	Colfax, Wash.
Hunter, Kenneth Hamilton	<i>Arts</i>	Moscow
Jenness, Randolph Edward	<i>Arts</i>	Weiser
Jennings, Charles Boyd	<i>Arts</i>	Boise
Jester, Velzora Margaret	<i>Arts</i>	Moscow
Johnson, Albert Reuben	<i>Arts</i>	Lewiston
Johnson, Chester Sprague	<i>Arts</i>	Shoshone
Johnson, Fletcher Bruce	<i>Arts</i>	Twin Falls
Johnson, Richard Robert	<i>Electrical</i>	Morton
Jones, Clara Elizabeth	<i>Arts</i>	Boise
Kane, Walter Thomas	<i>Agriculture</i>	Salmon
Kelly, Floyd Dean	<i>Electrical</i>	Moscow
Kempf, Rupert Edward	<i>Electrical</i>	Genesee
Kennedy, Alfred Gill	<i>Civil</i>	Dayton, Ohio
Kern, Amand Joseph	<i>Agriculture</i>	Genesee
Kimmell, Rex	<i>Arts</i>	Kicco, Fla.
King, Mary Elizabeth	<i>Arts</i>	Boise
Kinney, Charles Emmett	<i>Civil</i>	Nampa
Kutnewsky, Margaret Jeanette	<i>Arts</i>	Boise
Laws, Jack Otto	<i>Arts</i>	Coeur d'Alene
Leitch, Robert E.	<i>Forestry</i>	Lewiston
Lesley, David Naylor	<i>Civil</i>	Caldwell
Litton, Ruth Lorene	<i>Arts</i>	Lamont
Logan, Carolyn Grey	<i>Arts</i>	Boise
Lowe, Clare Brown	<i>Arts</i>	Council
Lowe, Janice Lillian	<i>Arts</i>	Council
Luse, Vera Marie	<i>Science</i>	Spokane, Wash.
Lyon, Lella Margaret	<i>Arts</i>	Caldwell
McCain, Eunice May	<i>Arts</i>	Gilbert
McClanahan, Scott Alexander	<i>Civil</i>	Payette
McCuaig, Howard Melvin	<i>Science</i>	Coeur d'Alene
McGee, Thelma Beatrice	<i>Arts</i>	Lewiston
McNamara, Hubert Michael	<i>Arts</i>	Bonnars Ferry
McNary, James Roland	<i>Agriculture</i>	Nampa
McPherson, Claude Arthur	<i>Arts</i>	Mandan, N. Dak.
Marcellus, Hazel Mildred	<i>Arts</i>	Boise
Martin, Aleene Vivian	<i>Arts</i>	Ilo
Mash, Ralph Edwin	<i>Chemical</i>	Harrison
Massey, Irvin Morris	<i>Forestry</i>	Moscow
Matthiesen, Raymond Milton	<i>Mechanical</i>	Cottonwood
Mattson, Fred Walter	<i>Arts</i>	Gooding

NAME	CURRICULUM	RESIDENCE
Meacham, Max Milton	<i>Arts</i>	Boise
Messinger, Harry Alexander	<i>Agriculture</i>	Gifford
Meyer, Alvina Helen	<i>Arts</i>	Fenn
Miller, Ruth Katharine	<i>Arts</i>	Burley
Mitchell, Lincoln Frank	<i>Electrical</i>	Council
Mitchell, Pauline Ada	<i>Arts</i>	Council
Moe, Clifford Frederick	<i>Arts</i>	Kellogg
Morrow, Ralph John	<i>Arts</i>	Lewiston
Moseley, Margaret Dell	<i>Arts</i>	Idaho Falls
Moser, Bernadine	<i>Arts</i>	Kendrick
Motie, Esther Louise	<i>Arts</i>	Spokane, Wash.
Mullarky, Jean Robert	<i>Arts</i>	Lewiston
Nagel, John, Jr.	<i>Agriculture</i>	Boise
Nankervis, Ethelyn Grace	<i>Arts</i>	Moscow
Neal, Edgar Henry	<i>Agriculture</i>	Boise
Neal, James Harman	<i>Agriculture</i>	Boise
Nelson, Adrian, Jr.	<i>Arts</i>	Moscow
Nelson, Ethel Mabel	<i>Arts</i>	Rupert
Nelson, Oscar A.	<i>Arts</i>	Moscow
Newhall, Wilbur Eugene	<i>Electrical</i>	Moscow
Newton, Faith Manwaring	<i>Arts</i>	Wallace
Nixon, William James	<i>Arts</i>	Weiser
Oakley, Helen Vinore	<i>Arts</i>	Boise
Ostrander, Ernest Eugene	<i>Arts</i>	Twin Falls
Ostroot, Margaret Cora	<i>Home Economics</i>	Moscow
Otter, Viola Evangeline	<i>Arts</i>	Moscow
Owings, Mary Ellen	<i>Arts</i>	Moscow
Paige, Anna May	<i>Science</i>	Moscow
Parks, Earl William	<i>Science</i>	Caldwell
Patch, Vernon Tabor	<i>Agriculture</i>	Payette
Paterka, Mabel Lucile	<i>Arts</i>	Republic, Wash.
Patton, Dewey William	<i>Agriculture</i>	Payette
Pearson, George	<i>Arts</i>	Boise
Pearson, Joseph Ephram	<i>Science</i>	Troy
Penwell, Guy Oscar	<i>Arts</i>	Moscow
Penwell, Mary Christina	<i>Arts</i>	Moscow
Perry, Vernon	<i>Agriculture</i>	Coeur d'Alene
Peterson, Sam Nansen	<i>Agriculture</i>	Blackfoot
Peterson, Walner Lauranties	<i>Civil</i>	Potlatch
Pflepsen, Mary Marguerite	<i>Science</i>	Moscow
Phillippi, Wesley Franklin	<i>Agriculture</i>	Boise
Phillips, Harry Thomas	<i>Arts</i>	Lewiston
Pierce, Eunice Aurilla	<i>Arts</i>	Rigby
Pitcairn, Charles Sloan	<i>Mechanical</i>	Twin Falls
Plummer, Irene Victoria	<i>Home Economics</i>	Plummerton, Mont.

NAME	CURRICULUM	RESIDENCE
Powell, Herbert Leland	<i>Mining</i>	Grangeville
Price, Vaughn Arlington	<i>Arts</i>	Twin Falls
Richard, Lewis Grant	<i>Arts</i>	Sandpoint
Pringle, Genevieve Florence	<i>Arts</i>	Boise
Provost, Leo Gordon	<i>Mining</i>	Lewiston
Ramsburg, George Ferdinand	<i>Forestry</i>	Weston, W. Va.
Ramsey, Helen Elizabeth	<i>Home Economics</i>	Sandpoint
Ransom, Lauren Melvin	<i>Electrical</i>	New Plymouth
Reed, Paul Henry	<i>Science</i>	North Lima, Ohio
Reeder, Bertha Marie	<i>Home Economics</i>	Moscow
Reynolds, Paul E.	<i>Arts</i>	Boise
Riechers, Alfred John	<i>Agriculture</i>	Filer
Rink, Robert Earl	<i>Science</i>	Cottonwood
Robbins, Adeline Marie	<i>Arts</i>	Moscow
Roberts, Adrian	<i>Agriculture</i>	Clarkia
Roberts, Helen Bernice	<i>Arts</i>	Twin Falls
Roberts, Milford	<i>Agriculture</i>	Paris
Rodner, Jack Wallace	<i>Forestry</i>	Moscow
Rose, William Samuel	<i>Agriculture</i>	Boise
Rowlands, Jean Carolyn	<i>Arts</i>	Sandpoint
Ruberg, Hugo Theodore	<i>Arts</i>	Troy
Sampson, Sigurd Laurence	<i>Mining</i>	Kellogg
Saunders, Marye Cecil	<i>Home Economics</i>	Wenatchee, Wash.
Scates, Vida May	<i>Arts</i>	Moscow
Schmid, William Fred	<i>Agriculture</i>	Payette
Schroeder, Leo Walter	<i>Agriculture</i>	Fraser
Schroeder, Otto Whitfield	<i>Agriculture</i>	Fraser
Scott, Wm. Wotherspoon, Jr.	<i>Science</i>	Coeur d'Alene
See, Gladys Elizabeth	<i>Home Economics</i>	Boise
Selby, Avis Carolyn	<i>Arts</i>	Boise
Sheldon, Joseph Brintnall	<i>Arts</i>	Caldwell
Sherry, Thomas Ernest	<i>Science</i>	Hailey
Sheneberger, Francis Calvin	<i>Forestry</i>	Twin Falls
Shurtz, Mary Frances	<i>Arts</i>	Boise
Sickles, Thomas Norwood	<i>Science</i>	Lapwai
Sinclair, Mabel Elizabeth	<i>Home Economics</i>	Jerome
Sinsel, Charles Fred	<i>Agriculture</i>	Boise
*Smith, Berthold Augustus	<i>Mining</i>	Kellogg
Smith, Carey Herbert	<i>Agriculture</i>	Moscow
Smith, Lila May	<i>Arts</i>	Boise
Space, Allen Frederick	<i>Mechanical</i>	Weippe
Space, Ralph	<i>Forestry</i>	Weippe
Space, Roscoe Leroy	<i>Mechanical</i>	Weippe
Specht, Edward John	<i>Electrical</i>	Priest River

* Deceased.

NAME	CURRICULUM	RESIDENCE
Spielberg, Irma Marguerite	<i>Arts</i>	Twin Falls
Stalker, Dwight Flack	<i>Mechanical</i>	St. Anthony
Stalker, Lloyd Earl	<i>Mechanical</i>	St. Anthony
Steadman, Chancey Austin	<i>Arts</i>	Payette
Stevens, Helen Maye	<i>Arts</i>	Boise
Stoddard, Verner Lee	<i>Arts</i>	St. Anthony
Stoneman, John Warren	<i>Forestry</i>	Hillyard, Wash.
Stout, Leslie Nathaniel	<i>Agriculture</i>	Kellogg
Stunz, Emil August	<i>Electrical</i>	Boise
Suppiger, Georgianne Wade	<i>Arts</i>	Moscow
Swift, Joseph Alonzo	<i>Science</i>	Twin Falls
Throckmorton, Lucie Brooks	<i>Arts</i>	Rupert
Tierney, Michael Joseph	<i>Arts</i>	Moscow
Tipton, Doris Gertrude	<i>Arts</i>	Boise
Tolman, Philip Sydney	<i>Arts</i>	Boise
Trimble, Frances Maria	<i>Arts</i>	Palouse, Wash.
Troy, William Edward	<i>Arts</i>	Colfax, Wash.
Tucker, George Newton	<i>Agriculture</i>	Notrs
Turnbull, Richard Roos	<i>Mining</i>	Lewiston
Turner, Charles A.	<i>Civil</i>	Grangeville
Turner, Theodore Wallace	<i>Arts</i>	Caldwell
Vogleson, Grace Willamette	<i>Arts</i>	Lewiston
Vosburgh, Robert Nelson	<i>Electrical</i>	Moscow
Walker, Everett Foster	<i>Forestry</i>	Moscow
Wallace, Charles A.	<i>Mechanical</i>	Careywood
Wallace, Everett	<i>Agriculture</i>	Lewiston
Wallace, George Bruce	<i>Electrical</i>	Careywood
Wallace, Laurence Allison	<i>Arts</i>	Caldwell
Walters, Vernon Barger	<i>Civil</i>	Twin Falls
Weaver, Arlo Irvin	<i>Mining</i>	Boise
Weed, Agnes Lucile	<i>Arts</i>	Deary
Weed, Florence June	<i>Home Economics</i>	Deary
Wells, Greek	<i>Electrical</i>	Fairfield
Welo, Oscar Melvin	<i>Arts</i>	Sandpoint
Wheeler, Elaine	<i>Arts</i>	Caldwell
White, Floyd Edward	<i>Agriculture</i>	Boise
Wildman, Glenn A.	<i>Civil</i>	Nampa
Wilkinson, Elva	<i>Arts</i>	Salt Lake City, Utah
Williams, Kenneth Ward	<i>Civil</i>	Priest River
Williams, Lillian Madge	<i>Arts</i>	Kooskia
Wilson, Bernadine Elsie	<i>Arts</i>	Moscow
Wilson, Lorne Norman	<i>Agriculture</i>	Boise
Winkler, Charles	<i>Mining</i>	Council
Wolfe, Colette Alice	<i>Home Economics</i>	Twin Falls
Wolfenden, William	<i>Forestry</i>	Gooding
Woods, Elizabeth Ridge	<i>Arts</i>	Boise

NAME	CURRICULUM	RESIDENCE
Woolsey, Allen Albert	<i>Chemical</i>	Fraser
Wright, Chester Clay	<i>Science</i>	Rupert
Wyland, Elmer Earl	<i>Electrical</i>	Twin Falls
Wyman, Ward Potter	<i>Arts</i>	Boise
Yarborough, Nora	<i>Home Economics</i>	Moscow
Yost, Albert William	<i>Agriculture</i>	Blackfoot
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UNCLASSED

NAME	MAJOR	RESIDENCE
Abbott, Albert Fred	<i>Agriculture</i>	Fernwood
Abel, Leonard Abraham	<i>Agriculture</i>	Lewiston
Anderson, Christian Rudolf	<i>Agriculture</i>	Weiser
Anderson, Ruth	<i>Piano</i>	Troy
Angell, Mary Evelyn	<i>Piano</i>	Moscow
Angell, Virginia	<i>Piano</i>	Moscow
Armbuster, Florence	<i>Piano</i>	Moscow
Averill, Kelsey	<i>Violin</i>	Moscow
Baumann, Herman	<i>Forestry</i>	Milwaukee, Wis.
Beimfohr, Barbara	<i>Piano</i>	Aberdeen, Wash.
Blaylock, Alva	<i>Commerce</i>	Moscow
Brown, Mrs. C. C.	<i>Art</i>	Moscow
Brummond, Ada	<i>Violin</i>	Moscow
Brummond, Theodore	<i>Violin</i>	Moscow
Cameron, Alyce	<i>Piano</i>	Moscow
Cameron, Minnie Bell	<i>Voice</i>	Moscow
Carlson, Clifford	<i>Violin</i>	Moscow
Chapin, Calvin Manellus	<i>Agriculture</i>	Seattle, Wash.
Cherpillod, William Harry	<i>Commerce</i>	Moscow
Chesnut, Lewis	<i>Violin</i>	Moscow
Cline, Martha	<i>Piano</i>	Moscow
Cole, George Melvin	<i>German, etc.</i>	Husum, Wash.
Collins, Margaret	<i>Piano</i>	Moscow
Collins, Mildred	<i>Violin</i>	Moscow
Daniels, Albert Stanley	<i>Forestry</i>	Bay City, Mich.
Darrah, Homer Clyde	<i>Agriculture</i>	Emmett
Day, Bernice	<i>Piano</i>	Moscow
Dennis, Jerome	<i>Violin</i>	Moscow
Dougherty, John	<i>Violin</i>	Moscow
Drew, Avis	<i>Voice</i>	Moscow
Dwight, Eldred Raymond	<i>Commerce</i>	Twin Falls
Eddy, Leslie Eugene	<i>Forestry</i>	Dietrich
Fanning, Ruth	<i>Piano</i>	Moscow
Ficke, Arthur Benjamin	<i>Agriculture</i>	Payette
Flanagan, Arthur Paul	<i>Agriculture</i>	Seattle, Wash.
Graybill, Thelma Alice	<i>French, etc.</i>	Spokane, Wash.

NAME	MAJOR	RESIDENCE
Green, Kathleen	<i>Voice</i>	Moscow
Hall, Delbert Arlington	<i>Agriculture</i>	Spokane, Wash.
Hansen, Josie	<i>Piano</i>	Moscow
Hatfield, Bernadine	<i>Violin</i>	Moscow
Hickman, Teresa Keane	<i>Home Economics</i>	Moscow
Highsmith, Etta A.	<i>Piano</i>	Nyssa, Ore.
Hobson, Claire	<i>Agriculture</i>	Boise
Hodge, Mrs. G. D.	<i>Cello</i>	Moscow
Hulbert, Celine Goethals	<i>Home Economics</i>	Moscow
Jensen, Ernest Caleb	<i>Agriculture</i>	Moscow
Johnson, Alice	<i>Voice</i>	Troy
Johnson, Marie	<i>Violin</i>	Moscow
Keith, Hugh Melhuish	<i>Agriculture</i>	Moscow
Kelly, Clarence L.	<i>Agriculture</i>	Lava Hot Springs
Knutson, Arthur O.	<i>Agriculture</i>	Meridian
Larsen, Louise	<i>Piano</i>	Moscow
McGill, Oro J.	<i>Agriculture</i>	Missoula, Mont.
McGowan, John Henry	<i>Law</i>	Boise
Mackey, Fidilla Paton	<i>Agriculture</i>	St. John, Wash.
Mason, Alvin Marrion	<i>Forestry</i>	Spokane, Wash.
McBride, Melvin Winfiel	<i>Agriculture</i>	Port Orchard, Wash.
Mileham, Horace J.	<i>Agriculture</i>	Salmon
Miller, Ethel Douglas	<i>French</i>	Moscow
Miller, William Chopson	<i>Chemistry</i>	Moscow
Mootz, Gretchen Minnie	<i>Home Economics</i>	Spokane, Wash.
Myers, Rose	<i>Voice</i>	Moscow
Nelson, Olga Therese	<i>Home Economics</i>	Moscow
Nero, Leona	<i>Violin</i>	Moscow
O'Brien, Percy Edward	<i>Law</i>	Coeur d'Alene
Ochs, Mrs. N. B.	<i>Violin</i>	Moscow
Patchen, Thomas Noyes	<i>Agriculture</i>	Coeur d'Alene
Paulson, Nellie	<i>Violin</i>	Moscow
Peabody, Harvey Metcalf	<i>Electrical</i>	Moscow
Perry, Gladys	<i>Piano</i>	Moscow
Peterson, Alf Fredtjof	<i>Agriculture</i>	Spokane, Wash.
Peterson, Madeline	<i>Piano</i>	Moscow
Raney, Mrs. Chase	<i>Home Economics</i>	St. Maries
Reed, Milton	<i>Agriculture</i>	Edison, Wash.
Robbins, Raymond Laurence	<i>Law</i>	Moscow
Rolinc, John	<i>Mining</i>	Wardner
Schmitz, Melba Nelson	<i>French</i>	Moscow
Sheldon, Donald David	<i>Commerce</i>	Caldwell
Smith, Theodora	<i>Voice</i>	Moscow
Springstead, Herbert Hilton	<i>Agriculture</i>	Bountiful, Utah
Standish, Dewey Doxsie	<i>Agriculture</i>	Ontario, Ore.
Storms, Willard Sidney	<i>Forestry</i>	Rupert

NAME	MAJOR	RESIDENCE
Stredder, Charles Albert	<i>Law</i>	Roseberry
Sudderth, Iris Viola	<i>Piano</i>	Palouse, Wash.
Trimble, May Belle	<i>Home Economics</i>	Moscow
Wilson, Eber Michael	<i>Law</i>	Placerville
Witter, Iona S.	<i>Voice</i>	Moscow
Wooley, Jane	<i>Home Economics</i>	Moscow
Yarborough, Ethel	<i>Piano</i>	Moscow
Yarborough, Iris	<i>Violin</i>	Moscow
Unclassed Students, 90		

SCHOOL OF PRACTICAL AGRICULTURE AND HOUSEHOLD ARTS

NAME	YEAR	RESIDENCE
Batterson, George Andrew	<i>First</i>	St. Maries
Bell, Clayton	<i>First</i>	Drummond
Briney, Edward Horace	<i>First</i>	Salmon
Carlson, Montie Philip	<i>Third</i>	Idaho Falls
Click, Leo Ennes	<i>First</i>	Ilo
Coleman, James Arthur	<i>First</i>	Wendell
Davis, Glenn	<i>Second</i>	Buhl
Douglas, Orville Eldred	<i>Third</i>	Meridian
Fasel, Willis Thompson	<i>First</i>	Nampa
Fenton, Fuller Jay	<i>Second</i>	Rupert
Fitzpatrick, George	<i>First</i>	Sandpoint
Grenny, Martin	<i>First</i>	Opportunity, Wash.
Harris, Alfred G.	<i>First</i>	Potlatch
Hauger, Richard Henry	<i>First</i>	Fenn
Holt, Dean George	<i>First</i>	Meridian
Honess, Ralph	<i>First</i>	Ashton
Horning, Fred Oscar	<i>First</i>	Moscow
Hutchinson, Ray Herbert	<i>First</i>	Payette
Irving, James Wallace	<i>First</i>	Bonnors Ferry
Jamison, Charles Proctor	<i>First</i>	Claytonia
Johnson, Ray Morse	<i>First</i>	St. Maries
Jones, Avery B.	<i>First</i>	Friday Harbor, Wash.
Kelham, Hester Marie	<i>Third</i>	Troy
Kershisnik, Peter F.	<i>First</i>	Burley
Knull, Mark L.	<i>Second</i>	Twin Falls
Koster, Arthur Herman	<i>First</i>	Genesee
Lamb, Cecil William	<i>First</i>	Stites
Leonard, Fred Marvin	<i>First</i>	Winona
Lower, Helen	<i>Second</i>	Colbert, Wash.
McCauley, Harv William	<i>Third</i>	Buhl
Monette, Philip Ralph	<i>First</i>	Hunters, Wash.
Nilsson, Powell A.	<i>First</i>	Tekoa, Wash.
O'Brien, Jack J.	<i>First</i>	Spokane, Wash.

LIST OF STUDENTS

NAME	YEAR	RESIDENCE
Ostrom, Cameron Matthew	<i>Second</i>	Seattle, Wash.
Pickard, George Albert	<i>Second</i>	Glengary
Powers, Irvin Francis	<i>First</i>	Parma
Radermacher, Henry James	<i>Third</i>	Boise
Roberts, Cecil Stanley	<i>First</i>	Kendrick
Rogers, Alfred James	<i>First</i>	Moscow
Rogers, Russell Stanley	<i>First</i>	Moscow
Shoup, George Laird	<i>First</i>	Salmon
Shoup, Richard Marvin	<i>First</i>	Salmon
Sinclair, Hugh Carnival	<i>Second</i>	Jerome
Stehr, Leon	<i>First</i>	Usk, Wash.
Van Fleit, Eugene F.	<i>First</i>	Grangeville
Wainwright, Victor Ormond	<i>Third</i>	Payette
Ware, Leo William	<i>First</i>	Tetonia
Watson, Robert Platt	<i>First</i>	Weiser
Wiggins, Charles Alfred	<i>First</i>	Red Cloud, Neb.
Wiggins, Edward B.	<i>First</i>	Lewiston
School of Practical Agriculture and Household Arts, 50		

FOREST RANGERS

NAME	YEAR	RESIDENCE
Martin, Ernest M.	<i>Second</i>	Weiser
May, Henry William	<i>First</i>	Warren
Nicol, Henry Quinton	<i>Second</i>	Reubens
Peterson, Raymond	<i>Second</i>	Moravia
Vick, Ernest Raynold	<i>First</i>	Watford City, N. D.
White, Albert C.	<i>First</i>	Boise
Forest Rangers, 6		

MINERS SHORT COURSE

NAME	RESIDENCE
Fogle, James	Moscow
Hester, Jay Pinckney	Boise
McIlvenny, Hugh	Spokane, Wash.
Moore, Coy Hart	Mountain Home
Mulville, Noel	Hailey
Shartridge, William Packard	Spirit Lake
Sullivan, James Francis	Moscow
Miners Short Course, 7	

CORRESPONDENCE STUDENTS

NAME	SUBJECT	RESIDENCE
Anderson, Clara	<i>Education</i>	Elk River
Blair, Samuel A.	<i>Forestry</i>	Dungannon, Va.
Brown, Edna	<i>Education</i>	Mackay
Brown, F. M.	<i>Forestry</i>	Philadelphia, Pa.
Chapman, Arthur Bramwell	<i>Physics</i>	Colfax, Wash.

NAME	SUBJECT	RESIDENCE
Chapman, Bessie	<i>Education</i>	Geneva
Chapman, Mildred	<i>Education</i>	Geneva
Ensz, John H.	<i>Education</i>	Kuna
Evensen, Linar	<i>Forestry</i>	Shanghai, China
Ferris, David B.	<i>Forestry</i>	Ridley Park, Pa.
Fontanna, Stanley G.	<i>Forestry</i>	Coeur d'Alene
Gribolo, Peter	<i>Forestry</i>	Ft. Sill, Okla.
Herre, Grace	<i>Education</i>	American Falls
Hewitt, Willard	<i>Education</i>	Sandpoint
Hoidahl, H. I.	<i>Forestry</i>	Stanley, Wis.
Hurst, Edna	<i>Education</i>	Preston
Hussey, R. E.	<i>Forestry</i>	St. Louis, Mo.
Ingersoll, Howard H.	<i>Forestry</i>	Philadelphia, Pa.
Lehmkuhl, W. J.	<i>Forestry</i>	Minneapolis, Minn.
McLellan, K.	<i>Forestry</i>	San Francisco, Cal.
Mathews, Ada	<i>Education</i>	Elk River
Morris, Mead M.	<i>Forestry</i>	La Grande, Ore.
Newland, William Ross	<i>Education</i>	Elk River
O'Shinsky, Lewis	<i>Forestry</i>	New York, N. Y.
Park, W. S.	<i>Forestry</i>	Cleveland, Ohio
Pederson, Nellye	<i>Sociology</i>	Roberts, Mont.
Reineke, Lester H.	<i>Forestry</i>	Ithaca, N. Y.
Roche, William M.	<i>Forestry</i>	Coeur d'Alene
Rowe, Iris	<i>Education</i>	Elk River
Schwarz, H. A.	<i>Forestry</i>	Grafton, Neb.
Shields, Edward	<i>Forestry</i>	Bonair
Shupe, Verna Irene	<i>Education</i>	Bayview
Smith, R. M.	<i>Forestry</i>	New York City
Spaulding, Velma	<i>Education</i>	Caldwell
Sunderlin, Frances B.	<i>Education</i>	Genevée
Watkins, John T.	<i>Education</i>	Forney

Correspondence Students, 36

SUMMER SESSION, 1919

NAME	RESIDENCE
Adams, John Franklin	Nezperce
Anderson, Olga	Moscow
Babcock, Ethel Peyton	Coeur d'Alene
Badger, Eula	Nampa
Baken, Clara	Moscow
Bangs, Edwin Orlo	Moscow
Bates, Dorothy	Moscow
Beimfohr, Mary Fogle	Moscow
Berry, Delcie May	Post Falls
Bonnett, Martha Tunstall	Moscow
Booher, Mary	Troy

NAME	RESIDENCE
Buchanan, May	Moscow
Buchanan, L. L.	Lapwai
Byrns, Margaret Ely	Moscow
Byrns, Marion Louise	Moscow
Carlson, Amy Theresa	Moscow
Carlson, Carl	Lewiston
Carlson, Joseph Emanuel	Lewiston
Chesnut, Priscilla	Moscow
Chariton, Clarence Walter	Coeur d'Alene
Clarke, Mrs. J. N.	Moscow
Cole, Dorothy Mildred	Portland, Ore.
Collins, Kenneth Heath	Moscow
Cunningham, Lulu	Boise
Davis, Clara Ransom	Moscow
Denman, Alvin	Des Moines, Ia.
Dinsmore, Florence	Troy
Dow, Mary Genevra	Moscow
Duggan, Catherine	Moscow
Dunkle, Olive Grace	Osborn
Elliot, Lenora Inez	Moscow
Evans, Alvin E.	Moscow
Evans, Mrs. Alvin E.	Moscow
Evans, Martha E.	Pocatello
Fanning, Margaret	Moscow
Field, Leif E.	Moscow
Francisco, Hugh	Paul
Frantz, Helen	Moscow
French, Mildred Pearl	Boise
Fry, Clarence Griffing	Manhattan, Kan.
Gibson, Mrs. John	Moscow
Goethals, Celine	Moscow
Gossett, Bertha	Moscow
Grafton, Marlea	Western, Neb.
Green, Jennie A.	Farmington, Wash.
Grice, Mrs. Glen	Moscow
Gritman, Bertie E.	Moscow
Hall, Victor Louis	Lewiston
Hammond, Erma Norton	Troy
Hammond, Myrtle Mary	Moscow
Hansen, Cora	Troy
Hansen, Josie	Moscow
Hatfield, Glatha Doris	Moscow
Herington, Wilfred Leslie	Moscow
Hewitt, Willard W.	Sandpoint
Higgs, Mamie Alberta	Burley

NAME	RESIDENCE
Hoffman, Bertha May	Challis
Hoffman, Lulu M.	Challis
Hulme, Gertrude May	Moscow
Jester, Velzora	Moscow
Johnson, J. Hugo	Moscow
Johnson, Lila May	Moscow
Johnston, Mabel Leannah	Moscow
Junge, Kathrynne	Moscow
Kalinowski, Annette	Moscow
Kendrick, Martha	Moscow
King, Leola Ruby	Kendrick
Lieuallen, Mrs. J. W.	Moscow
Lindley, Elizabeth Kidder	Moscow
Livingston, Alice	Moscow
MacDougall, Charlotte	Medford, Ore.
McArthur, Beryl	Coeur d'Alene
McCall, Florence Archibald	Spokane, Wash.
McDaniel, Camille	Moscow
Marshall, Hazel	Gibbs
Merwin, Evelyn	Elk River
Moore, Vina D.	Moscow
Moore, Frank L.	Moscow
Morton, Margaret	Moscow
Neely, Olive Isabell	Moscow
Newman, Wilfred Ewart	Spokane, Wash.
Nielsen, Mrs. B.	Moscow
Nagle, Archie	Post Falls
Nagle, Mary	Post Falls
Northrop, Mrs. Frank Ford	Weiser
Northrop, Frank Ford	Weiser
O'Keefe, Norene	Coeur d'Alene
Olesen, Ella Letitia	Moscow
Park, Eliza Ann	Pullman, Wash.
Peck, Rupert Leroy	Moscow
Peterson, Jennie	Moscow
Plummer, Grace	Moscow
Powers, Hudson Edward	Middleton
Schroeder, Mrs. John F.	Moscow
Schroeter, Mrs. Charles L.	Moscow
Schwarz, Otto	Moscow
Scott, Ruth Miriam	Moscow
Smith, Clara	Moscow
Smith, Ella Helen	Moscow
Snoddy, Wayne S.	Moscow
Street, Ida	Moscow

NAME	RESIDENCE
Thomas, Esther Elizabeth	Moscow
Thomas, Frank Heinrich	Moscow
Thomas, Joseph	Moscow
Thompson, Mrs. Charles L.	Moscow
Thomson, Mrs. F. A.	Moscow
Vance, Lulu Emily	Boise
Warren, Lillian Belle	Moscow
Weed, Agnes Lucille	Deary
Wegmann, Helen	Portland, Ore.
Wilber, Renaldo Flavins	Southwick
Willis, Bertha L.	Moscow
Wooley, Mrs. J. C.	Moscow
Woodland, Margarette Frances	Moscow
Ziese, Mabel E.	Bellingham, Wash.

Summer Session Students, 115

SUMMARY OF STUDENTS

	MEN	WOMEN	TOTAL
College of Letters and Science:			
Graduate Students.....	5	6	11
B.A., 321, (Unclassed, 8).....	139	190	329
B.A.(Ed.)	1	9	10
B.S., 63, (Unclassed, 1).....	50	14	64
Home Economics [B.S.(H.Ec.), 43; Unclassed, 8]		51	51
Music	6	33	39
Correspondence Students.....	5	12	17
			521
College of Agriculture:			
Graduate Student.....	1	..	1
Four-Year Curricula, 112, (Unclassed, 22) ..	132	2	134
School of Practical Agriculture and Household Arts.....	48	2	50
			185
College of Engineering:			
Civil Engineering.....	26	1	27
Electrical Engineering, (Unclassed, 1)... ..	32	..	32
Mechanical Engineering.....	20	..	20
Chemical Engineering.....	12	1	13
			92
College of Law:			
Third Year.....	10	..	10
Second Year.....	10	..	10
First Year.....	11	..	11
Unclassed	5	..	5
			36

	MEN	WOMEN	TOTAL
School of Mines:			
Graduate Students.....	2	..	2
Four-Year Curriculum, 24, (Unclassed, 1)	25	..	25
Miners Short Course.....	7	..	7
			34
School of Forestry:			
Four-Year Curriculum, 31, (Unclassed, 6)	37	..	37
Forest Rangers.....	6	..	6
Forestry Correspondence Students.....	19	..	19
			62
Total Students, Regular Session, 1919-20....	609	321	930
Attendance (net) at the 1919 Summer Ses-			
sion, less 24 duplicates (5 men, 19 women) ..	22	69	91
Total Attendance.....	631	390	1021

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

SUMMARY

	COLLEGE	SUMMER SESSION	SPECIAL COURSES	TOTAL
Idaho	664	80	105	849
States other than Idaho.....	130	11	30	171
Foreign Countries.....	0	0	1	1
Total	794	91	136	1021

Counties in Idaho.

	COLLEGE	SUMMER SESSION	SPECIAL COURSES	TOTAL
Ada	93	1	6	100
Adams	12	0	0	12
Bannock	15	1	0	16
Bear Lake.....	2	0	2	4
Benewah	7	0	2	9
Bingham	10	0	0	10
Blaine	5	0	1	6
Boise	1	0	0	1
Bonner	13	0	4	17
Bonneville	7	0	1	8
Boundary	2	0	2	4
Butte	0	0	0	0
Camas	1	0	0	1
Canyon	53	1	1	55
Cassia	7	1	1	9
Clearwater	17	1	4	22

SUMMARY OF STUDENTS

	COLLEGE	SUMMER SESSION	SPECIAL COURSES	TOTAL
Elmore	3	0	1	4
Franklin	0	0	1	1
Fremont	5	0	2	7
Gem	8	0	0	8
Gooding	5	0	1	6
Idaho	18	0	4	22
Jefferson	3	0	0	3
Jerome	2	0	1	3
Kootenai	40	7	3	50
Latah	173	57	47	277
Lemhi	7	0	4	11
Lewis	7	1	2	10
Lincoln	6	0	1	7
Madison	0	0	0	0
Minidoka	13	1	1	15
Nez Perce	38	4	1	43
Oneida	1	0	0	1
Owyhee	0	0	1	1
Payette	16	0	2	18
Power	3	0	1	4
Shoshone	23	1	0	24
Teton	0	0	1	1
Twin Falls	41	0	3	44
Valley	1	0	0	1
Washington	6	2	3	11
Total	664	80	105	849

States Other Than Idaho.

	COLLEGE	SUMMER SESSION	SPECIAL COURSES	TOTAL
California	3	0	1	4
Colorado	5	0	0	5
District of Columbia.....	1	0	0	1
Florida	1	0	0	1
Iowa	2	1	1	4
Kansas	1	1	0	2
Massachusetts	2	0	0	2
Michigan	1	0	0	1
Minnesota	1	0	1	2
Missouri	0	0	1	1
Montana	4	0	1	5
Nebraska	1	1	2	4
New York.....	1	0	3	4
North Dakota	1	0	1	2

RECAPITULATION

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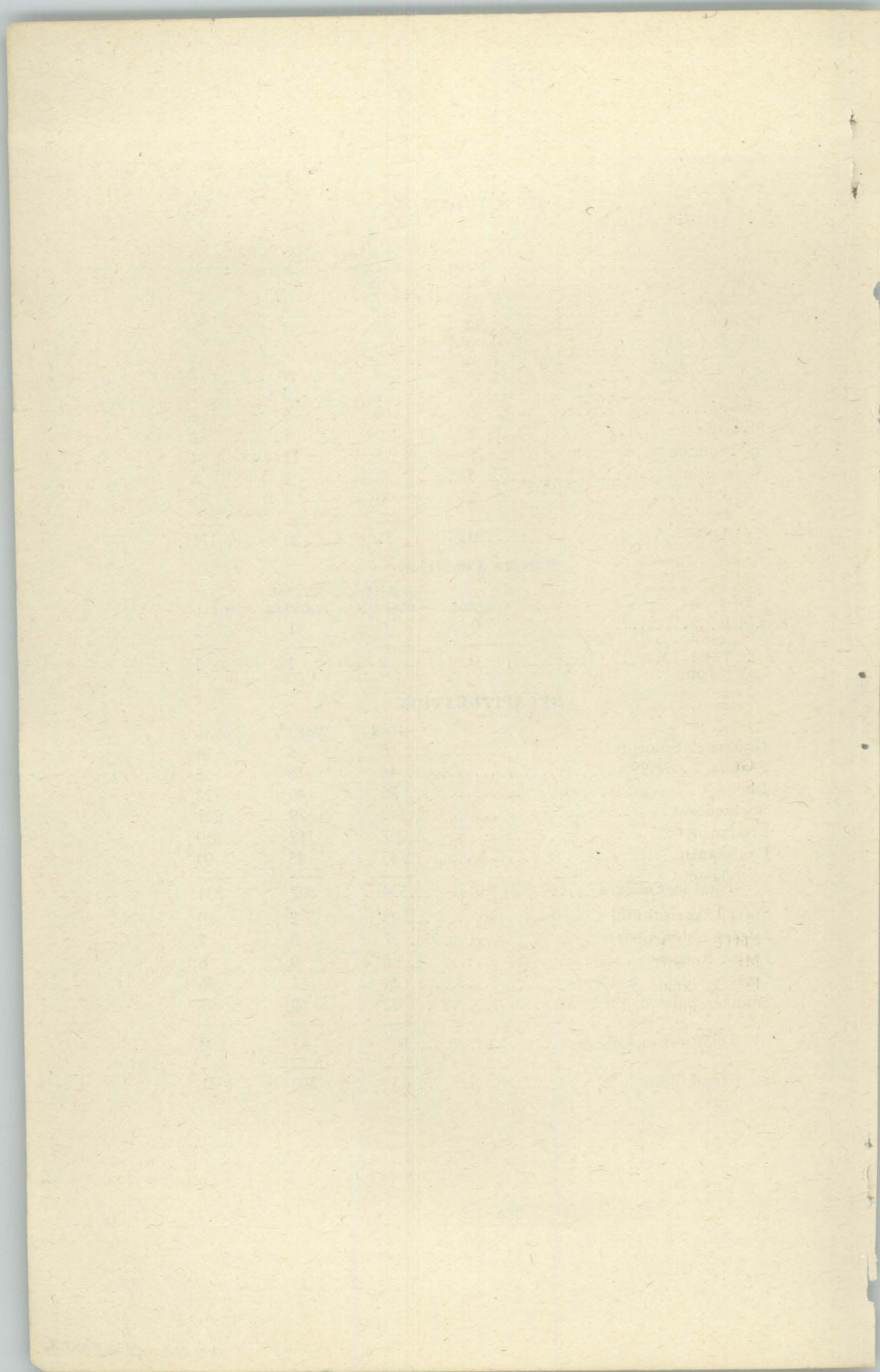
	COLLEGE	SUMMER SESSION	SPECIAL COURSES	TOTAL
Ohio	2	0	1	3
Oklahoma	0	0	1	1
Oregon	13	2	1	16
Pennsylvania	0	0	3	3
South Dakota	2	0	0	2
Texas	1	0	0	1
Utah	6	0	0	6
Virginia	1	0	1	2
Washington	77	6	11	94
Wisconsin	3	0	1	4
Wyoming	1	0	0	1
Total	130	11	30	171

Foreign Countries.

	COLLEGE	SUMMER SESSION	SPECIAL COURSES	TOTAL
China	0	0	1	1
Total	0	0	1	1

RECAPITULATION

	MEN	WOMEN	TOTAL
Graduate Students.....	8	6	14
Seniors	46	15	65
Juniors	76	46	122
Sophomores	142	79	221
Freshmen	207	112	319
Unclassed	45	45	90
Total in Colleges.....	524	307	831
Special Agricultural Courses.....	48	2	50
Miners Short Course.....	7	0	7
Forest Rangers	6	0	6
Correspondence Students	24	12	36
Summer Session, 1919 (net).....	22	69	91
Total not in Colleges.....	107	83	190
Grand Total	631	390	1021



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