

THE UNIVERSITY OF MISSOURI BULLETIN

VOLUME 28, NUMBER 1

GENERAL SERIES

1927, No. 1

CATALOG

EIGHTY-FIFTH REPORT OF THE CURATORS
TO THE GOVERNOR OF THE
STATE, 1926-1927



ANNOUNCEMENTS 1927-1928

ISSUED FOUR TIMES MONTHLY; ENTERED AS SECOND-CLASS MATTER AT THE
POSTOFFICE AT COLUMBIA, MISSOURI—30,000
JANUARY 1, 1927

CALENDAR, 1927

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
..	..	..	..	..	..	1	..	..	1	2	3	4	5	..	..	1	2	3	4	5	..	..	..	..	..	1	2
2	3	4	5	6	7	8	6	7	8	9	10	11	12	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	..	..	..	..	..	27	28	29	30	31	..	..	24	25	26	27	28	29	30
30	31	..	..	..	..	..	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	..	..	1	2	3	4	..	..	..	..	1	2	..	..	1	2	3	4	5	6	..
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
29	30	31	..	..	..	..	26	27	28	29	30	..	..	24	25	26	27	28	29	30	28	29	30	31	..	..	..
..	..	..	..	..	..	..	30	31	..	..	..	..	..	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
..	..	..	..	1	2	3	..	..	..	..	..	..	1	..	1	2	3	4	5	..	..	..	..	1	2	3	..
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
..	..	..	..	..	..	..	30	31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

CALENDAR, 1928

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	
1	2	3	4	5	6	7	1	2	3	4	1	2	3	1	2	3	1	2	3	4	5	6	7
8	9	10	11	12	13	14	5	6	7	8	9	10	11	4	5	6	7	8	9	10	8	9	10	11	12	13	14	
15	16	17	18	19	20	21	12	13	14	15	16	17	18	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
22	23	24	25	26	27	28	19	20	21	22	23	24	25	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
29	30	31	..	..	..	..	26	27	28	29	..	..	..	25	26	27	28	29	30	31	29	30	..	..	..	..	..
..	
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	..	..	..	1	2	3	4	..	..	1	2	3	4	5	6	7	8	9	10	11	..
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11	
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	
27	28	29	30	31	..	..	24	25	26	27	28	29	30	29	30	31	..	..	..	..	26	27	28	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	
..	..	..	..	..	1	..	..	1	2	3	4	5	6	..	..	..	1	2	3	..	..	..	..	..	..	1	..
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	
23	24	25	26	27	28	29	28	29	30	31	..	..	..	25	26	27	28	29	30	..	23	24	25	26	27	28	29
30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30	31	..	..	..	..	..

UNIVERSITY CALENDAR AT COLUMBIA

First Semester

1927

September 12.....Monday, 2 p. m., freshman conference.
September 13.....Tuesday, registration for freshmen.
September 13.....Tuesday, entrance examinations.
September 14, 15.....Wednesday, Thursday, registration of sophomores,
upperclassmen and graduate students.
September 16.....Friday, 8 a. m., class work begins.
September 16.....Friday, 10 a. m., opening convocation.
October 31.....Monday, 8 a. m., first term two-year winter course in
agriculture begins.
November 23.....Wednesday, 12 noon, Thanksgiving holidays begin.
November 28.....Monday, 8 a. m., Thanksgiving holidays close.
December 20.....Tuesday, 4 p. m., first term two-year winter course in
agriculture closes.
December 20.....Tuesday, 4 p. m., Christmas holidays begin.

1928

January 2.....Monday, 8 a. m., Christmas holidays close.
January 2.....Monday 8. a. m., second term two-year winter course
in agriculture begins.
January 21.....Saturday to }
January 28.....Saturday } Mid-year examinations.
January 28.....Saturday, 4 p. m., first semester closes.

Second Semester

January 30.....Monday, registration.
January 31.....Tuesday, 8 a. m., class work begins.
February 25.....Saturday, 4 p. m., two-year winter course in agriculture
closes.
April 4.....Wednesday, 12 noon to }
April 11.....Wednesday, 8 a. m., } Easter holidays.
May 26.....Saturday to }
June 2.....Saturday } Final examinations.
June 3.....Sunday, 11 a. m., baccalaureate address.
June 6.....Wednesday, 10 a. m., commencement exercises.

Summer Session

June 7.....Thursday, registration.
June 8.....Friday, 8 a. m., class work begins.
July 4.....Wednesday, Independence Day, holiday.
July 29.....Sunday, 11 a. m., baccalaureate address.
August 3.....Friday, 4 p. m., summer session closes.
August 3.....Friday, 8 p. m., commencement exercises.

UNIVERSITY CALENDAR AT ROLLA

First Semester

1927

September 7 Wednesday, entrance examinations and registration.
September 9 Friday, 8 a. m., class work begins.
November 24 Thursday, Thanksgiving Day, holiday.
December 22 Thursday, 4 p. m., Christmas holidays begin.

1928

January 3 Tuesday, 8 a. m., Christmas holidays close.
January 20 Friday, 12 noon, first semester closes.

Second Semester

January 23 Monday, entrance examinations and registration.
January 25 Wednesday, 8 a. m., class work begins.
February 22 Wednesday, Washington's Birthday, holiday.
May 18 Friday, 12 noon, senior class work closes.
May 20 Sunday, baccalaureate address.
May 23 Wednesday, 4 p. m., all class work closes.
May 24 Thursday, commencement exercises.
May 25 Friday, summer surveying class begins.
June 23 Saturday, summer surveying class closes.

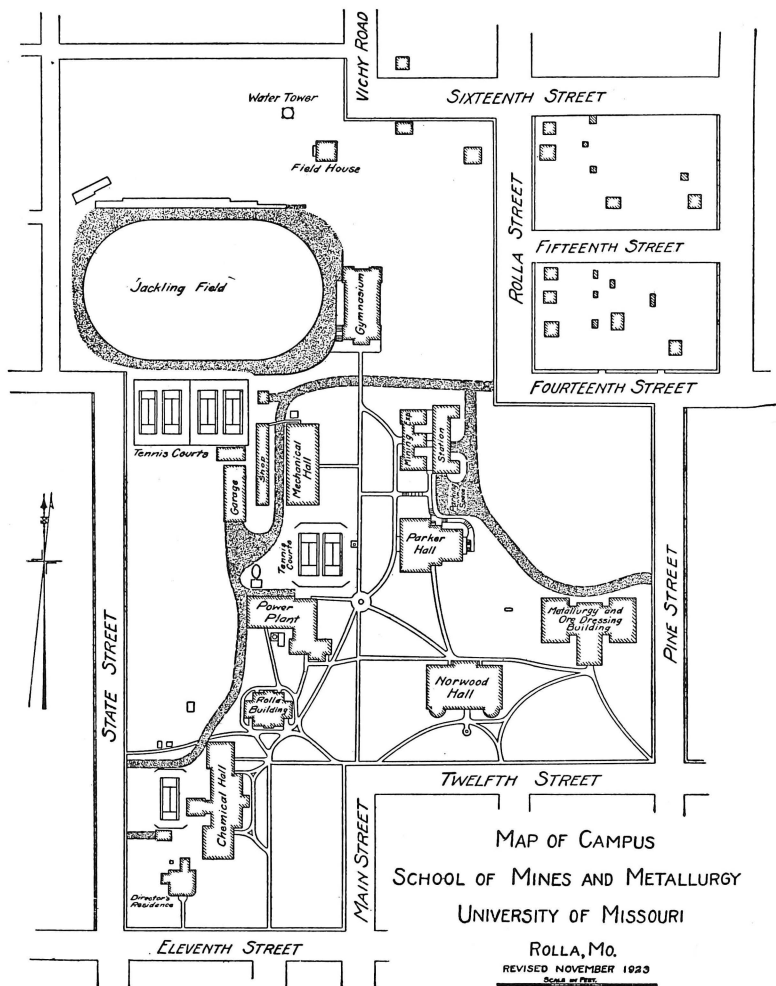


TABLE OF CONTENTS

	Page
REPORT OF BOARD OF CURATORS.....	7
OFFICERS OF INSTRUCTION AND ADMINISTRATION.....	10
SECTION I. GENERAL INFORMATION.....	27
SECTION II. THE SCHOOLS AND COLLEGES	
College of Arts and Science.....	94
College of Agriculture.....	113
Agricultural Experiment Station.....	134
Agricultural Extension Service.....	137
School of Business and Public Administration.....	142
School of Education.....	147
College of Engineering.....	166
Engineering Experiment Station.....	176
School of Fine Arts.....	178
Graduate School.....	191
School of Journalism.....	198
School of Law.....	202
School of Medicine.....	208
School of Mines and Metallurgy.....	218
Missouri State Military School.....	228
Extension Division.....	232
Summer Session.....	241
SECTION III. STATEMENT OF COURSES.....	242
SECTION IV. DEGREES AND CERTIFICATES, 1926..	320

REPORT OF THE BOARD OF CURATORS

Columbia, Missouri, February 1, 1927.

To His Excellency the Honorable Sam A. Baker, Governor of Missouri:

Sir: I have the honor to present herewith the annual catalog of the University of Missouri, reviewing in part the work of the current session and outlining as far as possible the program of the scholastic year of 1927-28.

The session of 1925-26 closed at Columbia on June 9, 1926, and at Rolla on June 5, 1926.

The work reviewed by this report began with the summer term at Columbia, which opened on June 8 and closed on August 4, 1926. The regular session of 1926-27 opened at Columbia on September 15, 1926, and at Rolla on September 6, 1926.

The total number of students enrolled for work in all of the divisions—residence work, correspondence courses and extension centers and others—for the year 1926 will amount to more than 9000. This increase is well distributed among the various divisions of the University. There has been a large increase, nearly 1,000, in the number of students enrolled for work offered in the Extension Division. The steady increase in the enrollment of students in residence in the University has continued in the same ratio but the significant point is that there are a larger number of junior, senior and graduate students enrolled with each session. The rapid development of the School of Fine Arts has shown the need of a school which provides for the major portion of a standard liberal college education with training in Art and Music. In the College of Agriculture the enrollment in the freshmen class is almost twice that of [two years ago. There has been a large increase in the number of students in the Graduate School and the Summer Session, a considerable number of which are teachers in the State who are studying for advanced degrees. The increase in the School of Journalism is also large.

Research and general service to the State occupies a large share in the activities of the staff of the experiment stations and the members of the faculty. The results of these investigations are communicated promptly to the people by the means of bulletins and the success of our efforts is indicated in the number of requests for assistance that are received, and answered promptly, from all sections of the State. For example, in the College of Agriculture over 300,000 bulletins have been distributed in the last year, and more than 200,000 inquiries have been answered. There has been developed by the members of the Faculty of Medicine a technic

whereby the condition known as cataract in the eye may be produced at will and be caused to disappear as readily. The furtherance of this work to make it applicable to the human race is going on and will, we believe, have far reaching good effect in the treatment of blindness resulting from cataract. In other divisions various investigations are being conducted. The work of the School of Journalism, the oldest Journalism School in the world, has attracted national and international attention. And in recognition of its international interest there has been presented to the School by the British Empire Press Union, a stone from Saint Paul's Cathedral, London, and by the American-Japan Society of Tokyo, a stone lantern from Japan, the dedication of which brought to the University the Ambassadors of Great Britain and Japan. The members of the Faculty of the School of Education have assisted in the Missouri School Survey, and are cooperating with the various school boards in the solution of the educational problems in the communities. In the School of Mines and Metallurgy the members of the faculty in addition to their regular teaching duties, are conducting experiments leading to the solution of various problems in the mining industry. With the cooperation of the clay industries of Missouri a course in ceramic engineering is being established, and additional emphasis is being placed on research work of the problems affecting the commercial development of work of that nature.

But the Faculty and Administration of the University is keenly conscious of the fact that its duty is primarily to educate the youth of the State, and therefore, the major portion of the time of the regular faculty members is devoted to regular teaching duties. We are pleased to note that their efforts to develop an institution of higher training for professional work, rather than the school acting as a direct competitor of other colleges in the State for students of freshman and sophomore rank, is producing very satisfactory results.

In so far as available funds would allow, rooms that had fallen into disuse because of lack of repair have been put into usable condition. The total space thus brought back into service is more than the equivalent of an entire building. In addition, much needed repairs have been made in buildings and in the walks and drives resulting in the general improvement of the plant.

In the pages that follow are statements giving general information regarding the University, requirements for admission and other data of a general nature regarding the institution. There also appears the outline of the various curricula and a statement of the courses which will be offered during the coming session.

Respectfully submitted,

JAMES E. GOODRICH,
President

CORPORATION

THE BOARD OF CURATORS

Term Expires January 1, 1929

Mercer Arnold	Joplin
A. A. Speer	Jefferson City
Milton Tootle, Jr.	St. Joseph

Term Expires January 1, 1931

H. W. Lenox	Rolla
James E. Goodrich	Kansas City
H. J. Blanton	Paris

Term Expires January 1, 1933

Frank M. McDavid	Springfield
Charles F. Ward	Plattsburg

Officers of the Board

James E. Goodrich	President
Leslie Cowan	Secretary
R. B. Price, Jr.	Treasurer

The Executive Board at Columbia

Mercer Arnold	Joplin
H. J. Blanton	Paris
Frank M. McDavid	Springfield

The Executive Committee at Rolla

A. A. Speer	Jefferson City
C. F. Ward	Plattsburg
Edward Kahlbaum, Secretary	Rolla
Eugene J. Campbell, Treasurer	Rolla

The Board of Visitors

Charles I. Baird, Chairman	Kansas City
W. P. Brinkley	Linneus
John F. Case	Wright City
Alex. E. Douglass	Kansas City
Charles E. Prettyman, Jr.	Neosho

OFFICERS OF INSTRUCTION AND ADMINISTRATION

The following figures are used to indicate:

1. Officers or members of the faculty on leave of absence for the year 1926-27.
2. Officers or members of the faculty of the School of Mines at Rolla.
3. Those who have resigned during the year.

FACULTY

STRATTON DULUTH BROOKS, A.M., LL.D., *President*

JOHN CARLETON JONES, Ph.D., LL.D., *President Emeritus, Professor Emeritus of Latin.*

DEANS

²CHARLES HERMAN FULTON, E.M., D.Sc., *Director of the School of Mines and Metallurgy*

¹ALBERT KERR HECKEL, Ph.D., *Dean of Men, Professor of Citizenship*

JAMES PATTERSON MCBAIN, LL.B., *Dean of the Faculty of Law, Professor of Law*

ELMER JAMES MCCAUSTLAND, M.C.E., *Dean of the Faculty of Engineering, Director of the Engineering Experiment Station, Professor of Sanitary Engineering*

FREDERICK A. MIDDLEBUSH, Ph.D., *Dean of the Faculty of Business and Public Administration, Professor of Political Science and Public Law*

WALTER MILLER, A.M., LL.D., *Dean of the Graduate Faculty, Professor of Latin*

FREDERICK BLACKMAR MUMFORD, M.S., *Dean of the Faculty of Agriculture, Director of the Agricultural Experiment Station, Professor of Animal Husbandry*

MERVIN GORDON NEALE, Ph.D., *Dean of the Faculty of Education, Professor of School Administration*

GUY LINCOLN NOYES, M.D., *Dean of the Faculty of Medicine, Director of the University Hospitals*

¹MRS. BESSIE LEACH PRIDDY, Ph.D., *Dean of Women, Associate Professor of History*

T. LUTHER PURDOM, A.M., Ph.D., *Acting Dean of Men, Professor of Education*

JAMES T. QUARLES, *Dean of the Faculty of Fine Arts, Professor of Music*

FREDERICK MONROE TISDEL, Ph.D., *Dean of the Faculty of Arts and Science, Professor of English*

LOUISE IRBY TRENHOLME, A. M., *Acting Dean of Women, Assistant Professor of History*

WALTER WILLIAMS, LL.D., *Dean of the Faculty of Journalism, Professor of History and Principles of Journalism*

PROFESSORS

EDGAR ALLEN, Ph.D., *Professor of Anatomy*

HERMANN BENJAMIN ALMSTEDT, Ph.D., *Professor of Germanic Languages*

JOHN SITES ANKENY, Litt.D., *Professor of the Theory and Practice of Art*

²JOSEPH WAYNE BARLEY, Ph.D., *Professor of English and Modern Languages*

²STUART LEE BAYSINGER, M.D., *Student Health Advisor, Professor of Hygiene*

HENRY MARVIN BELDEN, Ph.D., *Professor of English*

EDWIN BAYER BRANSON, Ph.D., *Professor of Geology*

CHESTER LELAND BREWER, *Professor of Physical Education, Director of Athletics*

HARRY GUNNISON BROWN, Ph.D., *Professor of Economics*

SIDNEY CALVERT, B.Sc., A.M., *Professor of Organic Chemistry*

MABEL V. CAMPBELL, B.S. in H.E., A.M., *Professor of Home Economics*

ARLIE GLENN CAPPS, Ph.D., *Professor of Education*

²CHARLES YANCEY CLAYTON, Met.E., *Professor of Metallurgy and Ore Dressing*

DUDLEY STEELE CONLEY, B.L., M.D., *Professor of Clinical Surgery*

JOHN WALDO CONNAWAY, D.V.S., M.D., *Professor of Veterinary and Comparative Medicine, Veterinarian to the Agricultural Experiment Station*

JESSE HARLIAMAN COURSAULT, Ph.D., *Professor of the History and Philosophy of Education*

WINTERTON CONWAY CURTIS, Ph.D., *Professor of Zoology*

²CHARLES LAURENCE DAKE, Ph.D., *Professor of Geology and Mineralogy*

²GEORGE REINALD DEAN, B.S., C.E., *Professor of Mathematics*

LUTHER MARION DEFOE, A.B., *Professor of Mechanics in Engineering*

²FRANK EDWARD DENNIE, B.S., in C.E., *Professor of Physical Education and Director of Athletics*

SHERMAN DICKINSON, B.S. in A.H., Ph.D., *Professor of Agricultural Education*

DAN HARRISON EIKENBERRY, Ph.D., *Professor of Education*

JOSEPH DOLIVER ELLIFF, A.M., *Professor of High School Administration, High School Visitor, Director of the Summer Session*

CHARLES A. ELLWOOD, Ph.D., LL.D., *Professor of Sociology*

WILLIAM CARLYLE ETHERIDGE, Ph.D., *Professor of Field Crops*

ARTHUR HENRY ROLPH FAIRCHILD, Ph.D., *Professor of English*

²CARROLL RALPH FORBES, E.M., *Professor of Mining*

²FLOYD HILL FRAME, A.B., E.E., *Professor of Electrical Engineering*

- ²LEON ELLIS GARRETT, B.S., *Professor of Mechanics*
 CHARLES E. GERMANE, Ph.D., *Professor of Education*
 CHARLES WILSON GREENE, Ph.D., *Professor of Physiology and Pharmacology*
 ADDISON GULICK, Ph.D., *Professor of Physiological Chemistry*
³ERSKINE M. HARMON, B.S. in Agr., *Extension Professor of Dairy Husbandry*
²ELMO GOLIGHTLY HARRIS, C.E., *Professor of Civil Engineering*
 LEONARD HASEMAN, Ph.D., *Professor of Entomology, State Entomologist*
 ELI STUART HAYNES, Ph.D., *Professor of Astronomy*
¹ESSIE MARGARET HEYLE, Ph.B., *Extension Professor of Home Economics*
 H. WADE HIBBARD, A.M., M. E., *Professor of Mechanical Engineering*
 BENJAMIN FRANKLIN HOFFMAN, M.L., Litt.D., *Professor of Germanic Languages*
 ALBERT G. HOGAN, Ph.D., *Professor of Animal Nutrition*
²MAJOR EDWARD HOLMES, Ph.D., *Professor of Ceramic Engineering*
 JAY WILLIAM HUDSON, Ph.D., *Professor of Philosophy*
 ABRAHAM LINCOLN HYDE, Ph.B., *Professor of Bridge Engineering*
 LOUIS INGOLD, Ph.D., *Professor of Mathematics*
 THEOPHIL WILLIAM HENRY IRION, B.S., in Ed., Ph.D., *Professor of Education*
²R. O. JACKSON, M.E., *Professor of Mechanical Engineering*
 OLIVER RAY JOHNSON, B.S. in Agr., A.M., *Professor of Agricultural Economics*
 HARRY LAVERNE KEMPSTER, B.S., *Professor of Poultry Husbandry*
 ROBERT JOSEPH KERNER, Ph.D., *Professor of Modern History*
 MONROE CRAWFORD KERTH, Colonel, Infantry, United States Army, *Professor of Military Science and Tactics*
 HENRY HERMAN KRUSEKOPF, A.M., *Professor of Soils*
 STEPHEN IVES LANGMAID, A.M., LL.B., *Professor of Law*
 ALEXANDER CARTWRIGHT LANIER, M.E., M.E.E., *Professor of Electrical Engineering*
 ELLSWORTH ALLAN MACLEOD, *Professor of Piano*
 WILLIAM GWATHMEY MANLY, A.M., *Professor of Greek Language and Literature*
²CLAIR VICTOR MANN, C.E., *Professor of Mechanical Drawing and Descriptive Geometry*
 FRANK LEE MARTIN, A.B., *Professor of Theory and Practice of Journalism*
 ARTHUR JOHN MEYER, B.S. in Agr., *Director of the Agricultural Extension Service*
 MAX F. MEYER, Ph.D., *Professor of Psychology*
 MERRITT FINLEY MILLER, M.S.A., *Professor of Soils*

- ²KENNETH M. MOORE, B.S. in C.E., Captain, Corps of Engineers,
United States Army, *Professor of Military Science and Tactics*
E. L. MORGAN, A.M., *Professor of Rural Sociology*
MARCUS PINSON NEAL, M.D., *Professor of Pathology, Director of*
University Hospital Laboratories
GUY DORIC NEWTON, M.E., *Professor of Mechanical Engineering*
JAMES LEWIS PARKS, A.B., LL.B., *Professor of Law*
CLAUDE ANDERSON PHILLIPS, Ph.D., *Professor of Education*
ERNEST CHURCHILL PHILLIPS, A.M., M.E., *Professor of Shop Pro-*
duction
- ¹JOHN PICKARD, Ph.D., D.F.A., *Professor of Classical Archaeology*
and History of Art, Curator of the Museums of Art and Classical
Archaeology
WILLIAM HENRY POMMER, *Professor Emeritus of Music*
ARTHUR CHESTER RAGSDALE, M.S., *Professor of Dairy Husbandry*
ROBERT LEE RAMSAY, Ph.D., *Professor of English*
JAMES WALTER RANKIN, Ph.D., *Professor of English*
MAZYCK PORCHER RAVENEL, M.D., *Professor of Medical Bacter-*
iology and Preventive Medicine, Director of Public Health
Laboratories
GEORGE REEDER, *Lecturer on Meterology and Climatology, Director*
of the Missouri Climatological Service, Meteorologist, United
States Weather Bureau
HERBERT MEREDITH REESE, Ph.D., *Professor of Physics*
WILLIAM JACOB ROBBINS, Ph.D., *Professor of Botany*
THOMAS JACOB RODHOUSE, M.C.E., *Professor of Hydraulic Engineer-*
ing
JAMES HARVEY ROGERS, Ph.D., *Professor of Economics*
HARRY RUBEY, B.S., C.E., *Professor of Civil Engineering*
HERMAN SCHLUNDT, Ph.D., *Professor of Physical Chemistry*
MERRILL ISAAC SCHNEBLY, A.B., J.S.D., *Professor of Law*
DR SCOTT, A.B., B.S. in J., *Professor of Economics*
JOHN RUTLEDGE SCOTT, A.M., *Professor Emeritus of Elocution*
³KENNETH CRADDOCK SEARS, A.B., J.D., *Professor of Law*
ROBERT WASHINGTON SELVIDGE, A.M., *Professor of Industrial*
Education
HENRY ORMAL SEVERANCE, A.M., *Librarian*
³JAMES WIGGINS SIMONTON, A.B., S.J.D., *Professor of Law*
JAMES TAYLOR SLEEPER, A.B., Ed.M., *Professor of Public School*
Music
FRANK FLETCHER STEPHENS, Ph.D., *Professor of American History,*
Assistant Dean of the Faculty of Arts and Science
OSCAR MILTON STEWART, Ph.D., *Professor of Physics*
DAN GISH STINE, A.B., M.D., *Professor of Clinical Medicine*
THOMAS JESSE TALBERT, A.M., *Professor of Horticulture*
WILLIAM ARTHUR TARR, B.S. in E., B.S. in Min.E., Ph.D., *Professor*
of Geology

³MANCE TAYLOR, R.N., *Professor of Nursing, Principal of the School of Nursing*

ALBERT EDMUND TROMBLY, M.A., *Professor of French and Italian*

EDWIN A. TROWBRIDGE, B.S. in Agr., *Professor of Animal Husbandry*

²WILLIAM DE GARMO TURNER, Ph.D., *Professor of Chemistry*

JONAS VILES, Ph.D., *Professor of American History*

GUSTAF ERIC WAHLIN, Ph.D., *Professor of Mathematics*

HERBERT WALL, *Professor of Voice*

JACOB WARSHAW, Ph.D., *Professor of Spanish*

¹MYRON WEBSTER WATKINS, Ph.D., *Professor of Economics*

LUTHER ABRAHAM WEAVER, B.S. in Agr., *Professor of Animal Husbandry*

MENDEL PENCO WEINBACH, B.S. in E.E., A.M., *Professor of Electrical Engineering*

WILHELMUS DAVID ALLEN WESTFALL, Ph.D., *Professor of Mathematics*

CHARLES HAMILTON WILLIAMS, A.B., B.S. in Ed., *Director of University Extension*

WALTER SCOTT WILLIAMS, C.E., *Professor of Topographic Engineering*

²LEON ELMER WOODMAN, Ph.D., *Professor of Physics*

JOHN COCHRAN WOOLEY, M.S., in A.E., *Professor of Agricultural Engineering*

ASSOCIATE PROFESSORS

WILLIAM ALBERT ALBRECHT, Ph.D., *Associate Professor of Soils*

THOMAS S. BARCLAY, Ph.D., *Associate Professor of Political Science*

RICHARD BRADFIELD, Ph.D., *Associate Professor of Soils*

SAMUEL TILDEN BRATTON, Ph.D., *Associate Professor of Geology and Geography*

²JOSIAH BRIDGE, M.S., *Associate Professor of Geology*

JAMES WILLARD BURCH, B.S. in Agr., *Extension Associate Professor of Animal Husbandry*

²JOE BEATY BUTLER, C.E., M.S., *Associate Professor of Civil Engineering*

CLARENCE EDGAR CARTER, B.S. in Agr., *Extension Associate Professor of Field Crops*

HARRY HAYWARD CHARLTON, Ph.D., *Associate Professor of Anatomy*

JESSIE ALICE CLINE, B.S. in Ed., A.M., *Associate Professor of Home Economics*

HARRY HERSCHELL COXEN, M.S., *Associate Professor of Industrial Education*

FRED TAYLOR CRUSE, Major, Field Artillery, United States Army, *Associate Professor of Military Science and Tactics*

²LOUIS WADE CURRIER, S.B., M.A., *Associate Professor of Mineralogy*

- ELLA VICTORIA DOBBS, A.M., *Associate Professor of Industrial Arts*
²HOWARD LEROY DUNLAP, B.S., Ph.D., *Associate Professor of Chemistry*
MAX MAPES ELLIS, Ph.D., Sc.D., *Associate Professor of Physiology*
²MARSHALL GRAHAM, B.S. in M.E., *Associate Professor of Mining Engineering*
SAMUEL DAVID GROMER, A.M., LL.D., *Associate Professor of Agricultural Economics*
LEONARD DIXON HAIGH, Ph.D., *Associate Professor of Agricultural Chemistry*
²HERBERT RUSSELL HANLEY, B.S. in Min.E., Met.E., *Associate Professor of Metallurgy*
¹CHARLES ALTON HELM, A. M., *Associate Professor of Field Crops.*
²OSCAR ADAM HENNING, A.M., *Associate Professor of German*
²VAN BUREN HINSCH, E.M., *Associate Professor of Mathematics*
HENRY DAGGETT HOOKER, Ph.D., *Associate Professor of Horticulture*
²EUGENE LEE JOHNSON, Ph.B., LL.B., *Associate Professor of English*
EVA JOHNSTON, Ph.D., *Associate Professor of Latin*
¹MACK MARQUIS JONES, B.S. in E.E., *Associate Professor of Agricultural Engineering*
²KARL KENNETH KERSHNER, M.S., *Associate Professor of Chemistry*
AUGUST FREDERICK KUHLMAN, A.M., *Associate Professor of Sociology*
HARRY ANDERSON LA RUE, C.E., *Associate Professor of Highway Engineering*
²SAMUEL HORACE LLOYD, JR., A.B., M.S., *Associate Professor of Psychology*
²ISRAEL HERRICK LOVETT, E.E., *Associate Professor of Electrical Engineering*
MARY R. MCKEE, A.B., *Associate Professor of Physical Education for Women*
HORACE FAIRCHILD MAJOR, B.S.A., *Associate Professor of Landscape Gardening, Superintendent of Grounds*
¹ROBERT STANLEY MANN, B.J., *Associate Professor of Journalism*
MAURICE GOLDSMITH MEHL, Ph.D., *Associate Professor of Geology*
²GARRETT A. MUILENBURG, E.M., Ph.D., *Associate Professor of Geology and Mineralogy*
HAROLD YOUNG MOFFETT, Ph.D., *Associate Professor of English*
GLENN RAYMOND MORROW, Ph.D., *Associate Professor of Philosophy*
JOHN FREDERICK NICHOLSON, M.S., *Extension Associate Professor, State Extension Agent*
²MAURICE D. ORTEN, M.A., *Associate Professor of Economics*
²RYLAND FLETCHER RATLIFF, A.M., *Associate Professor of Physics*
WILLIAM H. E. REID, M.S., *Associate Professor of Dairy Husbandry*
W. REES BREBNER ROBERTSON, Ph.D., *Associate Professor of Zoology*
MARY ELIZABETH ROBINSON, B.S. in H.E., *Extension Associate Professor of Home Economics*

WALTER JULIUS SAUPE, Ph.D., *Associate Professor of Education*
 PAUL FRANKLIN SCHOWENGERDT, A.B., B.S. in Agr., *Extension Associate Professor of Soils*

²WALTER THEODORE SCHRENK, M.S., Ph.D., *Associate Professor of Chemistry*

LEWIS JOHN STADLER, B.S.A., Ph.D., *Associate Professor of Field Crops*

ALLEN EDWIN STEARN, M.S., Ph.D., *Associate Professor of Chemistry*

GEORGE WASHINGTON TANNREUTHER, Ph.D., *Associate Professor of Zoology*

²MARTIN HARMON THORNBERRY, Met.E., *Associate Professor of Metallurgical Research, in charge of the Mississippi Valley Experiment Station*

RALPH KNUPP WATKINS, Ph.D., *Associate Professor of Education*

JAMES ROY WHARTON, M.E., *Associate Professor of Mechanical Engineering*

JESSE ERWIN WRENCH, A.B., *Associate Professor of European History*

ASSISTANT PROFESSORS

ELBERT FRANK ALLEN, Ph.D., *Assistant Professor of Mathematics*

²CLARENCE EDWARD BARDSLEY, C.E., Sc.D., *Assistant Professor of Civil Engineering*

HERMAN BETZ, Ph.D., *Assistant Professor of Mathematics*

HARRY SATTERLEE BILL, *Assistant Professor of the Theory and Practice of Art*

ALBERT EDGAR BILLING, Captain, Field Artillery, United States Army, *Assistant Professor of Military Science and Tactics*

JOHN COY BOUR, S.J.D., *Assistant Professor of Law*

³HANNAH STILLMAN BRADFIELD, B.S., M.A., *Assistant Professor of Home Economics*

²STERLING PRICE BRADLEY, B.S. in Ed., *Assistant Professor of English*

SAMUEL BRODY, A.M., *Assistant Professor of Dairy Chemistry*

WILLIS JUDSON BURNER, A.M., *Assistant Professor of Spanish*

²CELESTIN PIERRE CAMBIAIRE, Ph.B., Ph.D., *Assistant Professor of Spanish and French*

²ERNEST WILSON CARLTON, M.S., *Assistant Professor of Mechanical Drawing and Descriptive Geometry*

JOHN HAROLD CASEY, B.J., *Assistant Professor of Journalism*

EMMA CAUTHORN, A.M., *Assistant Professor of Latin*

DONALD WALTER CHITTENDEN, A.M., *Assistant Professor of Animal Husbandry*

IDA FRA CLARK, B.S. in H.E., *Extension Assistant Professor of Home Economics*

JAMES JOSEPH COGLAN, Captain, Infantry, United States Army, *Assistant Professor of Military Science and Tactics*

JESSIE V. COLES, B.S., A.M., *Assistant Professor of Home Economics*

- LESLIE LEONARD CONNETT, Captain, Infantry, United States Army,
Assistant Professor of Military Science and Tactics
- MARY VIOLETTE DOVER, Ph.D., *Assistant Professor of Chemistry*
- MARION E. DUNSHEE, Ph.B., *Extension Assistant Professor of Home Economics*
- ADRIAN JACKSON DURANT, A.M., D.V.M., *Assistant Professor of Veterinary Science*
- RICHARD HUFF EMBERSON, B.S. in Ed., *Extension Assistant Professor of Rural Education, Boys' and Girls' Club Agent*
- ²VICTOR KOPPLE FISCHLOWITZ, M. S., *Assistant Professor of Mathematics*
- PEARL B. FLOWERS, *Assistant Professor of Nursing, Principal of the School of Nursing*
- LEONARD H. FRASIER, B.S. in C.E., Captain, Field Artillery, United States Army, *Assistant Professor of Military Science and Tactics*
- HERBERT E. FRENCH, Ph.D., *Assistant Professor of Organic Chemistry*
- HARRY MILLER GARLOCK, B.S. in Agr., *Extension Assistant Professor of Animal Husbandry*
- ³EMMA EDITH GRIESEL, A.B., *Assistant Professor of Voice*
- ¹MARY JANE GUTHRIE, Ph.D., *Assistant Professor of Zoology*
- KENYON G. HARMAN, B.S. in Agr., *Extension Assistant Professor of Field Crops*
- WILLIAM FRANKLIN HARRISON, LL.B., Captain, Infantry, United States Army, *Assistant Professor of Military Science and Tactics*
- GUY VERNON HEAD, A.B., LL.B., *Assistant Professor of Law*
- CANNON CHILES HEARNE, B.S. in Agr., *Extension Assistant Professor, State Extension Agent*
- JOHN GILBERT HEINBERG, A.M., *Assistant Professor of Political Science and Public Law*
- EARL WILTON HENDERSON, B.S. in Agr., A.M., *Assistant Professor of Poultry Husbandry*
- HARRY C. HENSLEY, B.S. in Agr., *Extension Assistant Professor of Agricultural Economics*
- MARGARET C. HESSLER, A. M., *Assistant Professor of Home Economics*
- HUGH BRYAN HESTER, A.B., Captain, Field Artillery, United States Army, *Assistant Professor of Military Science and Tactics*
- CLARA LOUISE HILLIGASS, R.N., *Assistant Professor of Nursing, Superintendent of University Hospitals*
- HENRY COBOURN HOWARD, JR., Ph.D., *Assistant Professor of Analytical Chemistry*
- ROBERT LORENZO HOWARD, A.M., LL.B., *Assistant Professor of Law*
- GEORGE WILLIAM HULBERT, A.B., LL.B., *Assistant Professor of English*

BENTON LA RUE HUMMEL, B.S. in Agr., *Extension Assistant Professor of Rural Sociology*

²WILLIAM J. JENSEN, A.M., *Assistant Professor of Physics*

BREDELLE JESSE, A.M., *Assistant Professor of French and Italian*

EMERY KENNEDY JOHNSTON, B.J., *Assistant Professor of Advertising*

EDWIN VIRGIL KERR, First Lieutenant, Field Artillery, United States Army, *Assistant Professor of Military Science and Tactics*

³CHARLES E. KERCHNER, M.E., *Assistant Professor of Mechanical Engineering*

MARY LOUISE KLINGNER, B.S. in Ed., A.M., *Assistant Professor of Home Economics Education*

SARA LAWRENCE LOCKWOOD, B.J., *Assistant Professor of Journalism*

ARTHUR JAMES McADAMS, B.S., *Extension Assistant Professor of Agricultural Engineering*

²T. G. MACCARTHY, C.E., *Assistant Professor of Civil Engineering*

²STANLEY C. MCCOLLUM, B.S. in I.E., *Assistant Professor of Physical Education*

¹BESSIE A. MCCLENAHAN, M.A., *Assistant Professor of Rural Sociology*

WILLIS EDGAR MANEVAL, Ph.D., *Assistant Professor of Botany*

LOIS MARTIN, B.S. in H.E., *Extension Assistant Professor of Home Economics*

THEODORE T. MARTIN, A.B., *Extension Assistant Professor, Boys' and Girls' State Club Agent*

²CLARENCE JOHN MONROE, Ph.D., *Assistant Professor of Chemistry*

MERL P. MOON, Ph.D., *Assistant Professor of Medical Bacteriology and Preventive Medicine*

ANDREW EDWARD MURNEEK, Ph.D., *Assistant Professor of Horticulture*

PAUL B. NAYLOR, A.B., *Extension Assistant Professor, State Extension Agent*

RUSSELL JOHN NELSON, First Lieutenant, Infantry, United States Army, *Assistant Professor of Military Science and Tactics*

EARL MARVIN PAGE, B.S. in Agr., *Extension Assistant Professor of Horticulture*

³WILLIAM HENRY PYLE, Ph.D., *Assistant Professor of Educational Psychology*

JEREMIAH THOMAS QUINN, B.S. in Agr., A.M., *Assistant Professor of Horticulture*

²GEORGE OTTIS RANES, B.S. in E.E., *Assistant Professor of Electrical Engineering*

²ROLFE M. RANKIN, A.M., *Assistant Professor of Mathematics*

MAURICE J. REGAN, B.S. in Agr., *Extension Assistant Professor of Dairy Husbandry*

VANCE LAWTON RICHMOND, M.A., First Lieutenant, Infantry, United States Army, *Assistant Professor of Military Science and Tactics*

- HAROLD WILLIAM RICKETT, Ph.D., *Assistant Professor of Botany*
WALTER STUNTZ RITCHIE, Ph.D., *Assistant Professor of Agricultural Chemistry*
JULIA MADDEN ROCHEFORD, *Extension Assistant Professor of Home Economics*
SAMUEL FRAZIER RUSSELL, B.S. in Agr., *Extension Assistant Professor of Animal Husbandry*
ALEXANDER H. SCHUTZ, Ph.D., *Assistant Professor of French and Italian*
IRL T. SCOTT, Ph.D., *Assistant Professor of Botany*
SAMUEL BRYAN SHIRKY, A.M., *Superintendent of Short Courses, Assistant to the Dean of the Faculty of Agriculture*
LLOYD MILTON SHORT, Ph.D., *Assistant Professor of Political Science and Public Law*
³HARLAN LOY SHRADER, B.S. in Agr., *Extension Assistant Professor of Poultry Husbandry*
ROSS J. SILKETT, B.S. in Agr., *Extension Assistant Professor of Soils*
MARY EMELINE STEBBINS, R.N., P.H.N., *Extension Assistant Professor of Home Economics*
AUBREY FAY STEPHENS, B.S. in Agr., *Extension Assistant Professor of Dairy Husbandry*
¹CAROLINE TAYLOR STEWART, Ph.D., *Assistant Professor of French and Italian*
ELMER GEORGE ALEXANDER SUHR, Ph.D., *Assistant Professor of Classical Archaeology*
¹KNOWLES CLARK SULLIVAN, A.M., *Assistant Professor of Entomology, Deputy Inspector of Nurseries*
HAROLD GORDON SWARTWOUT, A.M., *Assistant Professor of Horticulture*
ROBERT RAPHAEL THOMASSON, B.S. in Agr., *Extension Assistant Professor, State Extension Agent*
FREDERICK LUNDY THOMSEN, M.S., Ph.D., *Assistant Professor of Agricultural Economics*
IDE PEEBLES TROTTER, A.B., M.S.A., *Extension Assistant Professor of Field Crops*
¹CHARLES WESLEY TURNER, B.S. in Agr., A.M., *Assistant Professor of Dairy Husbandry*
²JAMES HENRY UNDERWOOD, *Assistant Professor of Shop*
³ELMER ELLSWORTH VANATTA, M.S., *Assistant Professor of Agricultural Chemistry*
MRS. EDITH G. VAN DEUSEN, Ph.B., *Extension Assistant Professor of Home Economics*
²EDWARD H. WALTER, B.S. in C.E., First Lieutenant, Corps of Engineers, United States Army, *Assistant Professor of Military Science and Tactics*

POSS BRECKON WARREN, B.S. in Eng., Captain, Field Artillery,
United States Army, *Assistant Professor of Military Science and
Tactics*

LILA MERLE WELCH, A.M., *Assistant Professor of Home Economics
Education*

BERTHA KINGSBURY WHIPPLE, M.S., *Assistant Professor of Home
Economics*

WILLIAM WALLER WHITLOCK, *Assistant Professor of Voice*

JAMES STEELE WILLIAMS, Ph.D., *Assistant Professor of Geology and
Geography*

²PHILIP ANTON WILLIS, B.S. in Mech.E., *Assistant Professor of
Mechanical Engineering*

BERLEY WINTON, B.S. in Agr., A.M., *Extension Assistant Pro-
fessor of Poultry Husbandry*

DILLER C. WOOD, B.S. in Agr., *Extension Assistant Professor of
Agricultural Economics*

²WALTER CHARLES ZEUCH, C.E., *Assistant Professor*

CULLEN CASWELL ZIMMERMAN, B.S. in Ed., *Assistant Professor of
Economics*

INSTRUCTORS

JOHN QUINCY ADAMS, A.M., *Instructor in Geography*

MILDRED L. ADAMS, B.S., *Instructor in Physical Education*

CHESTER F. AHMANN, Ph.D., *Instructor in Physiological Chemistry*

MRS. JANET DAVISON BASKETT, A.B., *Instructor in Rural Sociology*

RICHARD S. BATTERSBY, M.D., *Lecturer in Pediatrics*

¹CATHERINE ELIZABETH BEDFORD, B. S. in Ed., *Instructor in In-
dustrial Arts*

²IDA A. BENGTON, S. M., Ph.D., *Lecturer in Bacteriology*

ELMER A. BIERBAUM, B.S., *Extension Instructor in Horticulture*

¹HERBERT BLUMER, A.M., *Instructor in Sociology*

IDA BOHANNON, Ph.D., *Instructor in Spanish*

FREDERICK PHILIP BOHN, B.J., *Instructor in Photo-Illustration*

³GEORGE A. BOND, JR., B.S. in Agr., *Instructor in Physical Educa-
tion*

MURRAY EUGENE BORISH, A.M., *Instructor in English*

ALAGA HARRISON BOYD, B.S. in C.E., *Instructor in Engineering
Drawing*

THOMAS ALLAN BRADY, A.M., *Instructor in History*

BASIL BAXTER BRANSTETTER, B.S. in Agr., *Instructor in Field
Crops*

¹MINNIE M. BRASHEAR, A.M., *Instructor in English*

MILDRED BRIGGS, A.B., M.S., *Instructor in Home Economics*

MARY SWAN BRISLEY, *Instructor in Rural Sociology*

MILDRED WOODWARD BROWN, M.S., *Instructor in Pathology*

ELIZABETH BURRELL, B.S. in Ed., *Instructor in the University
Elementary School*

CHARLES HENRY BUTLER, Ph.B., A.M., *Instructor in Education,
Principal, University High School*

- JESSE LEE CAMPBELL, B.S. in Agr., A.M., *Instructor in Vocational Agriculture in the University High School*
- HAROLD CANFIELD, B.S., M.A., *Extension Instructor in Poultry Husbandry*
- SARA HUDSPETH CHILES, B. S. in Agr., *Extension Instructor, Assistant Boys' and Girls' Club Agent*
- MARSHALL G. CLARK, M.S., *Instructor in Animal Husbandry*
- RUBY J. CLINE, B.S. in Ed., *Instructor in Physical Education for Women*
- ³KATHERINE CONLEY, A.B., *Instructor in University Elementary School*
- ³M. RAYMOND COLLINGS, A.B., *Instructor in Anatomy*
- EUGENE WOODVILLE COWAN, B.S. in Agr., A.M., *Instructor in Agricultural Chemistry*
- WALTER F. CRANGLE, B.S. in Ed., *Instructor in Physical Education*
- ³ROY ASA CROUCH, A.M., *Instructor in Education, Principal, University Elementary School*
- HARMON O. DE GRAFF, Ph.D., *Instructor in Sociology*
- FRANK ERNEST DEXHEIMER, A.B., M.D., *Resident Physician in the University Hospitals, Instructor in Physical Diagnosis*
- ³EDWIN BERCK DIKE, B.S., A.M., *Instructor in English*
- GUSTAV JOHN DIPPOLD, B.S. in Agr., B.S. in Ed., *Instructor in Agricultural Education*
- NETTIE ALICE DOOLITTLE, B.S., A.M., *Instructor in Education*
- RAY THEODORE DUFFORD, M.S., *Instructor in Physics*
- FINIS O. DUNCAN, Ph.D., *Instructor in Mathematics*
- GEORGE RAYMOND EDWARDS, B.J., *Instructor in Physical Education*
- E. C. ELTING, B.S., A.M., *Instructor in Dairy Husbandry*
- ³WALTER OLIVER ESSMAN, A.M., *Instructor in Sociology*
- WILLIAM J. FALLON, *Instructor in Physical Education*
- ²FRANK CECIL FARNHAM, A.B., M.S., *Instructor in Physics*
- CHARLES EDWARD FISHER, *Instructor in Physical Education*
- MEADE T. FOSTER, B. S. in Agr., *Instructor in Animal Husbandry*
- BENJAMIN H. FRAME, B.S. in Agr., A.M., *Instructor in Agricultural Economics*
- ELLA PEARL FRENCH, R.N., *Instructor in Home Nursing*
- LILLIAN MABEL FUNK, M.A., *Instructor in English*
- K. I. GANNON, *Instructor in Industrial Education, St. Louis*
- CARL REES GENTRY, B.S. in Ed., *Instructor in the Theory and Practice of Art*
- WARREN GIFFORD, B.S. in Agr., A.M., *Instructor in Dairy Husbandry*
- ²ELBRIDGE ALVAH GOODHUE, A.B., B.S., *Instructor in Mathematics*
- ³WILLIAM EMMET GLORE, A.B., *Instructor in English*
- LEWIS STEPHEN GRANDY, B.S. in E.E., *Instructor in Electrical Engineering*
- C. BOYLSTON GREEN, A.M., *Instructor in English*

- ²MARION HUGH GRIFFITTS, A.M., *Instructor in German*
¹ESTHER M. GRIFFITH, A.M., *Instructor in Chemistry*
 HARRY EMMONS HAMMOND, M.S., *Instructor in Physics*
 DOUGLAS REID HANSEN, *Instructor in Theory and Practice of Art*
 HAROLD M. HARSHAW, Ph.D., *Instructor in Agricultural Chemistry*
 CAROLINE E. E. HARTWIG, B.S. in Ed., A.M., *Instructor in the University High School*
²IVAN LEE HEBEL, B.S., *Instructor in Mathematics*
³KARL WILLIAM HEIMBERGER, B.S. in C.E., *Instructor in Highway Engineering*
 FLORA E. HENKE, *Instructor in Industrial Education, St. Louis*
 GWINN HENRY, A.B., *Instructor in Physical Education*
 RUSSELL WILLIAM HIBBERT, A.B., B.S. in Ed., *Instructor in Industrial Education, St. Louis*
 JANE HINOTE, B.S., *Extension Instructor, Boys' and Birls' Club Agent*
 LYNN RAY HOWARD, B.S., *Instructor in Home Economics*
 MRS. GERMAINE SANSOT HUDSON, *Instructor in French*
³MILDRED HUDSON, B.S. in Ed., *Instructor in the University High School*
³FORREST R. HUGHES, B.S., *Instructor in Engineering Drawing*
 RUTH WILLARD HUGHEY, A.M., *Instructor in English*
 CHESTER GEORGE JAEGER, A.M., *Instructor in Mathematics*
²EMMA RICE JENSEN, A.M., *Instructor in Biology*
 MARY POLK JESSE, B.S. in Ed., A.M., *Instructor in the University Elementary School*
²DANIEL BOONE JETT, *Instructor in Mathematics*
 MILDRED EDITH JOHNSON, A.M., *Instructor in Spanish*
 WILLIAM DUFFIE JOHNSON, B.S. in E.E., *Instructor in Electrical Engineering*
 WILLOUGHBY H. JOHNSON, JR., A.M., *Instructor In English*
 HOWARD LESLIE JOLLIFF, Mus.B., A.B., *Instructor in Piano*
¹DOROTHY KAUCHER, A.M., *Instructor in English*
 WALTER D. KELLER, A.M., *Instructor in Geology*
 MONA JOSEPHINE KELLEY, A.M., *Instructor in English*
²A. VERN KILPATRICK, B.S. in M.E., *Instructor in Mechanical Engineering*
 BASCOM MILTON KING, B.S. in Agr., A.M., *Instructor in Field Crops*
 ROY THOMAS KIRKPATRICK, B.S. in Agr., A.M., *Instructor in Field Crops*
 HOWARD W. LEECH, B.S. in Ed., *Instructor in the University High School*
 AMY L. LEGER, R.N., *Instructor in Nursing*
 JAMES P. LENNEY, *Instructor in Industrial Education, St. Louis*
 LURA LEWIS, A.M., *Instructor in English*
 EDNA MCGUIRE, B.S. in Ed., *Instructor in the University Elementary School*

FREDERICK FRANCIS MCKENZIE, B.S.A., Ph.D., *Instructor in Animal Husbandry*

HENRY EDWIN MATHIAS, A.M., *Instructor in Geology*

³MARY WILSON MAXWELL, B.S., *Instructor in Physical Education*

²CHARLES J. MILLAR, M.S., *Instructor in Biology*

JAMES CONILESE MILLER, B.S. in Ed., *Instructor in Education, Principal, University Elementary School*

WALTER H. MILLER, B.S. in Ed., *Instructor in Mechanical Engineering*

LUCY CLINTON MOORE, B.S., *Instructor in the University High School*

THOMAS CECIL MORELOCK, B.J., *Instructor in Journalism*

HUGH POTEET MUIR, M.D., A.M., *Instructor in Physical Diagnosis*

CHARLES FREDERIC MULLETT, A.M., *Instructor in History*

ELSA LOUISE NAGEL, B.S. in Ed., A.M., *Instructor in Germanic Languages*

ALFRED THEODORE NAVARRE, M.S., A.M., *Instructor in Geology and Geography*

ERNEST E. NAYLOR, B.S., A.M., *Instructor in Botany*

LOUIS J. NEEDELS, A.M., *Instructor in Anatomy*

HAROLD GOULD NEWMAN, A.M., *Instructor in Veterinary Science*

ADA C. NIEDERMAYER, A.B., *Instructor in Rural Sociology*

¹DOROTHY VIRGINIA NIGHTINGALE, A.M., *Instructor in Chemistry*

RALPH REX PARKS, B.S. in A.E., *Instructor in Agricultural Engineering*

CHESTER J. PETERS, B.S. in Ed., A.M., *Instructor in the University High School*

EDNA A. RASMUSSEN, M.A., *Instructor in Physical Education for Women*

ALLEN WALKER READ, B.A. in Ed., A.M., *Instructor in English*

H. DONOVAN RHYSNBURGER, B.S. Com., *Instructor in English*

J. WILLARD RIDINGS, B.J., *Instructor in Journalism*

DUDLEY A. ROBNETT, A.M., M.D., *Instructor in Pathology*

²ARTHUR SCOTT, Technical Sergeant D.E.M.L., United States Army, *Instructor in Military Science and Tactics*

EUGENE WEBSTER SHARP, B.J., A.M., *Instructor in Journalism*

REBECCA SHOLLEY, B.S., A.M., *Instructor in Home Economics*

ROBERT WILLIAM SIDDLE, A.B., *Instructor in Physiology*

³ROBERT INGALLS SIMPSON, B.S. in Agr., *Instructor in Physical Education*

BINA SLAUGHTER, B.S. in Agr., *Extension Instructor in Home Economics*

GERALDINE SPAULDING, A.B., *Instructor in French*

³LOUIS SPRARAGAN, B.S. in E.E., *Instructor in Electrical Engineering*

ANTON J. STANKOWSKI, B.S. in Agr., *Instructor in Physical Education*

³HJALMAR STORLIE, A.B., *Instructor in English*

ELEANOR TAYLOR, B.S. in Ed., A.M., *Instructor in the University Elementary School*

JEAN E. TAYLOR, B.S. in Ed., A.M., *Instructor in English*

MRS. MARGARET POINDEXTER TELLO, *Instructor in Piano*

GERALD BARCLAY THORNE, B. S. in Agr., *Instructor in Agricultural Economics*

ALICE E. TULLER, *Instructor in Piano*

ANDREW W. UREN, D.V.M., *Instructor in Veterinary Science*

GEORGE VENABLE, *Instructor in Orchestra, Director of University Band*

BERTRAND MAX WAINGER, A.M., *Instructor in English*

NELL WALKER, A.M., *Instructor in Spanish*

²DAVID FRANCIS WALSH, M.S., *Instructor in Metallurgy*

CLARENCE WALTER WEBER, B.S., A.M., *Instructor in Dairy Husbandry*

JOHN RODGERS WHITMAN, B.S. in Agr.Ed., *Instructor in Vocational Agriculture in the University High School*

ROGERS WHITMORE, *Instructor in Violin*

NATALIE WILSON, B.S., *Instructor in Physical Education*

EDNA WOOD, B.S. in Ed., *Instructor in the University High School*

FARRIS H. WOODS, A.M., *Instructor in Zoology*

EMILY KATHRYN WYANT, A.M., *Instructor in Mathematics*

THOMAS LESLIE YATES, B.J., *Instructor in Advertising*

²REAGAN HARRIS YOUNG, B.S. in Mech.E., *Instructor in Mechanical Drawing and Descriptive Geometry*

GENEVA YOUNGS, *Instructor in Voice*

ASSISTANT INSTRUCTORS

HORACE ROSSER AUSTIN, A.B., *Assistant Instructor in French*

ALMA BETZ, B.S. in Ed., A.B., *Assistant Instructor in Germanic Languages*

MINNIE PEARL BOZARTH, B.S. in Ed., *Assistant Instructor in Industrial Arts*

MARY E. BUFFUM, A.B., *Assistant Instructor in Romance Languages*

CLAUD C. CLAPP, A.B., *Assistant Instructor in English*

WARD ALLISON DORRANCE, A.B., *Assistant Instructor in French*

EARL R. GARRISON, B.S. in Agr., *Assistant Instructor in Dairy Husbandry*

JOHN S. MATTHEWS, *Assistant Instructor in Dairy Husbandry*

WOODBURN O. ROSS, A.B., *Assistant Instructor in English*

R. LEONARD STOKES, *Assistant Instructor in Voice*

GRACE TRUMAN TANDY, *Assistant Instructor in Education*

ADMINISTRATIVE AND OTHER OFFICERS

²HENRY HORTON ARMSBY, C.E., *Registrar, Student Advisor, School of Mines and Metallurgy*

ORVILLE MARION BARNETT, *Attorney of the University*

EDWARD ERNEST BROWN, *Business Manager*

S. WOODSON CANADA, A.B., *Registrar*

LESLIE COWAN, B.S. in C.E., *Secretary of the University*

ESTELLE HICKOK, *Secretary to the President*

ROBERT E. LEE HILL, M.S., *Alumni Recorder*

²EDWARD KAHLBAUM, *Business Manager, School of Mines and Metallurgy*

ROBERT BEVERLY PRICE, B.L., *Treasurer of the University*

JOHN FRANCIS WILLIAMS, *University Publisher*

BRUCE J. CARL, *Secretary of the Agricultural Extension Service*

MRS. MARGARET BASS CHAMBERLAIN, B.L., *Head of Read Hall, Assistant Dean of Women*

OTTO SMITH CRISLER, D.V.M., *Superintendent of Hog Cholera Serum Laboratory*

³ROBERT RICHMOND DICKERSON, *Superintendent of Buildings and Grounds, School of Mines and Metallurgy*

FREDERICK DUNLAP, F.E., *Extension Forester*

²CLAUDE O. GRIM, *Acting Superintendent of Grounds*

²NOEL HUBBARD, *Assistant Registrar, School of Mines and Metallurgy*

ARTHUR ALLAN JEFFREY, A.B., *Agricultural Editor*

AUGUST W. KAMPSCHMIDT, A.B., M.D., *Radiographer in the University Hospitals*

²DOROTHY A. KIESLER, *Secretary to the Director, School of Mines and Metallurgy*

ANN W. LANDIS, B.S. in Ed., *Extension Assistant*

HUBERT PRESTON MCCUISTION, B.S., M.D., *Physician in the Student Health Service*

ARTHUR LORD WESTCOTT, M.E., *Superintendent of Buildings*

HELEN LOUISE WOELFEL, A.B., *Biological Artist*

NELLE WORD, *Manager of the University Cafeteria*

LIBRARY STAFF

HENRY ORMAL SEVERANCE, A.M., M.Pd., *Librarian*

²EDITH CARRINGTON JONES, A.M., *Librarian, School of Mines and Metallurgy*

WILL HOWARD COLLINS, A.B., B.L.S., *Assistant Librarian*

FLORENCE BAXTER CURRIE, B.L.S., A.M., *Head Cataloger*

STELLA BLANCHE HEDRICK, *Head of Acquisitions Department*

PERCY ANDERSON HOGAN, *Law Librarian*

ELSIE L. JAECK, A.B., *Head of Circulation Department*

AGNES AUTEN, A.B., *Assistant Cataloger*

²MARY R. BEACH, A.B., *Assistant Librarian*

²JOSEPHINE MARY BOWEN, *Assistant in Library*

JOHN HERMAN DOUGHERTY, A.B., *Assistant at Loan Desk*
MRS. ADA M. ELLIOTT, *Extension Reference Librarian*
FLOY EDNA FRENCH, *Assistant in Acquisitions Department*
JANE FRODSHAM, *Assistant in Charge of Agricultural Library*
¹MRS. JANE A. HURTY, *Assistant in Charge of Engineering Library*
²LUCY S. KIESLER, *Assistant in Library*
LUCILE SCHULHERR KILLOUGH, *Assistant Cataloger*
PRIESTLY H. MCCABE, *General Assistant*
MRS. FANNIE BOOTH MOORE, *Assistant in Charge of Arts and Science
Reading Room*
MILDRED NOWELL, *Secretary*
FREDA PAPE, *Assistant at Loan Desk*
JULIA E. SAMPSON, *Assistant in Charge of Journalism Library*
INEZ SPICER, B.S., *Assistant Cataloger*
MRS. LULA TESTERMAN, *Assistant in Charge of Medical Library*
DOROTHY LOUISE WAHLERS, *Periodical Clerk*
FRIEDA K. WILLIAMS, A.B., *Assistant Cataloger*

SECTION I

GENERAL INFORMATION

HISTORICAL STATEMENT

The University of Missouri is eighty-eight years old. It is the oldest state university west of the Mississippi River. It has always been an integral part of the state's school system, since it was established by an act of the General Assembly of Missouri, approved February 11, 1839, two days after the act establishing the public school system of the state was approved.

The University was located at Columbia, Boone County, June 24, 1839. The cornerstone of the main building was laid July 4, 1840. The spring following, April 14, 1841, instruction in academic courses was begun. The first class consisting of two members was graduated in 1843. Women were first admitted to the University in 1869.

The development of the highest and most efficient type of citizen is the fundamental aim of the University. A liberal education in the arts and sciences and training of the professions is offered.

ORGANIZATION

The University of Missouri comprises the following divisions:

COLLEGE OF ARTS AND SCIENCE	GRADUATE SCHOOL
COLLEGE OF AGRICULTURE	SCHOOL OF JOURNALISM
COLLEGE OF ENGINEERING	SCHOOL OF LAW
SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION	SCHOOL OF MEDICINE
SCHOOL OF EDUCATION	SCHOOL OF MINES AND METALLURGY
SCHOOL OF FINE ARTS	EXTENSION SERVICE

The School of Mines and Metallurgy is at Rolla; the other divisions are at Columbia.

Emphasis is given in particular lines of work by the establishment of minor divisions, chief of which are the Agricultural Experiment Station, the Engineering Experiment Station, the Missouri State Military School, and the Mining Experiment Station at Rolla.

The University Faculty consists of the President, deans, professors, associate professors, assistant professors in all the divisions of the University, and the Librarian. Each division—college or school—of the University has its own faculty, consisting of the Dean, professors, associate professors, and such other teachers of

that school or college as the faculty concerned may elect. The teachers in each department work together thru a chairman appointed by the President for a term of one year.

The President is the executive head of the University and is a member of all the faculties.

LOCATION

The University of Missouri, being at Columbia, is about half way between St. Louis and Kansas City, near the center of the state. By railroad it is reached by the Wabash and the Missouri, Kansas & Texas railways. It is located on national highways number forty and sixty-three which were formerly known as state highways two and seven. Columbia is progressive and prosperous, with a population of approximately 15,000 and more than forty miles of paved streets. Columbia may be characterized as a town of schools, homes, and churches, with enough industrialism to make it efficient. It offers the conveniences of a larger city without the distractions.

EQUIPMENT

GROUNDS AND BUILDINGS: The University grounds at Columbia cover more than 800 acres. The main divisions are in the Francis Quadrangle, the East Campus, the athletic fields, and the University farm. About five miles south, an 80-acre tract is used for experimental work in horticulture. On a 90-acre tract two miles north, the University has a plant for the manufacture of hog-cholera serum. The University also owns about 46,000 acres mainly in the Ozark Mountains of Southern Missouri.

The following University buildings are at Columbia:

Jesse Hall (administration), Parker Memorial Hospital, University Hospital, Lathrop Hall (for fine arts), McAlester Hall (for medicine), Rothwell Gymnasium, Women's Gymnasium, Schweitzer Hall (for agricultural chemistry), Switzler Hall, Jay H. Neff Hall (for the School of Journalism), Whitten Hall (for horticulture), Lefevre Hall (for botany and zoology), Marie Louise Gwynn Hall (for home economics), Lee Harry Tate Hall (for the school of law), Waters Hall (for agriculture); separate buildings for agriculture, astronomy, chemistry, business and public administration, geology, dairy, University Elementary School, University High School, engineering, engineering shops, Industrial arts, library, machinery (for agricultural engineering), physics, poultry, veterinary and cafeteria; two power plants, livestock judging pavilion, dairy barn, horse barn, sheep barn, beef cattle barn, several buildings on hog cholera serum farm; other small buildings; residences for the President of the University and the Dean of the Faculty of Agriculture; Read Hall (dormitory for women.)

The alumni, former students and present students of the University, have presented the institution with a beautiful Gothic Memorial Tower and a Memorial Stadium, dedicated to the memory of the University students who lost their lives in the World War.

LABORATORIES AND MUSEUMS: Practical instruction in the sciences is provided in the following laboratories: Agricultural chemistry, agricultural engineering, animal husbandry, anatomy, astronomy, bacteriology, botany, chemistry, dairy husbandry, engineering (civil, electrical, sanitary, and mechanical), entomology, experimental psychology, educational psychology, field crops, fine arts, geology and mineralogy, home economics, horticulture, industrial arts, journalism, military science, pathology, pharmacology, physics, physiology, physiological chemistry, poultry husbandry, soils, veterinary science, and zoology. There has been added to the museums, during 1924, the Sutton African Collection, consisting of trophies secured by Dr. Richard Sutton, of Kansas City, during a recent African expedition.

There are museums of agriculture, classical archaeology, ethnology, geology, mathematics, zoology, and the social museum.

DRAFTING ROOMS: Rooms are provided for the theory and practice of art and for engineering drawing.

DORMITORIES: The University has one dormitory for women. For detailed information concerning this and the boarding facilities connected with it, see page 61.

LIBRARIES: The libraries of the University at Columbia are the general library, law library, medical library, engineering library, agricultural library, journalism library, and collections in the chemistry, geology, and biology buildings, and the Lathrop collection in the general library. They contain about 238,806 volumes and 25,000 pamphlets. 2,942 periodicals are currently received by the libraries.

The library has been enriched within the last few years by the gift of Honorable Gardiner Lathrop, a former member of the Board of Curators, of one thousand dollars for a department library, to be known as the "John H. Lathrop Library of English and American Literature," and by the purchase of the private library of the late Professor G. Jacques Flach, a French jurist and historian, consisting of 6,000 volumes. The collection is rich in the history of France, especially of Alsace-Lorraine, and in legal literature. The library has secured also the private library of Professor Paul Lejay, consisting of 6,000 volumes of classical literature.

The private library of Dr. William Benjamin Smith was presented to the University library by Dr. Smith in 1926. The collection numbers 2000 volumes. There are 325 volumes in mathematics and physics, 300 in philosophy, 900 in religion and theology, and more than 500 in history literature and the World War.

The general library is housed in a separate building. The reading room will accommodate 260 readers; the four seminar rooms for graduate students provide for 50 students. The library is open 12½ hours a day for consultation during the academic year. It is closed on Sundays and on important legal holidays.

Students have access to the collections of the State Historical Society, containing 65,000 volumes and pamphlets. This collection is housed in the General Library Building. The State Historical library is open 8½ hours a day, except Sunday and legal holidays.

The law library occupies the third floor of the Law building. The collection consists of 26,500 volumes, and the room is open 12½ hours daily, except Sunday. The library includes a valuable collection of law books on criminal laws and criminal trials, presented by John D. Lawson, former Dean of the Law faculty.

The medical library has moved into commodious apartments in the new wing of the Medical Building and is open 7½ hours daily, except Sunday. The collection consists of 8,621 volumes.

The engineering library is shelved in the Engineering Building and is open 7½ hours daily, except Sunday. The collection consists of 6,858 volumes.

The agriculture library is on the second floor of the new Agriculture Building and is open 11 hours daily, except Sunday. The collection on hand there consists of 14,612 volumes.

The journalism library is open 9½ hours daily and consists of 1,717 volumes, and occupies a desirable room on the main floor of J. H. Neff Hall.

These statistics are for books shelved in the branch libraries. There are many other volumes on the same subjects in the general library.

Other collections, shelved in the various laboratories, are accessible at certain hours daily, except Sunday. The collections are small, but have been selected with special reference to the needs of students in these laboratories.

GYMNASIUMS AND ATHLETIC FIELDS: *For Men:* Rothwell Gymnasium presents facilities for gymnastics, indoor track, basketball, boxing, wrestling, handball, and other indoor activities and also adequate locker and bathing facilities. Rollins Field, named in recognition of the generosity of the Rollins family, is adjacent to the Gymnasium. It is one of the most comprehensive and complete recreation and athletic fields of the middle West. It has a 440-yard cinder track with a 220-yard straight-away, a 12-lap board track for winter training, numerous football, baseball, and other play fields, and 20 excellent tennis courts. As an addition to the outdoor equipment, there has been built this past year a Memorial Stadium, unique in design and complete in every respect for handling the large crowds which come to the University for Intercollegiate football. The Stadium, when completed, will seat 56,000. In addition to the football field, there will be a 440-yard

cinder track. Under the Stadium are excellent quarters for training, dressing, and general care of the athletic teams.

For Women: The women of the University have a complete plant exclusively for their own use, a gymnasium complete in every detail with excellent facilities for all indoor recreation and games, complete dressing and service quarters in the basement, and a swimming pool 30x60 with an up to date chlorination and filtration equipment. Immediately adjacent to the Gymnasium are the girls' play and athletic fields exclusively for their own use. These include tennis courts, courts for basketball, volley ball, and play ball, also a cinder track for track athletics, and soccer and hockey fields. There is space for archery and other outdoor games suitable for women.

PUBLICATIONS OF THE UNIVERSITY

The publications of the University consist of *The University of Missouri Studies*, *University of Missouri Bulletin*, and publications of the Agricultural Experiment Station and the Agricultural Extension Service.

The *University of Missouri Bulletin* comprises the astronomical series, the education series, engineering experiment station series, extension series, general series, journalism series, library series, medical series, law series, literature series, science series, and social science series. The publications of the Agricultural Experiment Station include research bulletins—bulletins and circulars of information based for the most part on the work of the local station. The publications of the Agricultural Extension Service are of a more popular nature, covering a wider range of work. *The University of Missouri Studies* contain the results of original research by the teachers and graduate students of the University. Beginning January 1, 1926, *The University of Missouri Studies*, A QUARTERLY OF RESEARCH, were issued quarterly, the first four numbers of Volume One being issued during the year.

The bulletins and circulars of information are sent free, within the State, on application. The catalog and special announcement of each school and college are issued annually and may be had by writing to the Registrar of the University.

ENTRANCE

All communications regarding entrance should be addressed to the Registrar, University of Missouri, Columbia, Missouri, who has charge of all matters relating to admission to any division of the University.

REQUIREMENTS FOR ADMISSION

The University admits without examination graduates of the fully accredited high schools in Missouri, who present fifteen acceptable units. The units accepted in various subjects will be found on page 35.

Those graduates of schools fully accredited by other state universities of similar rank, who comply with the requirements as stated, will also be admitted without examination.

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

Manual Training, Home Economics, and similar subjects require double periods, as do the laboratory sciences. No college credit is granted for high school units in excess of the fifteen units required for admission.

College subjects required for admission are designated in terms of "hours," an hour being the equivalent of a subject pursued one period a week for one semester, fifteen hours constituting a semester's work.

Following are the requirements for admission as a regular student to the several colleges and schools, and to the Graduate School.

THE COLLEGES

COLLEGE OF ARTS AND SCIENCE	COLLEGE OF ENGINEERING
COLLEGE OF AGRICULTURE	SCHOOL OF FINE ARTS
SCHOOL OF MINES AND METALLURGY (AT ROLLA)	

The requirements for admission to these colleges are fifteen units, the equivalent of a four-year high school course; or, twelve units, the equivalent of a recognized three-year senior high school course in addition to at least three units completed in the ninth grade, or the last year of the junior high school.

A candidate for admission who has completed his work in a high school organized on the four-year basis must present fifteen units from the list on page 35. Three of these units must be in English. The following additional units are recommended and expected: ARTS AND SCIENCES, ENGINEERING, one unit in mathe-

matics, two units in one foreign language; AGRICULTURE, one unit in mathematics; SCHOOL OF FINE ARTS, one unit in mathematics, two units in one foreign language and one unit in history. For students entering music curricula three units in music are required. (See page 178.) SCHOOL OF MINES AND METALURGY, one unit in algebra and one unit in plane geometry.

A candidate for admission who offers a certificate of graduation from a senior high school (comprising grades 10, 11 and 12) must present twelve senior high school units from the list on page 35 exclusive of those units completed in a junior high school. The candidate's preparation must have been in all respects the equivalent of that required from a standard four-year high school.

THE PROFESSIONAL SCHOOLS

SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION: The requirements for admission to the School of Business and Public Administration are the satisfactory completion of (1) a four-years' high school course or its equivalent, and (2) the first four semesters' work or 60 hours' credit (exclusive of the required work in physical training and military science) in the College of Arts and Science of the University of Missouri or the equivalent.

SCHOOL OF EDUCATION: The requirements for admission to the School of Education are the satisfactory completion of (1) a four-years' high school course or its equivalent, and (2) 60 semester hours of credit (exclusive of the required work in physical training and military science) which may be accepted toward the degree of B. S. in Education.

SCHOOL OF JOURNALISM: The requirements for admission to the School of Journalism are the satisfactory completion of (1) a four-years' high school course or its equivalent, and (2) the first four semesters' work or 60 hours' credit (exclusive of the required work in physical training and military science) in the College of Arts and Science of the University of Missouri or the equivalent. It is strongly urged that this credit include: A modern language, 10 hours; logic, 3 hours; American history, 5 hours; narration and description, 3 hours; exposition, 3 hours. For students who plan to specialize in agricultural journalism, 5 hours of chemistry should be included.

SCHOOL OF LAW: The requirements for admission to the School of Law are the satisfactory completion of (1) a four-years' high school course or its equivalent, and (2) the first four semesters' work and 60 hours' credit (exclusive of the required work in physical training and military science) in the College of Arts and Science or any other division of the University of Missouri or the equivalent.

SCHOOL OF MEDICINE: The requirements for admission to the School of Medicine are the satisfactory completion of (1) a four-years' high school course or its equivalent, and (2) the first four

semesters' work—60 normal credit hours²—(exclusive of required work in physical training and military science) in the College of Arts and Science of the University of Missouri or the equivalent. This credit must include normal credit hours² as follows:

English composition and literature, 6 hours; German or French, 8 hours; general zoology, 8 hours, of which at least 4 hours must be laboratory work; general physics, 8 hours, of which at least 2 hours must be laboratory work; inorganic chemistry, 8 hours, of which at least 4 hours must be laboratory work; organic chemistry, 5 hours, of which at least 2 hours must be laboratory work, and general bacteriology, 3 hours.

Beginning in September, 1928, the requirements for admission to the School of Medicine will be the satisfactory completion of (1) a four-years' high school course or its equivalent, and (2) the first six semesters' work—90 normal credit hours²—in the College of Arts and Science or the equivalent, including the specific requirements listed above.

THE GRADUATE SCHOOL

Graduates of colleges and universities accredited by the Association of American Universities, the Association of Colleges and Secondary Schools of the Southern States, the Missouri College Union, or the North Central Association of Colleges and Secondary Schools will be admitted to the Graduate School.

Graduates of other colleges and universities of high standing and graduates of reputable foreign colleges and universities may be admitted to the Graduate School.

MISSOURI STATE TEACHERS' COLLEGES: (1) A graduate of a Missouri State Teachers' College whose first regular enrollment for college work in a Teachers' College was subsequent to September 1, 1916, and who has completed the 120-hour curriculum, will be admitted to the Graduate School of the University upon presentation of the proper credentials.

(2) A graduate of a Missouri State Teachers' College whose first regular enrollment for college work in a Teachers' College was prior to September 1, 1916, will be granted credit in the University of Missouri in accordance with the Conference Agreement of State Educational Institutions. In granting such credit the University will be governed by the recommendations of the Credentials Committee of the State Teachers' College from which the student was graduated.

ENTRANCE CONDITIONS

Students may not enter with a deficiency in preparatory work except that students may be admitted to music curricula in the School of Fine Arts conditioned in applied music. Such students, however, must present a total of fifteen acceptable units.

²Normal credit refers to the credit hours obtained without regard to excess or diminished credit on the basis of the grades received. See page 90.

Students may be admitted to those divisions requiring two years of college work for entrance conditioned in a small amount of the credit required, except that no deficiency in hours credit is permitted for admission to the School of Medicine.

Entrance conditions, except in applied music, must be removed within two semesters from the date of entrance. (For removal of condition in applied music see page 178.)

SOURCES OF ACCEPTABLE CREDITS

The credits required for admission to the under-graduate divisions, as detailed above, may be secured

- (a) By certificate from an accredited high school or academy.
- (b) By examination.
- (c) By transfer of credits from another university or college of recognized standing.

(a) ADMISSION BY CERTIFICATE.

The university will not accept a certificate of graduation unless the high school course of the student has been four years in length and unless all the work has been done in the regular session of the school, with the exception that credit will be allowed without examination from approved secondary summer schools.

The diploma will not be accepted as a credential. The student must present the proper form of certificate, signed by the principal or superintendent of the accredited school, recommending his admission to the University. *The University recommends that accredited schools issue these certificates only to those students who have been graduated.*

Students wishing to enter the University by certificate from an accredited high school or academy may obtain the necessary blanks from the Registrar. Certificates of credit should be submitted early. (See Directions for New Students, Page 38).

Subjects Accepted for Admission: The subjects in which entrance units may be offered, the maximum and minimum number of units acceptable in each subject for admission to the College of Arts and Science, Agriculture, Engineering, School of Fine Arts, or School of Mines (Rolla), are presented in the following:

Subjects	Max.	Min.	Subjects	Max.	Min.
English.....	4	3	Greek.....	3	2
Algebra (elem.).....	1½	1	German.....	3	2
Plane geometry.....	1	1	French.....	3	2
Solid geometry.....	½	½	Spanish.....	3	2
Plane trigonometry.....	½	½	Physics.....	1	1
**Arithmetic (adv.).....	½	½	Chemistry.....	2	1
**Algebra (adv.).....	½	½	General biology.....	1	1
History.....	4	1	General Science.....	1	1
American government.....	½	½	Zoology.....	2	1
Latin.....	4	2	Botany.....	2	1

Subjects	Max.	Min.	Subjects	Max.	Min.
Hygiene.....	1	½	†Economics.....	½	½
Physical geography.....	1	½	Sociology.....	½	½
†Agriculture.....	1	1	Community Civics.....	½	½
†Vocational agriculture.....	6	2	†Commercial arithmetic...	½	½
††Music.....	†	½	†Commercial law.....	½	½
Drawing.....	2	1	†Commercial geography...	½	½
†Manual training.....	2	1	†Bookkeeping.....	1	½
†Mechanical drawing.....	1	1	†Stenography, typewriting.	2	2
†Household art.....	2	1	†Typewriting.....	1	½
†Vocational home economics.	4	2	††Teacher-training.....	3	3

**Must be preceded by elementary algebra and plane geometry. Advanced arithmetic and advanced algebra cannot be offered together.

†Vocational subjects. The maximum number of units accepted in vocational subjects is eight.

††If more than one unit be presented in music the maximum number of units accepted in vocational subjects will be reduced equally.

†Three units in music will be accepted for admission to the School of Fine Arts. Two units only will be accepted for admission to other divisions of the University.

††No credit is given unless all of the three teacher-training courses are completed.

(b) ADMISSION BY EXAMINATION.

All persons who desire to take the entrance examination should first write to the Registrar, stating the name of the division which they desire to enter. Those who are eligible will be notified.

Entrance examinations will be held at the University September 13, 1927. Entrance examinations may also be held on January 28, 1928, and June 8, 1928.

Extra examinations for entrance will be ordered only for good cause and only upon satisfactory evidence that the candidate could not attend the regular examination. By order of the Board of Curators, any person entering any extra or repeated entrance examination must pay a fee of \$1 to the Secretary of the University.

Further information concerning entrance examinations may be obtained by addressing the Registrar, University of Missouri, Columbia.

(c) ADMISSION BY TRANSFER OF CREDITS FROM OTHER COLLEGES OR UNIVERSITIES.

One who has been admitted to another college or university of recognized standing will be admitted to this University upon presenting a certificate of honorable dismissal and an official statement of the courses completed by him, provided his scholastic record in such college or university has been satisfactory. This should include a statement of the subjects which were accepted for his admission.

Credit in the form of advanced standing may be allowed for work satisfactorily completed in any other college or university of recognized standing in so far as such work satisfies the particular requirements of the division of the University in which the student registers. (Advanced standing for the work of the senior year will

not be granted.) Claims for advanced standing, in order to receive recognition, must be made by the student within one semester after entrance. If a student files with the Registrar complete official credentials at least six weeks before the opening of the semester, claims for advanced standing will be passed upon and the student notified before registration.

Admission from Teachers' Colleges of Other States: Students from the teachers' colleges of other states will be admitted without examination, provided they furnish certificates showing that they have satisfied the entrance requirements to the college or school which they wish to enter. They will also be given credit for advanced standing for all courses in excess of entrance requirements which count toward the degrees for which they are candidates; but the credit will not be greater in amount than that granted to such students by the state university of the state in which the school is located. The certificate should be sent in advance to the Registrar.

Admission from Accredited Junior Colleges: This University desires to encourage sound standards of scholarship in the educational institutions of Missouri and to co-operate between public and private efforts in education of collegiate grade. It has therefore at the request of these institutions themselves accepted the responsibility of standardizing certain Missouri Colleges that could not offer four years of standard college instruction and the Bachelor's degree and yet might hope satisfactorily to duplicate the first two years of the standard colleges. It was believed the University might also profit by having some students, especially women students, spend their first two years in a college and do their upper-class work in the University. Accordingly, encouragement has been given to a group of institutions known as junior colleges.

Graduates of accredited junior colleges will be admitted without examination to junior standing in the College of Arts and Science of this University, provided they have satisfied the entrance requirements and the work of the first two years of this college.

Graduates in music of accredited junior colleges whose courses in music have been approved for credit in the School of Fine Arts, will be admitted without examination to junior standing in the School of Fine Arts, if their courses have paralleled the work of the first two years.

Junior college graduates will also be admitted to any other division of the University, except the Graduate School, if they have completed the specific requirements for admission to such division.

ADMISSION OF SPECIAL STUDENTS AND HEARERS

In recognition of the fact that experience and maturity tend to compensate in a measure for the lack of scholastic attainments, persons over twenty-one, who give evidence of intelligence and ma-

turity, may be admitted to the University as special students without passing the regular examinations required for entrance, under the following conditions: (1) They must show good reason for not taking a regular course. (2) They must demonstrate their fitness to pursue courses selected; they are required to take all regular examinations, and are expected to do better than average work. Failure to live up to this expectation will result in their elimination by the dean. Special students cannot become candidates for degrees until they have satisfied the entrance requirements to the college or school in which the degree is offered.

Those admitted as special students to the schools requiring two years of college work for regular admission are expected to have had some college work, or to have had experience compensating in a way for the lack of it.

No special students are admitted to the School of Medicine. The number admitted to the School of Law is limited.

With the consent of the Registrar and the instructors concerned, students may be admitted to any division as hearers. Hearers must be registered and pay fees, but are not required to take examinations and receive no credit toward a degree.

DIRECTIONS FOR NEW STUDENTS

ENTRANCE: Anyone desiring information regarding entrance should address the Registrar, University of Missouri, Columbia, Missouri.

All credentials to be submitted in support of one's application for admission or advanced standing should be in the hands of the Registrar by August 1 and in any event not later than August 15. High school graduates will avoid delay and inconvenience by having their certificates sent as soon as possible after graduation. Blanks for the certification of high school credits may be obtained from the Registrar.

Certificates and all credentials from other colleges and universities filed by candidates for admission or advanced standing become the property of the University.

Regular Students: All candidates for admission as regular students, except those whose certificates have been accepted as indicated on page 35 must take the entrance examinations. These will be held according to the program given on page 36.

Students whose certificates have been accepted will receive full information regarding entrance and registration.

Special Students and Hearers: Persons more than 21 years old may be admitted as special students or hearers without meeting the regular prescribed entrance examinations, under the conditions indicated on page 37.

Application for admission as a special student or hearer should be made in advance to the Registrar.

Graduate Students: Persons are admitted as graduate students by the Registrar, and application and official transcripts of record, including statement of degree, should be sent before the opening of the session to the Registrar.

REGISTRATION: For dates of registration see Calendar page 3.

Full directions for registration will be found in the main corridor of Jesse Hall during the days of registration.

Late Registration: A student who enters after the regular registration period may, on account of courses being filled, find difficulty in securing the subjects he desires, and moreover, he is not permitted to carry the full amount of work, but must enroll for a proportionately reduced amount of work, depending on the date of entrance. No student is admitted to any division of the University for work for which he is to receive credit after the expiration of one-fourth of the time for which the courses he selects are scheduled, except in extraordinary cases, when the Registrar has power to admit him on recommendation of the dean of the division. Students entering late are examined or conditioned in the work which their classes have already done. The foregoing statements do not apply to students entering for the short courses in agriculture or as hearers.

FEES: For information regarding fees see page 48.

An honor graduate of a fully accredited school should get a statement of his scholarship from the Registrar before paying any fees.

ACCREDITED SCHOOLS

ACCREDITED COLLEGES AND UNIVERSITIES IN MISSOURI

*Central College.....	Fayette.
*Central Wesleyan College.....	Warrenton.
*Culver-Stockton College.....	Canton.
*Drury College.....	Springfield.
Harris Teachers' College.....	St. Louis.
*Lindenwood College.....	St. Charles.
Missouri State Teachers' Colleges:	
Central	Warrensburg.
Northeast	Kirksville.
Northwest	Maryville.
Southeast	Cape Girardeau.
Southwest	Springfield.
*Missouri Valley College.....	Marshall.
*Missouri Wesleyan College.....	Cameron.
*Park College.....	Parkville.
*St. Louis University.....	St. Louis.
*Tarkio College.....	Tarkio.
*University of Missouri.....	Columbia.
*Washington University.....	St. Louis.
Webster College.....	Webster Groves.
*Westminster College.....	Fulton.
*William Jewell College.....	Liberty.

*Member Missouri College Union.

ACCREDITED JUNIOR COLLEGES IN MISSOURI

(List Corrected to January 1, 1927.)

†Christian College.....	Columbia.
†Cotter College.....	Nevada.
Flat River Junior College.....	Flat River.
†Hardin College.....	Mexico.
†Kansas City Junior College.....	Kansas City.
Kemper Military School.....	Boonville.
†LaGrange College.....	LaGrange.
†Ozark Wesleyan College.....	Carthage.
†Palmer College.....	Albany.
St. Mary's Institute.....	O'Fallon.
†St. Joseph Junior College.....	St. Joseph.
Southwest Baptist College.....	Bolivar.
†Stephens College.....	Columbia.
Wentworth Military Academy.....	Lexington.
The Principia.....	St. Louis.
†William Woods College.....	Fulton.

†Offering approved music courses.

SECONDARY SCHOOLS FULLY ACCREDITED WITH THE UNIVERSITY OF MISSOURI

(List Corrected to January 1, 1927.)

Note—The University of Missouri will accept the certificate from any school accredited by the North Central Association of Colleges and Secondary Schools or by Association of Colleges and Secondary Schools of the Southern States. Schools on this list marked with a star () are on the North Central Association list.*

Consolidated district schools are indicated by the notation (C. D.)

Adrain	*Aurora
Advance	Auxvasse (C. D.)
Alba	Ava
Albany:	Avalon (C. D.)
High School	
Academy of Palmer College	Baring
Alma (C. D.)	Barnard
Altamont	Bates City
Alton	Bell City
Amity	Belle (C. D.)
Amoret (C. D.)	Bellflower
Anderson	Belton
Appleton City	Benton
Arcadia:	Bernie
Ursuline Academy	Bethany
Archie (C. D.)	Bethel
Armstrong	Bevier
Ash Grove	Bigelow (C. D.)
Ashland (C. D. No. 2)	Billings
Atlanta (C. D. No. 3)	Birch Tree

- Bismarek.
 Blackburn
 Blackwater
 Blairstown (C. D.)
 Blodgett
 Bloomfield
 Blue Springs
 Blythedale (C. D.)
 Bogard
 Bois D'Arc (C. D.)
 Bolekow (C. D.)
 Bolivar:
 High School
 Academy of Southwest Baptist College
 Boomer:
 Forker
 Bonne Terre
 Boonville:
 *High School
 *Kemper Military School
 Bosworth
 Bowling Green
 Bragg City
 Brashear
 *Braymer
 Breckenridge
 Bridges (C. D.)
 Bronaugh (C. D.)
 Brookfield:
 *High School
 Shelby (C. D.) (Route 5)
 Browning
 Brumley
 Brunswick
 Bucklin
 Buckner
 Buffalo
 Bunceton
 Burlington Junction
 *Butler

 Cabool
 Cainesville
 Cairo
 Caledonia
 Calhoun
 California
 Callao
 Camden (C. D.)
- Camden Point:
 High School (C. D.)
 *Academy of Missouri Christian College
 Cameron
 Campbell
 *Canton
 Cape Girardeau
 †High School
 St. Vincent's Academy
 Cardwell
 Carl Junction
 *Carrollton
 Carterville
 Carthage:
 *High School
 Academy of Ozark Wesleyan College
 Caruthersville
 Cassville
 Center (C. D.)
 Centerview (C. D.)
 Centralia
 Chaffee
 Chamois
 Charleston
 Chilhowee (C. D.)
 Chillicothe:
 *High School
 St. Joseph's Academy
 Chula
 Clarence
 Clark
 Clarksburg
 Clarksville
 Clarkton
 Clayton:
 Christian Brothers
 *High School
 John Burroughs School
 *Academy of Chaminade College
 Clearmont
 Clever (C. D.)
 Clifton Hill:
 High School
 Thomas Hill (C. D.)
 Clinton
 Coffey
 Cole Camp
 Columbia:
 *Academy of Christian College
 *Academy of Stephens College
 *High School
 *University High School

Competition (C. D.) No. 2	Eolia (C. D.)
Conception:	Essex
Conception College Academy	Esther
Conception Junction	Eugene
Concordia:	Eureka (C. D.)
High School	Everton
St. Paul's College Academy	Ewing (C. D.)
Conway	*Excelsior Springs
Cooter	Exeter
Corder	
Corning	Fairfax:
Cowgill	High School
Craig	Daleview (C. D.)
Crane	Fair Grove
Crocker	Fairplay
Crystal City	Fairview (C. D.)
Cuba	Farber (C. D.)
	Farmington
Dadeville (C. D.)	Faucett (C. D.)
Darlington	*Fayette
Dawn (C. D.)	*Ferguson
Dearborn (C. D.)	Festus
Deepwater	Fillmore (C. D.)
DeKalb	*Flat River
Delta	Fordland
*Desloge	Forest City
DeSoto	Fornfelt
Dexter	Forsyth (C. D.)
Diamond (C. D.)	Fortescue (C. D.)
Diehlstadt (C. D.)	Frankford
Dixon	Fredericktown
Doe Run	Freeman
Doniphan	Fruitland
Dover	Fulton:
Downing	*High School
Drexel	*Academy of Synodical College
Duenweg	
Durham	Gainesville
	Gallatin
Eagleville (C. D.)	Galt (C. D.)
Easton	Garden City
East Prairie	Gideon
Edgerton (C. D.)	Gilliam (C. D.)
Edina:	Gilman City
High School	Glasgow
St. Joseph's	Golden City
Eldon	Goodman
Eldorado Springs	Gorin
Ellington (C. D.)	Gower (C. D.)
Elmer (C. D.)	Graham (C. D.)
Elmo (C. D.)	Grain Valley (C. D.)
Elsberry	Granby
Elvins	Grand Pass (C. D.)
Eminence	

Grandview (C. D.)
 Granger (C. D.)
 Grant City
 Grayson (C. D.)
 Green Castle
 Green City
 Greenfield
 Green Ridge (C. D.)
 Greentop
 Greenville
 Guilford

 Hale
 Hallsville
 Halltown
 Hamburg:
 Francis Howell
 Hamilton:
 High School
 New York Township
 Hannibal:
 High School
 St. Joseph's Academy
 Hardin:
 *High School
 Central (C. D.)
 Harris
 Harrisonville
 Hartville
 Hatfield (C. D.)
 Hayti
 Henrietta (C. D.)
 Herculanum
 Hermann
 Hickman Mills (C. D.)
 Higbee
 *Higginsville
 Holcomb (C. D.)
 Holden
 Holland (C. D.)
 Holliday
 Hollister:
 *School of the Ozarks
 Holt
 Hopkins
 Hornersville
 Houston
 Houstonia (C. D.)
 Hughesville (C. D.)
 Humansville
 Hume (C. D.)
 Hunnewell

Huntsville
 Hurdland

 Iberia:
 Iberia Academy
 Ilasco
 Ilmo
 Independence:
 *William Chrisman
 Irondale
 Ironton

 *Jackson
 Jameson (C. D.)
 Jamesport
 Jasper
 Jefferson City:
 *Ernst Simonsen
 Jennings
 Jerico Springs
 *Joplin

 Kahoka
 Kansas City:
 *Academy of St. Teresa Junior
 College
 Barstow School
 *Central
 *Country Day School
 De La Salle Academy
 French Institute of Notre Dame de
 Sion
 Loretto Academy
 *Manual Training
 *Northeast
 Paseo
 Redemptorist
 *Rockhurst
 *Southwest
 St. Agnes Academy
 St. Aloysius Academy
 St. Vincent's Academy
 *Sunset Hill School
 *Westport
 Kearney
 *Kennett
 Keytesville
 Kidder:
 *Kidder Institute
 Kimmswick
 King City
 Kingston
 *Kirksville

- Kirkwood
 *High School
 Ursuline Academy
 Knobnoster
 Knox City

 LaBelle
 Laclede
 Laddonia
 LaGrange:
 High School
 Academy of LaGrange College
 Lamar
 Lamonte
 Lancaster
 LaPlata
 Laredo
 Lathrop
 Latour (C. D.)
 Lawson
 Leadwood
 *Lebanon
 Lees Summit
 Leeton:
 High School (C. D.)
 Shawnee Mound (C. D.)
 Leonard
 Lewistown (C. D.)
 Lexington:
 *High School
 *Wentworth Military Academy
 Liberal
 Liberty
 Licking
 Lilbourn
 Lincoln
 Linn (C. D.)
 Linn Creek
 Linneus
 Lock Springs
 Lockwood
 Louisiana
 Lowry City
 Lucerne
 Ludlow
 Luray
 Lutesville

 McFall:
 High School (C. D.)
 Grandview (C. D.)
 *Macon
 Madison:
 High School

 Middle Grove
 Maitland
 Malden
 Malta Bend (C. D.)
 Mansfield
 *Maplewood
 Marble Hill:
 Academy of Will Mayfield College
 Marceline
 Marionville
 *Marshall
 Marshfield
 Marston
 Martinsville (C. D.)
 Maryville:
 *High School
 St. Patrick's School
 Matthews (C. D.)
 Maysville
 Maywood (C. D.)
 Meadville
 Memphis
 Mendon (C. D.)
 Metz (C. D.)
 Mexico:
 *Academy of Hardin College
 *McMillan
 *Missouri Military Academy
 St. Brendan
 Miami
 Middletown
 Milan
 Miller
 Mindenmines (C. D.)
 Mirable (C. D.)
 *Moberly
 Mokane
 *Monett
 Monroe City:
 High School
 Holy Rosary Academy
 Montgomery City
 Monticello (C. D.)
 Montrose:
 High School
 Johnston
 Mooresville (C. D.)
 Morehouse
 Morley
 Morrisville (C. D.)
 Mound City:
 *High School
 Holt County (C. D.)

- Moundville (C. D.)
 Mountain Grove
 Mountain View
 Mt. Moriah (C. D.)
 Mt. Vernon

 Napton (C. D.)
 Naylor
 Neosho
 Nevada:
 *High School
 *Academy of Cottey College
 Newark
 New Bloomfield (C. D.)
 Newburg
 New Franklin
 New Hampton
 New Haven
 New London
 New Madrid
 New Point (C. D.)
 Newtonia
 Newton
 Nixa
 Noel
 Norborne
 *Normandy (C. D.)
 North Kansas City
 Norwood (C. D.)
 Novelty
 Novinger

 Oak Grove
 Oak Ridge
 Odessa
 Olean
 Oran
 Oregon
 Oronogo
 Orrick
 Osborn
 Osceola
 Otterville (C. D.)
 Overland:
 *Ritenour
 Owensville
 Ozark

 Pacific
 *Palmyra
 Paris
 Parkville:
 *Academy of Park College
 Parma
- Parnell (C. D.)
 Pattonsburg:
 High School
 Civil Bend
 Paynesville (C. D.)
 Peculiar (C. D.)
 Peirce City
 Perry
 Perryville:
 High School
 St. Vincent's
 Pickering
 Piedmont
 Pilot Grove
 Pineville
 Platte City
 Plattsburg
 Pleasant Hill
 Pleasant Hope
 Pollock
 Polo
 *Poplar Bluff
 Portageville
 Potosi
 Powersville
 Prairie Hill (C. D.)
 Prairie Home (C. D.)
 Princeton
 Purdin
 Purdy
 Puxico
 Queen City
 Quitman (C. D.)

 Ravanna (C. D.)
 Ravenwood:
 High School (C. D.)
 Harmony (C. D.)
 Raymore (C. D.)
 Raytown (C. D.)
 Rensselaer (C. D.)
 Republic
 Revere (C. D.)
 Richards (C. D.)
 Rich Hill
 Richland
 Richmond:
 High School
 Millville (C. D.)
 Ridgeway
 Rockport
 Rockville (C. D.)
 Rocky Comfort

Rogersville	*Savannah
*Rolla	Schell City
Rothville	*Sedalia
Rosendale (C. D.)	Seligman
Russellville	Senath
Rutledge	Seneca
	Seymour
St. Charles:	*Shelbina
*High School	Shelbyville
Convent of the Sacred Heart	Sheldon
St. Clair	Sheridan (C. D.)
Ste. Genevieve:	Sikeston
High School	Silex (C. D.)
Valle	Skidmore (C. D.)
St. James	Slater
St. Joseph:	Smithton (C. D.)
Convent of the Sacred Heart	Smithville
*Benton	Southwest City
*Central	Sparta (C. D.)
*Lafayette	Spickard
Roubidoux	Springfield:
St. Louis:	Greenwood
*Academy of Sacred Heart, Mary-	*High School
land and Taylor	St. de Chantal Academy
*Academy of Sacred Heart College,	Spruce:
Meramec and Nebraska	Ballard (C. D.)
Academy of the Visitation	Stanberry
*Beaumont	Steele
Christian Brothers'	Steeleville
*Grover Cleveland	Steffenville (C. D.)
Hancock (C. D.), 9427 Broadway	Stella
*Hosmer Hall	Stet (C. D.)
*Loretto Academy	Stewartsville
*William Cullen McBride	Stockton
*The Principia	Stotesbury
*Roosevelt	Stoutland
Rosati-Kain	Stoutsville
St. Alphonsus	Strafford (C. D.)
St. Elizabeth Institute	Sturgeon
*St. Joseph's Academy	Sullivan
*St. Louis University	Summersville (C. D.)
St. Mark's	Sumner (C. D.)
*Sancta Maria in Ripa	Sweet Springs
*Soldan	
*Yeatman	*Tarkio
St. Mary's	Thayer
Salem	Thomasville
Salisbury:	Tina
High School	Tipton
St. Joseph's	*Trenton
Sampsel (C. D.)	Triplett (C. D.)
Sarcoixie	Troy

Turney	Waverly
Tuscumbia	Waynesville
	Weatherby
Union	Weaubleau (C. D.)
Union Star	*Webb City
*Unionville	Webster Groves:
*University City	*High School
Urbana	Nerinx Hall
Urich	Wellington
Utica	*Wellston
	Wellsville
Van Buren (C. D.)	Westboro (C. D.)
*Vandalia	Weston
Vanduser	*West Plains
Versailles	Wheatland (C. D.)
Vienna (C. D.)	Wheaton
	Wheeling (C. D.)
Walker (C. D.)	Willard (C. D.)
Walnut Grove	Williamstown (C. D.)
Wardell	Williamsville
Warrensburg:	Willow Springs
High School	Windsor
Farmers' (C. D.)	Winfield
*Training School, C. M. S. T. C.	Winona (C. D.)
Warsaw	Winston (C. D.)
*Washington	Worth
Watson (C. D.)	

EXPENSES AND AIDS

TUITION AND FEES

TUITION: Tuition is free in all divisions of the University to students who are residents of the State of Missouri. Students who are non-residents of the state, excepting those admitted to the Graduate School for graduate work only, are each required to pay a tuition fee of \$10 for each semester. With the exception above noted, no person shall be considered eligible to register in the University as a resident of the State of Missouri unless he has been a bona fide resident in the State for the twelve months next preceding the date of his original enrollment. The residence of minors shall follow that of the legal guardian but in case a resident of Missouri is appointed guardian of a non-resident minor, the legal residence of such minor for the purpose of this rule shall not be considered established in Missouri until the expiration of twelve months after such appointment. In the case of students whose parents move to Missouri and become bona fide residents of the State, such students shall be considered residents of the State.

LIBRARY, HOSPITAL, AND INCIDENTAL FEE: All students in the University, except those specially exempt by rules of the Curators (see pages 79-83), are required to pay a library, hospital, and incidental fee as follows:

(1)	For one semester of 18 weeks.....	\$30.00
(2)	For the summer session (8 weeks).....	15.00
(3)	A. For the first term of the Two-year Winter Course in Agriculture (8 weeks).....	10.00
	B. For the second term of the Two-year Winter Course in Agriculture (8 weeks).....	10.00

Students who are permitted to carry work leading to eight credit hours or less in a semester will be admitted on the payment of an incidental fee of \$15.00 a semester. Students in the summer session who are permitted to carry work leading to four hours credit or less will be admitted on the payment of an incidental fee of \$7.50. For the purpose of this rule, courses taken as a hearer will be counted in making up the eight hours.

FEE FOR LATE REGISTRATION: Every student who files his study card after the close of the last day of registration must pay a fee of \$5 for late registration in addition to fees already provided for. This rule applies to all except hearers and to students entering for the short winter courses in agriculture.

FEE FOR DIPLOMA, CERTIFICATE, AND HOOD: A diploma fee of \$5 must be paid for each degree or life certificate taken in the Uni-

versity and a fee of \$2 each for other certificates. Those receiving A. M. and Ph. D. degrees are furnished hoods. The fee-for each hood is about \$15.

CHANGES IN FEES: The University reserves the right to make at any time changes in any or all fees without advance notice.

REFUND OF FEES: The library, hospital and incidental fee (provided the student has received no hospital care, in which case no refund will be made) and laboratory fees (provided the amount retained shall not be less than the cost of the material used in the laboratory by the student) will be refunded in accordance with the following schedule:

<i>Length of Residence.</i>	<i>Amount of fee to be refunded.</i>
First two weeks.....	80 %
Between two and four weeks.....	60 %
Between four and six weeks.....	40 %
Between six and eight weeks.....	20 %
After eight weeks..	No refund.

Each member of the University Cadet Band who completes the course will have his library, hospital, and incidental fee refunded at the close of the session upon a report from the director of the band and the commandant of cadets showing that his work has been satisfactory and provided he has turned in and properly accounted for his uniform and other equipment issued him.

DEPARTMENTAL FEES: In all departments where the equipment is exposed to depreciation, due to its being used by the students for purposes of receiving instruction, or where material of any description is furnished by the department and consumed by the student, departmental fees are collected in accordance with the following regulations:

A fixed charge is made for the individual courses in the laboratories and for other courses in which material or apparatus is used as described above. This fixed charge or fee is made to cover the cost of material used and wear of instruments as ascertained by experience in each particular laboratory and course.

Extra charges for breakage, etc., may be made in case the loss to the University is not covered by the regular charge.

The laboratory charges for the first and second semesters of the session of 1927-28 are listed below. In all cases, the charges given are for one course and for one semester. The charges must be paid in advance.

LABORATORY CHARGES

Agricultural Chemistry

Catalog No. of Course	Title of Course	Fee
101w.....	Agricultural Analysis.....	\$10 00
110f or 111w....	Advanced Agricultural Analysis.....	†
205w.....	Plant Chemistry.....	†
207f.....	Colloid Chemistry.....	†
211f.....	Research.....	†
212w.....	Research.....	†

†\$1.00 per credit hour.

†\$1.00 for each hour of laboratory instruction.

Agricultural Economics

105f.....	Farm Accounts.....	\$1.00
110w.....	General Farm Management.....	1.00
112f.....	Advanced Farm Cost Accounting.....	1.00
125f.....	Agricultural Statistics.....	2.00
202f.....	Advanced Farm Management.....	2.00

Agricultural Engineering

2f or w.....	Farm Shop II Woodwork and Concrete.....	\$5.00
10f or w.....	Farm Shop I Metalwork.....	5 00
11f or w.....	Farm Gas Engines.....	3 00
21f.....	Surveying and Drainage.....	2 00
30w.....	Farm Machinery.....	2 00
100f or w.....	Special Problems.....	†
103w.....	Farm Buildings and their Equipment.....	2 00
104w.....	Farm Building Design.....	1 00
112f.....	Farm Tractors.....	5 00
200f or w....	Research.....	†

†The minimum fee is \$2.00; for each additional credit hour over one, fee is \$1.00.

Anatomy and Histology

102f.....	Human Dissection.....	\$15 00
103w.....	Human Dissection.....	10 00
104f.....	Histology.....	12 00
105w.....	Neurology.....	8 00
106f.....	Topographic and Applied Anatomy.....	8 00
107f.....	Elementary Anatomy.....	6 00
108f.....	Anatomical Technology.....	*
206f.....	Advanced Anatomy.....	*
207w.....	Advanced Anatomy.....	*
208f or w....	Research.....	*

*\$1.00 per credit hour.

Animal Husbandry

Catalog No. of Course	Title of Course	Fee
1f or w.....	Types and Market Classes of Live Stock.....	\$1 00
2f.....	Breeds of Live Stock.....	1 00
3w..	Live Stock Judging..	1 00
4f or w.....	Slaughtering of Domestic Animals and Cutting and Curing of Meats.....	2 00
120f or w.....	Animal Breeding Investigations.....	3 00

Art, Theory and Practice of

(See Fine Arts)

Astronomy

1f or w.....	Descriptive Astronomy...	\$1 00
3f.....	Observatory Practice.....	3 00
104f.....	Practical Astronomy.....	3 00
105w.....	Advanced Practical Astronomy.....	3 00

Botany

1f or w.....	General Botany...	\$7 00
3f or w.....	General Bacteriology.....	6 00
10w.....	Advanced General Botany..	3 00
100w.....	Plant Physiology..	6.00
102f.....	Plant Pathology.....	5.00
104f.....	Histological Methods.....	5.00
106f.....	Genetics and Heredity.....	2 00
107w.....	Mycology.....	5 00
111f.....	Special Problems.....	‡
112w..	Special Problems.....	‡
201w.....	Advanced Plant Pathology.....	5 00
203f.....	Special Topics.....	‡
204w.....	Special Topics.....	‡
206f.....	Research...	‡
207w..	Research.....	‡

‡\$1.00 per credit hour.

Chemistry

1f or w.....	General Inorganic Chemistry..	\$12 00
1f or w.....	General Inorganic Chemistry (Lectures only).....	2 00
2f or w.....	General Inorganic Chemistry..	2 00
15f or w.....	Elementary Organic Chemistry.....	6 00
25f or w.....	Analytical Chemistry..	15 00
27f or w.....	Qualitative Analysis.....	12 00
110f or w.....	Organic Chemistry.....	12 00
112f or w.....	Organic Chemistry..	7 00
113f or w.....	Organic Synthesis and Analysis.....	12 00
121f or w.....	Quantitative Chemical Analysis.....	14.00
122f or w.....	Quantitative Chemical Analysis.....	14 00
124f or w.....	Quantitative Organic Analysis.....	14 00

Catalog No. of		<i>Chemistry—Continued</i>	
Course	Title of Course		Fee
130w.....	Physical Chemistry.....		\$7 00
131f.....	Physical Chemistry.....		12 00
133w.....	Electro Chemistry.....		10.00
135w.....	Radioactivity and Structure of Matter.....		2 00
211f.....	Advanced Organic Chemistry.....		2 00
212w.....	Advanced Organic Chemistry.....		2 00
225w.....	Qualitative Organic Chemistry.....		12 00
227w.....	Advanced Analytical Chemistry.....		*
271f or 272w.....	Research.....		*

*Without laboratory work, no fee; with 1 hour of laboratory work, fee \$5.00 for the first hour; for each additional hour, \$2.00.

Civil Engineering

2f or w.....	Elementary Surveying.....	\$4.00
32f or w.....	Materials of Construction.....	5.00
104f or w.....	Higher Surveying.....	3.00
111f.....	Route Surveys.....	3.00
120f or w.....	Graphic Statics.....	2.00
122w.....	Structural Design.....	2.00
124w.....	Mill Structures.....	2.00
133w.....	Testing Laboratory.....	5.00
134w.....	Road Materials.....	5.00
140f or w.....	Hydraulics.....	2.00
201w.....	Geodetic Surveying.....	3.00
226w.....	Concrete Structures.....	2.00

Dairy Husbandry

1f or w.....	Elements of Dairying.....	\$5.00
101f.....	Dairy Products.....	5.00
102f.....	Dairy Bacteriology.....	5.00
103w.....	Market Milk and Milk Inspection.....	5.00
104w.....	Dairy Cattle Judging.....	1.00
106w.....	Dairy Cattle Breeds and Breeding.....	2.00
107w.....	Dairy Manufactures.....	7.00

Economics and Commerce

17f or w.....	Elementary Accounting.....	\$2.00
117f or w.....	Advanced Accounting.....	2.00
128f.....	Statistics and Business Management.....	2.00

Education

Educational Psychology

A102f or w.....	Educational Psychology.....	\$1.00
A176w.....	Psychology of Elementary School Subjects.....	2.00
A202f.....	Intelligence Testing.....	2.00
A207w.....	Differential Psychology.....	2.00
A208f or w.....	Psychology of High School Subjects.....	2.00

Methods in Agriculture

Catalog No. of Course	Title of Course	Fee
E107f or w.....	Supervised Practice in Vocational Agriculture.....	\$2.00
E115f or w.....	Management of Vocational Agriculture.....	1.00
E117f or w.....	Visual Education.....	5.00
E120w.....	Community Educational Activities in Vocational Agriculture.....	1.00

Educational Administration

C170f or w.....	Educational Statistics.....	\$1.00
C205f or w.....	Administration of Educational Tests and Measure- ments.....	2.00

Theory and Practice of Teaching

D110f or w.....	Technique of High School Teaching.....	\$2.00
D121w.....	Technique of Teaching in Elementary School.....	2.00
D150f or w.....	Practice Teaching in High School.....	5.00
D151f or w.....	Assistant in Elementary School.....	2.00

Electrical Engineering

101f.....	Electrical Machinery A.....	\$7.00
102w.....	Electrical Machinery A.....	7.00
110f.....	Electrical Machinery B.....	7.00
111w.....	Electrical Machinery B.....	8.00
134w.....	Telephony.....	5.00
250f.....	Special Electrical Laboratory.....	6.00

English

107f.....	Dramatic Interpretation.....	\$5.00
108w.....	Dramatic Interpretation.....	5.00
109w.....	Stagecraft and Acting.....	5.00

Entomology

103w.....	Insect Anatomy.....	\$1.00
104f.....	Classification of Insects.....	1.00
115w.....	Relation of Insects to Diseases.....	3.00
116f.....	Morphology, Histology and Development of Insects...	2.00

Field Crops

1f or w.....	Field Crops.....	\$3.00
104f.....	Forage Crops Production.....	2.00
105w.....	Grain Crops Production.....	2.00

FINE ARTS

Catalog No. of Course	<i>Applied Art</i> Title of Course	Fee
50f or w.....	Art Craft I.....	\$4.00
60f.....	Art Craft II.....	5.00
101f or w.....	Art Craft III.....	4.00
102f or w.....	Art Craft IV.....	4.00
103f or w.....	Basketry.....	5.00
109w.....	Bookbinding.....	5.00
G120f.....	Handwork for Primary Grades.....	4.00
G121w.....	Handwork for Intermediate Grades.....	4.00
<i>Art, Theory and Practice of</i>		
2f or w.....	Introduction to Art.....	\$3.00
4f or w.....	Representation.....	3.00
5f or w.....	Architectural Drawing.....	3.00
6f.....	Shades and Shadows.....	1.00
7w.....	Perspective.....	1.00
10f or w.....	Theory of Design.....	3.00
104f.....	Architecture.....	3.00
110f.....	Planning of Domestic and Civic Buildings.....	3.00
111f or w.....	Interior Decoration.....	3.00
114f.....	History of Architecture I.....	3.00
115w.....	History of Architecture II.....	3.00
116f.....	Architectural Sources.....	3.00
117w.....	Architectural Design.....	3.00
122f or w.....	Life I.....	†
124f or w.....	Life II.....	†
127f or w.....	Advanced Life I.....	†
129f or w.....	Advanced Life II.....	†
140f.....	Structural Design.....	3.00
141w.....	Applied Design.....	3.00
142w.....	Historic Ornament and Style.....	2.00
145f.....	Historic Projects.....	3.00
146f.....	Technical Craft.....	3.00
150f or w.....	Advanced Representation.....	3.00
155f or w.....	Advanced Design.....	3.00
156w.....	Painting.....	3.00
157f or w.....	Pictorial Composition.....	3.00
158f.....	Tone.....	3.00
159w.....	Tone.....	3.00
160f.....	Advanced Pictorial Composition.....	3.00
165f.....	Advanced Painting.....	3.00
170w.....	Advanced Decorative Composition.....	3.00
175w.....	Special Problems.....	3.00
180f.....	History of Modern Painting and Crafts.....	3.00
202f or w.....	Problems of Design.....	3.00
206f or w.....	Problems of Form.....	3.00
210f or w.....	Traditions of Painting.....	3.00
220f or w.....	Oriental Painting.....	3.00
230f or w.....	Contemporary Art.....	3.00
250f or w.....	Seminary.....	3.00

† 2 and 3 hours credit \$3.00; 4 and 5 hours credit \$5.00

Music

Catalog No. of Course	Title of Course	Fee
	Applied Music, Private Instruction in Piano, Voice Violin, Violoncello, and other orchestral instruments. For information regarding agreement under which lessons in applied music are given see page 00.	
	<i>Elementary</i> —Under Student Assistant:	
	Two half hours per week	\$30.00
	One half hour per week	20.00
	<i>College</i> —	
	Two half hours per week	50.00
	One half hour per week	40.00
	Single lessons	5.00
	<i>Practice Rooms</i> —With use of piano:	
	One hour daily for one semester	5.00
	For each additional hour	4.00
	Students taking two \$50.00 subjects in Applied Music will be allowed a discount of 10 per cent on such charges.	
71f or 72w.	University Chorus	2.00
73f or 74w.	University Orchestra	2.00
75f or 76w.	Piano Ensemble	2.00
77f or 78w.	String Ensemble	2.00

*Geography and Geology**Geology*

1f or w.	Principles of Geology	\$5.00
2f or w.	Physical Geology	5.00
14f or w.	Common Rocks and Minerals	4.00
15f or w.	Advanced General Geology	3.00
100f.	Economic Geology	2.00
101w.	Economic Geology	2.00
107w.	Determinative Mineralogy	10.00
120f.	Historical Geology	3.00
121w.	Introduction to Paleontology	3.00
135w.	Petrography	10.00
200w.	Geology of Oil and Gas	5.00
201f.	Mineral Deposits	5.00
207w.	Advanced Mineralogy	5.00
208w.	Principles of Ore Deposits	5.00
216w.	Structural Geology	3.00
234f or w.	Paleontology	5.00

Geography

6f or w.	Principles of Geography	\$1.00
70f or w.	Industrial Geography	1.00
80f or w.	Introduction to Regional Geography	1.00
109f or w.	Business Geography	2.00
110f.	Geography of North America	1.00
111w.	Geography of South America	1.00

Geography—Continued

Catalog No. of Course	Title of Course	Fee
112f.....	Geography of Europe.....	\$1.00
113f.....	Geography of Asia.....	1.00
114w.....	Geography of Caribbean America.....	1.00
116w.....	Geography of Trade.....	1.00
118f.....	Geography of Africa.....	1.00
119w.....	Conservation of Natural Resources.....	1.00
212w.....	Historical Geography of the United States.....	1.00
213f.....	Political Geography.....	1.00
214w.....	Cartography.....	1.00

Home Economics

1f or w.....	Food and Nutrition.....	\$5.00
2f or w.....	Food and Nutrition.....	5.00
10f or w.....	Household Problems.....	1.00
15f.....	Design.....	3.00
16w.....	Design.....	3.00
20f or w.....	Home Nursing and Health.....	1.00
50f or w.....	Textiles and Clothing.....	3.00
51f or w.....	Textiles and Clothing.....	3.00
55f.....	Millinery.....	5.00
101f or w.....	Household Sanitation.....	1.00
110f.....	Home Planning and Furnishing.....	3.00
111w.....	Problems in Home Planning and Furnishing.....	3.00
115f or w.....	Home Management.....	5.00
120f or w.....	Food and Nutrition.....	5.00
121f or w.....	Food and Nutrition.....	5.00
122f or w.....	Dietetics.....	5.00
123w.....	Dietetics.....	5.00
124w.....	Field Work in Dietetics.....	†
145f or w.....	Dress Design.....	3.00
146f.....	Advanced Dress Design.....	3.00
150f.....	Clothing Problems.....	5.00
151w.....	Clothing Problems.....	5.00
152f or w.....	Advanced Clothing.....	3.00
155w.....	Advanced Textiles.....	3.00
160f or w.....	Home Care and Training of the Child.....	1.00
170f.....	Experimental Cookery.....	5.00
200f.....	Home Economics Seminar.....	1.00
201w.....	Home Economics Seminar.....	1.00
202f.....	Metabolism.....	7.00
205f or w.....	Research in Food Preparation.....	†
210f or w.....	Research in House Furnishing.....	†
215f or w.....	Special Problems in Home Management.....	†
221f or w.....	Problems in Nutrition.....	†
245w.....	Problems in Dress Design.....	†
250f or w.....	Research in Clothing.....	†

†\$2.00 per credit hour.

†\$3.00 per credit hour.

Horticulture

Catalog No. of Course	Title of Course	Fee
1w.....	General Horticulture.....	\$2.00
6w.....	Elementary Landscape Gardening.....	1.00
102f or w.....	Elementary Landscape Design.....	3.00
103f or 104w.....	Ornamental Horticulture.....	1.00
106f.....	Commercial Vegetable Growing.....	1.00
109f or 110w.....	Commercial Floriculture.....	1.00
112w.....	Advanced Landscape Design.....	4.00
119w.....	Vegetable Forcing.....	1.00
133w.....	Small Fruit Culture.....	1.00

Industrial Education

G1w.....	Shopwork for Junior High Schools.....	\$6.00
G2f.....	Metal Work.....	7.00
G4w.....	Machine Work.....	7.00
G5f.....	Tools and Materials.....	2.00
G10f.....	Woodwork.....	7.00
G105w.....	Furniture Construction.....	7.00

Journalism

One fee of \$5.00 to all students registered in the School of Journalism or to any student taking any Journalism course or courses.

Mechanical Engineering

1f or w.....	Engineering Drawing I.....	\$2.00
2f or w.....	Engineering Drawing II.....	2.00
25f or w.....	Patternmaking.....	8.00
30f or w.....	Forge and Machine Work.....	8.00
101f or w.....	Machine Design A.....	1.00
103w.....	Machine Design B.....	1.00
104f.....	Prime Mover Design.....	1.00
105w.....	Prime Mover Design.....	1.00
121f.....	Mechanical Laboratory, A.....	9.00
122w.....	Mechanical Laboratory, A.....	9.00
123f.....	Mechanical Laboratory, B.....	9.00
131f or w.....	Heat Machinery, A.....	6.00
132f.....	Heat Machinery, B.....	1.00
133w.....	Heat Machinery, B.....	1.00
142f or w.....	Factory Production.....	7.00
150f or w.....	Management Engineering.....	1.00
151f.....	Heating and Ventilation.....	1.00
154f.....	Refrigeration, A.....	2.00
201f or w.....	Special Machine Design.....	1.00
211w.....	Shopwork Engineering.....	3.00
221f or w.....	Special Mechanical Laboratory.....	9.00
234f.....	Gas Engineering.....	1.00
235w.....	Gas Engineering.....	1.00
251w.....	Refrigeration, B.....	1.00

Medical Bacteriology and Preventive Medicine

Catalog No. of Course	Title of Course	Fee
102f.....	Medical Bacteriology.....	\$12.00
201w.....	Advanced Bacteriology.....	12.00
202f or w.....	Research.....	10.00
203f or w.....	Conduct of Public Health Laboratories.....	7.00

Military

Military equipment including a uniform is furnished to each student taking this course, for which a deposit of \$15.00 is required, all but \$3.00 of which will be refunded when this equipment is returned. Students who are enrolled in the required course of Military-Physical Education pay an additional fee of \$2.00.

Music

(See Fine Arts)

Pathology

101w.....	General and Special Pathology.....	\$16.00*
102f.....	Clinical Pathology.....	8.00**
201f or w.....	Advanced Pathology (per credit hour).....	2.00
202w.....	Advanced Pathology (per credit hour).....	2.00
204f.....	Research (per credit hour).....	4.00
204w, 205w.....	Research (per credit hour).....	4.00

*Fee for courses 101w and 102f includes rental of microscope.

**Students furnishing their own microscopes will receive a \$5.00 refund for course 101w and a \$3.00 refund for course 102f.

Physical Education

One fee of \$2.00 for any one or all courses including Military Physical Education except swimming for which a fee of \$5.00 is charged.

Physics

1f or w.....	Elementary College Physics.....	\$6.00
2w.....	Elementary College Physics.....	4.00
3f.....	General Physics.....	5.00
4w.....	General Physics.....	5.00
104f.....	Electrical Measurements:	
	4 hours credit.....	4.00
	5 hours credit.....	5.00
106w.....	Ionization of Gases:	
	1 hour credit.....	3.00
	2 hours credit.....	5.00
107f.....	Electricity.....	*
108w.....	Light.....	*
203f.....	Special Problems.....	5.00
204w.....	Special Problems.....	5.00
211f.....	Research.....	6.00
212w.....	Research.....	6.00

*\$2.00 per credit hour.

Physiology and Pharmacology

Catalog No. of Course	Title of Course	Fee
2w.....	Elementary Vertebrate Physiology.....	\$7.00
100w.....	The Physiology of Muscle and Nerve.....	5.00
101f.....	Physiology of the Circulation and Respiration.....	5.00
103f.....	Alimentary Mechanisms.....	5.00
105f.....	The Central Nervous System and Sense Organs.....	5.00
106w.....	Metrology and Prescription Writing.....	5.00
108w.....	Pharmacology.....	12.00
111f.....	Elementary Physiological Chemistry.....	6.00
112w.....	Physiological Chemistry.....	15.00
115f or 116w....	Advanced Physiological Chemistry.....	*
117f or 118w....	Toxicology.....	*
219f.....	The Blood.....	6.00
221f.....	Advanced Respiration.....	6.00
223f.....	Advanced Circulation.....	*
224w.....	Metabolism.....	*
231f or 232w....	Physiological Problems.....	*
241f or 242w....	Research.....	*

*\$2.00 per credit hour for courses over 200; \$3.00 per credit hour for courses over 100.

Poultry Husbandry

1f.....	Elementary Poultry Raising.....	\$2.00
2w.....	Poultry Production.....	2.00
3w.....	Types and Breeds of Poultry.....	2.00
103f.....	Marketing Poultry Products.....	2.00
104f.....	Poultry Judging and Breeding.....	2.00
106w.....	Incubation and Brooding Practice.....	3.00

Psychology

1f or w.....	Instincts and Habits.....	\$2.00
112w.....	Music Systems (Esthetics II).....	1.00

Rural Sociology

115f or w.....	Rural Sociology.....	\$1.00
117f.....	Rural Community Organization.....	1.00
119f or w.....	Social Case Work.....	1.00
219w.....	Advanced Social Case Work.....	1.00

Sociology

(See Rural Sociology courses 115, 117, 119, and 219)

Soils

1f or w.....	Soils.....	\$5.00
100f.....	Soil Fertility.....	5.00
102f.....	Soil Surveying.....	4.00
105w.....	Soil Bacteriology.....	5.00
106f.....	Special Problems.....	See note

Soils—Continued

Catalog No. of Course	Title of Course	Fee
107w.....	Special Problems.....	See note
205f.....	Soils Research.....	See note
206w.....	Soils Research.....	See note

Note—106f, 107w, 205f and 206w without laboratory, NO FEE; with laboratory, fee of \$2.00 for each credit hour.

Veterinary Science

1f.....	Veterinary Anatomy and Physiology.....	\$5.00
2f or w.....	Veterinary Medicine and Surgery.....	5.00
101f.....	Stock Farm Sanitation and Disease Prevention.....	3.00
102w.....	Stock Farm Sanitation and Disease Prevention.....	3.00
103f.....	Diseases of Poultry.....	2.00
104w.....	Diseases of Poultry.....	2.00
105f.....	Special Problems.....	3.00
106w.....	Special Problems.....	3.00
202f.....	Research.....	3.00
203w.....	Research.....	3.00

Zoology

1f or w.....	General Zoology.....	\$7.00
3f.....	Advanced General Zoology.....	7.00
4w.....	Comparative Anatomy of Vertebrates.....	10.00
100f or w.....	Embryology of Vertebrates.....	6.00
101f.....	Comparative Histology.....	6.00
103w.....	Parasitology.....	6.00
110f.....	Protozoology.....	6.00
111f.....	Genetics.....	*
112w.....	Cytology.....	7.00
120f or 121w.....	Special Problems.....	5.00
200f.....	Research.....	*
201w.....	Research.....	*
205f.....	Special Topics.....	*
206w.....	Special Topics.....	*

*The minimum fee is \$3.00; for each additional hour over one, fee is \$1.00.

ROOM AND BOARD

The majority of students enrolled in the University are accommodated in private rooming and boarding houses. The University maintains an approved list of such houses, which may be secured upon application to the Secretary of the University.

Regulations of Rooming Houses. The University reserves the right to prescribe rules under which its students shall room in private homes, dormitories, and chapter houses, or elsewhere, whether these

rules are or are not published in the annual catalog. No student is permitted to reside in a house which is not on the approved list.

Men and women who are students of the University may not room in the same houses, unless they are relatives of the family.

No woman student may change her living quarters during the semester without the consent of the Dean of Woman.

Every sorority house, fraternity house, and student club is required to employ an approved chaperon or matron.

DORMITORIES FOR MEN

The University does not maintain dormitories for men but there are dormitories operated without profit as follows:

Y. M. C. A. DORMITORY FOR MEN: The Y. M. C. A. building contains quarters for eighty students. See page 86. Applications for rooms should be addressed to the Secretary, Y. M. C. A., Columbia, Missouri.

KNIGHTS OF COLUMBUS DORMITORY FOR MEN: The Knights of Columbus Student Home has rooms for seventy-two students. Meals are also served. See page 87. Applications should be addressed to the Secretary, The Knights of Columbus Student Home, Columbia, Missouri.

DEMOLOY DORMITORY FOR MEN: The order of DeMolay for Boys is erecting in Columbia a building which will serve as a home for DeMolay students attending the University.

DORMITORIES FOR WOMEN

There are two dormitories for women. One—Read Hall—is maintained by the University, and the other—Hendrix Hall—is maintained by the Methodists.

HENDRIX HALL FOR WOMEN: This dormitory, erected by the Methodists, is located one-half block from each campus. It is a new brick and stone building completed in 1925—modern in every respect. It has rooms for eighty-six young women, dining room for one hundred twenty-five, parlors, play-room, fudge kitchen, laundry, etc. The Hall is supervised by a capable woman. Applications should be made to the Director of Hendrix Hall, Columbia, Missouri.

READ HALL DORMITORY FOR WOMEN: The University maintains Read Hall, a dormitory for women. The Hall lodges thirty-two young women and the dining-room accommodates about forty additional day boarders.

Room Rent. The rent of rooms is from \$36 to \$50 a semester for each occupant, according to location of room. In addition, there is a small charge for the use of an electric iron. The rent must be paid at least fifteen days before the opening of each semester and is not refundable.

Board. The cost of table board, subject to revision, is \$7 a week and is payable monthly in advance. Students boarding at the hall are required to continue during the entire semester unless excused from the University. No refunds are made except for absences longer than four days.

The University reserves the right to make changes in the rates given above before the opening of a semester.

Application for Room. Application for room or for place in the dining room is made to the Secretary of the University. Applications may not be filed more than one semester in advance. Application for room includes application for board, but a separate application may be made for a place in the dining room. A deposit of \$5 must accompany each application. This deposit is credited on the first payment for room or board.

Rooms are assigned in the order of application. Preference is given to freshmen or sophomores, but in case there are vacancies, rooms may be assigned to upperclass women after August 15.

No student may reside in the hall for more than two years.

If the application for either room or board is withdrawn before August 15, the deposit will be refunded; if withdrawn after that date, the deposit will not be refunded.

The customs of the hall are such as would be found in any refined home.

PRIVATE BOARD AND LODGING: Board in private families may be had for from \$5 to \$7 a week.

THE UNIVERSITY CAFETERIA: A new, completely equipped cafeteria, under direct management of the University, serves at cost, well prepared foods in amply variety.

ESTIMATED EXPENSES FOR ONE SEMESTER:

Fees.....	\$45
Board.....	120
Rent.....	45
Laundry.....	15
Books and stationery.....	25
Miscellaneous.....	50
<hr/>	
Total.....	\$300

These estimates show the expenses of the *average* male student. Expenses for a woman will usually be \$25 higher. Miscellaneous expenses listed above cover amusements, organization dues, etc. Some saving may be made in them. The item for books and stationery may vary with the college or school in which work is taken. Laboratory fees also will vary. No provision is made in the estimates for clothing and railway fares. Nonresident students are required to pay an additional nonresident tuition fee of \$10 a semester. A student can save money by boarding at The Cafeteria.

SOURCES OF AID TO STUDENTS

EMPLOYMENT BUREAUS: Employment bureaus are maintained by the University for the purpose of obtaining work for those students who find it necessary to earn a part of their expenses. These bureaus guarantee no one a position, but try to help all who apply.

Men desiring information regarding employment should write to the Secretary, Employment Bureau, Y. M. C. A. Building, Columbia, Missouri.

Women who desire information regarding employment should write to the Dean of Women.

THE ANTHONY W. ROLLINS SCHOLARSHIP FUND: In 1845 a fund of \$10,000 for the purpose of providing scholarships to residents of Boone County was established by Anthony W. Rollins, M. D. Three-fourths of the annual interest on the fund is devoted to the education of youths of Boone County, and the remaining one-fourth is added to the principal. The permanent fund now amounts to about \$77,000. Three-fourths of the annual income is available for loans to students resident in Boone County, preference being given to such as evince an inclination to prepare to preach the gospel. Those to whom money from this fund is advanced are required to give their note and to make payment under conditions that will be made known on application to the Secretary of the University. A blank form on which applications for aid from this fund may be made will be furnished by the Secretary on request.

THE WILLIAM ALEXANDER GREGORY EDUCATIONAL FUND: By the terms of the will of the late Charles R. Gregory of St. Louis, the residue of his estate, amounting to approximately \$300,000, after providing for numerous bequests to charitable institutions, was left to the University of Missouri to create the above fund, named in honor of his brother. The will directs that the principal shall be invested by the Board of Curators in a safe and prudent manner, and that the income "shall be used in assisting white students of either sex in obtaining an education in any of the courses of said institution." The income is administered by a committee appointed by the President of the University.

A part of the income is used for the establishment of the Gregory Fellowships and Scholarships, awards being made only to persons whose scholarship is satisfactory and whose need of financial assistance has been proved to the committee.

A further part of the income is set aside as a loan fund to be used for making loans to students who have made clear their intellectual ability, their integrity, and their need of such assistance. Applicants for loans from this fund must see personally the secretary of the committee before their applications will be considered by the committee. Inquiries for further information should be addressed to the Secretary of the University.

THE YEATER-WATSON LOAN FUND: This fund consists of moneys collected under the provisions of the Act of April 1, 1895, providing for the endowment of the University and for the establishment and endowment of free scholarships of merit.

It is named in honor of Charles E. Yeater of Sedalia, who conceived the idea, and Drake Watson of New London, who introduced the bill in the legislature.

The amount of the principal is approximately \$25,000. The income is loaned to students who are worthy of such assistance. Application for loans should be made to the Secretary of the University.

THE JOHN D. PERRY FUND: This fund was established by the late Mary E. Perry of St. Louis, and is named in memory of her father, John D. Perry, of St. Louis. The fund is, "for the financial assistance of such students in attendance at the University of Missouri, as shall appear from time to time to need and deserve such assistance while pursuing their studies." Full information regarding the possibility of securing aid from this fund may be had of the Secretary of the University.

THE JAMES C. REID LOAN FUND: This fund was established by the late James C. Reid, of Columbia, Boone County, Missouri, the income of which is to be used "to educate poor, industrious and worthy young men and women of Boone County, Missouri, in the State University each applicant for any of said money to have the written recommendation of three reputable persons to the effect that said applicant is a Christian person and of good standing in the community if there are more applicants any one year than money to supply them, preference, other things being equal, to be shown to young women." Applications for loans from this fund should be made to the Secretary of the University.

THE ST. LOUIS REPUBLIC LOAN FUND: This fund was established by the St. Louis Republic, a former newspaper of St. Louis, through the efforts of the Editor, Paul Brown. The fund amounts to approximately \$2,000.00 and is to be loaned to worthy students in the College of Agriculture. Applications for loans from this fund should be made to the Secretary of the University.

THE KNIGHTS TEMPLAR LOAN FUND: A student loan fund has been created by the Knights Templar of Missouri to assist worthy sons and daughters of Masons during the junior and senior years of their college course. Part of this fund is available to University of Missouri students. Those interested can secure definite information by writing to Dr. J. H. Scarborough, Secretary, Warrensburg, Missouri, or by applying in person to B. C. Hunt, Columbia Savings Bank, Columbia.

OTHER LOAN FUNDS: There are other loan funds, the donors of some of which do not desire their names mentioned, which are available to students. Information regarding loans from these funds may be secured upon application to the Secretary of the University.

MEDICAL ATTENTION FOR STUDENTS

Students registered for full-time work in the University and paying \$30 per semester, and those registered for part-time work and paying \$15 per semester, may have free medical attention and hospital care. No charge will be made for surgical operations that are considered by the staff as imperative. Hospital care is given without charge except for extraordinary medicines and for special nursing. When a special nurse is required the patient must pay the whole cost of that service. The need for a special nurse will usually be determined by the physician in charge.

In the dispensary at the hospital, any student who has registered and paid fees as indicated above may consult with and have treatment by the members of the staff of the department of clinical medicine and surgery. The attention of the same staff physicians is available to students who have been admitted to the hospital.

The University has established quarters in which there may be detained and cared for a limited number of those who suffer from dangerous communicable diseases. Students who are detained in quarantine established by the University will be required to accept the exclusive professional service of the members of the department of clinical medicine and surgery, except when consultation is desired or required by the patient or his family. Under ordinary conditions a student may engage a physician of his own choice, in which case he will be responsible for the physician's fee. The University will not in any case undertake to furnish professional service except that rendered by the staff of the department of clinical medicine and surgery.

Those students who are ill in any degree are urged to report at the hospital promptly for advice and treatment. A nurse is on duty in the hospital every day of the University session from 8 a. m., until 4:30 p. m. to give information about the medical and surgical service of the dispensary and to make appointments for consultation and treatment. Students ill enough to be detained in bed may be admitted to the hospital at any time.

It is not the policy of the University to provide medical attention for students in their homes or rooming houses. The members of the staff do not treat students at any place other than at the University Hospitals except under unusual circumstances.

Vaccination against smallpox is required of all students and immunization from typhoid fever is recommended.

FELLOWSHIPS, SCHOLARSHIPS, PRIZES

UNIVERSITY FELLOWSHIPS AND SCHOLARSHIPS

The University offers a limited number of fellowships each yielding an annual stipend of \$600. These fellowships will be awarded to those applicants who, irrespective of department, have completed at least one year of successful graduate study and have demonstrated their ability to render service in the form of research. The University also offers a limited number of scholarships of \$300 a year, open to graduate students of high promise in scholarship, irrespective of the lines of work they may desire to pursue. It is expected that scholars be well qualified for graduate work in the subject which they elect, and that they shall devote themselves mainly to work in such subject.

University fellows and scholars are allowed to engage in outside work only with the consent of the graduate committee and the professor of the subject which they elect. The executive board, upon the recommendation of the committee and the major professor, may deprive any student of his fellowship or scholarship whenever it may appear that he is not devoting himself as he should to his work as a fellow or scholar.

Applications must be filed not later than March 1, in order to receive consideration in the award for the next academic year. Applications received after this date will be considered in filling vacancies that may occur. Application blanks may be obtained from the Registrar of the University and, when filled out, should be sent to the Dean of the Graduate Faculty, University of Missouri, Columbia, Missouri.

PEABODY SCHOLARSHIP IN EDUCATION

In June, 1912, the trustees of the Peabody Education Fund gave the University the sum of \$6,000 on condition that it be held and used as the endowment of a Peabody Graduate Scholarship in Education. The annual income from this fund will be paid to the holder of the scholarship. The award will be made in the same manner as the University scholarships.

No award in 1926-27.

GREGORY FELLOWSHIPS AND SCHOLARSHIPS

The Board of Curators has seen fit to provide that not more than \$3,000 annually from the income of the William Alexander Gregory Educational Fund may be used for the establishment and maintenance of fellowships and scholarships in the Graduate School to be known as the "Gregory Fellowships and Scholarships." These are awarded on the same conditions as apply to the University fellowships and scholarships.

GREGORY SCHOLARS 1926-27

- NOLA LEE ANDERSON (Mathematics)
B.S. in Ed., A.M., University of Missouri
- CARL COLTON BRANSON (Geology)
A.B., University of Missouri
- GEORGE CRAMER (Physics)
A.B., University of Missouri
- GRACE GRIFFIN (Education)
Pd.B., Syracuse University; A.M., University of Missouri
- HAROLD DONALD GRIFFIN (Education)
A.B., Bethany College
- DENNIS LOREN MURPHY (English)
A.B., University of Missouri
- GEORGE EATON SIMPSON (Sociology)
B.S., Coe College
- WALDO EMERSON WALTZ (Political Science)
B.S. in Ed., Northeast Missouri State Teachers' College

VOLKER SCHOLARSHIP IN SOCIAL SERVICE

William Volker of Kansas City has established in the department of sociology, in order to encourage training in social welfare work, a graduate scholarship of the annual value of \$300. The scholarship will be awarded upon the same conditions as apply to University scholarships.

The scholarship for the year 1926-27 was awarded to LILLIAN ALDEN HART, of Danville, Kentucky.

The second scholarship for the year 1926-27 was awarded to ZELMA L. HOUSE, of Knox City, Missouri.

AGRICULTURAL RESEARCH FELLOWSHIPS AND SCHOLARSHIPS

The University offers a limited number of research fellowships in the Agricultural Experiment Station each yielding \$600 a year, and scholarships each yielding \$300. It is the purpose of these fellowships and scholarships to foster and encourage original investigation and to give opportunity to students who desire to become efficient investigators in agricultural science. All candidates for these fellowships and scholarships must fulfill the requirements for admission to the Graduate School. See page 191.

These fellowships and scholarships are available in all departments of the College of Agriculture. The fellowships are awarded only to such applicants as have completed one year of successful graduate study and have demonstrated their ability to carry on independent research work. The scholarships are awarded to those candidates who, as undergraduates, have shown exceptional ability in scholarship and a capacity for original research. Application blanks for these fellowships may be obtained from the Registrar of

the University and, when filled out, should be sent to the Dean of the Graduate Faculty, University of Missouri, Columbia, Missouri. Applications must be filed not later than March 1, in order to receive consideration in the award for the next academic year. Applications received after this date will be considered in filling any vacancies that may occur.

THE AGRICULTURAL RESEARCH FELLOWSHIP

ZULU ETHEL WILLIAMS (Home Economics and Physiology)
A.B., University of Missouri

THE AGRICULTURAL RESEARCH SCHOLARSHIPS 1926-27

LESTER EARL CASIDA (Animal Husbandry)
B.S. in Ed., Northeast Missouri State Teachers' College
EARL N. MCCUBBIN (Horticulture)
B.S. in Agr., University of Missouri
GLADYS MUILENBURG (Rural Sociology)
B.S., Kansas State Agricultural College
JOHN RANDOLPH PAULLING, JR., (Dairy Husbandry)
B.S., Clemson Agricultural College
E. CHARLOTTE ROGERS (Home Economics)
A.B., Mount Holyoke College, M.A., Brown University
CHESTER H. ROSZMANN (Soils)
B.S., Michigan State College
CLARENCE MITCHELL TUCKER (Botany)
B.S. in Agri., University of Missouri

TEACHING FELLOWSHIPS

TEACHING FELLOWSHIPS FOR MEMBERS OF FACULTIES OF MISSOURI COLLEGES: Besides the usual number of University and Gregory Fellowships awarded each year, the University offers a limited number of Teaching Fellowships in the several departments which entitle the holder to a stipend up to six hundred dollars for the two semesters according to the number of hours taught. These Teaching Fellows will be eligible for the Summer Session Scholarships mentioned below and will have the opportunity to earn a complete year of graduate work in case they register for three-fourths of a full program during the two semesters and devote their entire time during the Summer Session to study.

Applications for these fellowships and scholarships should be filed with the Dean of the Graduate School.

No award in 1926-27.

OTHER SCHOLARSHIPS

SCHOLARSHIP IN AMERICAN CITIZENSHIP: A scholarship is offered in American Citizenship of the annual value of \$250. This scholarship was established in 1908 by the Missouri Society of Colonial Dames of America. Candidates may be of either sex, must be natives of and resident in Missouri, and must satisfy all entrance requirements to the University.

Each candidate must present to the committee on the scholarship in American Citizenship, on or before March 1, a formal application, together with letters or other evidence of the fulfillment of the general requirements outlined above, and must pass a qualifying examination. Blank forms for application may be obtained from the Registrar. The qualifying examination, which will be held at Columbia on High School Day, will include the following subjects described in the University catalog under "Subjects Accepted for Admission:" Three units in English, two units in Latin or two units in any other foreign language, one unit in medieval and modern or in English history, one unit in American history, and one-half unit in civil government. The final selection will be made by the Missouri Society of the Colonial Dames of America from the candidates passing the qualifying examination.

"The scholar will be required to select his courses at the University subject to the approval of the University committee on the scholarship in American Citizenship. He must select at least one course in history each year. His total courses in history must include at least three courses in American history, provided that one course in American government shall be substituted for one of the required courses in American history. The scholar may be required to present each semester a paper prepared in connection with the prescribed course in history. These papers, together with a special report on the work of the scholar, shall be sent each year to the Missouri Society of the Colonial Dames of America."

The payment under this scholarship shall be made in eight monthly installments. The scholarship will be awarded for four years, but may be withdrawn at any time if the work of the scholar is of unsatisfactory character. The next regular award will be made in 1930. All communications regarding the scholarship should be addressed to the Committee on the Scholarship in American Citizenship, University of Missouri, Columbia, Missouri.

The scholarship for the year 1926-27 was awarded to IDA MARIE BRENNECKE, of Sedalia, Missouri.

FRANK P. BLAIR SCHOLARSHIP: A scholarship of the value of \$250 a year was established in 1911 by Mrs. B. B. Graham of St. Louis in memory of her father, the late Frank P. Blair. It is awarded on the same general terms as the Scholarship in American Citizenship, except that the candidate need not be a native of

Missouri. The next regular award of this scholarship will be made in 1927.

The scholarship for the year 1926-27 was awarded to MARY LOUISE RAMSEY, Knobnoster, Missouri.

RHODES CLAY SCHOLARSHIP: This scholarship was established by Green Clay of Mexico, Missouri, in memory of his son, Rhodes Clay, with the following conditions:

1. The sum of \$5,000 was given in trust to the Board of Curators for the establishment of a freshman scholarship to be called the Rhodes Clay Scholarship, and to be so denominated perpetually in the official catalog of the University.

2. The annual interest on \$5,000 is to be paid to that member of the freshman class in the College of Arts and Science who, on the score of scholarship, deportment and general worthiness, shall be judged entitled thereto by a committee hereafter to be mentioned. The Board of Curators, however, may, for weighty reason, upon the recommendation of the President of the University, extend competition to one or more of the other divisions at Columbia.

3. In making the award, scholarship and literary attainments alone are not considered, but the moral character, physical constitution and general worthiness of the various candidates will be duly considered.

4. A committee of award is appointed each year by the President of the University, and the award is announced at the opening convocation in the fall.

5. The student to whom the scholarship is awarded for any year must spend the following year pursuing work in the University.

6. In case the student to whom the award is made is unable for any reason to meet the requirements set forth under No. 5, the committee of awards will make another selection.

7. The amount of the scholarship will be paid by the Secretary of the University in ten equal installments to that student to whom it has been awarded, the first payment to be made September 1, and the other payments the first of each following month until the entire amount has been paid.

The scholarship for 1926-27 was awarded to ROBERT LAWRENCE LINVILLE, of Skidmore, Missouri.

UNITED DAUGHTERS OF THE CONFEDERACY SCHOLARSHIPS:

Margaret McLure Scholarship, St. Louis: A scholarship of the annual value of \$400 was established in 1916 by the Margaret McLure Chapter of the Daughters of the Confederacy. The scholarship is awarded to a young lady who must be a resident of Missouri, must be of southern lineage, must be unable without pecuniary assistance to take a University course, and must satisfy all entrance requirements to the University. The next regular award of the scholarship will be made in 1927.

The scholarship for the year 1926-27 was awarded to JOSEPHINE SMITH of Webster Groves, Missouri.

George Edward Pickett Scholarship, Kansas City: A scholarship of the annual value of \$150, established by the George Edward Pickett Chapter. Candidates may be of either sex, must be at least seventeen years old, have at least one Confederate ancestor, must reside in Kansas City, Missouri, must be unable without pecuniary assistance to take a University course, and must satisfy all entrance requirements to the University. The next regular award of the scholarship will be made in 1927.

The scholarship for the year 1926-27 was awarded to VERA BLAND of Kansas City, Missouri.

EUGENE FIELD SCHOLARSHIP: A scholarship as a memorial to Eugene Field, a former student at the University of Missouri, was established in 1913 by contributions obtained largely thru the efforts of J. West Goodwin, Sedalia. The scholarship consists of the income on \$1,500. It is open to students who have been at least two semesters in the School of Journalism and who will continue as students in the school at least two semesters after the award. It is given annually, at the close of the second semester, to that student of the foregoing group who has shown himself best equipped in professional ideals and in general newspaper-making ability to do the work of a journalist.

The scholarship for the year 1926-27 was awarded to FRED BRAILAND JESKE, of Ferguson, Missouri.

JAY L. TORREY SCHOLARSHIP: Thru a gift from the late Colonel Jay L. Torrey of Fruitville, Howell County, Missouri, a scholarship has been established to be awarded annually to the deserving woman student in the School of Journalism adjudged by the Faculty best equipped to do the work of a journalist. It is open to women students who have been at least two semesters in the School of Journalism, and who will continue at least two semesters after the award. The scholarship consists of the income on \$2,000.

The scholarship for the year 1926-27 was awarded to MARY JO TURNER, of Marionville, Missouri.

JOHN W. JEWELL SCHOLARSHIPS: These scholarships were established by H. S. Jewell and Mrs. John W. Jewell of Springfield, Missouri, in memory of Mr. Jewell's son, John W. Jewell, a former student of the School of Journalism. They are awarded annually at the close of the second semester to five students in the School of Journalism adjudged by the Faculty most deserving, upon the basis of scholarship and general merit, in each of the following departments of the School of Journalism: History and Principles of Journalism, Editorial, News, Advertising, and Graduate Work. The five scholarships are for \$50 each, paid from the income on a donation of \$5,000.

The scholarships for the year 1926-27 were awarded to LESTER JACOB SACK, of Greenville, Mississippi; ARTHUR EARL HORST, of

Sanger, Texas; WILLIAM H. MENTEER, of Columbia, Missouri; PAUL H. LINDENMEYER, of Falls City, Nebraska; HELEN JO SCOTT, of Shandon, Ohio

THE ISAAC HINTON BROWN SCHOLARSHIP: The Missouri Woman's Club of New York City offers a scholarship of the value of \$125 a semester, which may be awarded for four years to a young woman who meets the following requirements: She must be of Caucasian parentage, a native of Missouri, preferably from a rural district, and must be a graduate of a Missouri high school. She must, furthermore, be able to satisfy all entrance requirements to the University, must expect as a candidate for the degree of B.S. in Education to prepare for the profession of teaching, and must be unable without financial assistance to complete the University course. This scholarship may be withdrawn at any time if the work of the scholar is unsatisfactory or if there are other sufficient reasons for its withdrawal. The selection is based upon the results of competitive examinations and upon other factors indicating high character and educational promise. Application blanks and detailed information may be obtained from the Chairman of the Isaac Hinton Brown Scholarship, University of Missouri, Columbia, Missouri. The next regular award of the scholarship will be in 1930.

The scholarship for the year 1926-27 was awarded to NORA ZELMA MITCHEM, of Belle, Missouri.

S. H. FORD SCHOLARSHIP: This scholarship was founded without specification as to how it should be awarded. The Board of Curators has assigned it to the School of Education, with the provision that it shall be awarded in April of each year to some student in the graduating class who, upon the basis of scholarship and probable service in the field of education, is deemed most worthy to receive the scholarship, and that public announcement of the award be made by the President of the University on Commencement Day. The scholarship consists of the income on \$1,000, and at present affords \$50 a year.

The scholarship for 1926-27 was awarded to ARTHUR N. STUNZ, of Columbia, Missouri.

J. V. C. KARNES SCHOLARSHIP: As a memorial to her husband, the Hon. J. V. C. Karnes, formerly President of the Board of Curators, the late Mrs. J. V. C. Karnes, of Kansas City, Missouri, provided for a scholarship of \$50 annually to be awarded by the Faculty of the School of Law to the student in the second-year class who, in the judgment of the Faculty, has made the best general record during the year. This scholarship is payable in two equal installments, at the beginning of the first and second semesters of the student's third year in the School of Law of this University.

The scholarship for 1926-27 was awarded to MARY LOUISE RAMSEY, of Knobnoster, Missouri.

JAMES S. ROLLINS SCHOLARSHIPS: In 1889 James S. Rollins left \$6,000 to endow six scholarships in the University—"the

interest" on this \$6,000 "to be forever used" under the direction of the Board of Curators of the University for founding scholarships to be awarded by the President and Faculty of the University as a recognition of merit and character. The scholarships are awarded as follows:

In the College of Arts and Science, to two members of its junior class, \$50 each.

In the College of Agriculture, to a member of the junior class, \$50.

In the School of Law, to a second-year student, \$50.

In the College of Engineering, to a fourth-year student, \$50.

In the School of Medicine, to a first-year student, \$50.

These scholarships are payable immediately after commencement each year.

The scholarships for the year 1926-27 were awarded as follows:

College of Arts and Science:

IRENE BARNES, of Meadville, Missouri.

CHARLES S. PARKER, JR., of Kansas City, Missouri

College of Agriculture:

ROLLO E. SINGLETON, of Clifton Hill, Missouri

School of Law:

JOHN M. GERLASH, of Tarkio, Missouri.

College of Engineering:

LESTER VERNON TILLER, of St. Joseph, Missouri

School of Medicine:

FLORIAN LOUIS HARMS, of Keytesville, Missouri

HARRY TIDD SCHOLARSHIP: This scholarship represents the annual income on \$3,000 established by Harry Tidd of Hutchinson, Kansas, to be awarded to the most outstanding student enrolled in the University of Missouri, regardless of his years of attendance. The award is to be based on 50 % scholarship, 25 % general activities, and 25 % athletics.

The scholarship for the year 1926-27 was awarded to TED J. O'SULLIVAN, of Kansas City, Missouri.

THE MISSOURI ENGINEERS OF CHICAGO SCHOLARSHIP: This scholarship was established by the Missouri Engineers of Chicago, to be supported by subscriptions from among its members. The scholarship is awarded to engineering students of high scholastic standing and creditable participation in student activities. The amount of the stipend will range from \$100 to \$300 annually.

The scholarship for the year 1926-27 was awarded to DAVID HICKS CUNNINGHAM, of Columbia, Missouri.

SCHOLARSHIPS IN MUSIC: There are occasional grants from special musical foundations from time to time, available to talented students for advanced instruction in music in the School of Fine Arts of the University of Missouri, as well as in other colleges and schools of music. For information apply to the Dean of the Faculty of Fine Arts, University of Missouri.

The Presser Foundation Scholarship amounting to \$250 for the year 1926-27 was awarded to RICHARD LEONARD STOKES, of Moultrie, Georgia.

JONAS VILES, JR., SCHOLARSHIP: A scholarship of the annual value of \$100, founded by Mr. and Mrs. Jonas Viles in memory of their son, Jonas Viles, Jr., at his suggestion and in part from his earnings. It is awarded annually by the department of zoology to an advanced student in zoology, as an aid for study at the Woods Hole Biological Laboratory or some similar institution.

The scholarship for the year 1926-27 was awarded to FARRIS HARDIN WOODS, of Columbia, Missouri.

CLARENCE CLINTON CROUCH SCHOLARSHIP: A memorial scholarship of the annual value of \$100, provided by the family and friends of Clarence Clinton Crouch. It is awarded annually by the department of zoology to an advanced student in this subject, preferably as an aid for study during the summer, at the University of Missouri or an institution like the Marine Biological Laboratory at Woods Hole, Massachusetts. In exceptional cases the proceeds may be used in other ways at the discretion of the department of zoology, for example, to defray the expenses of attendance by a student or students at meetings of scientific societies for the presentation of papers.

FORM OF BEQUEST

In making a bequest to the University by gift or will, it is suggested that the following form be used:

I give, devise and bequeath to The Curators of the University of Missouri as trustee, the sum of \$_____ (followed by recital of the purposes and uses for which the bequest may be made.)

PRIZES

WILLIAM J. BRYAN PRIZE: Established by the Board of Curators thru a donation by W. J. Bryan of Lincoln, Nebraska. The prize consists of \$17.50 in money or a medal of equivalent value, at the option of the successful contestant, and is awarded for the best essay on some subject pertaining to the science of government. In 1927-28 the William J. Bryan Prize will be awarded for the best essay on "The Progress of Budgetary Reform in Missouri," under the following conditions:

1. Competition is open to all students of the University.
2. Essays submitted shall contain not more than 2,500 words.
3. They must be in the hands of the Registrar of the University not later than 12 o'clock noon of the last Saturday in March.
4. Each essay shall be signed with a fictitious name and be accompanied by a sealed envelope containing the real name of the writer and bearing the fictitious name on the outside.
5. An essay which is awarded a prize shall become the property of the University and be deposited in the library.

No award at commencement, 1926.

DELTA SIGMA PI PRIZE: The International Commerce Fraternity of Delta Sigma Pi offers a gold key to be awarded annually to that member of the graduating class who has made the best scholastic record in one of the commerce curricula in the School of Business and Public Administration.

At commencement in June, 1926, this prize was awarded to WALTER THOMAS CARPENTER, of Coffeyville, Kansas.

CHI OMEGA SOCIAL BETTERMENT PRIZE: The Rho Alpha Chapter of the Chi Omega Fraternity has established a prize of \$25 to be known as the Chi Omega Social Betterment Prize. The basis of the award will be the comparative achievements of the competitors with respect to the following points:

1. Grade work done as shown in class average and examinations.
2. Amount of work taken in the department of sociology.
3. General interest manifested in social service.
4. To a limited extent, the character of work done in other departments of the University, especially in the departments of history and economics.

The prize is open to upperclass women students only and is awarded at commencement each year.

At commencement in June, 1926, this prize was awarded to KATHERINE JOHNSTON, of Columbia, Missouri.

WILLIAM MACK PRIZE: William Mack of New York City, a graduate of the School of Law, provides this school annually with a set of the "Corpus Juris-Cyc," in about forty volumes, which is awarded to that member of the third-year class who, in the judgment of the Faculty, has made the best progress during the year. Four semesters residence as a student in the school is required of candidates for this prize.

This prize will not be awarded to the student who has previously been awarded a similar prize for the best work in a legal research training course. In that event it will be awarded to the student second in excellence, as aforesaid.

At commencement in June, 1926, this prize was awarded to JAMES WESLEY MCAFEE, of Brookfield, Missouri.

MILITARY PRIZES: The Curators have provided two silver cups to be awarded each year, one to the best drilled company of Infantry and one to the best drilled battery of Field Artillery.

Captain Roy S. Gibson, Infantry, has provided a cup for the most efficient freshman infantry platoon, to be awarded each year.

Captain James J. Coghlan, Infantry, has provided a cup for the most efficient sophomore infantry platoon, to be awarded each year.

Two medals have been provided for marksmanship, one to be given to the best rifle shot and one to the best pistol shot.

Two medals have been provided for military efficiency, one to the best private of Infantry and one to the best private of Field Artillery.

At commencement in June, 1926, these awards were distributed as follows:

The Military Cups:

Company "C," Cadet Captain GEORGE R. KUNKEL.

Battery "B," Cadet Captain FRANCIS S. WEAKLEY.

The Roy S. Gibson Cup:

First Platoon, Company "B," Cadet Captain VERNUS PYLE.

The James J. Coghlan Cup:

First Platoon, Company "A," Cadet First Lieutenant VANCE J. JULIAN.

The Military Medals:

LEE D. DILLARS, Company "A," Infantry Unit.

JOHN T. BARNETT, Battery "B," Field Artillery Unit.

The Rifle Marksmanship Medal:

Cadet CECIL C. COUCHMAN, Infantry Unit.

The Pistol Marksmanship Medal:

Cadet Major EDWARD K. CHORD, Field Artillery Unit.

HOMER CROY PRIZE: An annual prize of \$100 is offered by Homer Croy, author, of New York, for the best written article of any kind (except poetry) produced by a student in the School of Journalism. The article must have been published during the school year.

At commencement in June, 1926, this prize was awarded to JOE ALEX MORRIS, of Lancaster, Missouri.

SPECIAL DISTINCTION AWARD: An award of \$100 is offered by an anonymous donor to the woman student in the School of Journalism who best exemplifies the spirit, attainments and aspirations that make for an all-around self-controlled journalist.

At commencement in June, 1926, this prize was awarded to SARAH ISABELLE LOWIS, of St. Louis, Missouri.

DRAMATIC ARTS CLUB PRIZES: The Dramatic Arts Club offers a prize of \$20 for the best, and of \$10 for the second best, one-act play not already published or performed, written by a student in the University. Manuscript must be submitted previous to March 12, 1928. Full details may be obtained from the Secretary of the Club.

At commencement in June, 1926, these prizes were awarded as follows: First—FLORENCE ROBINSON, of Hannibal, Missouri. Second—J. WILLARD PIDINGS, of Columbia, Missouri.

ART LOVERS GUILD PRIZES: The Art Lovers Guild offers a prize of \$16 for the best, of \$8 for the second best, of \$4 for the third best, and of \$2 for the fourth best, original landscape rendered in oil by any student in the University who has not sold a picture of his own production for more than \$10. The picture must be submitted under a pseudonym accompanied by an envelope containing the competitor's real name. The competition closes May 15, 1928. Full details may be obtained from the Secretary of the Club.

At commencement in June, 1926, the prizes were awarded as follows: First—EDWIN D. MYERS, of Kirksville, Missouri. Second—CAROL FLEENOR, of Columbia, Missouri. Third—ANITA MOORE, of Columbia, Missouri. Fourth—CLARA DEMETER, of Macon, Missouri.

DELTA THETA PHI PRIZE: A prize of \$25 is offered by the Bliss Senate of the Delta Theta Phi Fraternity to that member of the first-year class in the School of Law who attains the highest standing in his class.

At commencement in June, 1926, this prize was awarded to MARY LOUISE RAMSEY, of Knobnoster, Missouri.

THE NORRIS ATHLETIC TROPHY: A silver trophy cup given each year by Norris Incorporated, to be awarded to the Varsity athlete in the graduating class voted by the student body as "the best all-around man," considering scholastic work, athletics, student activities, and all-around usefulness.

At commencement in June, 1926, this trophy was awarded to SAM B. WHITEMAN, of Richmond, Missouri.

THE JAMES A. GIBSON ATHLETIC SCHOLARSHIP TROPHY: An annual award of a silver plate to the senior athlete having the best scholastic record during his entire period in the University. This yearly award was established by James A. Gibson in 1916, and maintained by him until the present time. The M men of Missouri have now taken it over and will maintain it as a permanent yearly award.

At commencement in June, 1926, this trophy was awarded to JULIAN JOHNSON, of New London, Missouri.

PI MU EPSILON PRIZE: The Missouri Chapter of the National Mathematics Fraternity of Pi Mu Epsilon offers a prize to be awarded annually to that sophomore or junior member of the class in the integral calculus who attains the highest grade in a special examination set for this purpose.

At commencement in June, 1926, this prize was awarded to the following: CARL NEITZERT, of Syracuse, Missouri, and J. H. SCHNEIDER, of Columbia, Missouri.

AGRICULTURAL JOURNALISM AWARD: A shield has been presented to the School of Journalism by the Missouri Ruralist, farm paper, published in St. Louis, on which shield will be engraved each year the name of the student who has done the most outstanding work in agricultural journalism that year.

At commencement in June, 1926, this honor was awarded to OSCAR WILLIAM MEIER, of Jackson, Missouri.

MEDALS

LAWS ASTRONOMICAL MEDAL: The S. S. Laws Astronomical Medal is offered annually at commencement to the student who stands highest in astronomy, and has at the same time attained a high average of general scholarship. An original thesis written on some astronomical subject, and showing capacity for scientific investigation, is required.

No award in 1926.

THE HENRY AND MARY CORNELIA CRUMBAUGH MEDAL: This medal was provided by the will of Mrs. Robert Lee C. Hearne in memory of her father and mother, former residents of Columbia. Mrs. Hearne gave to the Curators of the University \$1,000, the income on which is to provide a medal of the value of \$50, to be awarded annually as a scholarship medal for excellence in chemistry. The medal will be awarded for excellence in household chemistry or chemistry of nutrition.

At commencement in June, 1926, this medal was awarded to ZULU ETHEL WILLIAMS, of Lamar, Missouri.

MCANALLY MEDAL: The McAnally Medal is offered for the best essay by a member of the senior class submitted to the English Department by May 15. Any literary subject will be acceptable.

At commencement in June, 1926, this medal was awarded to ESTHER CATHERINE OXLEY, of Macon, Missouri.

STEPHENS MEDAL: This prize was established by a gift of the late James L. Stephens of Columbia, and is awarded annually for the best oration by any student of the University who has not received a Bachelor's degree. The prize consists of a book in defense of the Christian religion, and a gold medal, for the purchase of which the annual interest on \$500 is available. The orations must be submitted not later than the second Friday in February. The winner

will represent the University in the annual contest of the Missouri Valley Oratorical Association.

At commencement in June, 1926, this medal was awarded to JEAN PAUL BRADSHAW, of Lebanon, Missouri.

PHI BETA KAPPA TROPHY: The Missouri Chapter of Phi Beta Kappa offers a trophy for the high school whose graduates show the highest scholarship in the freshman year at the University of Missouri. Only those high schools having three or more representatives in the freshman class will be considered, and the award will be made at the close of the session 1926-27, based on the scholarship statistics of freshmen in the preceding two semesters. The trophy will be in the form of a cup, to be held for one year by the winning school, but it becomes the permanent possession of the school which wins it three times, not necessarily in successive years.

At commencement in June, 1926, this trophy was awarded to the Keytesville High School.

CURATORS' SCHOLARSHIPS

Summer Session Scholarships for members of faculties of Missouri colleges: In an endeavor to encourage members of the faculties of colleges in Missouri to take advantage of the resources of the University for graduate instruction the Board of Curators has authorized the award of the Curator's Scholarship for the Summer Session to five members of each faculty of accredited junior colleges in Missouri, state teachers colleges, the Kansas City Teachers College and St. Louis Teachers College, and the institutions which are members of the Missouri College Union. This scholarship carries exemption from library, hospital and incidental fee. Application forms for these scholarships will be in the hands of the president of each institution eligible and may be secured from his office.

The Curators Scholarship for the 1926 Summer Session was awarded to the following:

Central College.	Rachel Kibler Field
Fayette, Missouri.	Bertram Isaac Laurence
Christian College.	Stella Sexton Meyer
Columbia, Missouri.	
Hardin College.	Edith Marion Allen
Mexico, Missouri.	
Kansas City Junior College.	Annette Betz
	Andrew Pierson
	James Rice
	Albert Carl Julian Saeger
	James Elmer Wildish
Kidder College.	C. A. Leker
Kidder, Missouri.	
St. Teresa Junior College and Academy.	Sister Sylvia Marie Boothby
Kansas City, Missouri.	Sister Frederic Glaser
	Sister Victoria Houren

Stephens College.....	Ida Ellen Graham
Columbia, Missouri.	Alline Smith
William Woods College.....	Mrs. E. A. Cockrell
Fulton, Missouri.	Doris De Vour
	Harold Donald Griffin
	Elizabeth Lyon

HONOR GRADUATES: The Board of Curators, in an attempt to encourage higher scholarship, offers annually a scholarship to that student attaining the highest scholastic rank in the graduating class of each fully accredited secondary school in Missouri, junior college, state teachers college, colleges comprising the Missouri College Union. This scholarship amounts to exemption from the library, hospital and incidental fee for such portion (not more than two semesters) of the school year (beginning in September and ending the following August) immediately following the graduation of the student from the school or college. Certifications of the student's attainment is to be made by the proper official of the institution to the Secretary of the Board of Curators on forms furnished by the latter.

MISSOURI COLLEGE UNION: Scholarships available to students taking the degree of A. B. or B. S. in the following colleges:

William Jewell College	Park College
Central College	Tarkio College
Washington University	Central Wesleyan College
Westminster College	Missouri Wesleyan College
Drury College	Culver-Stoekton College
Missouri Valley College	Lindenwood College
St. Louis University	

For the session 1926-27 a Curators' Scholarship was awarded to CORA WALLENBROCK of Saint Charles, Missouri, honor graduate of Lindenwood College, St. Charles, Missouri.

Teachers Colleges: Available to a member of the graduating classes in the advanced courses of any of the following colleges:

Northeast State Teachers College, Kirksville
 Central State Teachers College, Warrensburg
 Northwest State Teachers College, Maryville
 Southeast State Teachers College, Cape Girardeau
 Southwest State Teachers College, Springfield

For the session 1926-27 the Curators' Scholarship was awarded to John C. Bauman, honor graduate of the Central State Teachers College at Warrensburg, Missouri.

Junior Colleges as follows:

Christian College, Columbia	St. Mary's Institute, O'Fallon
Cottey College, Nevada	St. Joseph Junior College, St. Joseph
Flat River College, Flat River	Southwest Baptist College, Bolivar
Hardin College, Mexico	Stephens College, Columbia
Kemper Military School, Boonville	Synodical College, Fulton
The Junior College of Kansas City	The Principia, St. Louis
LaGrange College, LaGrange	Wentworth Military Academy, Lexington
Palmer College, Albany	William Woods College, Fulton

For the session 1926-27 the Curators' Scholarship was awarded to JULIA ANN CHRISTIAN, honor graduate of the Synodical College of Fulton, Missouri.

Secondary Schools: Honor graduates of the following secondary schools were awarded Curators' Scholarships during the session of 1926-27:

Adrian.....	Wayne Criswell
Adrian (class of 1925).....	Ennis A. Morriss
Anderson.....	Pauline Roark
Appleton City (class of 1925).....	Nelson Sommer
Aurora.....	Aileen Cobb
Ava.....	Margaret Edna Miller
Belton.....	Eugene Ensminger
Blackburn (class of 1925).....	Emil Pape
Bloomfield (Consolidated).....	Marion Cain
Bloomfield (Consolidated) (class of 1925).....	Clarence Curneal
Branson.....	George P. Alexander
Bridges Consolidated (Charleston).....	Etheridge Nance
Brunswick (class of 1925).....	Vetura Knight
Bueklin.....	Rogers Townsend
Buffalo.....	Virginia L. Alexander
Calhoun.....	Jean Paul Munday
California (class of 1925).....	Nadia Faulks
Carl Junction.....	Mervin Bowers
Carthage.....	Edwin Hough
Chamois.....	Lee R. Willis
Charleston.....	Harold Lee Joslyn
Chilhowee.....	Wayne Byron Journey
Clinton.....	Robert Duncan
Columbia.....	John William Fellows
Columbia (University High School).....	Frances Lavinia Jeffrey
Concordia.....	Fern Kroencke
Crocker.....	Ross H. Johnston
Cuba.....	George Kohrman
Cuba (class of 1925).....	Lyndon Rodgers
Dawn.....	Dorothy Patton
Doniphan (class of 1925).....	Richard Harold Borth
Eldon (class of 1925).....	Maggie Woten
Eldorado Springs.....	Donald Dawson
Elvins (class of 1925).....	Alma Wolfe
Essex.....	Velma P. Spickelmier

Esther.....	Marion Hoy
Farmington.....	Jack Manley
Ferguson.....	Pearl Elizabeth Tiffin
Frankford (class of 1925).....	Richard Waddell
Gallatin.....	Leo Scott
Garden City.....	John Coe
Graham.....	Brooking Gex
Greencastle (class of 1925).....	Hallie Oran Walters
Greenfield.....	Clyde Ray
Hallsville.....	Robert Ray Robinson
Hereulaneum.....	Bessie Knight
Holden.....	Fordice Rogers
Holliday.....	Frederick Hurlie Wiley
Hopkins.....	John Edward Mutti
Houston.....	Robert Lee Bridges
Kennett.....	Randle Jasper Smith
Kirkwood.....	George Milton Kerth
Knob Noster.....	Freddie Lee Ramsey
Lawson.....	Juanita Shepherd
Leeton.....	Harold Oram
Linn.....	Robert Gove
Marceline (class of 1925).....	George Ben Putman
Miami (class of 1925).....	Josephine McDaniels
Mokane.....	Thomas Burford
Moberly.....	Duis Donald Bolinger
Mount Moriah (Mill Grove).....	J. Paul Miller
Mount Vernon.....	Kenneth Garrison
Newark.....	Albert Glover
New Franklin.....	Zella Leech
New Haven.....	Carl Eimback
New London.....	Florence Briggs
New York Township (Hamilton).....	A. W. Diddle
Pacific (class of 1925).....	Kenneth Smalley Shepard
Paris.....	Stapleton Bodine
Pineville.....	Frank Sears
Pleasant Hill.....	Fred B. Cloud
Poplar Bluff.....	Herman Haag
Prairie Home.....	Oliver Johnson
Raymore.....	Harry E. Ensminger
Rock Port.....	Madge Pettit
Rolla.....	Charles Perry Clemens
Ruskin.....	Glen Hopkins
St. Louis (Beaumont High School).....	Marie Quernheim
Salem (class of 1925).....	Jack Young
Salisbury (class of 1925).....	Lola Donelson
Sedalia (Smith-Cotton).....	Marie Brennecke
Seymour.....	J. F. Vollenweider
Stoutsville.....	John J. Moore
Sweet Springs.....	John Vance Neale
Thomasville.....	Jessie S. Huddleston

Tuscumbia.....	Robert Marvin Stillwell
Urich.....	Bertrice Harvey
Waynesville.....	William Ralph Christeson
Waynesville (class of 1925).....	Jewell Bell

Masonic Home of Missouri and Odd Fellows' Home: A scholarship amounting to exemption from the library, hospital and incidental fee for two semesters is offered to such students of the Masonic Home of Missouri, at St. Louis, and the Odd Fellows' Home, at Liberty, as may be prepared to enter the University.

INTERSCHOLASTIC SCHOLARSHIPS: The scholarships listed below are awarded as a result of contests among students of accredited Missouri high schools held in Columbia on High School Day. Rules regarding the contests and other information may be obtained by writing the Director of University Extension, Columbia, Missouri.

Music: A scholarship amounting to exemption from fees for individual lessons, for one year (two semesters) to the winner of first place and for one semester to the winner of second place, will be awarded to the successful contestants in the following: Voice for women, voice for men, violin and piano; provided, however, that not more than one of such scholarships may be awarded to the same individual, and that the scholarship be completely used within one year (beginning in September and ending the following August) after graduation from the high school.

Debating: At a meeting of teachers of accredited schools at the University in May, 1914, arrangements were made for the organization of a Missouri High School Debating League. Any high school in the state which is accredited by the University may become a member of this league by paying the annual dues of \$3.50 on or before October 31 of each year. These dues should be paid to the district director.

Series of debating contests are held among the various schools composing the league and a final contest determining the winning team for the state is held in Columbia on High School Day. A scholarship of the value of \$125 in the University is given to the best individual debater. This scholarship will be paid in monthly installments during the student's first two semesters in the University. It must be completely used within one year (beginning in September and ending the following August) immediately following the graduation of the student from high school. The subject for debate by the League in 1926-27 is:

Resolved: That the adherence of the United States to the Permanent Court of International Justice (The World Court) under the conditions approved by the United States Senate on January 27, 1926, is a wise public policy. The rules governing the League, and further information, may be obtained by writing the Director of University Extension, Columbia, Missouri.

The scholarship for the year 1926-27 was awarded to Ted Willard of Lebanon, Missouri.

General: A scholarship amounting to exemption from the library, hospital and incidental fee, for one year (two semesters) to the winner of first place and for one semester to the winner of second place, will be awarded to the successful contestants in the following subjects: Fourth year Latin, fourth year English, physics, chemistry, advanced algebra and American history; provided, however, that not more than one of the scholarships may be awarded to the same individual and that the winner be graduated from a Missouri accredited high school in May or June following the winning of the scholarship, and makes use of it the following school year.

Interscholastic Scholarships: Curators' Scholarships for the session 1926-27 listed below were awarded as a result of contests among students of accredited Missouri high schools held in Columbia on High School Day:

American History Contest.

Columbia.....Marvin T. Haw, Jr.

Fourth Year English Contest.

Columbia.....Elizabeth Fyfer

Fourth Year Latin Contest.

Columbia.....Lloyd Thomas

Physics Contest.

Webster Groves.....Kirby F. Thornton

STUDENT ACTIVITIES

GOVERNMENT

REGULATIONS GOVERNING STUDENT ACTIVITIES: All organizations of students in the University, except those which are under the control of a special board or faculty committee, are under the supervision of the committee on student activities. The complete rules of this committee are issued each fall in "The Student Handbook," but some of the more important rules are given here.

No student organization which in any way represents the University before the public, or which holds itself to be a University organization or an organization of University students, may use the name of the University in connection with its own name, or in connection with its members as students, without consent of the proper faculty or administrative committee.

An auditing committee consisting of two faculty members and one student member supervises all financial operations of public performances given by or under the management of student organizations. All student publications are supervised in the same manner.

Students whose class work is not satisfactory are not permitted to take any part in any public, dramatic or musical performance. Organizations having both men and women members are not permitted to give out-of-town performances.

The Dean of Men of the University is directly concerned with the general welfare of the men students. He seeks conferences with them on matters affecting their personal and group interests. He invites correspondence with the parents of students for the purpose of getting co-operation between home and University.

PROVISION FOR WOMEN: All departments of the University are open to women, except that of military science and tactics. In the lecture room they receive the same instruction and meet the same intellectual requirements as the men. The women students have use of a suite of parlors, in Read Hall and the Women's Gymnasium.

The Dean of Women of the University gives general and individual attention to the needs of women students and consults with them on any matter concerning their welfare. She exercises a general supervision over organizations of women students and their social affairs. All houses where women students live must be approved by her and women students must secure her approval before changing rooms during the semester.

STUDENT GOVERNMENT: Some years ago the students took their first important step toward self-government, with the establishment of a student senate to advise with the faculty committees on discipline. Later they effected a permanent student organiza-

tion adopting a constitution and electing a president and council. The student senate represents the students in cases of discipline, while the council has power to make recommendations upon matters of student policy, and to represent the student body in negotiations with the faculty and officers of administration.

DISCIPLINE: In the government of the University, the President and faculty rely chiefly upon the sense of duty of the students. The student is expected to pursue his studies with diligence, to attend classes regularly, to live morally, and maintain good behavior. The removal of those who fail to meet these requirements is in the interest of the University.

SOCIETIES

FRATERNITIES AND SORORITIES: There are at the University of Missouri chapters of many of the leading fraternities and sororities. These are all subject to certain rules and regulations of the faculty committee on student activities. The fraternities have formed the Pan-Hellenic Council and the sororities the Pan-Hellenic Association, both of which are strong organizations and both are exerting a good influence for better scholarship. The committee on student activities, as far as possible, deals with the Pan-Hellenic Council and the Pan-Hellenic Association in matters affecting the chapters which are members of these organizations.

LITERARY AND SCIENTIFIC SOCIETIES: Many literary and scientific societies are maintained in the University, with practically each department and each special field of interest represented. Some of these are conducted by members of the faculty and are open to advanced students. Others are conducted by students, in some cases with the participation of members of the faculty.

HONORARY SOCIETIES: There are several honorary societies in the University, organized to raise scholastic and cultural standards in their respective lines. In addition to the general literary society, Phi Beta Kappa; the scientific society, Sigma Xi; the social science society, Alpha Zeta Pi; and general honor societies, there are similar organizations in the schools of Law, Engineering, Medicine, Journalism, Education, Business and Public Administration, the Graduate School, and the College of Agriculture, and in several of the departments.

RELIGIOUS INFLUENCES

CHURCHES: Columbia has seven churches near the University. Members of these churches are interested in the students and endeavor to make them feel at home in the Sunday services, at the midweek meetings, and at the young people's societies.

YOUNG MEN'S CHRISTIAN ASSOCIATION: The Young Men's Christian Association was organized in the University in 1890. Bible and mission study classes, men's meetings, and other whole-

some religious activities are conducted by the association. The Association Building, situated at the main entrance of the University, is a social and religious center for men of the University. In it are dormitory rooms for eighty men, club rooms, parlors, bowling alleys, game rooms, reading rooms, swimming pools, and other features attractive to young men. The association desires to serve the new student. It invites correspondence with young men who expect to enter the University, and urges new students to come to the Association Building upon arrival in Columbia.

KNIGHTS OF COLUMBUS STUDENT HOME: The Knights of Columbus of Missouri have established a student home a few blocks from the University campus. This home has rooms for seventy-two men students; meals are served, and a parlor, a billiard room, and an auditorium are provided for rest and recreation. The facilities of the home are open to students of all denominations, the auditorium, in particular, being obtainable for student gatherings.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION: The Young Women's Christian Association, organized in the University in 1891, exists solely to be of service to the women students. It offers opportunity for development and training in religious and social service. It endeavors to bring the University women into closer relationship with their churches, and to help in every other way to make their University life most pleasant and most worthwhile. A house which provides rooming facilities for sixteen girls, is maintained by the association for social purposes and group leadership meetings. Weekly business meetings are held at the Bible College on Thursday afternoon.

THE STUDENTS' RELIGIOUS COUNCIL: A most inclusive and comprehensive co-operative religious organization is found at the University of Missouri. Its membership includes the Protestant, Catholic, and Jewish student organizations. It strives to carry forward a campus-wide program of religious activities through the co-operative effort of the churches of Columbia. The ministers of Columbia, the student pastors, the President of the University and two additional members of the University Administration, the Dean of the Bible College, and the student presidents of the young people's societies, compose its Board of Control.

THE UNIVERSITY ASSEMBLY

The students and faculty assemble in the University Auditorium from time to time to hear addresses by well-known educators and representative men in other fields. The purpose is to broaden the intellectual, social and religious life of the University. The assembly serves also to bring together students of all divisions, and to conserve University spirit. There are no fixed dates, but assemblies are arranged whenever it is possible to get a lecturer.

THE UNIVERSITY CO-OPERATIVE STORE

The students of the University maintain a co-operative store to sell themselves books, stationery and general supplies. Management of the store is in the hands of a board of directors elected by the students. The store is in Jesse Hall.

THE ALUMNI ASSOCIATION

The Alumni Association of the University of Missouri is composed of the thousands of men and women who have been enrolled in the institution, including those enrolled in the short course and summer school. Every man and woman who ever attended the University of Missouri is automatically a member of the Alumni Association, without dues. There is a county alumni association in every county in Missouri and an organization in every prominent city in the United States. The *Alumnus* is the monthly publication of the Alumni Association. The annual and semi-annual meeting of the alumni is held during Commencement Week. The officers of the University of Missouri Alumni Association are: President, Frank B. Rollins, Columbia, Mo.; first vice-president, George C. Willson, St. Louis, Mo.; second vice-president, Miss Elsa Bradley, Kansas City, Mo.; treasurer, S. F. Conley, Columbia; secretary and editor of *The Alumnus*, Bob Hill, 217 Jesse Hall, Columbia.

MEMORIAL UNION AND STADIUM

Two memorials are being built on the University campus in grateful memory of the heroic company of Missouri alumni and former students and their companions from the state of Missouri who, during the Great War, paid the full measure of devotion that we, who survived them, might have life and have it more abundantly.

The first of these memorials is the Union Building, which will be the headquarters for students during their leisure hours and will be the permanent headquarters for the alumni and former students. The feature of the Union is the Memorial Tower said to be the finest Gothic Tower in America. It was formally dedicated and presented by the alumni, students, faculty members and friends of the University, to the University on November 20, 1926. Steps will be made to complete the wings on the north and south sides of the Tower, one of which will be devoted to the women and one to the men and will be the permanent headquarters for student and alumni activities.

Work on the Memorial Stadium began in December, 1925, the first unit of which seats 25,000 and was formally dedicated and presented by the alumni to the University on November 20, 1926. The ultimate seating capacity will be approximately 90,000 and the Stadium will be finished in keeping with seating demands.

Approximately one million dollars has been subscribed by alumni, students, faculty members, and friends of the University to finance these two memorials, the first buildings presented to the University by the Alumni Association, without cost to the state. Dr. J. C. Jones, president emeritus of the University, is director of the Memorial Union and Stadium campaign, Bob Hill, alumni recorder, is assistant director, and Leslie Cowan is treasurer.

REGULATIONS, GRADES, DEGREES

REGULATION OF STUDIES

COURSE NUMBERS: Courses for underclassmen are designated by numbers below 100; courses for upperclassmen and graduates, by numbers 100-199; courses primarily for graduates, by numbers 200-299.

The letter following the number of a course indicates the semester in which it is offered; thus, course 100f is offered during the first semester, 100w during the second semester. The number of hours' credit given for a course is indicated by the Arabic numeral in parentheses following the statement of the course. A capital letter preceding the number of a course indicates one of the special classes of courses into which the work of a large department is divided, as in the case of Education A102f and Education C150w.

SCHEDULE OF COURSES: The schedule of days, hours, and rooms for the session of 1927-28 will be issued as a separate bulletin.

DEFINITION OF HOUR: The hour, which is the unit of credit given in the University, is the equivalent of a subject pursued one period a week for one semester. Thus a course meeting five periods a week for a semester is a five-hour course. Three five-hour courses, or the equivalent, constitute a normal semester's work.

NUMBER OF HOURS: No undergraduate student is permitted to carry courses aggregating less than twelve or more than sixteen credit hours, exclusive of the required work in military science and physical education, but the dean of the division may reduce the minimum in special cases.

STUDIES IN OTHER DIVISIONS: Students registered in one division may, with the consent of their dean, take work in other divisions if, in the judgment of the professors concerned, they are prepared for such work. Students taking work in another division than that in which they are registered are subject, as respects this work, to the rules of the division in which the work belongs.

Undergraduates who at the beginning of any session have a graduation requirement for the bachelor's degree of fifteen hours or less may be permitted, with the approval of the appropriate deans, to register simultaneously in the Graduate School for courses sufficient to make up a full program.

Qualified seniors who do not avail themselves of the opportunity of dual registration will not receive credit in the Graduate School for credits earned in the undergraduate schools above graduation requirements.

EXTENSION DIVISION: Courses may be taken by correspondence or in extension centers. The maximum extra-mural work is twenty normal credit hours for one calendar year.

REQUIRED WORK IN MILITARY SCIENCE AND TACTICS AND IN PHYSICAL TRAINING: All men students in the University are required to take four semesters of military science and tactics and physical training during their freshman and sophomore years.

All women students are required to take four semesters of physical training two hours a week during their freshman and sophomore years.

A committee appointed by the Executive Board may, for satisfactory cause, excuse students from compliance with these regulations. All applications for excuse from these requirements should be filed with the Registrar not later than two weeks after the beginning of a semester. Excuses because of physical disability will be granted only as a result of physical examination, which is provided for all students.

RESIDENCE REQUIREMENT

The last year of work in any college or school must be done in residence, subject to such allowances and modifications as are indicated in the regulations of the separate colleges and schools.

EXAMINATIONS AND CREDITS

EXAMINATIONS: Examinations at the end of each semester close the studies pursued to that point.

GRADING: The system of grading and credits at the University makes uniform the grading of the different departments and divisions, and gives credit to students corresponding to the quality of their work.

The grades M, S, E, I, F are given. These are defined as follows: The grade of M means that the student ranks among the medium students, approximating 50 per cent of a class large enough to exclude accidental variations. The grade of S gives the student rank among those who are superior. The grade of E means that the individual is one of the few most excellent students. Below the grade of M, the grade I means that a student is somewhat below the medium. The grade of F places the student among those ranking lowest.

This system tends to promote uniformity of grading in the different departments, since the meaning of each grade is not left to the discretion of the individual teacher, but is defined objectively.

The grade of S is given to those students who impress the instructor as being superior to approximately 75 per cent of all students who have pursued this study during recent years. A student who impresses his teacher as being inferior to 75 per cent of all students in this particular branch of study will receive the grade of Inferior. Students may not be permitted to pursue courses in cases where they have made Inferior grades in other courses that are prerequisites. The professor of the department in which the

student wishes to take the new course will decide upon such cases individually. He may require additional preparation, but the grade originally recorded on the student's grade card will not be changed.

The grade of Excellent will be given to the few students who have manifested unusual ability in a particular branch of study.

CREDITS: In order to encourage students to do the best work of which they are capable, all faculties except those of the College of Engineering and the Schools of Fine Arts, Law and Medicine, where the curricula are definitely prescribed, credit their work in proportion to the grade received, thus enabling the most able and industrious students to be graduated in less than the normal time. For each recitation hour for which the grade of Excellent is recorded, the student will receive 20 per cent additional credit. For each recitation hour for which the grade of Superior is recorded, he will receive 10 per cent additional credit toward graduation.

The faculty further recognizes that those students who are inferior to seventy-five in a hundred, but whose work is not estimated by the teacher as a complete failure, are entitled to some credit. Students will, therefore, be given 90 per cent of the normal credit toward graduation for each recitation hour for which the grade of Inferior is recorded.

In order to do entire justice to the needs of the students coming to the University of Missouri, the faculty adapts the method of instruction to the students of average ability. Those who are of somewhat less ability will thus receive some benefit from the instruction and some credit. Those who are of superior ability and will devote their best energies to their work will accomplish much more than the average student, and will be given for this not only honorable mention, but recognition of their accomplishments by additional credit.

REPORTS: Written reports of grades are sent by the Registrar to parents or guardians at the close of each semester.

ELIMINATION OF DELINQUENT STUDENTS: The faculty will eliminate those individuals who cannot or will not measure up to the high standard of scholarship maintained by the University of Missouri. This is accomplished by two regulations. The first eliminates a student who does not pass in a certain proportion of his work in any semester. The second is cumulative, and eliminates any student who habitually falls behind in his work, even though he may remain under the first rule, when the sum of his deficiencies has reached a specified total.

DEGREES AND CERTIFICATES

DEGREES: The following degrees are now conferred by the University:

In the College of Arts and Science, Bachelor of Arts (A.B.).

In the College of Agriculture, Bachelor of Science in Agriculture (B. S. in Agr.), and Bachelor of Science (B. S.) in Home Economics.

In the School of Education, Bachelor of Science in Education (B. S. in Ed.).

In the School of Law, Bachelor of Laws (LL. B.).

In the College of Engineering, Civil Engineer (C. E.), Electrical Engineer (E.E.), Mechanical Engineer (M.E.), Chemical Engineer (Ch.E.), Agricultural Engineer (Ag. E.), and Bachelor of Science (B.S.) in Engineering.

In the School of Mines and Metallurgy at Rolla, Bachelor of Science (B.S.) in Mine Engineering, in Metallurgy, in Chemical Engineering, in Civil Engineering, in Electrical Engineering, in Mechanical Engineering, and in General Science. The graduate degrees of Engineer of Mines (E.M.) and of Chemical Engineer (Chem.E.), Civil Engineer (C.E.), Electrical Engineer (E.E.), Mechanical Engineer (M.E.), Metallurgical Engineer (Met. E.), and Master of Science (M.S.) are also given.

In the School of Journalism, Bachelor of Journalism (B.J.)

In the School of Business and Public Administration, Bachelor of Science (B.S.), in Business Administration, and Bachelor of Science (B.S.) in Public Administration.

In the School of Fine Arts, Bachelor of Fine Arts (B.F.A.), qualified by the department in which the work is taken.

In the School of Medicine, Bachelor of Science (B.S.) in Medicine.

In the Graduate School, Master of Arts (A.M.) and Doctor of Philosophy (Ph. D.).

Two degrees will not be granted to a student until he has earned a minimum of twenty-four hours' credit in addition to the requirements for one of the degrees.

Except that of Doctor of Laws (LL.D.), no degrees are conferred *honoris causa*.

For further information, see the announcement of the respective divisions in this catalog.

CERTIFICATES: Certificates are given, on completion of prescribed courses, in the School of Education, the College of Agriculture, and in the department of military science and tactics.

COMMENCEMENT EXERCISES

Commencement exercises are held at the close of the second semester and at the end of the Summer Session. For specific days, see University calendar, page 3.

SECTION II

THE SCHOOLS AND COLLEGES

COLLEGE OF ARTS AND SCIENCE

The College of Arts and Science has three clearly defined purposes:

(1) It offers to students who have the requisite ability and energy such a liberal education in the arts and sciences as will give them an intelligent familiarity with modern civilization, fit them for high service in the world, and give them resources for success and happiness in their own lives. Through the pursuit of the natural sciences, literary and philosophical studies, and the social sciences, it aims at liberty of thought, breadth of views, and the training of the civic spirit.

(2) It prepares for graduate work in the various fields of research. Students who wish ultimately to become trained investigators or to teach their specialties in colleges and universities should secure the A.B. degree as a preparation for graduate work.

(3) It teaches the basic subjects required for admission to the professional schools of Law, Medicine, Education, Journalism, Business and Public Administration.

REQUIREMENTS FOR ADMISSION: For information in regard to requirements for admission, see page 32.

FEES: For information in regard to scholarships, fees, etc., see sections under *General Information*.

ELECTIVE SYSTEM: Work in the College of Arts and Science is largely elective—that is, the student makes such choice and combination of studies offered in the college as he desires, subject to certain restrictions explained under the *Requirements for Graduation*.

A student may not take more than 16 hours nor less than 12 hours a week, not counting the required work in physical training and military science. Permission to add work without credit in the College of Arts and Science above the limit of 16 hours shall be at the discretion of the dean.

REQUIREMENTS FOR GRADUATION

DEGREES: The College of Arts and Science confers only one undergraduate degree, that of Bachelor of Arts (A.B.). In order to receive the degree of Bachelor of Arts the candidate must meet the following requirements:

1. He must have been regularly admitted to the College.
2. He must have completed a total of at least 124 hours.

3. He must have completed a total of 124 points. Each hour of credit is valued in points, as follows: E, 3 points; S, 2 points; M, 1 point. "Passed" grades and advanced standing are treated as of M grade. No points are given for I and F grades.

4. He must complete during the freshman year:

(a) Four hours of citizenship.

(b) Six hours of English composition.

5. He must complete during the first two years:

(a) Ten hours of one foreign language, either ancient or modern. If the student presents 3 units for admission in one foreign language, he will be excused from 5 hours of this requirement, and if the student is prepared to enter the second course in a given foreign language, he may fulfill the requirement by taking, in addition, 5 hours of another foreign language. In the case of Latin, the requirement may be fulfilled by taking course 10 and 5 hours in another foreign language.

(b) Three hours of mathematics or of logic, unless 3 units of mathematics have been presented for admission.

(c) Five hours of a physical science (astronomy, chemistry, geology, physics), unless 2 units of these have been presented for admission.

(d) Five hours of a biological science (botany, zoology), unless 2 units of these have been presented for admission.

Such exemptions do not excuse him from the requirements of total hours as stated in 2.

By "hour" is meant one period a week for one semester.

The ordinary program of a student in his first year is Citizenship, English Composition and Rhetoric, a foreign language, and a science or mathematics, with military and physical training added. He may then, in the second year, complete the freshman-sophomore requirements and take work preparatory to the major and minor. The first sixty hours of credit must include the freshman-sophomore requirements. However, students who are partly self-supporting should not attempt a full program.

6. During the last two years of his course he must complete:

(a) one major of at least 24 hours comprising a sequence of closely correlated studies chosen from the courses offered for students in the College of Arts and Science and containing at least 12 hours from courses offered for upper-classmen or for graduates. (The major need not be confined to a single department, but the courses must represent a closely related sequence); (b) one minor of at least 18 hours, of which at least 5 hours must be from courses for upper-classmen or graduates. A student is not permitted to elect toward his minor courses from the department in which he has done the chief work for his major, or vice versa, but the major and minor must together constitute a unified plan of study.

Work done to meet the requirements in 4 and 5 cannot be included in counting up hours for a major and a minor except that

where a student presents 10 hours in one foreign language in fulfillment of his requirements the second 5 hours in such language can be counted toward the major or minor.

The rule adding to or subtracting from the normal number of credit hours a certain percentage in case the grade is "E," "S," or "I," does not apply to the requirements of the first two years, and it does not apply to majors and minors.

The student must, before the close of his sophomore year, notify the dean in writing of his selection of his major and minor. The courses making up his major and minor must be approved by an adviser from the department in which the student does his chief work, and must consist of courses regularly accepted for credit toward the A.B. degree.

Courses regularly accepted for majors and minors are offered in the following departments:

Theory and practice of art (2, 4, 6, 10, 100, 104, 150, 155, 156, 157); astronomy, botany, chemistry, classical archaeology and history of art, economics and commerce (1, 17, 105, 106, 110, 115, 118, 119, 124, 140, 220); education (A102, A150, A155, A157, A160, A170, A171, B125, B150, B271); English (except 103); geology and geography, Germanic languages, Greek, history, Latin, mathematics (except 155); philosophy, physics, physiology, political science and public law, psychology, Romance languages, sociology and zoology.

A minor may be permitted in Music or in Home Economics (see page 109).

MAJOR SEQUENCES

ART, THEORY AND PRACTICE

I. For Students Primarily Interested in Representation and Painting

General Subject	No. of Course	Special Title	Credit Hours
Art.....	2f & w.....	Introduction to Art.....	5
Art.....	4f & w.....	Representation.....	5
Art.....	10f & w.....	Theory of Design.....	5
Art.....	157f & w.....	Pictorial Composition.....	5
Art.....	156w.....	Painting.....	3 or 6
Art.....	150f & w.....	Advanced Representation.....	5
For Art 150f & w may be substituted History of Art 111f, History of Italian Renaissance Painting.....			3

II. For Students Primarily Interested in Design and Architecture

General Subject	No. of Course	Special Title	Credit Hours
Art.....	2f & w.....	Introduction to Art.....	5
Art.....	4f & w.....	Representation.....	5
Art.....	10f & w.....	Theory of Design.....	5
Art.....	104f.....	Architecture.....	3
Art.....	156w.....	Painting.....	3 or 6
Art.....	155f & w.....	Advanced Design.....	5

For Art 155f & w may be substituted Archaeology 106f, Greek Art to the Age of Pericles, 3 hours, and Archaeology 107w, Greek Art from the Age of Pericles to Roman Times, 3 hours.

Supporting minors are recommended in Education, English, Foreign Languages, History, or Home Economics.

BOTANY

General Subject	No. of Course	Special Title	Credit Hours
Botany.....	1f & w.....	General botany.....	5
Botany.....	3f & w.....	General bacteriology.....	3
Botany.....	10w.....	Advanced General Botany.....	3 or 5
Botany.....	106f.....	Genetics and plant breeding...	3
Botany.....	100w.....	Plant physiology.....	5

At least five (5) hours from following:

Botany.....	102f.....	Plant pathology.....	3
Botany.....	201w.....	Advanced plant pathology.....	3
Botany.....	104f.....	Histological methods.....	3
Botany.....	107f.....	Mycology.....	3
Botany.....	111f & 112w...	Special problems.....	4

For prospective teachers, zoology 1f or w and botany 102f or 104f are required. Minors are recommended in zoology, chemistry, physics, geology, mathematics, education, or languages.

For a botany-zoology major preparatory to medicine, see under zoology major.

CHEMISTRY

General Subject	No. of Course	Special Title	Credit Hours
Chemistry.....	1f & w.....	General inorganic chemistry...	5
Chemistry.....	2f & w.....	General inorganic chemistry...	3
Chemistry.....	27f & w.....	Qualitative Analysis.....	3
Chemistry.....	110f & w.....	Organic chemistry.....	5
Chemistry.....	112f & w.....	Organic chemistry.....	3
Chemistry.....	121f & w.....	Quantitative chemical anal....	5
Chemistry.....	121f & 130w...	Physical chemistry.....	5 or 3

The three-hour course in physical chemistry 130 will be accepted toward a major for students minoring in biology, or other departments in which Calculus is not required as a part of the student's plan of study. Greek II. Greek For Students of Chemistry, a study of the derivation and meaning of scientific terms in chemistry, is recommended to students of chemistry.

CHEMISTRY

Medical Sciences

General Subject	No. of Course	Special Title	Credit Hours
Chemistry.....	1f & w.....	General inorganic chemistry...	5
Chemistry.....	2f & w.....	General inorganic chemistry...	3
Chemistry.....	25f & w.....	Analytical chemistry.....	5
Chemistry.....	110f & w.....	Organic chemistry.....	5
Chemistry.....	112f & w.....	Organic chemistry.....	3
Chemistry.....	130w.....	Physical chemistry.....	3
Physiology.....	112w.....	General physiological chemistry.	5

ECONOMICS AND COMMERCE

The major in this department should ordinarily concentrate at least twenty of the twenty-four hours in one of the following groups:

I. General Theory

General Subject	No. of Course	Special Title	Credit Hours
Economics.....	1f & w.....	General economics.....	5
Economics.....	105f & w.....	Money credit and banking....	5
Economics.....	115w.....	Public revenues.....	3
Economics.....	119w.....	Trusts and combinations.....	2
Economics.....	211f.....	Advanced economic theory....	5
Economics.....	220f.....	Special markets and business cycles.....	3
Economics.....	240f.....	Economics of the professions...	2

II. Public Policy

General Subject	No. of Course	Special Title	Credit Hours
Economics.....	1f & w.....	General economics.....	5
Economics.....	105f & w.....	Money credit and banking....	5
Economics.....	106f.....	Transportation and pub.utilities	3
Economics.....	110f.....	Labor problems.....	5
Economics.....	115w.....	Public revenues.....	3
Economics.....	119w.....	Trusts and combinations.....	2
Economics.....	124w.....	Foreign exchange and trade....	2

III. Commerce

General Subject	No. of Course	Special Title	Credit Hours
Economics.....	1f & w.....	General economics.....	5
Economics.....	105f & w.....	Money credit and banking....	5
Economics.....	106f.....	Transportation and pub.utilities	3
Economics.....	124w.....	Foreign exchange and trade....	2
Economics.....	140w.....	History of commerce and in- dustry.....	2
Geography.....	115f & w.....	Commercial and industrial geog.	3
Geography.....	116f & w.....	The geography of trade.....	3

IV. Finance

General Subject	No. of Course	Special Title	Credit Hours
Economics.....	1f & w.....	General economics.....	5
Economics.....	17f & w.....	Elementary accounting.....	3
Economics.....	105f & w.....	Money credit and banking....	5
Economics.....	115w.....	Public revenues.....	3
Economics.....	118f.....	Corporation finance.....	3
Economics.....	124w.....	Foreign exchange and trade....	2
Economics.....	220f.....	Special markets and business cycles.....	3

The minor to support a major in any of the above named groups should ordinarily be selected from the following departments: I General Theory—Philosophy, Psychology, History, Mathematics, Physics, Zoology, Sociology, and Political Science and Public Law; II Public Policy—History, Political Science and Public Law, Sociology, Zoology, Education, and Philosophy; III Commerce—Geology and Geography, History, Political Science and Public Law; IV Finance—Mathematics, Political Science and Public Law, and History.

ENGLISH

Students making their major in English will take at least three hours in each of the following groups of courses. Upon the basis of the twelve hours thus required, majors will be built up, under the direction of the adviser for the department, to meet the needs of different types of students:

I. Composition

General Subject	No. of Course	Special Title	Credit Hours
English.....	50f & w.....	Narration.....	3
English.....	60f & w.....	Exposition.....	3
English.....	100w.....	The short story.....	3
English.....	101f.....	Advanced composition.....	3
English.....	104w.....	The book review and critical essay.....	3

II. Language

General Subject	No. of Course	Special Title	Credit Hours
English.....	119f.....	The English language.....	3
English.....	120w.....	The English language.....	3
English.....	125f.....	Chaucer and his time.....	2½-3

III. Later Literature

General Subject	No. of Course	Special Title	Credit Hours
English.....	155f.....	The age of reason.....	3
English.....	156f.....	Johnson and his time.....	3
English.....	165f.....	The Romantic period.....	3
English.....	166w.....	The Victorian period.....	3

IV. Earlier Literature

General Subject	No. of Course	Special Title	Credit Hours
English.....	125f.....	Chaucer and his time.....	2½-3
English.....	135f.....	Shakespeare.....	3
English.....	136w.....	Shakespeare.....	3
English.....	145f.....	Milton.....	3

Students electing course 125 to meet the requirement in the third group will take also one of the other courses in the fourth group.

FRENCH AND ITALIAN

French

General Subject	No. of Course	Special Title	Credit Hours
French and Italian	1f or w.....	Elementary French.....	5
French and Italian	2f or w.....	Intermediate French.....	5
French and Italian	3f or w.....	Advanced French.....	5

The rest of the major may be elected from upperclassman courses of the department and should be chosen in consultation with the department adviser before the close of the sophomore year. Prospective teachers should elect courses in composition.

GEOLOGY AND GEOGRAPHY

I. Geology

General Subject	No. of Course	Special Title	Credit Hours
Geology.....	1f & w.....	Principles of geology.....	5
Geology.....	14f & w.....	Common rocks and minerals...	3
Geology.....	15f & w.....	Advanced general geology.....	4
Geology.....	50f & w.....	Life of the geologic past.....	2
Geology.....	100f and 101w...	Economic geology.....	4
Geology.....	105s.....	Field course.....	4
Geology.....	120f or 121w...	Historical geology.....	3
		Introductory Paleontology.....	3

II. Geography

General Subject	No. of Course	Special Title	Credit Hours
Geography.....	6f and w....	Principles of geography.....	3
Geography.....	70f and w....	Industrial geography.....	3
Geography.....	80f and w....	Introduction to Regional Geog.	2
Geography.....	110f or 111w...	Geography of North America, or Geography of South America.....	3
Geography.....	112f or 114w...	Geography of Europe, or Geog- raphy of Caribbean America.	3
Geography.....	113f or 118f...	Geography of Asia, or Africa...	3
Geography.....	116w.....	Geography of Trade.....	3
Geography.....	119w.....	Conservation of Natural Re- sources in the United States.	3
Geography.....	145f and w....	Pro-seminary.....	1

Greek 14 is recommended for students majoring in geology or geography.

GERMANIC LANGUAGES

General Subject	No. of Course	Special Title	Credit Hours
German.....	1f & w.....	Beginning course in German...	5
German.....	2f & w.....	German reading, syntax and composition.....	5
German.....	3f & w.....	Advanced reading course.....	5
German.....	104f & w.....	Masterpieces of modern German drama and lyrics and novel.	3

The remaining hours may be elected from courses above 104 under the direction of the adviser of the department.

HISTORY

I Courses required in all history majors.

General Subject	No. of Course	Special Title	Credit Hours
History.....	1f or w.....	Introduction to History.....	5
History.....	8f or w.....	American History.....	5
History.....	106f or w.....	Contemporary Europe.....	3
History.....	110f or w.....	Recent U. S. history.....	3

Two of the following unless included in the minor:

Economics.....	1f or w.....	General economics.....	5
Political science.....	1f or w.....	American government.....	5
Sociology.....	1f or w.....	General sociology.....	5

II The major must include, in addition to the requirements listed above, at least 8 hours of upperclass work in one of the following fields:

Ancient and Medieval History

General Subject	No. of Course	Special Title	Credit Hours
History.....	123f.....	Ancient History; Orient & Egypt	2
History.....	124w.....	Ancient History; Greek period.	2
History.....	125f.....	Ancient History; Roman period	2
History.....	117f.....	Pol. and Soc. Hist. of England.	3
History.....	154w.....	European culture—medieval...	2
Philosophy.....	104f.....	Ancient Philosophy.....	3

Modern European History

General Subject	No. of Course	Special Title	Credit Hours
History.....	134f.....	The Near East.....	3
History.....	137w.....	The Far East.....	2
History.....	165w.....	Recent Russia.....	3
History.....	155w.....	Renaissance.....	2
History.....	118w.....	Pol. and Soc. Hist. of England.	3
History.....	145f.....	Expansion of Europe.....	2
History.....	146w.....	British Empire.....	2

American History

General Subject	No. of Course	Special Title	Credit Hours
History.....	180f.....	Social Forces in American Hist.	3
History.....	182w.....	History of the west.....	3
History.....	185f.....	American Revolution and formation of National Government.....	3
History.....	190f.....	American diplomatic history...	3
History.....	208w.....	American constitutional history	2
History.....	209w.....	Recent diplomatic problems...	2
History.....	218w.....	Political parties in U. S.....	2

Diplomatic History

General Subject	No. of Course	Special Title	Credit Hours
History.....	134w.....	The near eastern question.....	2
History.....	137w.....	The far eastern question.....	3
History.....	190f.....	American diplomatic history...	3
History.....	165f.....	Recent Russian history.....	3
History.....	209w.....	Recent diplomatic problems...	2
History.....	145f.....	Extension of Europe.....	2
History.....	146w.....	The British empire.....	2
History.....	216f or w.....	Seminary in Contemporary Europe.....	2, 3or 4
Political science.....	109f.....	International law.....	3

With the approval of the adviser, a limited amount of work from other departments may be substituted in some of these special fields—e.g. American Ideals (Philosophy 112) in American History.

In addition to one of the other social sciences, or a combination of them with special emphasis on one, and to geography, minors will be accepted in the philosophy, literature or art of the country or period covered by the major, and in education.

LATIN

A major in Latin shall consist of the following:

General Subject	No. of Course	Special Title	Credit Hours
Latin.....	20, f or w.....	Virgil's Aeneid.....	5
Latin.....	30f.....	Cicero's essays on friendship and old age.....	5
with two hours of the following:			
Latin.....	35w.....	Sallust's Jugurtha.....	3
Latin.....	40w.....	Ovid: Selected poems.....	2
Latin.....	50f or w.....	Latin prose composition.....	1
Latin.....	60 w.....	Livy: Books XXI-XXII.....	3
followed by			
Latin.....	170f.....	Horace: Satires and epistles..	3
Latin.....	180w.....	Horace: Odes and epodes....	3
six hours selected from			
Latin.....	101w.....	Latin prose composition.....	1

General Subject	No. of Course	Special Title	Credit Hours
Latin.....	103f.....	Cicero's Letters.....	3
Latin.....	104w.....	Juvenile's satires.....	3
Latin.....	106f.....	Catullus.....	3
Latin.....	108w.....	Virgil's Aeneid: VI-XII.....	3
Latin.....	110f.....	Tacitus: Annals or agricola....	3
Latin.....	115f.....	Rapid reading.....	2
Latin.....	116w.....	Rapid reading.....	2
Latin.....	125w.....	Lucretius.....	3

The supporting minor may be in Greek, archaeology, education, English, modern foreign language, or history.

MATHEMATICS

General Subject	No. of Course	Special Title	Credit Hours
Mathematics.....	2f or w.....	Trigonometry and algebra	5
Mathematics.....	4f or w.....	Analytic geometry.....	5
Mathematics.....	5f or w.....	Differential calculus.....	5
Mathematics.....	106f or w.....	Integral calculus.....	5

and either 104 and 105 (modern geometry and advanced algebra) or 120 and 125 (differential equations and their applications).

Those beginning their work in mathematics with course 1 may complete a major by taking courses 3, 104, 105, 110, 111, and six hours additional to be approved by the adviser.

It is recommended that the supporting minor be in physics or education, although it may be taken in any of the mathematical or physical sciences, and in French or German.

PHILOSOPHY

General Subject	No. of Course	Special Title	Credit Hours
Philosophy.....	103f.....	Ethical theory.....	3
Philosophy.....	104f.....	Ancient philosophy.....	3
Philosophy.....	105w.....	Modern philosophy.....	3

A course in psychology, two additional courses in philosophy, and other courses selected by the adviser to complete the 24 hours.

A supporting minor may advantageously be taken in the following subjects: English, political science, education, and sociology.

PHYSICS

General Subject	No. of Course	Special Title	Credit Hours
Physics.....	3f.....	General physics.....	5
Physics.....	4w.....	General physics.....	5
Physics.....	104f.....	Electrical measurements.....	4 or 5
Physics.....	112f.....	Heat.....	3

with additional hours selected from the following:

General Subject	No. of Course	Special Title	Credit Hours
Physics.....	108w.....	Light.....	1 or 2
Physics.....	100f & w.....	Advanced work in general physics.....	
Physics.....	110.....	Electricity and magnetism.....	3
Physics.....	113.....	Light.....	3
Physics.....	114w.....	Mechanics.....	3

By special permission courses in mathematics or chemistry may be substituted. Mathematics or chemistry is recommended for the supporting minor.

PHYSIOLOGY

Majors and minors may be elected with considerable freedom of choices from the experimental physiological and physiological chemical courses in the department, in combination with pre-requisite and sequence courses from zoology, botany, anatomy and chemistry. The student is reminded that he cannot use for his major subjects from the department in which he chooses his minor, and vice versa. For example, when the minor is chosen from zoology then the elective courses listed below cannot be offered as a part of the major either in physiology or physiological chemistry. If the minor is offered in chemistry then other chemical courses cannot be applied to a major in physiological chemistry or physiology. Minors in the department must include at least six hours elected from courses 100f, 101f, 103f, and 118w.

Not less than 12 hours from the following:

General Subject	No. of Course	Special Title	Credit Hours
Physiology.....	1w.....	Elementary physiology.....	5
Zoology.....	4w.....	Comparative anatomy.....	5
		(Required if not elected in minor)	
Chemistry.....	1f or w.....	General inorganic chemistry...	5
Chemistry.....	2f or w.....	General inorganic chemistry...	3
Chemistry.....	25f or w.....	Analytical chemistry.....	5
Chemistry.....	110f or w.....	Organic chemistry.....	5
		(Required if not elected in minor)	
Chemistry.....	112f or w.....	Organic chemistry.....	5
Chemistry.....	113f or w.....	Organic synthesis and analysis.	3-5
Botany.....	100w.....	Physiological botany.....	5
Zoology.....	100f or w.....	Embryology.....	3
Zoology.....	101f.....	Comparative histology.....	3
Anatomy.....	104f.....	Histology.....	5
Anatomy.....	105w.....	Neurology.....	3
Medical bacteriology.....	102w.....	Medical bacteriology.....	4
followed by			
Physiology.....	100w.....	General physiology.....	2
Physiology.....	101f.....	Physiology of circulation and respiration.....	2
Physiology.....	112w.....	General physiological chemistry	5

and not less than 3 hours from the following courses in physiology: 103f, Alimentary Mechanisms (2); 105f, The Central Nervous System and Sense Organs (2); 108w, Pharmacology (4); 115f or 116w, Advanced Physiological Chemistry (5); 117f or 118w, Toxicology (2); 122w, Advanced Physiology of Respiration (3); 124w, Adv. Physiology of Cir. System (2-4); 231f and 232w, Physiological Problems.

POLITICAL SCIENCE AND PUBLIC LAW

Government Group

General Subject	No. of Course	Special Title	Credit Hours
Political science.....	1f or w.....	American government.....	5
Political science.....	102w.....	European governments.....	3
Political science.....	105f or s.....	Political parties.....	3
Political science.....	106f or s.....	Municipal government.....	3
Political science.....	107w.....	Municipal problems.....	2
Political science.....	108w.....	State administration.....	3
Political science.....	112f.....	National administration.....	3

Public Law Group

General Subject	No. of Course	Special Title	Credit Hours
Political science.....	1f or w.....	American government.....	5
Political science.....	102w.....	European governments.....	3
Political science.....	109f or s.....	International law.....	3
Political science.....	110w or s.....	International law.....	3
Political science.....	190f.....	Principles of political science...	3
Political science.....	120f.....	Constitutional law.....	3

Five additional hours in political science.

PSYCHOLOGY

In preparation for the major, students should take in high school or college elementary courses in physics, zoology and chemistry.

General Subject	No. of Course	Special Title	Credit Hours
Psychology.....	1f or w.....	Instincts and habits.....	4
Psychology.....	52w.....	Abnormal psychology.....	2
Psychology*.....	2w.....	Elementary physiology.....	5
Philosophy*.....	105w.....	Modern philosophy.....	3
Mathematics or Education*.....		Statistics or mental measurements.....	2
Psychology.....	100f.....	Psychological principles of art..	3
Psychology.....	125f.....	Social psychology.....	3
Psychology.....	Elective.....		3

*Students who minor in education, philosophy, physiology or mathematics must make substitutions in the major sequence. For work in industrial or other applied psychology, a minor in physics, zoology or chemistry is more expedient.

SPANISH

General Subject	No. of Course	Special Title	Credit Hours
Spanish.....	30f or w.....	Elementary Spanish.....	5
Spanish.....	31f or w.....	Intermediate Spanish.....	5
Spanish.....	32f or w.....	Advanced Spanish.....	5

The rest of the major may be elected from upperclassman courses of the department and should be chosen in consultation with the department adviser before the end of the sophomore year. Prospective teachers should include among their electives as much work in composition and conversation as possible.

SOCIOLOGY

Teaching Social Science

General Subject	No. of Course	Special Title	Credit Hours
Sociology.....	1f or w.....	General sociology.....	5
Economics.....	1f or w.....	General economics.....	5
Sociology.....	110f or w.....	Social pathology.....	3
Sociology.....	125f.....	General anthropology.....	3
Sociology.....	126w.....	Cultural anthropology.....	3
Sociology.....	230w.....	History of social philosophy....	3

Social Service

General Subject	No. of Course	Special Title	Credit Hours
Sociology.....	1f or w.....	General sociology.....	5
Economics.....	1f or w.....	General economics.....	5
Sociology.....	110f or w.....	Social pathology.....	3
Sociology.....	111w.....	Criminology.....	3
Sociology.....	112f.....	Child welfare.....	3
Sociology.....	113w.....	Constructive social policies....	2
Sociology.....	119w.....	Social case work.....	3
Sociology.....	117s or 222w...	Community organization, or...	3
		Methods of social research...	2

Rural Social Service

General Subject	No. of Course	Special Title	Credit Hours
Sociology.....	1f or w.....	General sociology.....	5
Economics.....	1f or w.....	General economics.....	5
Rural life.....	115s, f, or w...	Rural sociology.....	3
Sociology.....	117s.....	Community organization.....	3
Sociology.....	110f or w.....	Social pathology.....	3
Rural life.....	119s or f.....	Leadership.....	3
Sociology.....	222w.....	Methods of social research....	2
Rural life.....	239f or w.....	Field work.....	2 to 8

In each of the above sequences five hours in political science (courses 1f or 1w) may be substituted for economics 1.

Rural Social Service

General Subject	No. of Course	Special Title	Credit Hours
Sociology.....	1f or w.....	General sociology.....	5
Economics.....	1f or w.....	General economics.....	5
Rural life.....	115s, f, or w...	Rural sociology.....	3
Sociology.....	117s.....	Community organization.....	3
Sociology.....	110f or w.....	Social pathology.....	3
Rural life.....	119s or f.....	Leadership.....	3
Sociology.....	222w.....	Methods of social research.....	2
Rural life.....	239f or w.....	Field work.....	2 to 8

In each of the above sequences six hours in political science (courses 3 and 4) may be substituted for economics 1.

ZOOLOGY

I. Preparatory to Research

General Subject	No. of Course	Special Title	Credit Hours
Zoology.....	1f or w.....	General zoology.....	5
Zoology.....	2w.....	Theory of evolution.....	2
Zoology.....	3f or 105s	Advanced general zoology or...	3
Zoology.....	.....	Invertebrate zoology.....	3
Zoology.....	4w.....	Comparative anatomy of vertebrates.....	5
Zoology.....	100f or w.....	Embryology of vertebrates.....	3
Zoology.....	101f or 112w...	Comparative histology or.....	3
.....	.....	Cytology.....	5
Zoology.....	103w.....	Parasitology.....	3
Zoology.....	110f or 120f...	Protozoology or Special problems	3
Zoology.....	111f.....	Genetics.....	3
Zoology.....	210f and w....	Seminar.....	2

II. Preparatory to Medicine

General Subject	No. of Course	Special Title	Credit Hours
Zoology.....	1f or w.....	General zoology.....	5
Zoology.....	2w.....	Theory of evolution.....	2
Zoology.....	4w.....	Comparative anatomy of vertebrates.....	5
Zoology.....	100f or w.....	Embryology of vertebrates.....	3
Zoology.....	101f.....	Comparative histology.....	3
Zoology.....	103w.....	Parasitology.....	3
Zoology.....	110f.....	Protozoology.....	3
Zoology.....	111f.....	Genetics.....	3
Zoology.....	112w or 120f or w	Cytology or.....	5
.....	.....	Special problems.....	3

IIa.

Prospective medical students may also select a major which combines courses in botany and zoology, choosing their adviser from either department, as follows: Botany, 1, 3, 100, and 102 or 104 or 106; Zoology 1 and 3, or 4 and 100 or 101 or 103 or 111.

III. Preparatory to Teaching

General Subject	No. of Course	Special Title	Credit Hours
Zoology	1f or w	General zoology	5
Zoology	2w	Theory of evolution	2
Zoology	105s or 3f	Invertebrate zoology or	3
		Advanced Gen. zoology	3
Zoology	4w	Comparative anatomy of vertebrates	5
Zoology	100f or w	Embryology of vertebrates	3
Zoology	101f	Comparative histology	3
Zoology	103w	Parasitology	3
Zoology	110f or 112w	Protozoology or	3
		Cytology	5
	or 111f	Genetics	3
Zoology	210f and w	Seminar	2

Zoology—Medical Sciences

General Subject	No. of Course	Special Title	Credit Hours
Zoology	2w	Theory of evolution	2
Zoology	4w	Comp. anatomy of vertebrates	5
Zoology	101f	Comparative histology	3
Zoology	103w	Parasitology	3
Zoology	100f and w	Embryology	3

followed by eight hours made up of Anatomy 102f (8), or Histology (5), combined with Physiology (2) or Neuro-Anatomy (3) or Embryology (3).

IIIa

Prospective high school teachers may also select a major which combines courses in botany and zoology, with a minor in education, choosing the adviser in either department, as follows: Botany 1, 3, 10, and 100 or 102 or 104 or 106; Zoology 1 and 3 or 4 and 100 or 101 or 103 or 111.

Course 1 cannot be included in the major if it is used to meet the freshman-sophomore requirement in biological science. Supporting minors may be arranged in botany, geology, chemistry, physics, medical science, social sciences, and the like. The juniors and seniors taking the course in general zoology will receive reduced credit. Course Greek 12, Derivation of Scientific Terms in Zoology, is recommended to students of zoology.

ELECTIVES FROM OTHER DIVISIONS: The following courses in other divisions are open as electives to students in the College of Arts and Science, and the candidate may present them to an amount not exceeding 9 hours in all, as a part of the 124 hours required for graduation, except that students who pursue a combined course in the College of Arts and Science and Medicine, or Law, or Engineering, or Home Economics, may elect 30 hours in the School of Medicine or the first year in law, or 20 hours in engineering, or 24 hours in home economics. The student who pursues a combined course

may not elect courses from any division except the College of Arts and Science and the division chosen in taking the combined course.

From the College of Agriculture. Entomology, for not more than 6 hours; agricultural chemistry, for not more than 6 hours; elements of landscape gardening, for not more than 5 hours; Home Economics, courses 1, 2, 10, 20, 101, 110, 120, 121, 122. 123. Meteorology, 1 hour.

From the School of Business and Public Administration. Mathematics of business and insurance 155, 3 hours. Investments, 2 hours.

EDUCATION

Candidates for the A. B. degree who wish a temporary teachers certificate will be admitted to the courses in Education required for the certificate. The following sequence is recommended:

Educational Psychology, 3 hours
History of Education, 3 hours
Preventive Medicine, 2 hours
The Technique of Teaching, 3 hours
Teaching of the subject, 2 hours
High School Economy, 2 hours.

These courses may be counted toward the A. B. degree, the first three regularly, the last three under the 9-hour rule for electives from other divisions. By taking an additional five hours in Practice Teaching, or, if this requirement is waived, another five hours in Education, the student may fulfill the requirement in professional educational courses for the life certificate. Practice Teaching is not accredited toward the A. B. degree, Mental Measurements may be substituted for High School Economy for the temporary certificate. Candidates for both the A. B. degree and a teachers certificate must enroll in both the College of Arts and Science and the School of Education.

From the College of Engineering. Mechanics (courses 100, 101, 112, and 205); electrical machinery (electrical engineering, 101, 102), 8 hours; applied thermodynamics (mechanical engineering, 231), 3 hours; elementary surveying (civil engineering, 2), 3 hours; pattern making (industrial engineering, 25), 2 hours; forge and machine work (industrial engineering, 30); 2 hours; engineering drawing, course 1 and 2, 5 hours. By proper choice of electives from these courses, students may complete both the requirements for the degree of Bachelor of Arts and the requirements for the degree of Civil Engineer, Electrical Engineer, Mechanical Engineer, or Chemical Engineer in 6 years. For particulars in regard to the plan, see under *College of Engineering*. For curricula of combined courses in Arts and Engineering, see page 161.

From the School of Fine Arts. Applied art, courses 50 and 101. Credit will be given toward the A.B. degree for a maximum of 20

hours selected from the following theoretical courses in music; 1, 2, 3, 4, 51, 52, 71, 72, 73, 74, 110, 111, 112, 113, 114, 115, 116, 118, 153, 154, 219, 220, 255, and 256.

From the School of Journalism. History and principles of journalism for not more than 6 hours; comparative journalism, 2 hours.

From the School of Law. Seniors may elect from the first year's work in law to an amount not exceeding 30 hours. Under special circumstances this privilege may be extended to juniors with the consent of the deans of the College of Arts and Science and the School of Law.

From the School of Medicine. Seniors who elect the combined course in Arts and Medicine may count toward the A.B. degree 30 hours from the following subjects in the Medical curriculum: Anatomy (12), Embryology (3), Histology (5), Neuro-Anatomy (3), Physiological Chemistry (5), Physiology (8), Bacteriology (4), Pharmacology (4), and Advanced Physiological Chemistry (2-4).

CREDIT FROM THE EXTENSION DIVISION: Credit will be given for work done in the Extension Division, but such credit may not exceed 10 normal credit hours for one calendar year, and in no case may work thus done be counted in lieu of the requirement of one year in residence.

CREDIT FOR OTHER COURSES: Credit of $1\frac{1}{2}$ hours a semester is given for the practical and theoretical work of the first two years in military science and tactics and credit for one-half hour a semester is given for practical work in physical training, but the maximum in either or both subjects may not exceed 8 hours. Credit of 2 hours a semester will also be given for the practical and theoretical work combined for the last two years of the curriculum of the Reserve Officers' Training Corps. The maximum credit, however, for both practical and theoretical work in military science and tactics may not exceed 12 hours.

Credit of 1 hour a semester is given for work in the University chorus and in the University orchestra, but the maximum in either or both subjects shall not exceed 4 hours.

Credit will also be given for work done in any institution of good standing upon the following courses: (1) the Bible as literature, maximum 4 hours; (2) life and literature of the New Testament, maximum 2 hours; (3) Hebrew history, maximum 3 hours; (4) psychology of religion, maximum 3 hours; (5) comparative religions, maximum 2 hours; (10) modern religious thought, maximum 2 hours; (7) Christian ethics, maximum 2 hours; (8) Hebrew language and literature, maximum 6 hours; (9) social significance of the teachings of Jesus, maximum 2 hours; (10) fundamental moral and religious values, maximum 2 hours; (11) history of the Christian church, maximum 3 hours; (12) origins of the Christian church, maximum 3 hours; (13) New Testament Greek, maximum 5 hours (prerequisite, at least two semesters in classical Greek); provided, that in the judg-

ment of the Dean of the College of Arts and Science, and of the instructor in charge of the subject most closely related, the work in these courses in the institution giving them is done in a satisfactory manner.¹

In case any one or more of these courses is taken by a student while he is enrolled as a student in this University, his registration for such courses must meet with the approval of the dean and the instructor or instructors above mentioned, and must be subject to the usual restrictions as to total number of hours' credit registered for in any semester; and the total credit for such courses shall not exceed 14 hours.

COURSES WITHOUT CREDIT FROM OTHER DIVISIONS: Students may, with the consent of the dean of the college, elect certain courses from other divisions for which credit is not given in the College of Arts and Science.

REQUIREMENTS IN ENGLISH: All students must in their junior year pass a test of their proficiency in English. Those students whose English is found to be unsatisfactory will be given a further test at the beginning of their senior year. No student will be recommended for graduation until his English is satisfactory.

HONOR-RANK LIST: At the end of each year a "Rank List" will be published containing the names of under-classmen who have maintained an average of S or better in the year's work, and of upper-classmen who graduate with distinction or who have received a grade of S or better in at least six hours of upper-classmen work.

Special honors will be awarded in rare cases upon recommendation of a committee, by vote of the faculty, to students who by some specific piece of work show unusual scholarly aspirations and attainments. In such cases an appropriate diploma or testimonial will be furnished.

GRADUATION WITH DISTINCTION: Students may receive the degree of Bachelor of Arts with Distinction in the subject in which their major lies, under conditions that vary somewhat in different departments. In most departments the candidate must pass with distinction a special Comprehensive Examination on the entire field of his specialization (major and minor) at the close of his senior year. The object of the examination is to test the candidate's grasp of the subject as a whole. Readings or other assignments are prescribed, and the department advises the candidates either individually or as a group. For work done in preparation for this examination outside his regular courses the candidate may be allowed not to exceed three hours of credit in each semester of his senior year. Those who enter for Distinction but fail to achieve

¹It is understood that the subjects most closely related to the above courses are (1) the Bible as literature, English; (2) history of the Jews, and church history, History; (3) comparative religions; (4) Christian ethics; (7) fundamental moral and religious values, Philosophy; (5) Hebrew language and literature, and New Testament Greek, Greek; (6) social significance of the teaching of Jesus, Sociology.

it will be given such grade upon the number of hours for which they have enrolled in the special work as their showing in the special examination justifies.

In the department of mathematics and in the department of geology and geography the requirements for Graduation with Distinction do not include a Comprehensive Examination. In mathematics, the candidate has the privilege of enrolling in the departmental seminary and in the Mathematics Club, and must present two acceptable papers before this club in the course of his senior year. In geology and geography he is required to attend the departmental seminary, to do certain prescribed reading, and to prepare an acceptable paper on a subject approved by the department; and he has the privilege of enrolling in a special honors course restricted to candidates for Distinction. For this work he may receive credit toward graduation to an amount not to exceed two hours in each semester of his senior year.

Students wishing to work for Distinction in any subject should consult their adviser when they make out their major and minor schedule. They may apply for candidacy at the beginning of their junior year; and their candidacy must be approved by the department not later than the third week of their senior year.

RESIDENCE: Students are expected to spend normally eight terms in residence, and no student shall be recommended for the degree who has not spent the equivalent of six terms in the college. Credit will be given, however, for time spent in other institutions of college rank and for work done in the Extension Division. The last twenty-four (24) hours taken by a student in fulfillment of the requirements for graduation, however, must be done in residence. The dean, however, if he considers it advisable, may permit a student who lacks not more than twelve hours of having completed the requirements for graduation to complete his work in another institution.

For further information regarding the College of Arts and Science, address

F. M. TISDEL,
DEAN, FACULTY OF ARTS AND SCIENCE,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

COLLEGE OF AGRICULTURE

The College of Agriculture was established by acts of Congress and by laws enacted by the Missouri General Assembly. The character of the instruction to be given in this College is to some extent specified in the legal enactments providing for its establishment.

The object of this instruction is to train men and women for success in the vocation of agriculture. The College aims to educate farmers, farm managers, fruit growers, grain growers, dairymen, poultrymen, and stockmen. It prepares men for responsible positions as teachers in agricultural colleges, investigators in experiment stations, for extension work in agriculture and home economics, as teachers of vocational agriculture and for service in the United States Department of Agriculture.

ENDOWMENT OF THE COLLEGE

1. *First Morrill Act:* The proceeds from the sale of 275,000 acres of land granted to Missouri by the Act of Congress of July 2, 1862. A part of this land has been sold and the sum invested in State Certificates of Indebtedness yielding 5 per cent interest, and in municipal and drainage district bonds. The sum received annually from this source now amounts to \$21,372.30. The Missouri Legislature has by law provided that one-fourth of this amount shall go to the School of Mines and Metallurgy at Rolla.

2. *Second Morrill Act:* An annual appropriation of \$25,000 by Act of Congress, approved August 30, 1890. One-sixteenth of this amount is by law appropriated to the Lincoln University at Jefferson City for the education of negro children in agriculture and mechanic arts. One-fourth of the remainder is by law apportioned to the School of Mines and Metallurgy at Rolla.

3. *Nelson Amendment:* An appropriation of \$25,000 annually by Act of Congress, approved March 4, 1907. A part of this money may be used for the special preparation of instructors for teaching the elements of agriculture and mechanic arts. This fund is apportioned in the same manner as that of the Second Morrill Act.

4. *Hatch Act:* An Act of Congress, approved March 2, 1887, appropriating \$15,000 annually to the Agricultural Experiment Station for investigation in agriculture.

5. *Adams Act:* An Act of Congress, approved March 16, 1906, appropriating \$15,000 annually to the Agricultural Experiment Station for fundamental research in agriculture and the related sciences.

6. *Smith-Lever Act:* An Act of Congress, approved May 8, 1914, provided for an appropriation of \$10,000 to the College of

Agriculture for extension work in agriculture and home economics. Additional sums were appropriated, increasing annually, until 1924-25 the total income from the Federal Government was \$200,-921.31. The sums above \$10,000 are available only on condition that the General Assembly of Missouri appropriates equal amounts.

7. *Purnell Act*: An Act of Congress approved February 24, 1925, appropriating \$30,000 to the Agricultural Experiment Station for the year ending June 30, 1927.

BUILDINGS

The New Agriculture Building: This new building was completed in 1923 and is built of native limestone. It contains approximately 60,000 square feet of floor space, housing in addition to several large classrooms, the agricultural library, the offices of the Dean and Director, the Agricultural Editor, the University Photographer, and the Departments of Animal Husbandry, Soils, Agricultural Economics, and Rural Sociology.

Waters Hall: This building was named in honor of Henry Jackson Waters, a former dean and director. It is a two-story stone building housing the Departments of Field Crops, Poultry Husbandry, Agricultural Education, and the Agricultural Extension Service.

Whitten Hall: A two-story stone building with a well-lighted basement with plant house and insectary, classrooms, laboratories, offices and preparation rooms for horticulture and entomology.

Dairy Building: A stone building, two stories, with laboratories for farm dairying, testing milk and its products, dairy bacteriology, the University Creamery, research, classrooms and offices.

Schweitzer Hall: A two-story stone building for agricultural chemistry containing the offices and general chemical laboratories of the Agricultural Experiment Station, several large student laboratories, and classrooms. The basement contains storerooms, coolers, and demonstration rooms.

Lefevre Hall: A modern biological laboratory building in which students registered in the College of Agriculture receive fundamental training in botany and zoology.

Veterinary Building: The Department of Veterinary Science is housed in a three-story stone building devoted exclusively to investigation and instruction in its particular line of work. The building contains laboratories for anatomy, physiology, investigations in contagious and infectious diseases, and operating rooms for clinics.

Home Economics Building: A new two-story building with a well lighted basement with classrooms, reading rooms, auditorium and special laboratories for work in home care of children, clothing, foods, textiles, applied art, nutrition and research work in the various phases of home economics.

Poultry Buildings: Several buildings are now available for instruction in poultry husbandry. Among them is a student laboratory building. There are also one fifteen-pen laying and breeding house, a large number of portable colony houses, a feed house and houses for experimental work. Several hundred fowls, representing the popular varieties, are available for instructional and experimental purposes.

Agricultural Engineering Buildings: A two-story stone building, including offices, classrooms, drafting room, and field machinery and home equipment laboratory, and a one-story stone building containing the metal and woodworking shops, gas engine and tractor laboratories.

Live Stock Judging Pavilion: This building is 90 by 160 feet, with an arena 50 by 120 feet, and has a seating capacity of 1,500. This structure is well lighted and heated and is provided with locker room and shower baths.

Barns and Shelters: The Department of Animal Husbandry is equipped with a modern horse barn, with a capacity of thirty horses. The first story is of stone work, granitoid floors, well lighted and ventilated. The second story furnishes space for feed room and hay storage. A 250-ton stone silo and a steel silo are a part of the equipment of this department. There are two cattle sheds, one 300 feet in length and divided into 15 lots, and the other 100 feet in length with lots for experimental and investigational work. The equipment also includes a modern hog barn with concrete floors and iron pen divisions, a dipping tank, suitable equipment of individual hog shelters and a sheep barn. A new beef cattle barn that houses 100 head of cattle and feed enough to carry them through the winter has just been completed. The dairy barn is modern in every detail, has stanchions for 56 cows, 5 box stalls and calf pens. Three small pens provide space for the herd bulls and experimental heifers. The milk room is modern.

University Serum Farm and Laboratory: A laboratory for the preparation of anti-hog-cholera serum, a barn for hyperimmune hogs with a capacity of 1,000 animals, a virus laboratory and infection pens with several smaller structures are located on a 90-acre farm two miles north of Columbia.

LABORATORIES

Agricultural Engineering: The agricultural engineering laboratory contains a large assortment of the best modern machinery, including one or more of the principal field and power machines. For instruction in gas engines and tractors, the laboratory is equipped with twenty stationary and portable gasoline and oil engines, and eight to ten of the latest types of tractors with suitable equipment for testing same. Lighting units are provided for work on farm-lighting systems. Drafting tables are provided to accommodate the

men designing farm buildings. The equipment for concrete work includes a complete set of concreting tools, molds for building blocks, forms for fence posts, water troughs and tanks, and tile machines, with small apparatus for testing cement and aggregates. A level and transit with complete set of tools are provided for tile drainage work. Complete sets of small hand tools, both for metal working and woodworking, are available for work in farm shop practice. Other farm shop equipment includes forges, anvils, a power drill, a power grinder, and a power saw.

Agricultural Chemistry: The laboratory for undergraduate instruction in agricultural chemistry, and the chemical laboratories of the Agricultural Experiment Station, located in Schweitzer Hall, provide facilities for instruction, and for research in animal nutrition, analysis of fertilizers, foods, feeding stuffs, detection of adulteration and artificial coloring. Opportunity is offered for a study of the provisional and official methods of the Association of Official Agricultural Chemists.

Botany: Laboratories for general physiological and structural botany, and culture rooms for physiological, mycological, and bacteriological work are in the Biology Building. They are equipped with compound and dissecting microscopes, microtomes, steam and steam-pressure sterilizers, incubators, balances, precision apparatus, and glassware. The herbarium amply illustrates the local flora.

Dairy Husbandry: Facilities for instruction include one of the leading college herds of dairy cattle consisting of more than 100 head representing the four leading dairy breeds, laboratories for the testing of milk and its products, farm dairying and dairy bacteriology. A special feature of the equipment is the University creamery, with equipment for the handling of market milk and the manufacture of butter, ice cream and cheese, with a refrigeration plant and cold storage facilities.

Entomology: The laboratories and insectary located in Whitten Hall are supplied with microscopes, dissecting instruments, microtomes, breeding cages, aquaria, spraying machines, insecticides and reagents. The museum contains collections of several thousand species of the more injurious and beneficial insects, arranged to illustrate their habits of work and life history.

Horticulture: The horticultural laboratories occupy about 12,000 square feet of forcing space under glass, a laboratory for the propagation of dormant plants, and storage room for cutting, bulbs, stocks, and scions. The department also has laboratories for soil examinations and investigation of special horticultural problems regarding plant growth. The out-of-door collection on the horticultural grounds comprises about one thousand varieties of fruits, ornamental shrubs, and trees for a study of planting, pruning, cultivating, and spraying.

Field Crops: The field crops laboratories include a judging and exhibition room for judging, grading, and handling grains, a room for storing demonstration material, and a germinating room.

Soils: Laboratories for investigation and instruction in soil physics, soil bacteriology and soil fertility. Equipped for mechanical and chemical analysis of soils.

LAND: The College of Agriculture owns and operates several hundred acres of land, all of which is utilized for instructional and investigational purposes. Each of the departments of Animal Husbandry, Dairy Husbandry, Entomology, Field Crops, Horticulture, Poultry, Soils and Veterinary Science maintains a considerable area of land as a part of its equipment. The Department of Veterinary science operates a 90-acre farm three miles from the College exclusively for the manufacture and distribution of anti-hog-cholera serum. The Department of Horticulture is developing an 80-acre fruit farm at Turner Station, six miles from Columbia. The Department of Animal Husbandry rents a 330-acre farm for grazing and cropping purposes.

LIVE STOCK EQUIPMENT: The leading breeds of live stock of all classes are maintained. Each year some of the live stock is fitted and exhibited. All the live stock is used for instructional or experimental purposes and students have the advantage of knowing how the live stock is bred, how it is cared for and the results that are obtained from it.

A. *Beef Cattle:* A herd of about 25 Herefords, 25 Shorthorns, 15 Aberdeen-Angus, seventy-five per cent of which have been bred by the University of Missouri, is maintained. Fat steers, bred and exhibited by the University, have won many prizes at the Missouri State Fair at Sedalia and the International Live Stock Exposition at Chicago.

B. *Horses:* A stud of 20 head of Percheron horses is maintained. A few American saddle mares and colts are kept. Several pairs of mules, together with the draft horses, perform all the farm work on the University farm. Eighty per cent of this equipment has been bred on the University farm.

C. *Hogs:* The Poland-China herd consists of about 15 brood sows with their offspring. The Duroc Jersey herd is similar in size and quality. Specimens of other breeds are maintained from time to time. A good-sized herd of Duroc Jerseys is maintained in a special swine-breeding experiment.

D. *Sheep:* A flock of 100 high-class sheep, including Shropshires, Hampshires, Southdowns and Dorsets, is maintained. Fat wethers from this flock are fitted and exhibited each year.

E. *Dairy Herd:* The Dairy Department maintains a herd of about 100 head of the Jersey, Holstein, Guernsey and Ayrshire breeds. Complete milk and butter records are kept of each cow.

The student is given instruction in the breeding, feeding, care and management of dairy cattle. Several cows in this herd hold milk and butterfat records which rank them among the best specimens of dairy cattle in America. Some of the outstanding sires of the Jersey and Holstein breeds have been developed in this herd.

LIBRARIES: The agricultural library has commodious quarters in the New Agriculture Building—an attractive reading room, a seminar room and a stack room which will accommodate 17,000 volumes. The library has 14,612 bound volumes besides many unbound volumes. In addition to these, there are 5,000 volumes on agricultural subjects in the general library.

PRACTICAL EXCURSIONS: Visits to successful farms, breeding establishments and to agricultural fairs and expositions are made under the guidance of instructors for the study of special phases of agriculture. The principles taught in the classroom are observed in their application to practical agricultural operations.

ADMISSION

Information concerning the requirements for admission is given on page 33. The requirements for admission to graduate instruction will be found in connection with the announcement of the Graduate School, page 191.

New students generally register at the beginning of the first semester, but may enter the College of Agriculture at the beginning of either semester or the summer session.

CURRICULA IN THE COLLEGE OF AGRICULTURE

In the description of these curricula, a year is understood to mean two semesters.

A. Four-year curriculum in agriculture for men, leading to the degree of Bachelor of Science in Agriculture (B.S. in Agr.). (See page 119.)

B. Four-year curriculum for the training of teachers of vocational agriculture, leading to the degree of Bachelor of Science in Agriculture (B.S. in Agr.). (See page 121.)

C. Four-year curriculum in agriculture for women, leading to the degree of Bachelor of Science in Agriculture (B.S. in Agr.). (See page 123.)

D. Four-year curriculum in Home Economics, leading to the degree of Bachelor of Science in Home Economics (B.S. in H.Ec.). (See page 125.)

E. Four-year curriculum in agricultural journalism, leading to the degree of Bachelor of Science in Agriculture (in Agricultural Journalism) [B.S. in Agr. (in Agr.Jour.)]. (See page 129.)

F. Two year Winter Course in Agriculture. (See page 131.)

G. Short Course in Dairy Manufactures. (See page 132.)

SUMMER SESSION: Many of the prescribed subjects and electives indicated in the following curricula are repeated during the summer session for the convenience of those students who desire to take them.

REGULATIONS, GRADES AND CREDITS: The general regulations governing grades and credits (see page 90) apply to all courses in this College. Students of exceptional ability may shorten the period of residence by superior scholarship. Students who in any term fall behind in more than 38 per cent of the hours in which they are registered at the end of that term, or who fall more than eight hours behind the total number of hours for which they have been registered up to that time, will be dropped from the College. The cumulative (8-hour) rule does not apply to work taken during the first term of the freshman year, but the application of the 38 per cent rule in the case of such students shall be at the discretion of the Dean. All students who have been dropped under this rule are permitted to return after one semester.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

The degree of Bachelor of Science in Agriculture will be awarded to candidates who have satisfactorily completed the total number of hours required in the respective curricula, including the requirement in military science and physical education.

A. FOUR-YEAR CURRICULUM IN AGRICULTURE FOR MEN

All candidates for the degree must complete 88 hours in the subjects listed in Curriculum A, p. 120, 26 hours elected from technical agricultural courses and 12 hours from any subjects offered in the University of Missouri or other standard college making a total of 126 hours.

TECHNICAL AGRICULTURE ELECTIVES: Agricultural subjects accepted in fulfillment of the requirement of 26 hours of technical agricultural electives are all courses now being offered in the departments of Agricultural Chemistry, Agricultural Engineering, Animal Husbandry, Dairy Husbandry, Field Crops, Horticulture, Poultry Husbandry, Soils, Veterinary Science, Agricultural Economics, all courses in Rural Sociology excepting 119f, 121f, 123f, 190f, w and s, 219w and 231f; all courses in Entomology excepting 103w, 104f, and 116f; agricultural education 105f and w; and plant pathology.

SPECIAL TRAINING: Students who desire a more specialized training in pure or applied science will be permitted to substitute not more than 15 hours of such subjects for agricultural electives. Substitutions for the technical agricultural requirements are permitted only when the teacher in charge of the major subject of specialization has definitely approved the particular courses which

are offered for such substitutions and in every case the special subjects selected must be approved by the Dean.

FARM EXPERIENCE: Candidates for graduation who have not had adequate farm experience before entering the institution are required to secure one year of practical farm experience before the degree will be conferred. All students are advised to secure this farm experience before entering the College of Agriculture. The College can not undertake to provide the means for satisfying this requirement. Affidavit of farm experience must be filed before graduation.

It is the policy of the faculty to encourage students preparing themselves for college teaching or research to enter the Graduate School for more advanced study in special lines. The required undergraduate curriculum offers an adequate background for students preparing themselves for college teaching and research.

GRADING OF GRADUATES FROM STANDARD COLLEGES: Graduates from standard colleges will be able to meet the requirements for the degree of B.S. in Agriculture upon completion of four terms (64 hours) of work in the College of Agriculture, provided they have completed subjects listed below or substantially equivalent courses in science:

Biological Science.....	15 hrs.
Geology.....	5 hrs.
Physics.....	5 hrs.
Chemistry.....	15 hrs.
Social Science.....	5 hrs.

CURRICULUM A

Freshman

Citizenship, 1f, Problems in American Citizenship.....	2	hours
Animal husbandry, 1f or w, types and market classes of livestock....	3	"
English 1f or w, Composition and Rhetoric.....	3	"
Chemistry, 1f or w, general inorganic chemistry.....	5	"
Horticulture, 1f or w, general horticulture.....	3	"
Military and physical education.....	1 ½	"
		<hr/>
		17 ½ hours

Citizenship, 1w, Problems in American Citizenship.....	2	hours
Field crops, 1f or w, field crops.....	3	"
English, 2f or w, Composition and Rhetoric.....	3	"
Botany, 1f or w, general botany.....	5	"
Geology, 2f or w.....	3	"
Military and physical education.....	1 ½	"
		<hr/>
		17 ½ hours

Sophomore

Physics, 1f or w, elementary physics.....	5	hours
Chemistry, 25f or w, analytical chemistry.....	5	"
Dairy husbandry, 1f or w, elements of dairying.....	3	"
Military and physical education.....	1½	"
Elective.....	3	"
		<hr/>
		17½ hours

Botany, 3f or w, general bacteriology.....	3	hours
Zoology, 1f or w, general zoology.....	5	"
Soils, 1f or w, soils.....	5	"
Military and physical education.....	1½	"
Elective.....	3	"
		<hr/>
		17½ hours

Junior

Chemistry, 15f or w, elementary organic chemistry.....	3	hours
Animal husbandry, 100f, principles of animal nutrition.....	3	"
Veterinary science, 1f, veterinary anatomy and physiology or		
Botany, 101w, plant physiology.....	5	"
Rural economies or rural sociology.....	5	"
Animal husbandry, 101w, animal breeding, or.....	3	" }
Horticulture, 115w, evolution of cultivated plants, or.....		
Field crops, 101w, field crop improvement.....		
Field crops, 100w, field crop management.....	2	"
Agricultural chemistry 101w, agricultural analysis.....	3	"

Senior

All subjects elective.

B. FOUR-YEAR CURRICULUM FOR TRAINING TEACHERS OF VOCATIONAL AGRICULTURE

The Federal Board for Vocational Education has designated the College of Agriculture as the approved institution in Missouri to prepare teachers of agriculture for the secondary schools of this State. The facilities of the College of Agriculture for teaching vocational agricultural subjects are excellent. It is the purpose of this course to give a thoroughly practical training in vocational agriculture and in education, including methods of teaching and practice teaching. A special department of agricultural education is maintained to insure the successful training of men for this important work. The curriculum offered by this institution has the approval of the state and federal boards of vocational education and complies fully with the provisions of the federal Vocational Education Act (Smith-Hughes).

REQUIREMENTS FOR THE DEGREE, BACHELOR OF SCIENCE IN AGRICULTURE: All candidates preparing to teach agriculture in

vocational high schools are required to complete 126 hours of University work, including military science and physical education. Each student is required to complete in a satisfactory manner the prescribed courses printed in the curriculum B, and in addition to elect 6 hours. Students who intend to teach must have had two years of continuous farm experience.

CURRICULUM B

Freshmen and Sophmores

Freshmen and sophmores take the courses shown in the curriculum (A) on page 120, excepting that Elementary Poultry Raising 1f must be taken in the first semester of the sophomore year in place of the three-hour elective and Education A102w, educational psychology in the second semester of the sophomore year in place of the three-hour elective.

Junior

Education, D110f, Technique of High School Teaching.....	3 hours
Agricultural Engineering, 10f, Farm Shop Practice.....	2 hours
Chemistry, 15f, Elements of Organic Chemistry.....	3 hours
Agricultural Economics 2f, Principles of Rural Economics	5 hours
Animal Husbandry, 100f, Principles of Animal Nutrition.....	3 hours
	<hr/>
	16 hours

Education, E115w, Management of Vocational Agriculture.....	2 hours
Education, E105w, Special Methods in Teaching Vocational Agriculture	3 hours
Agricultural Engineering, 1w, Farm Woodwork and concrete.....	3 hours
Agricultural Chemistry, 101w, Agricultural Analysis.....	3 hours
Agricultural Economics 110w, Farm Organization.....	3 hours
Field Crops, 100w, Field Crops Management.....	2 hours
	<hr/>

16 hours

Senior

Agricultural Engineering, 11f, Farm Gas Engines.....	3 hours
Veterinary Science, 1f, Anatomy and Physiology.....	5 hours
Education, D155f, Practice Teaching.....	5 hours
	<hr/>

13 hours

Education, E107w, Supervised Practice in Vocational Agriculture....	2 hours
Animal Husbandry, 101w, Animal Breeding or	}..... 3 hours
Horticulture, 115w, Evolution of Cultivated plants or.....	
Field Crops, 101w, Field Crops Improvement.....	
Electives.....	6 hours
	<hr/>

11 hours

Preferred Electives:

Agricultural Engineering 30w, Farm Machinery.....	2 hours
Animal Husbandry, 3w, livestock judging.....	3 hours
Animal Husbandry, 103w, beef production.....	3 hours
Animal Husbandry, 105w, pork production.....	3 hours
Dairy Husbandry, 100w, milk production.....	3 hours
Education, E117f and w, visual education.....	2 hours
Education, E120w, community educational activities in vocational agriculture.....	2 hours
Education, E210f and w, special problems in Agricultural Education...	1 hour
Education, E240f and w, seminar in agricultural education (Thesis)....	
English, 75f and w, public speaking.....	2 hours
Entomology, 2f and w, Applied Entomology.....	3 hours
Field Crops, 105f, grain crops production.....	3 hours
Rural Sociology, 115f and w, rural sociology.....	3 hours
Veterinary Science, 103f, 104w, diseases of poultry.....	2 hours

C. FOUR-YEAR CURRICULUM IN AGRICULTURE FOR WOMEN

The curriculum in agriculture for women emphasizes those phases of agricultural instruction of special significance to women. The degree of Bachelor of Science in Agriculture (B.S. in Agriculture) is conferred upon the completion of the required work.

REQUIRED WORK: The student must complete a total of 122 hours. Of the total number of hours, 62 hours are fixed requirements as shown in the printed curriculum, 30 hours are major electives to be selected as indicated and 30 hours are free electives.

CURRICULUM C

*Freshman**Fall Term:*

Citizenship, 1f, Problems in American Citizenship.....	2 hours
Home economics, 1f, food and nutrition.....	3 "
English, 1f, Composition and Rhetoric.....	3 "
Home economics, 10 household problems.....	2 "
Chemistry, 1f, general inorganic chemistry.....	5 "
Physical training.....	½ hour

Winter Term:

Citizenship, 1w, Problems in American Citizenship.....	2 hours
Chemistry, 2w, general inorganic chemistry.....	3 "
English, 2w, Composition and Rhetoric.....	3 "
Botany, 1w, general botany or zoology, 1w, general zoology.....	5 "
Horticulture, 1w, general horticulture.....	3 "
Physical training.....	½ hour

*Sophomore**Fall Term:*

Chemistry, 15f, elementary organic chemistry	3	hours
Home economics, 15, design	2	"
Home economics, 50, textiles and clothing	3	"
Botany, 3f, general bacteriology	3	"
Preventive medicine, 1f, preventive medicine	2	"
Physical training	½	hour
Electives	2	hours

Winter Term:

Physiology, 1w, elementary physiology	5	hours
Dairy husbandry, 1w, elements of dairying	3	"
Home economics, 2, food and nutrition	3	"
Physical training	½	hour
Electives	5	hours

Junior

Sociology, 115f, rural sociology	3	hours
Rural life, 2w, principles of rural economics	5	"
Electives	22	"

Senior

All subjects elective.

Major Electives, 30 Hours: Students are required to select one of the three following groups of courses as a major elective:

(1) The plant group, which includes courses in botany, field crops, horticulture, soils, and entomology, not prescribed in the curriculum.

(2) The animal group, which includes courses in zoology, animal husbandry, dairy husbandry, poultry husbandry, and veterinary science, not prescribed in the curriculum.

(3) The home economics group, in which the 30 hours must be chosen from one of the following lines of specialization.

(a) *The Farm Home:*

Home economics and other courses prescribed	18	hours
Animal husbandry, 5f, cutting and curing of meats	1	hour
Any home economics or technical agricultural courses not prescribed	11	hours

(b) *Vocational Home Economics Teaching:*

Home economics other than courses prescribed	19	hours
Theory and practice of art, 2f or w, introduction to art	5	hours
Animal husbandry, 5f, cutting and curing of meats	1	hour
Home economics, 145f, dress design	2	hours

Of the 30 hours remaining, 15 must be given to the courses in education prescribed in the curriculum for training teachers in vocational home economics. (See page 162)

Enough additional hours in home economics must be taken to total 40.

(c) *Home Economics Extension:*

Home economics other than courses prescribed	16	hours
Education, A102f or w, educational psychology	4	"
Education, D111f or w, theory of teaching	3	"
English, 75f or w, public speaking	2	"
Rural Sociology 191w, extension work	3	"
Home economics, 175f or w, field work extension	3	"

It is recommended that a part of the 25 hours of free electives be chosen from technical agricultural subjects.

(d) *Course for Training Food Chemists for Technical Laboratory Work:*

Home economics, 120f and 121f, food and nutrition	6	hours
Home economics, 122w, dietetics	3	"
Home economics, 202, metabolism	5	"
Chemistry, 27f or w, qualitative analysis	3	"
Chemistry, 121f or w, quantitative analysis	5	"
Agricultural chemistry, 101f or w, agricultural analysis	5	"
Special problems in home economics, or		
Agricultural chemistry	4	"

30 hours

D. FOUR-YEAR CURRICULUM IN HOME ECONOMICS

The curriculum in home economics is designed for five purposes, i.e., to prepare for (1) homemaking; (2) hospital dietitianship; (3) laboratory research (foods and nutrition); (4) textiles and clothing specialist; (5) extension work.

REQUIRED WORK: The student must complete a total of 122 hours. Of the total number of hours, 71 hours are fixed requirements as shown in the printed curriculum (D) including H. Ec. 1 & 2, 10, 15 & 16, 20 and 50 and 51, 28 hours are major electives to be selected as indicated and 23 hours are free electives.

CURRICULUM D

*Freshman**Fall Term:*

Citizenship, 1f, Problems in American Citizenship	2	hours
English, 1f, Composition and Rhetoric	3	"
Chemistry, 1 or 2, inorganic	5	"
Physical Training	½	hour
Electives (chosen from the following courses)	5	hours

Home Economics, 1, Food and Nutrition (3 hours).

Home Economics, 50, Textiles and Clothing (3 hours).

Home Economics, 10, Household Problems (2 hours).

Home Economics, 15, Design (2 hours).

15½ hours

Winter Term:

Citizenship, 1w, Problems in American Citizenship.....	2 hours
English, 2w, Composition and Rhetoric.....	3 hours
Botany, 1 or Zoology 1.....	5 "
Physical Training.....	½ hour
Electives (chosen from the following courses).....	5 hours

Home Economics, 2, Food and Nutrition (3 hours).
 Home Economics, 51, Textiles and Clothing (3 hours).
 Home Economics, 20, Home Nursing and Health (2 hours).
 Home Economics, 16, Design (2 hours).

15½ hours

Sophomore

Fall Term.

Chemistry 15, organic chemistry.....	3 hours
Botany 3, general bacteriology.....	3 "
Physical Training.....	½ hour
Electives (chosen from the following courses).....	5 hours

Home Economics, 1, Food and Nutrition (3 hours).
 Home Economics, 50, Textiles and Clothing (3 hours).
 Home Economics, 10, Household Problems (2 hours).
 Home Economics, 15, Design (2 hours).

Free Electives..... 4 hours

15½ hours

Winter Term:

Physiology 1, elementary physiology.....	5 hours
Physical Training.....	½ hour
Electives (chosen from the following courses).....	5 hours

Home Economics, 1, Food and Nutrition (3 hours).
 Home Economics, 50, Textiles and Clothing (3 hours).

Home Economics, 15, Design (2 hours).
 Home Economics, 20, Home Nursing and Health (2 hours).

Free Electives..... 5 hours

15½ hours

Junior

Fall Term:

Sociology 1, elementary sociology.....	5 hours
Home Economics, 101, House Sanitation.....	2 "
Home Economics Major electives.....	6 "
Free Electives.....	2 "

15 hours

Winter Term:

Economics 1, general economics.....	5 hours
Education A. 102 Educational psychology.....	3 "
Home Economics Major electives.....	5 "
Free Electives.....	2 "

15 hours

*Senior**Fall Term:*

Home Economics, 160, Home Care and Training of the Child....	3	hours
Home Economics Major electives.....	9	"
Free Electives.....	3	"
	<hr/>	
	15	hours

Winter Term:

Home Economics Major electives.....	8	hours
Free Electives.....	7	"
	<hr/>	
	15	hours

Major Electives 28 hours. Students are required to select one of the following groups of courses as a Major elective.

(1) GENERAL HOME ECONOMICS GROUP:

(a) *required courses:*

Home Economics 120 and 121, Food and Nutrition....	6	hours
Home Economics 150 and 160, Textiles and Clothing....	6	"
Home Economics 145 Dress Design.....	2	"
Home Economics 110 Home Furnishing.....	3	"
Home Economics 122 and 123, Dietetics.....	6	"
Home Economics 115 Household Management.....	4	"
Home Economics 155 Textiles.....	2	"

(b) *suggested supplementary courses:*

Home Economics 146 Dress Design.....	3	hours
Sociology 112 Child Welfare.....	3	"
Music 6 Appreciation of Music.....	4	"
Education A 150 The Psychology of learning.....	3	"
Agricultural Economics 101 Principles of Marketing....	3	"
Horticulture 1 General Horticulture.....	3	"
Philosophy 101 Introduction to Philosophy.....	3	"
English 5 and 6 Masterpieces.....	3	"
History 180 Social Forces in American History.....	3	"
Political Science 105 Political Parties.....	3	"

(2) THE DIETITIAN'S GROUP:

(a) *required courses:*

Home Economics 120 and 121, Foods and Nutrition....	6	hours
Home Economics 122 and 123, Dietetics.....	6	"
Home Economics 124 Field Work in Dietetics.....	5	"
Home Economics 202 Metabolism.....	5	"
Home Economics 170 Experimental Cookery.....	2	"

(b) *suggested supplementary courses:*

Economics 17, Elementary Accounting.....	3	hours
Agricultural Economics 101 Principles of Marketing....	3	"
Physiology 103 Alimentary Mechanisms.....	2	"
Physiological Chemistry 111.....	3	"

(3) THE LABORATORY RESEARCH (FOODS AND NUTRITION) WORKER'S GROUP.

(a) *required courses:*

Home Economics 120 and 121, Foods and Nutrition . . .	6	hours
Home Economics 122 and 123, Dietetics	6	"
Home Economics 202 Metabolism	5	"
Physiological Chemistry 102	3	"
Physiological Chemistry 115 Advanced	2	"
Chemistry 27 Qualitative Analysis	3	"
Chemistry 121 Quantitative Chemical Analysis	5	"

(b) *suggested supplementary courses:*

Physics 1, Elementary physics	5	hours
Home Economics 170 Experimental Cookery	2	"
Home Economics 205 Research in Food Preparation	5	"
Home Economics 221 Problems in Nutrition	5	"
Physiological Chemistry 116 Advanced	2	"
Anatomy and Histology 104	5	"
Zoology 101 Comparative Histology	3	"
Medical Bacteriology 102	4	"
Chemistry 112 Organic Chemistry	3	"
Chemistry 113 Organic Synthesis and Analysis	5	"
Chemistry 130 Physical Chemistry	3	"

(4) THE TEXTILE AND CLOTHING SPECIALIST'S GROUP.

(a) *required courses:*

Home Economics 110 Home furnishing	3	hours
Home Economics 150 and 151, Textiles and Clothing	6	"
Home Economics 145 and 146 Dress Design	6	"
Home Economics 152 Advanced Clothing	3	"
Home Economics 155 Advanced Textiles	3	"
Chemistry 25 Analytical Chemistry	5	"
Chemistry 112 Organic Chemistry	3	"

(b) *suggested supplementary courses:*

Physics 1, elementary physics	5	hours
Home Economics 153 Millinery	3	"
Home Economics 245 Special Problems in Dress Design	5	"
Home Economics 250 Research in Clothing	5	"
Medical Bacteriology 102	4	"
Medical Bacteriology 101 general hygiene	2	"
Chemistry 130 Physical chemistry	3	"
Chemistry 113 Organic Synthesis and Analysis	5	"

(5) THE EXTENSION WORKER'S GROUP.

(a) *required courses:*

Home Economics 120 and 121, Foods and Nutrition . . .	6	hours
Home Economics 150 and 151, Textile and Clothing . . .	6	"
Home Economics 145 Dress Design	2	"
Home Economics 110 Home Furnishing	3	"
Home Economics 122 Dietetics	3	"
Home Economics 115 Home Management	4	"
Education D. 110 Technique of Teaching	3	"
Education F. 110 Teaching of Home Economics	2	"

(b) *suggested supplementary courses:*

Home Economics 175 Field Work in Extension.....	3	hours
Home Economics 123 Dietetics.....	3	"
Home Economics 155 Advanced Textiles.....	3	"
Physiological chemistry 102.....	3	"
Horticulture 1 general horticulture.....	3	"
Agricultural Economics 101 Principles of Marketing....	3	"
Agricultural Economics 105 Farm Accounts.....	3	"
Rural Sociology 118 Rural Community Organization...	3	"
Rural Sociology 119 Extension Work.....	2	"

E. FOUR-YEAR CURRICULUM IN AGRICULTURAL JOURNALISM

The College of Agriculture, co-operating with the School of Journalism, offers a four-year course in agricultural journalism. The purpose of this course is to train men and women for successful service in the field of agricultural journalism. An effort is made to give to the student a broad foundation in the subject of agriculture and a knowledge of the principles and practices of journalism, with particular emphasis on agricultural journalism.

The degree of Bachelor of Science in Agriculture (in Agricultural Journalism) will be given to students registered in the College of Agriculture who complete all of the requirements in the curriculum and electives to make a total of 126 hours.

The University of Missouri offers exceptional facilities for such training because of the high standards of instruction in its School of Journalism and the excellent facilities for agricultural training in the College of Agriculture.

The School of Journalism offers a similar course leading to the degree of Bachelor of Journalism. See Announcement School of Journalism.

CURRICULUM E

FOUR-YEAR CURRICULUM IN AGRICULTURAL JOURNALISM

*Freshman**Fall Term:*

Citizenship, 1f, Problems in American Citizenship.....	2	hours
Animal husbandry, 1f, (types and market classes of livestock)...	3	"
English, 1f, Composition and Rhetoric	3	"
Chemistry, 1f, (general inorganic chemistry).....	5	"
Horticulture, 1f, (general horticulture).....	3	"
Military and physical education.....	1½	"

 17½ hours
Winter Term:

Citizenship, 1w, Problems in American Citizenship.....	2	hours
Field Crops, 1w, (field crops).....	3	"
English, 2w, Composition and Rhetoric	3	"
Botany, 1w, (general botany).....	5	"
Military and physical education.....	1½	"
Elective.....	3	"

 17½ hours

*Sophomores**Fall Term:*

Physics, 1f, (elementary physics).....	5	hours
Chemistry, 25f, (analytical chemistry).....	5	"
Dairy husbandry, 1f, (elements of dairying).....	3	"
Journalism, 100f, (History and principles of journalism).....	3	"
Military and physical education.....	1 ½	"

 17 ½ hours
Winter Term:

Botany, 3w, (general bacteriology).....	3	hours
Zoology, 1w, (general zoology).....	5	"
Soils, 1w, (soils).....	5	"
Journalism, 101w, (History and principles of journalism).....	3	"
Military and physical education.....	1 ½	"

 17 ½ hours
*Juniors**Fall Term:*

Animal husbandry, 100f, (animal nutrition).....	3	hours
Chemistry, 15f, (Elementary organic chemistry).....	3	"
Journalism, 102f.....	3	"
Journalism, 120f, (principles of advertising).....	3	"
Field Crops, 2f, (field crop management).....	2	"
Elective.....	2	"

 16 hours
Winter Term:

Animal husbandry, 101w, (animal breeding) or.....	}	3	hours
Horticulture, 115w, (evolution of cultivated plants) or.....			
Field Crops, 101w, (field crops improvement).....			
Journalism, 103w, or f, (reporting I).....		3	"
Social Science.....		5	"
Elective.....		5	"

 16 hours
*Seniors**Fall Term:*

Journalism, 104f, (reporting II).....	3	hours
Journalism, 110f, (copy reading I).....	3	"
*Journalism, 170f, (the agricultural press).....	3	"
Elective.....	7	"

 16 hours
Winter Term:

Journalism, 111w, or f, (copy reading II).....	3	hours
Journalism, 172w, (principles of rural journalism).....	3	"
Elective.....	10	"

 16 hours

*Journalism 171w (the Agricultural News), may be substituted in place of Journalism 170f (the Agricultural Press).

F. TWO YEAR WINTER COURSE IN AGRICULTURE (SHORT COURSE)

GENERAL STATEMENT

The purpose of the Two Year Winter Course in Agriculture, which is often called the Short Course, is to teach better farming methods and to develop a better knowledge of the business of farming. It is essentially a practical course for practical farmers. Four thousand young men and women have enrolled in this course and each of these has become a better farmer or home-maker by reason of the instruction obtained.

The Short Winter Course gives the largest possible amount of practical instruction in judging, breeding, and growing corn and other grains and forages; in soil fertility, field crops, and farm buildings; in live stock judging; stock feeding, animal breeding, and live stock farming; in growing, handling, and selling orchard products; in breeding, feeding, and handling dairy cows; in making ice cream, butter and cheese, and handling milk products; in farm butchering and meat curing; in diseases of farm animals and their treatment; in injurious and beneficial insects; in farm carpentry and blacksmithing, and handling farm machinery; in poultry raising; in farm management; in the keeping of farm accounts, and in rural life problems, co-operation, etc.

ADMISSION: Any person more than 16 years old may enroll for instruction in the Two Year Winter Course. No entrance examinations are given, but those admitted are supposed to have at least the equivalent of a common school education before entering. The work is so flexible that many persons of mature years and much experience have found it profitable to attend this course.

TIME: The Two Year Winter Course is arranged for the convenience of farmers. All of the work comes in November, December, January, and February. One can work on the farm eight months of the year and attend the Short Course the four others.

The course is divided into four terms. Two terms are offered each year. Each term is eight weeks long. The first term of the Short Course begins Monday October 31, 1927, and the second term, Monday January 2, 1928.

All the subjects taught in each term are finished at the end of the term, so that each term is a complete eight-weeks' short course. Students can enter in November or January, whichever is most convenient.

EXPENSES: A library, hospital and incidental fee of \$10.00 is charged for each term. This entitles students to free use of the libraries and to free hospital care and medical attention in case of sickness.

Most of the instruction is given by lectures and demonstrations. Books, however, are recommended, and it is desirable that the

students add to their libraries by the purchase of a few standard books on agriculture.

CERTIFICATE: Students who complete the 65 units of required work and 31 units of elective work of the Two Year Winter Course will be given a certificate of graduation.

SPECIAL ANNOUNCEMENT: A special announcement of the Two Year Winter Course describing this course in detail will be sent upon request.

G. SPECIAL COURSE IN DAIRY MANUFACTURES

The purpose of this course is to train men and women for butter-making, cheese-making, ice-cream manufacturing, and the handling of market milk. Success in dairy manufacturing now depends on a knowledge of the most modern methods. So great is the value of dairy products and so dependent on quality that the efficiency of the plant is measured by the ability of its employees to turn out the largest amount of high-quality product from the raw material. Only trained men can cope with the varied problems of manufacturing, marketing, and business management. The plant manager must be capable of directing and assisting skilled and technically trained labor. These qualifications may be gained through many years of work in commercial plants or by thorough school training combined with a much shorter period of practical experience. This special short course is designed to teach the fundamental principles necessary for the manufacturing and handling of dairy products and abundant opportunity is given to learn their application through practical work in the creamery. The work is so elastic that those with advanced preparation and experience are able to occupy their time as fully as those who come with little or no experience. The calls on the Missouri College of Agriculture for trained men to accept responsible positions in creameries, ice cream plants, cheese factories, market milk plants and large farm dairy establishments have exceeded the supply. The course begins January 2, and ends February 25, 1928. Students are required to pay a library, hospital and incidental fee of \$10.00. Laboratory fees which total approximately \$15.00 are also charged to cover the cost of materials used.

OUTLINE OF THE COURSE

	<i>Lecture periods</i>	<i>Laboratory periods</i>
Creamery buttermaking.....	2	3
Ice-cream making.....	2	2
Cheese-making.....	1	1
Market milk.....	1	1
Dairy bacteriology.....	1	1
Judging and testing dairy products.....	1	1
Dairy mechanics and refrigeration.....	1	1
Creamery and milk plant management.....	2	0
Milk production.....	3	0

For further information concerning the Short Winter Courses in agriculture, write to

SUPERINTENDENT OF SHORT COURSES,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

THE FARMERS' WEEK SHORT COURSE

In January, each year, the College of Agriculture offers a one week's short course in agriculture for farmers in connection with the Farmers' Week program, arranged in co-operation with the State Board of Agriculture and the various agricultural organizations of the State. In this course special lectures and demonstrations in soils, field crops, animal husbandry, dairying, horticulture, farm management, rural economics, veterinary science, agricultural engineering, poultry farming, and home economics are given in the classrooms, laboratories, and livestock pavilion belonging to the University. The course will be given again in January, 1928.

AGRICULTURAL EXPERIMENT STATION

EXECUTIVE BOARD OF CURATORS

F. M. McDAVID, Springfield; MERCER ARNOLD, Joplin;
H. J. BLANTON, Paris.

ADVISORY COUNCIL

The Missouri State Board of Agriculture

S. D. BROOKS, A. M., LL.D.....President of the University

STATION STAFF, NOVEMBER, 1926.

F. B. MUMFORD, M. S., Director, S. B. SHIRKY, A. M., Asst. to Director
Miss ELLA PAHMIEER, Secretary.

Agricultural Chemistry:

A. G. HOGAN, Ph. D.
L. D. HAIGH, Ph. D.
W. S. RITCHIE, Ph. D.
A. R. HALL, B. S. in Agr.
H. M. HARSHAW, M. S.
J. E. HUNTER, B. S.
C. L. SHREWSBURY, A. B.
E. W. COWAN, A. M.

C. W. TURNER, A. M.†
C. W. WEBER, B. S. in Agr.
E. C. ELTING, B. S. in Agr.
WARREN GIFFORD, B. S. in Agr.
E. R. GARRISON, B. S. in Agr.
J. S. MATTHEWS, B. S. in Agr.

Entomology:

LEONARD HASEMAN, Ph. D.
K. C. SULLIVAN, A. M.†
C. N. DAVIS, B. S. in Agr.

Agricultural Engineering

J. C. WOOLEY, B. S.
MACK M. JONES, B. S.†
R. R. PARKS, B. S. in Agr.
HARRY MILLER, B. S. in Agr.

Field Crops:

W. C. ETHERIDGE, Ph. D.
C. A. HELM, A. M.†
L. J. STADLER, Ph. D.
R. T. KIRKPATRICK, B. S. in Agr.
B. M. KING, A. M.
B. B. BRANSTETTER, A. M.
MISS CLARA FUHR, M. S.*

Animal Husbandry:

E. A. TROWBRIDGE, B. S. in Agr.
L. A. WEAVER, B. S. in Agr.
A. G. HOGAN, Ph. D.
F. B. MUMFORD, M. S.
D. W. CHITTENDEN, A. M.
F. F. MCKENZIE, Ph. D.
M. T. FOSTER, B. S.
M. G. CLARK, B. S.

Home Economics:

MISS MABEL CAMPBELL, A. M.
MISS JESSIE CLINE, B. S. in Ed., A. B.
MRS. HANNAH STILLMAN BRADFIELD,
A. M.

Botany and Physiology:

W. J. ROBBINS, Ph. D.
I. T. SCOTT, Ph. D.

Horticulture

T. J. TALBERT, A. M.
H. D. HOOKER, Ph. D.
H. G. SWARTWOUT, A. M.
J. T. QUINN, A. M.
A. E. MURNEEK, Ph. D.

Dairy Husbandry:

A. C. RAGSDALE, M. S.
WM. H. E. REID, A. M.
SAMUEL BRODY, A. M.

Poultry Husbandry

H. L. KEMPSTER, B. S. in Agr.
EARL W. HENDERSON, A. M.

Agricultural Economics:

O. R. JOHNSON, A. M.
S. D. GROMER, A. M.
BEN H. FRAME, A. M.
F. L. THOMSEN, Ph. D.
G. B. THORNE, B. S. in Agr.

Rural Sociology:

E. L. MORGAN, A. M.
MISS MARY S. BRISLEY
MISS ADA C. NIEDERMAYER, A. B.
MRS. JANET D. BASKETT, A. B.
HENRY J. BURT, M. A.
MISS GLADYS MUILENBERG, A. B.

Soils:

M. F. MILLER, M. S. A.
H. H. KRUSEKOPF, A. M.
W. A. ALBRECHT, Ph. D.
RICHARD BRADFELD, Ph. D.
R. E. UHLAND, A. M.
F. L. DAVIS, B. S. in Agr.

Veterinary Science:

J. W. CONNAWAY, D. V. S., M. D.
O. S. CRISLER, D. V. M.
A. J. DURANT, D. V. M.
H. G. NEWMAN, A. M.
ANDREW UREN, D. V. M.

Other Officers:

R. B. PRICE, M. S., Treasurer
LESLIE COWAN, B. S. in C. E., Sec.
A. A. JEFFREY, A. B., Agr. Editor.
J. F. BARHAM, Photographer
MISS JANE FRODSHAM, Librarian
E. E. BROWN, Business Manager

*In service of U. S. Department of Agriculture.

†On leave of absence.

GENERAL STATEMENT

This Station was established by the Act of Congress of 1887, and by the acts of the General Assembly of Missouri accepting its provisions. By an order of the Board of Curators of the University it was made a division of the College of Agriculture.

The special function of the Agricultural Experiment Station is to conduct original research in the various branches of agriculture. At this time investigations are in progress relating to the maintenance of soil fertility, the renovation of worn-out soil, rotation of crops, the adaptability of new plants to Missouri's soil and climate; the most economical methods of beef and pork production; dairying; animal diseases, their prevention or cure; animal and plant breeding; the propagation, selection, breeding and improvement of fruits and vegetables; tests of varieties of orchard and small fruits; insect pests and fungous diseases. In addition to these experiments conducted on the College grounds, the Station is making soil and crop tests on the principal soil types of the State. Preliminary to these tests and fundamental to all permanent improvements in the system of cropping and soil management, the Agricultural Experiment Station is making a systematic survey of the soils of the State, outlining and studying each type in detail. A reconnoissance survey of the entire

State has been completed, as well as a detailed and final survey of 58 individual counties.

The results of all these investigations are published in the form of bulletins and annual reports, which are distributed free to all who make a request for them. Requests for Experiment Station publications should be made to

F. B. MUMFORD,
DIRECTOR OF THE AGRICULTURAL EXPERIMENT STATION,
COLUMBIA, MISSOURI.

AGRICULTURAL EXTENSION SERVICE

STAFF MEMBERS

A. With Headquarters at the University—

1. Administrative and Supervisory Officers

S. D. BROOKS, A. M., LL. D.	President of the University
F. B. MUMFORD, M. S.	Dean of the College of Agriculture
A. J. MEYER, B. S. in Agr.	Director of the Agricultural Extension Service
*ESSIE M. HEYLE, Ph. B.	In Charge Home Economics Extension
J. F. NICHOLSON, M. S.	State Extension Agent
R. R. THOMASSON, B. S. in Agr.	State Extension Agent
C. C. HEARNE, B. S. in Agr.	State Extension Agent
P. B. NAYLOR, A. B.	State Extension Agent

2. Subject-Matter Specialists

AGRICULTURE

Agricultural Economics

H. C. HENSLEY, B. S. in Agr.

Agricultural Engineering

A. J. McADAMS, B. S. in Agr.

HAROLD LEMERT, B. S. in Agr.

Animal Husbandry

J. W. BURCH, B. S. in Agr.

H. M. GARLOCK, B. S. in Agr.

S. F. RUSSELL, B. S. in Agr.

Dairy Husbandry

M. J. REGAN, B. S. in Agr.

A. F. STEPHENS, B. S. in Agr.

Farm Management

D. C. WOOD, B. S. in Agr.

Field Crops

C. E. CARTER, B. S. in Agr.

K. G. HARMAN, B. S. in Agr.

I. P. TROTTER, M. S.

Horticulture

E. M. PAGE, B. S. in Agr.

ELMER A. BIERBAUM, B. S. in Agr.

Poultry Husbandry

BERLEY WINTON, M. A.

HAROLD CANFIELD, M. S. in Agr.

Rural Sociology

B. L. HUMMELL, B. S. in Agr.

Soils

P. F. SCHOWENGERDT, A. B., B. S. in Agr.

R. J. SILKETT, B. S. in Agr.

Forestry

FREDERICK DUNLAP, F. E.

HOME ECONOMICS

Clothing

MARY E. ROBINSON, B. S. in H. E.

LOIS MARTIN, B. S.

Health

MARY E. STEBBINS, R. N., P. H. N.

General Home Economics

MRS. EDITH G. VAN DEUSEN, Ph. B.

BINA SLAUGHTER, B. S. in Agr.

Nutrition

MARION E. DUNSHEE, Ph. B.

Home Management

IDA FRA CLARK, B. S. in H. E.

JULIA M. ROCHEFORD.

3. Boys' and Girls' Club Agents

THEODORE T. MARTIN, A. B.
JANE HINOTE, B. S. in H. E.

R. H. EMBERSON, B. S. in Ed.
SARA H. CHILES, B. S. in Agr.

*On leave of absence

4. *Other Staff Members*

A. A. JEFFREY, A. B.	Agricultural Editor
B. J. CARL	Secretary, Agricultural Extension Service
J. R. JORDAN	Accountant

B. With Headquarters away from the University—

1. *County Extension Agents*

O. E. ALLEN, B. S. in Agr.	T. F. LUEKER.
M. D. AMBURGEY, B. S. in Agr.	OWEN MCCAMMON, B. S. in Agr.
C. W. CAMPBELL, B. S. in Agr.	GUY Q. MCDANIEL, B. S. in Agr.
A. J. CLAYTON, B. S. in Agr.	E. S. MATTESON, B. S. in Agr.
R. S. CLOUGH, B. S. in Agr.	DAVID MEEKER, B. S. in Agr.
F. H. DARNALL, B. M. E., E. E.	OSCAR MEIER, B. S. in Agr.
M. B. DITTY, B. S. in Agr.	DAN E. MILLER, B. S. in Agr.
IRA DRYMON, B. S. in Agr.	A. J. RENNER.
T. A. EWING, B. S.	WM. A. RHEA, JR., B. S. in Agr.
J. ROSS FLEETWOOD, A. M., B. S. in Agr.	FLOYD ROGERS, B. S. in Agr.
D. R. FORRESTER, B. S. in Agr., M. S.	L. A. SAUNDERS.
GUS S. GEHLBACH, B. S. in Agr.	V. B. SHELDON, B. S.
J. ROBT. HALL, B. S. in Agr.	EARL T. STEELE, B. S. in Agr.
J. R. HANSEN, B. S. in Agr.	A. F. STEPHENS, B. S. in Agr.
JOHN HOWAT.	C. R. TALBERT, B. S. in Agr.
E. T. ITSCHNER, B. S. in Agr.	PAUL H. TEAL, B. S.
SCOTT M. JULIAN, B. S. in Agr.	C. W. VETTER, B. S. in Agr.
C. C. KELLER, B. S. in Agr.	L. F. WAINSCOTT, B. S. in Agr.
T. M. KEYSER, B. S. in Agr.	T. F. YOST, B. S. in Agr.
A. W. KLEMM, B. S. in Agr.	
R. A. LANGENBACHER.	<i>Assistant Agent</i>
STEWART LEAMING, B. S. in Agr.	H. W. GUENGERICH, B. S.
W. W. LEWELLING, B. S. in Agr.	COE PRITCHETT, B. S. in Agr.

2. *County Home Economics Agents*

FLORENCE CARVIN, B. S. in H. E., A. B.	MRS. CLAIRE L. MONTGOMERY, B. S. in H. E.
MARGARET HUSTON, A. B.	MARGARET NELSON.
CECILE MANIKOWSKI, B. S. in Agr., M. S.	ANNE SILLERS, B. S.
MARY MABEL MCMAHON, B. S. in Agr.	

3. *District Agents*

E. E. BRASFIELD, B. S. in Agr.	GEO. L. HAWN, B. S.
JOS. C. CALDWELL, B. S. in Agr.	WENDELL HOLMAN, B. S. in Agr.
F. R. CAMMACK, B. S. in Agr.	E. T. MALLINCKRODT, B. S. in Agr.
ROY I. COPLEN, B. S. in Agr.	C. H. WILLIAMS, B. S. in Agr.
JAS. E. CROSBY, JR., B. S. in Agr.	

4. *Negro Agent*

JOHN W. BUTLER, Dalton.

C. Field Instructors for the U. S. Veteran's Bureau Trainees.

W. H. RUSK, B. S. in Agr., in Charge.	C. C. LOCKWOOD, B. S. in Agr.
JOHN H. COX, B. S. in Agr.	

*On leave of absence.

GENERAL STATEMENT

The Agricultural Extension Service was established by the Board of Curators of the University June 8, 1914. Approximately one-half of its support comes from federal funds allotted to the State under the terms of the Smith-Lever Act of Congress approved May 8, 1914, and later supplementary acts of Congress. The balance of the financial support is derived from State and county appropriations supplemented by funds contributed by various organizations, principally the County Farm Bureaus of the State.

The Agricultural Extension Service is a teaching branch of the University. It is organized and administered for the specific purpose of giving information in subjects relating to agriculture and home economics to persons who are not resident at the University. It teaches both adults and young people—the latter through the agency of the Boys' and Girls' 4-H clubs.

Instruction is given mainly by the use of demonstrations established on farms and in farm homes. Local organizations and local leadership are utilized to the fullest extent possible to the end that people may be taught in groups corresponding in a way to classes on the campus. Large use is made of printed circulars.

All lines of instruction are organized on a project basis. Extension instruction is based largely upon county and community programs of work. These programs, in turn, are based upon the conscious needs of counties and communities for instruction in agriculture and home economics of immediate local significance.

The regular extension projects of the College of Agriculture include:

1. *Boys' and Girls' 4-H Club Work.*—This project provides the personnel and general "set-up" for the giving of instruction to boys and girls between the ages of 10 and 20 years. These young people are organized into groups called "4-H clubs." Each club has its adult local leader and its own officers. The lines of instruction given to club members are indicated by the following listing of clubs: Market Pig, Purebred Gilt, Sow and Litter, Baby Beef, Beef Calf, Purebred Heifer, Ewe and Lamb, Fat Lamb, Stock Judging, Dairy Calf I, Dairy Calf II, Dairy Calf III, Cow Testing, Bee Club, Corn Club I, Corn Club II, Grain Judging, Cotton, Soybean, Grain Sorghum Growing, Garment Making I, Garment Making II, Garment Making III, Baking, Canning I, Canning II, Hot Lunch, Supper, Health and First Aid, Young Housekeepers', More Attractive Homes, Grape, Potato, Sweet Potato, Tomato, Poultry I—Baby Chick, Poultry II—Flock Management, Poultry III—Poultry Breeding.

2. *County Agent Work.*—Under this project provision is made for the placing of extension representatives of the College of Agriculture in single counties or in groups of counties—the latter designated as "district agents." Plans for the financing and supervision of county and district agents are outlined in the project.

3. *County Home Demonstration Work.*—This project is similar to the preceding. It provides for the placing of home economics representatives of the College in counties where satisfactory working arrangements can be made.

4. *Extension Work in Clothing.*—Provides for the giving of instruction in the selection, construction, and renovation of wearing apparel.

5. *Home Management.*—Provides instruction in matters that have to do with the efficient household, with considerable attention to making homes more restful, livable and attractive, both inside and out.

6. *Nutrition.*—Provides instruction in all phases of human nutrition for both adults and children.

7. *Health and Household Sanitation.*—As its name implies, this project provides for the giving of instruction to rural people in matters affecting the health of individuals and communities.

8. *Agricultural Economics.*—Provides instruction in various phases of agricultural economics with special emphasis on the marketing of farm products and the financing of farm enterprises.

9. *Agricultural Engineering.*—Provides the means of giving instruction on practical and efficient methods and practices in problems relating to engineering phases of farming.

10. *Farm Management.*—Provides instruction in farm organization, farm accounting and the application of business practices to the operation of the farm as a unit.

11. *Extension Work in Soils and Field Crops.*—Provides for the giving of instruction in the wide range of problems relating to soil maintenance and improvement as well as the production of field crops common to Missouri.

12. *Extension Work in Animal Husbandry.*—Provides instruction in the breeding, feeding and management of cattle, horses, sheep and swine.

13. *Extension Work in Dairy Husbandry.*—Provides for the giving of instruction in the specialized dairy field. This project deals with all phases of dairy production and gives considerable attention to dairy manufacturers.

14. *Extension Work in Poultry Husbandry.*—Provides instruction in the breeding, feeding and management of the poultry flock and the care of poultry products.

15. *Extension in Horticulture.*—This project provides for the giving of instruction in all lines of orcharding, small fruit production, and truck farming.

16. *Rural Sociology.*—Provides instruction in community organization for community betterment in the open country.

17. *Farmers' Week.*—Under this project an annual short course for farmers of four days' duration is held at the University.

18. *Junior Farmers' Week.*—As a means of developing leadership in connection with the conduct of Boys' and Girls' 4-H Club

Work an annual gathering of club leaders and outstanding club members is held at the College. The meeting lasts 4 days. It is known as Junior Farmers' Week.

19. *Publications.*—The College of Agriculture issues series of extension circulars, leaflets, and posters dealing with all phases of agriculture and home economics. These publications are furnished without cost to residents of Missouri making personal request for them. List of available publications is likewise furnished on request.

20. *Administration.*—This project provides the administrative organization necessary to the conduct of the extension activities of the College.

For information concerning any of the foregoing projects or the Extension Service of the College of Agriculture, write to

A. J. MEYER,
DIRECTOR, AGRICULTURAL EXTENSION SERVICE,
COLUMBIA, MISSOURI.

SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

In January, 1914, the Board of Curators of the University of Missouri established the School of Commerce as a division of the University. Three years later the scope of the school was enlarged and its title was changed to that of Business and Public Administration.

It is the aim of this school to equip students with a thorough knowledge of the general principles of business and public administration and to furnish them with training for the special fields of commerce and social and public service.

The School of Business and Public Administration is a professional school with general ideals and standards similar to those of the schools of Law, Medicine, Education, and Journalism. In common with these schools, it requires for admission two years of college work.

Upon entering the school, the student has his choice among the following four curricula, each embracing four semesters of work:

- I. Banking, Finance, and Accounting.
- II. Manufacture, Trade, and Transportation.
- III. Public Service.
- IV. Social Service.

In each of these curricula emphasis is placed upon the importance of fundamental subjects as essential preparation for professional work. The special requirements of these curricula are indicated below.

The School of Business and Public Administration has been furnished adequate quarters in the Commerce Building on the West Campus of the University. Complete laboratory equipment is provided for the classes in elementary and advanced accounting.

A municipal reference library, maintained as a part of the Extension Division of this University, affords an opportunity for bringing students into contact with problems in public administration.

Field work in community organization is available within close proximity to the University and is required of students in the curriculum in social service. It has been organized in communities actually at work in the development of their own affairs.

REQUIREMENTS FOR ADMISSION

The requirements for admission to the School of Business and Public Administration as a regular student are the satisfactory completion of (1) a four-years' high school course, or its equivalent, and (2) the first four semesters' work, or 60 hours' credit (exclusive

of the required work in physical training and military science) in the College of Arts and Science of the University of Missouri, or its equivalent. Before entering this school students should complete the equivalent of the following courses in the College of Arts and Science: General economics 1 and American government 1. Those who intend to take curriculum I should complete, in addition to the above courses, general mathematics 1, or its equivalent. The same is true of general sociology 1, for curriculum III or IV, and preventive medicine 1, for curriculum IV.

All students who are candidates for a degree must be admitted as regular students. In addition, persons more than 21 years old, with proper qualifications, may be admitted as special students and permitted to take certain subjects without meeting the regular requirements for admission. For the general regulations applying to special students, see page 37.

Full information relating to admission will be found on page 33. All communications regarding entrance should be addressed to the Registrar, University of Missouri, Columbia.

REQUIREMENTS FOR GRADUATION

In order to receive a degree the student must have completed the 60 hours of college credit required for admission and 60 hours of credit for work included in one of the curricula in the School of Business and Public Administration. He must also have completed a total of 60 points. Each hour of credit in this school is valued in points as follows: E, 3 points; S, 2 points; M, 1 point. "Passed" grades and "Advanced standing" are treated as of M grade. No points are given for I and F grades.

The degree of Bachelor of Science in Business Administration will be conferred upon those students who complete either of the curricula in banking, finance, and accounting, or manufacture, trade and transportation.

The degree of Bachelor of Science in Public Administration will be conferred upon those students who complete either of the curricula in public service or social service.

CURRICULA

Four curricula are offered for the purpose of guiding students in their preparation for special fields of administration. In order to meet the needs and purposes of a particular student, modifications of any of the curricula may be made with the consent of the Dean.

It is assumed that students who enter any of the curricula have completed college courses in general economics and American government. Those who have not done this will be required to take these courses as part of the 60 hours required for the degree. The same is true of the course in general mathematics for curriculum I, the course in general sociology for curricula III and IV, and the course in preventive medicine for curriculum IV.

I. CURRICULUM IN BANKING, FINANCE, AND ACCOUNTING.

General Subject	No. of Course	Special Title	Credit Hours
Economics and commerce.....	17f or w	Elementary accounting.....	5
Economics and commerce.....	105f or w	Money, credit, and banking..	5
Economics and commerce.....	115w	Public revenues.....	3
Economics and commerce.....	117f or w	Advanced accounting.....	4
Economics and commerce.....	118f	Corporation finance.....	3
Economics and commerce.....	119f	Trusts and combinations....	3
Economics and commerce.....	121f	Industrial accounting.....	2
Economics and commerce.....	122w	Investments.....	2
Economics and commerce.....	124w	Foreign exchange and trade..	2
Economics and commerce.....	132w	Bank management.....	2
Economics and commerce.....	134w	Public accounting practice..	3
Economics and commerce.....	150w	Business law.....	3
Mathematics.....	155f or w	Mathematics of business....	3
Geography.....	109f or w	Business geography.....	3
		Elective.....	17
Total.....			60

II. CURRICULUM IN MANUFACTURE, TRADE AND TRANSPORTATION.

Economics and commerce.....	17f or w	Elementary accounting.....	5
Economics and commerce.....	105f or w	Money, credit, and banking..	5
Economics and commerce.....	106f	Transportation and public utilities.....	3
Economics and commerce.....	110f	Labor problems.....	5
Economics and commerce.....	117f or w	Advanced accounting.....	4
Economics and commerce.....	118f	Corporation finance.....	3
Economics and commerce.....	119f	Trusts and combinations....	3
Economics and commerce.....	121f	Industrial accounting.....	2
Economics and commerce.....	128f	Statistics and business man- agement.....	3
Economics and commerce.....	137w	Factory management and em- ployment problems.....	3
Economics and commerce.....	138w	Mercantile organization and credits.....	3
Economics and commerce.....	140w	History of commerce.....	3
Economics and commerce.....	150w	Business law.....	3
Geography.....	109f or w	Business geography.....	3
Journalism.....	120f or w	Principles of advertising....	3
		Elective.....	9
Total.....			60

III. CURRICULUM IN PUBLIC SERVICE.

A. ADMINISTRATIVE SERVICE.

General Subject	No. of Course	Special Title	Credit Hours
Political science.....	102f	English government.....	3
Political science.....	103w	Governments of continental Europe.....	3
Political science.....	106f	Municipal government.....	3
Political science.....	107w	Municipal problems.....	2
Political science.....	108w	State administration.....	3
Political science.....	112f	National administration....	3
Political science.....	201w	Principles and problems of public administration....	3
Political science.....	204f, 205w	Constitutional law of the United States.....	5
Economics and commerce....	17f or w	Elementary accounting....	5
Economics and commerce....	117f or w	Advanced accounting.....	4
Economics and commerce....	133w	Municipal accounting and budgetary control.....	2
Economics and commerce....	106f	Transportation and public utilities.....	3
Economics and commerce....	115w	Public revenues.....	3
Economics and commerce....	150w	Business law.....	3
		Elective.....	15
Total.....			60

B. FOREIGN SERVICE.

Political science.....	102f	English government.....	3
Political science.....	103w	Governments of continental Europe.....	3
Political science.....	109f	International law.....	3
Political science.....	115w	Administration of American foreign relations.....	3
Political science.....	207f	International organization....	3
History.....	106f or w	Contemporary Europe.....	3
History.....	110f or w	Recent United States history..	3
History.....	190f	American diplomatic history..	3
History.....	209w	Recent diplomatic problems..	2
Economics and commerce....	17f or w	Elementary accounting.....	5
Economics and commerce....	105f or w	Money, credit and banking..	5
Economics and commerce....	124w	Foreign exchange and trade..	2
Economics and commerce....	150w	Business law.....	3
Geography.....	109f or w	Business geography.....	3
		Elective.....	16
Total.....			60

Note—Students who complete the Foreign Service division of Curriculum III must have credit for fifteen semester hours in one foreign language or its equivalent.

IV. CURRICULUM IN SOCIAL SERVICE.

General Subject	No. of Course	Special Title	Credit Hours
Sociology.....	110f or w	Social pathology.....	3
Sociology.....	111w	Criminology.....	3
Sociology.....	113w	Constructive social policies..	2
Rural Life.....	117f	Community organization....	3
Sociology.....	119f or w	Social case work.....	3
Rural Life.....	190w	Leadership.....	3
Sociology.....	222f	Methods of social research...	2
Rural Life.....	239f or w	Field work	6
Journalism.....	102f or w	The news.....	3
Education.....	A102f or w	Educational psychology....	3
		Vocational courses.....	15
		Elective.....	14
Total.....			60

Note—Curriculum IV has been planned for students who are preparing for rural or urban social work, religious education, visiting teacher, city or county superintendent of public welfare, or secretary of young men or young women christian associations. Special groups of vocational courses have been arranged for each of these classes of work.

ELECTIVE COURSES: The elective part of the curricula may be taken in any division of the University. It is expected that the subjects elected will be related to the curriculum of the student and will tend to make him more efficient in his special field. All elections must be made with the advice and approval of the Dean. No student may take more than 16 hours a week for credit.

FEES: For information regarding fees, see pages 50 to 60.

For explanation of the numbering of courses, credit, etc., see Sec. III.

Courses of interest to students in the School of Business and Public Administration are offered in the College of Arts and Science, Schools of Education and Engineering, and other divisions of this University.

A special bulletin of the School of Business and Public Administration is issued each year. This contains a detailed announcement of all courses, entrance requirements, rules and regulations of the School of Business and Public Administration, and should be consulted by persons desiring full information concerning the school. For this bulletin, address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information regarding the School of Business and Public Administration, address

F. A. MIDDLEBUSH, DEAN,
FACULTY OF BUSINESS AND PUBLIC ADMINISTRATION.
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

SCHOOL OF EDUCATION

The School of Education exists for the purpose of giving professional training to men and women who expect to make teaching school supervision or school administration a career. Its purposes are based on the belief that teaching, helping teachers through supervision and providing the administrative organization under which teachers and supervisors may work most effectively, are fields requiring expert technical service. It is the object of the School of Education to furnish the training for this sort of service.

The growth of the School of Education at this, as at other universities, is the result of a demand on the part of school authorities for teachers who, in addition to being thoroughly equipped with knowledge, know how to utilize this knowledge in the training which the schools must give. To make this utilization of knowledge in the training of children, the teacher, supervisor or superintendent must have at least three things besides a knowledge of subject-matter.

1. Knowledge and appreciation of the part that education has played and must in the future play in the survival and progress of mankind.
2. Thorough acquaintance with the known facts about the human mind, how it develops, and how it works most economically and effectively at the various ages with which the schools must deal.
3. Knowledge of and training in the use of those techniques in the various fields of school work, which scientific study and the best experience have found to be the most effective.

Preparation for teaching, supervision or school administration embodying these three lines of work, represents one of the highest types of professional training and offers to those whose abilities and interests lead them to undertake it, opportunities for a career that will challenge the best they have to give to the world.

TYPES UNDERGRADUATE TRAINING

While there are certain fundamental lines of training that all teachers and educational workers should have, the complexity of school work and the many types of training offered make it necessary to have groups of courses designed to train people for definite kinds of educational work. These groups of courses are shown below together with the name of the adviser for each curriculum.

	Adviser	Room
1. High school teachers.....	See page 000	.....
2. Elementary school teachers.....	Mr. Phillips	Univ. El. Sch.
3. High school teacher-training in- structors	Mr. Coursault	102 Jesse
4. Teachers of industrial art.....	Mr. Selvidge	111 Eng.
5. Teachers and supervisors of art....	Mr. Ankeney	409 Jesse
6. Teachers and supervisors of music...	Mr. Sleeper	201 Lathrop
7. Teachers of physical training, (men)...	Mr. Brewer	Rothwell Gym.
8. Teachers of physical training (women)...	Miss McKee	Women's Gym.
9. Teachers of vocational home ec- onomics.....	Miss Campbell	207 Home Ec.
10. Teachers of vocational agriculture...	Mr. Dickinson	124 Agr.

Students planning to specialize for one of the fields of school work listed above should, as soon as possible after entrance to the School of Education, consult the proper adviser and fill out a subject of specialization card containing a list of all subjects to be taken for the degree. This card may be secured in room 120 Jesse Hall.

FACILITIES FOR OBSERVATION, DEMONSTRATION, AND PRACTICE TEACHING

The School of Education has for practice, demonstration, and experimental purpose two schools illustrating all grades of instruction in the public schools. The University Elementary School includes the Kindergarten and grades one to six. The University Junior-Senior High School includes grades seven to twelve. In addition to the opportunities for practice teaching and observation in the University schools, the University co-operates with the Columbia school board in providing facilities for practice teaching in a number of subjects and with the school boards of Belton and Centralia in providing practice teaching in Vocational Agriculture.

SCHOLARSHIPS IN EDUCATION

In addition to the regular University fellowships, scholarships and prizes described on pages 66 to 84 two special scholarships are available to students in the School of Education; the S. H. Ford Scholarship, and the Peabody Scholarship in Education described on pages 72 and 66.

REQUIREMENTS FOR ADMISSION

The requirements for admission to the School of Education are the satisfactory completion of

1. A four-years' high school course or its equivalent and
2. Sixty semester hours of credit which may be accepted toward the degree of B.S. in Education.

SUBJECTS AND FIELDS OF SPECIALIZATION

For the degree of B.S. in Education the student must complete the requirements in one of the following groups:

High School Teachers: A total of at least 20 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 3 hours of technique of teaching in high school, 2 hours of high school economy, 2 hours of school hygiene, 2 hours in the teaching of the subject of specialization and 5 hours of practice teaching.

He must have in at least one of the subjects of specialization given not less than the minimum requirement of University credit as specified. If he enters with advanced standing, he must complete at least one course with not less than 3 hours' credit in his subject of specialization under the advice of the adviser in that subject.

He must demonstrate to the satisfaction of the faculty his ability to teach successfully by practice teaching in the high school maintained for this purpose, excepting that a student who furnishes satisfactory evidence of successful experience as a teacher may have such experience accepted in partial or total fulfillment of this requirement. No advanced standing, however, is given for teaching experience gained as a teacher receiving a salary.

Elementary School Teachers: A total of 24 hours in education, including 3 hours of educational psychology, 2 hours of elementary school organization and management, 2 hours of school hygiene, 6 hours as assistant teacher in the University Elementary School, 2 hours of elementary school music methods, 3 hours of handwork, 3 hours of history of education and 3 hours of technique of teaching in elementary schools.¹

Teachers of Industrial Arts: A total of 20 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 3 hours of technique of teaching in high school, 2 hours of the teaching of industrial arts, 2 hours of school hygiene, 2 hours of high school economy and 5 hours of practice teaching.¹

Teachers and Supervisors of Art: A total of 20 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 3 hours of technique of teaching in elementary or high school, 2 hours of either high school economy or elementary school organization and management, 2 hours of teaching of art, 2 hours of school hygiene, and 5 hours of practice teaching.¹

Women Teachers of Physical Education: A total of 20 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 3 hours of technique of teaching in high school, 2 hours of school hygiene, 2 hours of high school economy or elementary school organization and management, 2 hours of the teaching of gymnastics and 5 hours of practice teaching.¹

¹See suggested curriculum.

Men Teachers of Physical Education: A total of 20 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 3 hours of technique of teaching in high school, 2 hours of school hygiene, 2 hours of high school economy or elementary school organization and management, 2 hours of the teaching of gymnastics and 5 hours of practice teaching.¹

Teachers and Supervisors of Music: A total of 20 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 3 hours of technique of teaching in either elementary or high school, 2 hours of school hygiene, 3 hours of public school music methods, and 6 hours of practice teaching.

Teachers of Vocational Home Economics: For the four-year course leading to the degree of B.S. in Education with a life certificate in vocational home economics, see the special four-year curriculum for the training of teachers of vocational home economics in the University catalog.

*Vocational Agriculture.*¹

RECOMMENDATION OF TEACHERS. Graduates and students of the School of Education are placed in desirable positions through the Committee on Recommendations. During the past year teachers were placed in positions as teachers in elementary schools, high schools, teachers' colleges, and universities, and as supervisors, principals, and superintendents.

The Committee serves as a ready and complete source of reference for all who are enrolled. A complete set of data and references is sent to school authorities upon request, thus saving the inconvenience and uncertainty of giving individual references each time one makes application for a position.

Students and teachers should register with the Committee as early as March in order that a complete file of recommendations may be secured and so that the Committee may nominate them for positions as soon as they are available. All data are strictly confidential and for the mutual benefit of the teacher and those employing her.

An enrollment fee of two dollars is charged, which partially covers the cost of postage and correspondence. No other fee is charged by the Committee.

All correspondence with regard to the placement of teachers should be addressed to:

COMMITTEE ON RECOMMENDATIONS,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

¹See suggested curriculum.

REGULATIONS AND REQUIREMENTS.

SUGGESTIONS REGARDING PREPARATION FOR ADMISSION: Students desiring to specialize in home economics, physical training, music, art or industrial arts may take elementary courses in these subjects during the freshman and sophomore years in the College of Arts and Science although credit toward the Bachelor of Arts degree is not given for all of these courses.

As soon as a student has determined upon the subject or field of work in which he wishes to specialize for a teacher's certificate, he should consult the adviser in that field or subject, in order that the most advantageous courses may be selected. The selection of a subject or field of specialization must in any case be made and a list of the courses to be completed filed with the dean when the student enters the School of Education. For a list of advisers, see pages 148 and 154.

SPECIAL STUDENTS: All students who are candidates for certificates to teach or for the degree must be admitted as regular students of the School of Education.

In addition to these, persons of proper qualifications who wish, without reference to the degree or life certificate, to make a serious study of some special phase of education or to gain a knowledge of fields they have hitherto neglected, e.g., theory and practice of art, industrial arts, music, physical education, agriculture, may be admitted as special students. Such students are subject to the general rules of the University regarding special students.

HOURS TO BE CARRIED: Students are permitted to carry not more than 16 credit hours each term.

RESIDENCE REQUIREMENTS: A student must spend his senior year in the University of Missouri in order to obtain the degree of B.S. in Education. Students entering with advanced standing must take at least three courses in education to fulfill the requirements for the degree and must take at least one course with not less than three hours' credit in the subject of specialization if a candidate for the life certificate. Work done in the Summer Session at Rolla will be counted as work in residence, except that candidates for a degree must have completed at least eight (8) hours in residence in Columbia.

ELECTIVE WORK: In general, any study in the University which will tend to make the candidate for the degree a more efficient teacher or specialist in the study of education may be elected, but he will not be permitted to elect studies at random.

SEQUENCE OF COURSES IN EDUCATION: The sequence of courses (except as outlined in special curricula) in education should be as follows:

1. *Educational psychology* (education, A102) should be taken during the last term of the sophomore year in the College of Arts and Science or during the first term of the first year in the School of Education.

2. *History of Education* (education, B125) should be taken during either term of the first year.

3. *Technique of teaching in High School* (education, D110) should be taken during either term of the first year.

4. *The course in the methods of teaching the subject in which the student specializes for the life certificate* should be taken during the first term of the second year.

5. *Practice teaching* should be taken either term of the second year.

6. *High school economy* (education, C150) should be taken during either term of the second year.

Preventive medicine (preventive medicine, course 1), required at present in place of school hygiene, may be taken at any convenient time.

DEGREES AND CERTIFICATES: The School of Education confers only one degree, Bachelor of Science in Education (B.S. in Ed.).

The School of Education is authorized by the Legislature of Missouri to confer certificates, valid for life, or for two years, according to the preparation of the candidates, upon persons who, in the judgment of the faculty, are considered qualified to teach in the public schools of the state. For requirements, see below:

REQUIREMENTS FOR GRADUATION WITH THE DEGREE OF BACHELOR OF SCIENCE: In order to secure the degree of Bachelor of Science in Education (B.S. in Ed.), the candidate must fulfill the following requirements:

1. He must be regularly admitted to the School of Education.

2. He must complete the professional courses in education listed in one of the groups under the caption "Subjects and Fields of Specialization," and also complete other work approved by the adviser in conformity with the corresponding suggested curriculum.

3. He must in his junior year pass a test of proficiency in English, excepting that a student whose English is found to be unsatisfactory will be given a further test at the beginning of his senior year. No student will be recommended for graduation until his English is satisfactory.

4. He must complete a total of sixty hours.

5. He must complete a total of 120 points of college work, including the 60 hours' work required for admission to the School of Education and the 60 hours' work required in the School of Education. Each hour of credit is valued in points as follows: E, 3 points, S, 2 points; M, 1 point. No points are given for the I and F grades. "Passed" grades and advanced standing are treated as of M grades.

6. He must be recommended by the Faculty of the School of Education.

REQUIREMENTS FOR A LIFE CERTIFICATE TO TEACH: In order to secure a certificate to teach, valid for life, the candidate must fulfill the following requirements:

1. He must be regularly admitted to the School of Education.

2. He must complete the requirements outlined above for the degree of B.S. in Education.

3. He must be recommended by the faculty of the School of Education.

REQUIREMENT FOR TWO YEARS' CERTIFICATE TO TEACH: Upon the completion of not less than 30 hours' work, including 3 hours of educational psychology, 3 hours of technique of teaching, 6 hours of elective work in education, and three-fourths of the minimum requirement in one of the subjects of specialization for a life certificate to teach, a certificate valid for two years may be granted to candidates regularly enrolled in the School of Education. This certificate will not be renewed. The 30 hours in the School of Education and the 60 hours in the College of Arts and Science, which are necessary for entrance to the School of Education, make a total of 90 hours of College work necessary for two years' certificate to teach. Students entering with advanced standing are not eligible to this certificate if they have not completed at least 20 hours of work in the University of Missouri.

SPECIALIZATION AND ADVISERS

Teachers pursuing special curricula should consult the advisers listed on page 148. These advisers will assist the student in making out a subject of specialization card which, when approved by the dean, will constitute the work required for the degree and life certificate. In all cases the required professional education courses listed under the field of specialization on pages 149 to 150 must be taken.

High school teachers are required to have a major in one and a minor in another of the subjects of specialization listed below. Immediately after entering the school of education students preparing for high school teaching should consult the proper advisers for assistance in making out a subject of specialization card. When this card is approved by the major and minor advisers it should be submitted to the dean in room 120 Jesse Hall.

MAJOR AND MINOR REQUIREMENTS FOR HIGH SCHOOL TEACHERS.

Subjects.	Min- imum require- for Major.	Min- imum require- for Minor.	Adviser.	Room No. of adviser.
Agriculture	(a)	24	Mr. Dickinson . .	122 Waters
Art	(a)	20	Mr. Ankeney . . .	409 Jesse
Biology	24	15	Mr. Curtis	110 Lefevre
Commerce	24	(b)		
Chemistry	24	15	Mr. Schlundt . . .	110 New Chemistry
English	24	15	Mr. Moffett	209 Jesse
French	24	15	Mr. Jesse	205 Jesse
Geography	24	15	Mr. Bratton	204 Geol.
General Science . . .	30	20	Mr. Watkins	Univ. H. S.
German	24	15	Mr. Almstedt . . .	309 Jesse
Home Economics . . .	(a)	22	Miss Campbell . . .	108 Home Ec.
Latin	24	15	Miss Cauthorn . . .	211 Jesse
Mathematics	24	15	Mr. Westfall	208 Eng.
Music	(a)	20	Mr. Sleeper	201 Lathrop
Physical Training (men)	(a)	18	Mr. Brewer	Rothwell Gym.
Physical Education (women)	(a)	18	Miss McKee	Women's Gym.
Physics	24	15	Mr. Stewart	104 Physics
Physiology and Hygiene	24	15	Mr. Greene	107 McAlester
Social Studies	30(c)	20(d)	Mr. Viles	316 Jesse
Spanish	24	15	Mr. Warshaw	205 Jesse

(a) For Major requirement see special curriculum.

(b) No Minor authorized.

(c) Must include American government, general economics and general sociology.

(d) Must include American government.

SELECTION OF MAJORS AND MINORS

Students registering after September 1, 1926, are required to have an academic minor as well as a major. Exception is made for students enrolling in specialized curricula such as physical education, vocational home economics, music, art, elementary school training, etc. The following table shows quite clearly the conditions which make it advisable for a prospective high school teacher to be prepared to teach in two academic fields.

EXTENT TO WHICH THE TEACHING PROGRAMS OF MISSOURI HIGH SCHOOL
TEACHERS CONTAIN MORE THAN ONE SUBJECT.

Subjects.	No. of teachers	As a sing. subj.	Two subj. comb.	Three subj. comb.	Four subj. comb.	Five subj. comb.
English.....	657	172	382	74	27	2
Mathematics.....	654	239	275	98	37	5
Social Studies.....	648	156	372	62	47	11
Science.....	359	88	161	60	42	8
Physical Education....	338	59	130	81	58	10
Agriculture.....	297	95	97	55	44	6
Latin.....	246	26	183	27	7	3
Home Economics.....	194	100	80	9	5	.....
Commercial.....	179	108	58	.....	11	2
Music.....	154	78	60	9	7	.....
Teacher Training.....	126	88	37	1	.....	.....
Geography.....	71	.....	29	9	24	9
Manual Training.....	67	42	18	5	2	.....
French.....	49	8	35	5	1	.....
Physiology and Hygiene	38	3	12	6	12	5
Spanish.....	34	9	20	5	.....	.....
Drawing.....	32	15	12	1	3	1
Art.....	6	3	3	.....	.....	.....

This table shows that in the first class high schools outside St. Louis, Kansas City and St. Joseph only 172 high school teachers teach English as a single subject, whereas 382 teach it in combination with some other subject-matter field such as social studies, Latin, etc. Seventy-four teach English in combination with two other subject-matter groups, 27 teach it with three other subject-matter groups and two with four others. The table gives similar information for the other subjects. It shows that only in the cases of home economics, commercial subjects, music, teacher training and manual training do more than 50 per cent of the teachers confine their teaching to single subject-matter fields.

In all the first class high schools of Missouri excepting those of the three largest cities more than fifty per cent of the teachers teach two or more subjects. In first class high schools in towns having a population of 2,500 or less, approximately 52 per cent of the teachers teach two subjects and 16 per cent teach three or more. Studies made in other states show similarly that high school teachers except in certain highly specialized fields must be prepared to teach in at least two academic groups of subjects.

HIGH SCHOOL TEACHING COMBINATIONS IN MISSOURI

In Missouri what subject is most frequently taught in combination with English? What subject is most frequently taught in combination with Latin, Mathematics, Science, etc.? Studies made of the programs of high school teachers in Missouri show that the following teaching combinations are most frequent.

TEACHING COMBINATIONS IN MISSOURI HIGH SCHOOLS.

Major Subject.	Minor Subjects.		
	First in frequency.	Second in frequency.	Third in frequency.
English	Social Studies . . .	Latin.	Home Economics
Social Studies.	English.	Mathematics. . . .	Physical Ed.
Mathematics.	Science.	Soc. Studies.	Latin
Science.	Mathematics. . . .	Physical Ed.	Soc. Studies
Physical Ed.	Soc. Studies.	Science.	Mathematics
Agriculture.	Mathematics. . . .	Soc. Studies.	Science
Latin.	English.	Mathematics. . . .	Soc. Studies
Home Eco.	English.	Soc. Studies.	
Commercial.	Mathematics. . . .	Soc. Studies.	
Music.	English.	Soc. Studies.	Drawing
Teacher Tr.	Soc. Studies.	English.	
Manual Training.	Physical Ed.	Agriculture.	Science
French.	English.	Latin.	Soc. Studies
Spanish	English.	Soc. Studies.	Latin

These combinations were determined from a tabulation of the teaching programs of more than 2,400 Missouri high school teachers outside the cities of Kansas City, St. Louis and St. Joseph. They show that the social studies are most frequently taught in combination with English; that Latin is next, and home economics the third most frequent combination with English. In the same manner the most frequent combinations that go with other subjects are shown.

The relation of supply and demand in various fields should also be considered in choosing majors and minors. It is very difficult to get accurate information on this point because the demand fluctuates somewhat from year to year. For the past two or three years the demand for teachers of science, mathematics, music, commercial subjects and Latin has been particularly urgent in the State of Missouri.

DESIRABLE TRAINING FOR HIGH SCHOOL ACTIVITIES

In choosing high school teachers, principals and superintendents are always anxious to find candidates who are able to handle extra-curricular activities or who have developed some particular ability which will contribute to the life of the high school. From the point of view of getting a position and becoming indispensable after one has been secured, such specialized abilities as those which enable teachers to direct glee clubs, coach athletic teams, coach debating teams, manage student publications, and sponsor high school clubs of various kinds are extremely important. There are many opportunities at the University for securing training and experience in these fields. It is strongly recommended that prospective high school teachers take advantage of them.

SPECIAL UNDERGRADUATE CURRICULA IN EDUCATION

The special curricula which follow have been worked out for the guidance of students who wish to prepare for definite lines of work. The curriculum in vocational home economics is a required one but the others are headed "suggested" with only the professional education courses definitely fixed. All students planning to specialize in the fields for which curricula are suggested are required, on entering the School of Education, to work out with their respective advisers a complete list of all courses to be taken for the degree. This list must be filed with the Dean of the School of Education.

SUGGESTED CURRICULUM FOR ELEMENTARY SCHOOL TEACHERS

Junior Year

<i>First Semester</i>	<i>Second Semester</i>
¹ Educational Psychology, A102. 3 hrs.	¹ Assistant in Elementary School
¹ Elementary School Organization and Management, D120.. 2 hrs.	D151..... 2 hrs.
Art..... 5 hrs.	¹ School Hygiene, D130..... 2 hrs.
¹ Elementary School Music Methods ² 2 hrs.	¹ Handwork, G120 or 121..... 3 hrs.
Elective..... 4 hrs.	Sociology..... 5 hrs.
	Elective..... 4 hrs.
16 hrs.	16 hrs.

Senior Year

<i>First Semester</i>	<i>Second Semester</i>
¹ History of Education, B125... 3 hrs.	¹ Technique of Teaching in Elementary Schools, D121..... 3 hrs.
Diagnostic Testing and Remedial Teaching, A140..... 3 hrs.	¹ Assistant in Elementary School, D151..... 2 hrs.
¹ Assistant in Elementary School, D151..... 2 hrs.	Plays and Games..... 2 hrs.
Elective (Literature)..... 3-5hrs.	Elective (Science and History). 6 hrs.
Elective..... 5-3hrs.	Elective..... 3 hrs.
16 hrs.	16 hrs.

¹Required educational courses.

²Students with no previous training in music should take 4 hours of elementary school music methods.

SUGGESTED CURRICULUM FOR TEACHERS OF INDUSTRIAL ARTS

*Junior Year**First Semester*

Woodwork 10f.....	2 hrs.
Tools and Materials, 5f.....	2 hrs.
Mechanical Drawing.....	3 hrs.
¹ Educational Psychology, A102	3 hrs.
¹ History of Education, B125...	3 hrs.
Elective.....	2 hrs.

15 hrs.

Second Semester

Shop Work for Junior High School, 1.....	2 hrs.
Pattern Making.....	2 hrs.
Introduction to Art.....	5 hrs.
¹ Teaching of Industrial Arts, G130.....	2 hrs.
¹ Technique of High School Teaching, D110.....	3 hrs.
Elective.....	2 hrs.

16 hrs.

*Senior Year**First Semester*

Metal Work.....	2 hrs.
¹ Administration of Industrial Education, G145.....	2 hrs.
¹ Practice Teaching, D150.....	5 hrs.
¹ School Hygiene, D130.....	2 hrs.
Elective.....	5 hrs.

16 hrs.

Second Semester

¹ High School Economy, C150.	2 hrs.
Machine Work, 4w.....	2 hrs.
¹ Educational and Vocational Guidance, C221.....	2 hrs.
Elective.....	10 hrs.

16 hrs.

¹Required educational courses.

SUGGESTED CURRICULUM FOR TEACHERS AND SUPERVISORS OF ART

*Junior Year**First Semester*

¹ Educational Psychology, A102.	3 hrs.
Industrial Arts — Elementary Artcraft, 50f.....	3 hrs.
Advanced Representation, 150w	5 hrs.
History of Architecture, I 104f..	3 hrs.
Elective.....	2 hrs.

16 hrs.

Second Semester

¹ Technique of High School Teaching, D110.....	3 hrs.
¹ Teaching of Art, H101w.....	2 hrs.
General Sociology, 1w.....	5 hrs.
Painting, 156w.....	6 hrs.

16 hrs.

*Senior Year**First Semester*

¹ Practice Teaching, D150.....	5 hrs.
¹ Elementary School Organization and Management, D120f.	
or High School Economy, C150	2 hrs.
History of Renaissance Painting, 111f.....	3 hrs.
Pictorial Composition, 157f....	5 hrs.
Elective.....	1 hr.

16 hrs.

Second Semester

Advanced Design, 155w.....	5 hrs.
History of Renaissance Painting, 112w.....	3 hrs.
¹ School Hygiene, D130.....	2 hrs.
¹ History of Education, B125...	3 hrs.
Elective.....	3 hrs.

16 hrs.

¹Required educational courses.

Art courses. It is a distinct advantage to the student to elect the three fundamental courses—Introduction to Art, Representation, and Design—as a part of his freshman and sophomore work.

It will be greatly to the student's advantage to elect courses in as many of the following subjects as possible during the first two years of college work:

English Literature.....	5 hrs.	Psychology.....	4-6 hrs.
European History.....	5-10 hrs.	French.....	10 hrs.
Gross Anatomy.....	3 hrs.	Mathematics.....	3 hrs.
Chemistry.....	5 hrs.	Physics.....	5 hrs.

This curriculum will be adjusted to the needs of the individual student as much as possible. The better the high school or junior college preparation the more liberty there will be in Junior and Senior electives.

SUGGESTED CURRICULUM FOR TEACHERS OF PHYSICAL EDUCATION—MEN

<i>First Year</i>			
Citizenship.....	2	Citizenship.....	2
Composition and Rhetoric.....	3	English.....	3
Zoology or Botany.....	5	Mathematics.....	5
Military Science and Tactics...	0	Military Science and Tactics..	0
*Elective.....	5	*Elective.....	5
<i>Second Year</i>			
*Chemistry or elective.....	5	*Chemistry or elective.....	5
English.....	3	Physiology.....	5
Playgrounds.....	2	Plays and Games.....	2
Scoutcraft.....	2	Preventive Medicine.....	2
Military Science and Tactics...	½	Military Science and Tactics..	1½
*Anatomy.....	3-4	*Elective.....	1-2
<i>Third Year</i>			
Educational Psychology.....	3	Technique of H. S. Tchg.....	3
Kinesiology.....	3	Teaching of Physical Ed.....	2
History and Principles of Physical Education.....	3	Athletics and Recreation for Men.....	2
Coaching Major Athletics.....	2	Coaching Major Athletics....	2
Recreational Athletics for Men.	½	School Hygiene.....	2
*Elective.....	4½	Recreational Athletics for Men.	½
		*Elective.....	4½
<i>Fourth Year</i>			
High School Economy.....	2	History of Education.....	3
Physical Examinations.....	3	Administration of Physical Education.....	3
Practice Teaching.....	3	Athletic Training and First Aid	2
*Elective.....	8	Practice Teaching.....	2
		*Elective.....	6

*Electives must be so arranged that a teaching minor of from 15 to 20 semester hours will be completed in mathematics, science, social studies or such other subject as may be approved by the major advisor.

SUGGESTED CURRICULUM FOR TEACHERS OF PHYSICAL EDUCATION—WOMEN

*Freshman Year**First Semester*

Problems in Citizenship.....	5 hrs.
Language.....	hrs.
Zoology.....	5 hrs.
Gymnastics and Athletics (41f).....	1 hr.

 16 hrs.
Second Semester

Problems in Citizenship.....	5 hrs.
Language or Elective.....	5 hrs.
Folk Dancing 25f.....	2 hrs.
Gymnastics and Athletics (42w).....	1 hr.
Elective.....	3 hrs.

 16 hrs.
*Sophomore Year**First Semester*

Chemistry.....	5 hrs.
Advanced Folk Dancing.....	2 hrs.
Playgrounds, 51f.....	2 hrs.
Anatomy.....	3 hrs.
Gymnastics and Athletics, (43f).....	1 hr.
Elective.....	3 hrs.

 16 hrs.
Second Semester

Chemistry or Bacteriology....	3 hrs.
Sociology.....	5 hrs.
Plays and Games, (54w).....	2 hrs.
Preventive Medicine.....	2 hrs.
Gymnastics and Athletics (44w).....	1 hr.
Elective.....	3 hrs.

 16 hrs.
*Junior Year**First Semester*

Kinesiology, 111f.....	3 hrs.
¹ Educational Psychology, A102..	3 hrs.
Major Sports Technique(29f-1).....	2 hrs.
History and Principles of Physical Education, 52f.....	3 hrs.
Gymnastics and Athletics (115f).....	1 hr.
Elective.....	4 hrs.

 16 hrs.
Second Semester

Physiology.....	5 hrs.
¹ Teaching of Physical Education, H119w.....	2 hrs.
¹ History of Education, B125..	3 hrs.
Major Sports Technique (29w-2).....	2 hrs.
Gymnastics and Athletics (116w).....	1 hr.
Elective.....	3 hrs.

 16 hrs.
*Senior Year**First Semester*

¹ Technique of High School Teaching, D110.....	3 hrs.
¹ Practice Teaching, D150.....	3 hrs.
Physical Examinations, 101f...	3 hrs.
¹ High School Economy of Elementary School Organization and Management.....	2 hrs.
Gymnastics and Athletics, (117f).....	2 hrs.
Elective.....	3 hrs.

 16 hrs.
Second Semester

¹ Organization and Administration of Physical Education, 120w.....	3 hrs.
Technique of Interpretative Dancing, 128w.....	2 hrs.
¹ Practice Teaching, D150w..	3 hrs.
Gymnastics and Athletics, (118w).....	2 hrs.
Elective.....	6 hrs.

 16 hrs.

¹Required education courses.

MINOR IN PHYSICAL EDUCATION

The student must complete a total of 18 hours in Physical Education. Physiology or anatomy is a prerequisite for all courses in Physical Education.

The requirements for any minor include:

Teaching of Physical Education, H119w;

Technique courses in each division;

At least 4 semesters of practical work in field of specialization exclusive of Freshman and Sophomore requirements.

The adviser must be consulted before the election of any course in Physical Education.

SUGGESTED CURRICULUM FOR TEACHERS AND SUPERVISORS OF MUSIC

For Freshman and Sophomore requirements, see School of Fine Arts, page 186.

Junior

	<i>Hours</i>		<i>Hours</i>
² Counterpoint, 109f.....	3	² Counterpoint, 110w.....	3
¹ Elem.School Music Meth. 129f.	2	¹ Elem.School Music Meth. 130w	2
Educational Psychology, A102..	3	School Hygiene, D130.....	2
History of Education, B125....	3	Orchestral Inst., 180w.....	2
Orchestral Inst., 179f.....	2	Practice Teaching, D150.....	2
Band or Orchestra, 73f, or		Band, Orchestra, 74w, Chorus,	
Chorus, 71f.....	1	72w.....	2
Elective.....	2	Technique of High School	
		Teaching.....	3
	<hr/> 16		<hr/> 16

Senior

	<i>Hours</i>		<i>Hours</i>
Technic of Teaching, D110 or 121	3	Sociology.....	5
² High School Music Meth., 131f.	3	Practice Teaching, D150.....	2
Practice Teaching, D150.....	2	History of Music, 154w.....	3
History of Music, 153f.....	3	Musical Form, 112w or Musical	
Musical Form, 111f or Musical		Analysis, 114w.....	2
Analysis, 113f.....	2	Instrumentation, 118w.....	2
High School Economy, C150....	2	Elective.....	1
Band or Orchestra, 73f or		Band or Orchestra, 74w or	
Chorus, 71f.....	1	Chorus, 72w.....	1
	<hr/> 16		<hr/> 16

¹Students desiring to prepare themselves as teachers of music in high schools may omit Counterpoint, and Elementary School Music Methods and may substitute further work in piano, voice or in academic subjects.

²Students desiring to prepare themselves as special music teachers in elementary schools may omit Counterpoint and High School Music Methods and may substitute further work in piano, voice or in academic subjects.

CURRICULUM FOR TEACHERS OF VOCATIONAL HOME ECONOMICS

All the courses listed are required. HEc. 15 and 16 should accompany HEc. 50 and 51.

Freshman¹

<i>Fall term</i>		<i>Winter term</i>	
"Problems in Citizenship".....	5 hrs.	"Problems in Citizenship"....	5 hrs.
Chemistry 1 or 2, inorganic....	5 hrs.	"Botany or Zoology".....	5 hrs.
H. Ec. 1 "Foods and Nutrition"		H. Ec. 2 "Foods and Nutrition"	
or.....	3 hrs.	or.....	3 hrs.
H. Ec. 50 "Textiles and Cloth-		H. Ec. 51 "Textiles and Cloth-	
ing."		ing."	
H. Ec. 10 "Household Prob-		H. Ec. 20 "Home Nursing and	
lems" or.....	2 hrs.	Health or.....	2 hrs.
H. Ec. 15 "Design.".....		H. Ec. 16 "Design.".....	
	<hr/>		<hr/>
	15 hrs.		15 hrs.

Sophomore¹

<i>Fall term</i>		<i>Winter term</i>	
Chemistry 15, organic chemistry	3 hrs.	Ed. A102, educational psychol-	
Botany 3, general bacteriology..	3 hrs.	ogy.....	3 hrs.
H. Ec. 1 Foods and Nutrition or	3 hrs.	Physiology 1, elementary phys-	
H. Ec. 50 Textiles and Cloth-		iology.....	5 hrs.
ing.		H. Ec. 2 Foods and Nutrition or	3 hrs.
H. Ec. 10 Household Problems		H. Ec. 51 Textiles and Clothing	
or.....	2 hrs.	H. Ec. 20 Home Nursing and	
H. Ec. 15 Elementary Design.		Health or.....	2 hrs.
Electives.....	5 hrs.	H. Ec. 16 Elementary Design.	
	<hr/>	Electives.....	3 hrs.
	16 hrs.		<hr/>
			16 hrs.

¹For the first two years the students may register in the College of Arts and Science or the College of Agriculture.

Junior

<i>Fall term</i>		<i>Winter term</i>	
Ed. B 125, History of Educa-		Ed. D 110 Technique of Teach-	
tion.....	3 hrs.	ing in High School.....	3 hrs.
H. Ec. 120 Food and Nutri-		Ed. F. 175 Organization and	
tion.....	3 hrs.	Administration of Vocational	
H. Ec. 150 Clothing Problems.	3 hrs.	Home Economics.....	2 hrs.
H. Ec. 145 Dress Design.....	2 hrs.	H. Ec. 121 Food and Nutrition	3 hrs.
H. Ec. 101 Home Sanitation...	2 hrs.	H. Ec. 151 Clothing Problems.	3 hrs.
Elective.....	3 hrs.	H. Ec. 110 Home Furnishing.	3 hrs.
	<hr/>	Electives.....	2 hrs.
	16 hrs.		<hr/>
			16 hrs.

<i>Fall term</i>		<i>Senior</i>	<i>Winter term</i>
¹ Ed. F. 110 Teaching of Vocational Home Economics.....	2 hrs.		Ed. C 150 School Economy... 2 hrs.
H. Ec. 121 Dietetics.....	3 hrs.		¹ Ed. D. 160 Practice Teaching
H. Ec. 115 Home Management..	4 hrs.		Voca. Home Economics.... 5 hrs.
Sociology 1, elementary sociology.....	5 hrs.		¹ H. Ec. 160 Home Care and Training of the Child..... 3 hrs.
Electives.....	2 hrs.		Economics 1, general economics or
			Political Science 1, American Government..... 5 hrs.
			Electives..... 1 hrs.
		16 hrs.	16 hrs.

¹May be taken either semester.

GRADUATE CURRICULA IN EDUCATION

Because of the fact that the tendency the country over is in the direction of establishing a standard of at least one year of graduate study for supervisors and administrators, the undergraduate curricula in those fields have been eliminated. It will still be possible for undergraduates looking forward to administrative and supervisory work to take certain courses in those fields as undergraduates. The major portion of the training, however, should be confined to post graduate study.

Beginning September 1, 1927, the following four suggested graduate curricula will take the place of the undergraduate work formerly specified for elementary school principals, high school principals, general grade supervisors, and superintendents of schools.

SUGGESTED GRADUATE CURRICULUM FOR ELEMENTARY SCHOOL PRINCIPALS

A205	Psychology of Education.....	3 hrs.
A176	Psychology of Elementary School Subjects.....	3 hrs.
A202	Intelligence Testing.....	3 hrs.
B271	Philosophy of Education.....	3 hrs.
C202	School Publicity.....	3 hrs.
C170	Elementary Statistics.....	2 hrs.
C211	City School Administration.....	3 hrs.
C205	Administration of Educational Tests and Measurements..	3 hrs.
D270	Curriculum Construction.....	2 hrs.
D225	Practice in Supervision.....	3 hrs.
D204	Elementary School Supervision.....	3 hrs.
	Elective.....	4 hrs.
		32 hrs.

SUGGESTED GRADUATE CURRICULUM FOR SUPERVISORS IN ELEMENTARY SCHOOLS

A205	Psychology of Education.....	3 hrs.
A176	Psychology of Elementary School Subjects.....	3 hrs.
A202	Intelligence Testing.....	3 hrs.
B271	Philosophy of Education.....	3 hrs.
C211	City School Administration.....	3 hrs.
C205	Administration of Educational Tests and Measurements...	3 hrs.
C170	Educational Statistics.....	2 hrs.
D204	Elementary School Supervision.....	3 hrs.
D270	Curriculum Construction.....	2 hrs.
D225	Practice in Supervision.....	3 hrs.
D265	Research in Supervision.....	4 hrs.
		<hr/>
		32 hrs.

SUGGESTED GRADUATE CURRICULUM FOR HIGH SCHOOL PRINCIPALS

C206	High School Administration.....	3 hrs.
C215	High School Supervision.....	3 hrs.
C220	High School Curriculum.....	3 hrs.
C230	Junior High School.....	2 hrs.
A221	Educational and Vocational Guidance.....	3 hrs.
A205	Psychology of Education.....	3 hrs.
B271	Philosophy of Education.....	3 hrs.
C211	City School Administration.....	3 hrs.
C201	Extra Curricular Activities.....	3 hrs.
C205	Administration of Tests and Measurements.....	3 hrs.
C180	Administration of Public Education in the United States..	3 hrs.
		<hr/>
		32 hrs.

SUGGESTED GRADUATE CURRICULUM FOR CITY SCHOOL SUPERINTENDENTS

A205	Psychology of Education.....	3 hrs.
A176	Psychology of Elementary School Subjects.....	3 hrs.
A202	Intelligence Testing.....	3 hrs.
B271	Philosophy of Education.....	3 hrs.
C180	Administration of Public Education in the United States..	3 hrs.
C211	City School Administration.....	3 hrs.
C202	School Publicity.....	2.5 hrs.
C215	High School Supervision.....	3 hrs.
C240	School Finance.....	2.5 hrs.
D204	Elementary School Supervision.....	3 hrs.
C205	Administration of Educational Tests and Measurements...	3 hrs.
		<hr/>
		32 hrs.

A special bulletin of the School of Education is issued each year. This bulletin contains information regarding courses, entrance requirements, rules and regulations of the School of Education, and should be consulted by persons wishing information concerning the school. For this bulletin, address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information concerning the School of Education, address

M. G. NEALE,
DEAN, FACULTY OF EDUCATION,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

COLLEGE OF ENGINEERING

BUILDINGS

The Departments of Electrical and Mechanical Engineering occupy the lower floor of the Engineering Building, the Engineering Building Annex and Engineering Shop Building. The Department of Civil Engineering is housed in a portion of Switzler Hall and the Civil Engineering laboratories. The work in Chemistry required of students in Chemical Engineering is given in the Chemistry Building on the Francis Quadrangle. The work of Agricultural Engineering is carried on in the Agricultural Engineering Building and in the Agricultural Engineering Laboratories, both of which are on the University Farm.

LABORATORIES

AGRICULTURAL ENGINEERING. The agricultural engineering laboratory contains a large assortment of the best modern machinery, including one or more of the principal field and power machines. For instruction in gas engines and tractors, the laboratory is equipped with twenty stationary and portable gasoline and oil engines and eight to ten of the latest types of tractors with suitable equipment for testing same. Lighting units are provided for work on farm-lighting systems. Drafting tables are provided to accommodate the men designing farm buildings. The equipment for concrete work includes a complete set of concreting tools, molds for building blocks, forms for fence posts, water troughs and tanks, and tile machines, with small apparatus for testing cement and aggregates. A level and transit with complete set of tools are provided for tile drainage work. Complete sets of small hand tools, both for metal working and woodworking, are available for work in farm shop practice. Other farm shop equipment includes forges, anvils, a power drill, a power grinder, and a power saw.

CHEMICAL ENGINEERING. In addition to the laboratories in general chemistry, there are separate laboratories for other fundamental courses in chemistry required in the chemical engineering curriculum. The general analytical laboratory offers facilities for work in qualitative and quantitative analysis. Special work in the technical analysis of fuels, water, gas and commercial products is given in smaller laboratories equipped especially for these lines of work. Two laboratories are available for general work in organic chemistry, and more advanced work along organic lines is provided for in a furnace room and a laboratory for the preparation of organic compounds. The laboratory in physical chemistry is equipped for work in electrochemistry and measurements in radio-activity. Advanced students

have an opportunity to pursue work in metallography and microphotography on heat-treated alloy steels.

CIVIL ENGINEERING. The equipment for testing materials includes several vertical testing machines with all the necessary accessories for tension, compression, and transverse tests on iron, steel, cement, concrete, and brick.

The road materials laboratory contains machines for making complete tests upon stone for road purposes, a standard rattler for paving-brick tests, and apparatus required in investigating bituminous road materials.

A new hydraulic laboratory has been equipped for the study of problems where large quantities of flowing water are needed. Two large size, direct-connected electric motor-driven centrifugal pumps have been installed, which supply water for investigations relating to the flow of water in flumes, large pipes, and conduits; to the discharge over dams and weirs, through racks, sluices and submerged orifices; and to other features encountered in water power and water supply developments.

A complete selection of surveying instruments includes those used in ordinary field practice, precise surveying, geodetic work, hydrographic surveying, water supply and stream measurement.

ELECTRICAL ENGINEERING. The electrical engineering laboratory contains direct and alternating current generators and motors of the common types met with in practice, and all the instruments necessary to make complete tests of their operation. Besides several low-ratio transformers used in routine exercises, the laboratory has a 10,000-volt, a 40,000-volt and a 100,000-volt transformer for high-tension experiments.

A low voltage motor-generator set is provided for general electro-chemical processes, such as electroplating with gold, silver, nickel, and copper. One large and several small electric furnaces are used for demonstrations of the electric processes involved in the production of carborundum, graphite, emery, calcium carbide, and ferro-alloys.

Through the generosity of the American Telephone and Telegraph Company and its associated company, The Southwestern Bell, the department is enabled to offer experimental work in telephone transmission. The A. T. and T. apparatus given as a perpetual loan to the electrical engineering laboratory comprises a variable frequency oscillator, an amplifier—ammeter—voltmeter and an artificial line equivalent to 220 miles of No. 12 N.B.S.

MECHANICAL ENGINEERING. The mechanical engineering laboratory contains several different types of steam engines, a steam turbine with superheater, condensers, gas engines, reciprocating and centrifugal pumps, fans, blowers, heating coils for work on ventilation and heating, and a variety of other machinery. Standard apparatus for determining the analysis and calorific value of coals and gases is provided. The laboratory is supplied with the

usual equipment of indicators, gauges, water and gas meters, scales, and other necessary accessories.

The central power plant of the University is used for conducting boiler tests under actual operating conditions.

There is located in the Engineering Shop Building a well equipped pattern shop, moulding room, forge shop and gas furnaces for the heat treatment of steel and a general machine shop. There is also a production shop equipped with production machines. This shop is used as a laboratory to illustrate the best methods of factory organization and production.

The shops also are equipped with a high-grade, high-powered, motor driven lathe for experimental purposes. It is used in making production tests to determine the proper kinds of tools and the best cutting speeds for machine work on various kinds of metals. The lathe is equipped with elaborate indicating and recording devices by which highly accurate data may be secured.

A 50-horsepower bituminous gas producer provides facilities for test and research.

LIBRARY. The engineering library in the Engineering Building has about 6,858 standard engineering books. These have been very carefully selected and include the works of all the best American and English engineering authors. About 107 periodicals are regularly received, together with publications recording the transactions of the more important engineering societies.

ADMISSION, CURRICULA, AND DEGREES

REQUIREMENTS FOR ADMISSION: The requirements for admission to the College of Engineering are the same as the requirements for admission to the College of Arts and Science. (See page 35.)

CURRICULA AND DEGREES: There are five curricula leading respectively to the professional degrees of Agricultural Engineer, Chemical Engineer, Civil Engineer, Electrical Engineer, and Mechanical Engineer. The requirement for a professional degree is 150 credit hours, in addition to the requirement of military science and physical education.

The degree of Bachelor of Science in Engineering may be given at the end of eight terms of college work for a total of 120 hours' credit, in addition to the requirement of military science and physical education, as shown in the tables on page 171.

Students may obtain both the A.B. and a professional engineering degree in twelve semesters. Those who can afford the additional time required are urged to take advantage of the opportunity thus afforded for general cultural training combined with an engineering education.

All the five-year curricula hereafter tabulated are practically the same for the first two and one-half years. The purpose of this plan is to give a training in the fundamentals of a general education;

to lay a foundation of English, mathematics, physics and chemistry upon which the more technical training may be founded. The choice of specialization may be deferred until the fall term of the third year. During this term, in consultation with a faculty advisor the student makes his choice and plans his work to lead to a degree.

While the curricula are based upon the plan of industrial divisions and retain the historic names of "Civil," "Electrical" and "Mechanical" engineer and others more recently recognized yet the student has the opportunity of securing the advantage of a "functional" division if he so chooses. For instance, a "management" or "supervision" division is easily formulated from courses listed under the statements relating to railway and administrative engineering, electric railway engineering, factory production, labor supply, management and shopwork engineering. The industrial divisions are, in the following paragraphs, more specifically outlined.

AGRICULTURAL ENGINEERING

(Administered jointly by the Dean of the Faculty of Agriculture and the Dean of the Faculty of Engineering.)

The curriculum in agricultural engineering is planned to prepare the student for experimental, design, or sales work with farm machinery, equipment or building concerns, superintendency of farms where machinery, irrigation, drainage, or buildings play an important part in their management, or teaching or extension work with the various agricultural colleges. The curriculum emphasizes the fundamentals of engineering and includes sufficient work in agriculture to furnish a basis for engineering work in this field.

CHEMICAL ENGINEERING

Rapid development of the chemical industries and increasing demand for engineers trained in fundamental chemical subjects have led to the introduction of courses in chemical engineering. The curriculum outlined is designed to give a broad and thorough training in general engineering subjects, and in theoretical and applied chemistry. Instruction in chemistry continues throughout the course. The general principles of physical science are further emphasized by extended courses in mathematics, physics and mechanics.

The curriculum aims to teach the student a scientific method of work. Instruction is given by means of recitations, lectures, laboratory work, and conferences. The electives enable the student to give some attention to specialization, but the prime object of the course is to produce a broadly-trained chemical engineer.

CIVIL ENGINEERING

The field covered by this curriculum is wide, embracing topographical, railway, and administrative, hydraulic, structural, municipal, and highway engineering. It is the aim to give a broad gen-

eral training which will later serve as a foundation for the development of any special line of civil engineering, and to fit men for technical and administrative positions in the promotion, design, construction, operation, and management of those projects and corporations with which the civil engineer is connected. The training is largely fundamental in nature but sufficient detailed practice is included to enable the graduate to immediately occupy a productive and remunerative position. A large percentage of graduates fill administrative positions, some entirely outside of engineering.

ELECTRICAL ENGINEERING

The curriculum in electrical engineering is intended to prepare students for electrical designing, manufacturing, contracting and for the installation and management of central and isolated electric light stations, power plants, and electric railways.

The technical work consists of the theory and principles of electricity and magnetism; electrical measurements; calibration of instruments; tests of all kinds; design and construction; study of problems in the generation, transmission, distribution, and utilization of electrical energy.

MECHANICAL ENGINEERING

In addition to the broad, general background in engineering training the curriculum in mechanical engineering provides training in fields relating to manufacturing, management, design and those phases of power engineering dealing with the problems of the development of engineering properties, planning and installing equipment, power plant operation, inspection and testing.

The continued development of our manufacturing industries involves increased attention to the problems of economy in production and in the careful planning of all engineering properties. The solution of these problems calls for the best thought of the well trained engineer and no field offers greater returns or a better opportunity for a high type of constructive work.

CURRICULA IN ENGINEERING, 1927-1928

First Year

Same in all Curricula.

Subject	Department and Course No.	Semester	
		First	Second
Problems in citizenship.....	Citizenship 1f, 2w.....	2	2
English composition and rhetoric.....	English 1f, 2w.....	3	3
Trigonometry and algebra.....	Math. 2f.....	5	
Analytical geometry.....	Math. 4f.....		5
General inorganic chemistry.....	Chem. 1f or w.....	5 or	5
Drawing I.....	M. E. 1f or w.....	3 or	3
Pattern making.....	M. E. 25f or w.....	2 or	2
Military science and physical education..	M. S.....	1½	1½
		16½	16½

Second Year

Same in all Curricula except Chemical Engineering.

Calculus.....	Math. 5f, 106w.....	5	5
General physics.....	Phys. 3f, 4w.....	5	5
Drawing II.	M. E. 2f or w.	2 or	2
Elementary surveying.....	C. E. 1f or w.....	3 or	3
Forge and machine work.....	M. E. 30f or w.	2 or	2
Materials of construction.....	C. E. 32a or w.....	3 or	3
Military science and physical education..	M. S.....	1½	1½
		16½	16½

ELECTRICAL AND MECHANICAL ENGINEERING

Third Year

Mechanics of engineering.....	Mech. 100f, 101w.....	4	4
Electrical machinery.....	E. E. 101f, 102w.....	4	4
Heat machinery A.....	M. E. 131f.....	3 or	3
Hydraulics.....	C. E. 140f.....	3 or	3
Machine design A.....	M. E. 103w.....		3
Graphic statics.....	C. E. 120w.....		2
General economics.....	Econ. 1f.....	5	
		16	16

AGRICULTURAL ENGINEERING

Third Year

Mechanics of engineering.....	Mech. 100f, 101w.....	4	4
Electrical machinery.....	E. E. 101f, 102w.....	4	4
Heat machinery A.....	M. E. 131f.....	3	
Gas engines.....	A. E. 11w.....		3
Hydraulics.....	C. E. 140f.....	3	
Farm buildings.....	A. E. 103w.....		3
Graphic statics.....	C. E. 120f.....	2	
Farm machinery... ..	A. E. 30w.....		2
		16	16

Fourth Year

Subject	Department and Course No.	Semester	
		First	Second
Machine design A.....	M. E. 103f.....	3	
Soils.....	Soils 1f.....	5	
Field crops.....	Field crops 1w.....		3
General economics.....	Econ. 1w.....		5
Farm tractors.....	A. E. 112f.....	2	
Farm building design.....	A. E. 104w.....		2
Irrigation and drainage.....	A. E. 122f.....	2	
Special problems in A. E.....	A. E. 101f.....	2	
Electives.....			4
		14	14

Fifth Year

Roads and pavements.....	C. E. 151f.....	2	
Sanitary problems.....	C. E. 152f.....	2	
Business law.....	Econ. 150w.....		3
Thesis.....	A. E. 200f or w.....	2	3
Electives.....		9	9
		15	15

CHEMICAL ENGINEERING

Second Year

Calculus.....	Math. 5a, 106w.....	5	5
General physics.....	Physics 3a, 4w.....	5	5
General inorganic chemistry.....	Chemistry 2f.....	3	
Qualitative analysis.....	Chemistry 27w.....		3
Forge and machine works.....	M. E. 30f or w.....	2 or	2
Drawing II.....	M. E. 2a or b.....	2 or	2
Military science and physical education.....	M. S.....	1½	1½
		16½	16½

Third Year

Mechanics of engineering.....	Mech. 100f, 101w.....	4	4
Electrical machinery.....	E. E. 101f, 102w.....	4	4
Organic chemistry.....	Chem. 110f.....	5	
Quantitative analysis.....	Chem. 121w.....		5
Materials of construction.....	C. E. 32f.....	3	
Elementary surveying.....	C. E. 2w.....		3
		16	16

Fourth Year

Subject	Department and Course No.	Semester	
		First	Second
Physical chemistry.....	Chem. 131f.....	5	
Hydraulics.....	C. E. 140f.....	3	
Machine design A.....	M. E. 103w.....		3
Heat machinery A.....	M. E. 131f.....	3	
Graphic statics.....	C. E. 120w.....		2
Organic chemistry.....	Chem. 112f.....	3	
General economics.....	Econ. 1w.....		5
Technical composition.....	Eng. 103w.....		2
Elective.....			2
		14	14

Fifth Year

Industrial Chemistry.....	Chem. 141f, 142w.....	3	3
Chemical technology.....	Chem. 143f, 143w.....	2	2
Quantitative analysis.....	Chem. 132f.....	5	
Business law.....	Econ. 150w.....		3
Thesis.....		2	2
Elective (to be approved by adviser).....		3	5
		15	15

CIVIL ENGINEERING

Third Year

Mechanics of engineering.....	Mech. 100f, 101w.....	4	4
Electrical machinery.....	E. E. 101f, 102w.....	4	4
Heat machinery A.....	M. E. 131f or w.....	3	or 3
Hydraulics.....	C. E. 140f.....	3	or 3
Graphic statics.....	C. E. 120f.....	2	
Higher surveying.....	C. E. 104w.....		4
Machine design A.....	M. E. 101w.....	3	
		16	15

Fourth Year

Roads and pavements.....	C. E. 151f.....	2	
Route surveys.....	C. E. 111f.....	4	
Stresses.....	C. E. 121f.....	3	
Sanitary problems.....	C. E. 152f.....	2	
Masonry structures.....	C. E. 125f.....	3	
Technical composition.....	Eng. 103w.....		2
Structural design.....	C. E. 122w.....		3
General economics.....	Econ. 1w.....		5
Elective.....			5
		14	15

Fifth Year

Subject	Department and Course No.	Semester	
		First	Second
Business law.....	Econ. 150w		
or.....			0 or 3
Contracts.....	Law 100f.....	3 or 0	
Concrete structures.....	C. E. 226w.....		3
Water supply.....	C. E. 142w.....		2
Bridge design.....	C. E. 222f.....	3	
Business relations.....	C. E. 112f.....	3	
Water power.....	C. E. 141w.....		3
Thesis or elective.....	C. E. 298f, 299w.....	6 or 9	
Elective.....			7 or 4
		15	15

ELECTRICAL ENGINEERING

Fourth Year

Electrical machinery B.....	E. E. 110f, 111w.....	6	5
Telephony.....	E. E. 134w.....		3
Heat machinery B.....	M. E. 132f.....	4	
¹ Electrical measurements.....	Phys. 104f.....	4	
Technical composition.....	Eng. 103w.....		2
Elective.....			4
		14	14

¹Students interested in administrative and commercial work in industry may substitute courses in Law or in Business Administration for Electrical Measurements.

ELECTRICAL ENGINEERING

Fifth Year

Electrical machinery C.....	E. E. 210f.....	3	
Electrical machine design.....	E. E. 220w.....		3
High voltage transmission.....	E. E. 242w.....		3
Electrical power distribution.....	E. E. 230f.....	3	
Water power.....	C. E. 141f.....		
or.....		3	
Heat machinery B.....	M. E. 133w.....	3 or 0	0 or 3
or.....			
Machine design B.....	M. E. 130w.....		
Contracts.....	Law 100f.....		
or.....		3	
Business Law.....	Econ. 150f.....		
Thesis.....			4
Elective.....		3 or 6	5 or 2
		15	15

Note—Upon recommendation of the graduate adviser in the department and approval of the dean, a research option, with maximum of 8 credit hours per semester, may be substituted, in special cases, for its equivalence in hours in the above curriculum.

MECHANICAL ENGINEERING

Fourth Year

Subject	Department and Course No.	Semester	
		First	Second
Machine design B.....	M. E. 103w.....		4
Mechanical laboratory.....	M. E. 121f, 122w.....	2	2
Heat machinery B.....	M. E. 132f, 133w.....	4	3
Factory production.....	M. E. 142f.....	4	
Technical composition.....	Eng. 103w.....		2
Elective.....		4	3
		14	14

Fifth Year

Management engineering.....	M. E. 111f.....	3	
Prime mover design.....	M. E. 104f, 105w.....	3	3
Applied thermodynamics.....	M. E. 231w.....		3
Elementary accounting.....	Econ. 17f.....	3	
Elective.....		6	9
		15	15

Note—Applicants for the Bachelor's degree must submit evidence of two months' experience in some field of engineering or activity closely related to engineering.

Applicants for the professional degrees must submit evidence of four months' experience in some field of engineering or activity closely related to engineering.

A special bulletin of the College of Engineering is issued each year. This contains a detailed announcement of all courses, entrance requirements, rules and regulations of the College of Engineering, and should be consulted by persons desiring full information concerning the College. For this bulletin, address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information regarding the College of Engineering, address

E. J. McCAUSTLAND,
DEAN, FACULTY OF ENGINEERING,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

THE ENGINEERING EXPERIMENT STATION

OFFICERS OF THE STATION

STRATTON DULUTH BROOKS, A. M., LL. D. President of the University
ELMER JAMES McCAUSTLAND, C. E., M. C. E. Director

The Engineering Experiment Station was established by the Board of Curators, July 1, 1909.

The object of the station is to be of service to the people of the State of Missouri by investigating such problems in engineering lines as appear to be of the most direct and immediate benefit, by publishing these studies and information in the form of bulletins, and by research of importance to the manufacturing and industrial interests of the state and to engineers.

The staff of the station at present consists of a director, together with a number of teachers who have undertaken research under the direction of the station.

Bulletins have been published as follows:

¹Vol. 1, No. 1, *Acetylene for Lighting Country Homes*, by J. D. Bowles, research assistant, 1909-10.

¹Vol. 1, No. 2, *Water Supply for Country Homes*, by K. A. McVey, research assistant, 1909-10.

¹Vol. 1, No. 3, *Sanitation and Sewage Disposal for Country Homes*, by W. C. Davidson.

¹Vol. 2, No. 1, *The Heating Value and Proximate Analysis of Missouri Coals*, by C. W. Marx and Paul Schweitzer. (A reprint.)

Vol. 2, No. 2, *Friction and Lubrication Testing Apparatus*, by Alan E. Flowers.

¹Vol. 2, No. 3, *Tests of Road Materials of Missouri*, by W. S. Williams and Warren Roberts.

¹Vol. 3, No. 1, *The Use of Metal Conductors to Protect Buildings from Lightning*, by E. W. Kellogg.

¹Vol. 3, No. 2, *Firing Tests on Missouri Coal*, by H. N. Sharp, research assistant, 1911-12.

Vol. 3, No. 3, *A Report on Steam Boiler Trials Under Operating Conditions*, by A. L. Wescott.

¹Vol. 4, No. 1, *Economics of Rural Distribution of Electric Power*, by L. E. Hildebrand, research assistant, 1912-13.

Vol. 4, No. 2, *Comparative Tests of Cylinder Oils*, by M. P. Weinbach.

¹Vol. 4, No. 3, *Artesian Waters of Missouri*, by A. W. McCoy, research assistant, 1912-13.

¹Out of print.

¹Vol. 4, No. 4, *Friction Tests of Lubricating Greases and Oils*, by A. L. Wescott.

¹No. 14, *A Study of the Effects of Heat on Missouri Granites*, by W. A. Tarr and L. M. Neuman, research assistant.

¹No. 15, *A Preliminary Study Relating to the Water Resources of Missouri*, by T. J. Rodhouse.

¹No. 16, *The Economics of Electric Cooking*, by P. W. Gumaer.

¹No. 17, *Earth Roads and the Oiling of Roads*, by H. A. LaRue.

¹No. 18, *Heat Transmission Thru Boiler Tubes*, by E. A. Fessenden and Jiles W. Haney, research assistant, 1913-14, 1914-15.

No. 19, *Geology of Missouri*, by E. B. Branson.

No. 20, *Energy Necessary to Shear Steel at High Temperatures*, by Guy D. Newton.

¹No. 21, *Water Supply and Sewage Disposal for Country Homes*, by E. J. McCaustland.

No. 22, *Study Relating to the Water Resources of Missouri*, by T. J. Rodhouse.

No. 23, *Experiments on the Extraction and Recovery of Radium from American Carnotite Ores*, by H. H. Barker, research professor, Engineering Experiment Station and Herman Schlundt.

No. 24, *The Grading of Earth Roads*, by H. A. LaRue.

No. 25, *Experiments on Sun Flower Seed Oil*, by H. E. French and R. O. Humphrey.

No. 26, *Directory of Alumni and Former Students, College of Engineering*.

The following studies are in progress:

Insulating value of paints and varnishes.

Surface iron losses in rotating electrical machines.

Survey of road-making materials in Missouri.

Coal testing.

Energy required to shear steel at high temperatures.

Investigation of lubricating oils.

Effect of lime in earth roads.

Also a number of detailed studies of materials and processes and investigations of Missouri's natural resources.

A standardizing laboratory has been established and part of the apparatus is now available.

For further information regarding the Engineering Experiment Station, address

DIRECTOR OF THE ENGINEERING EXPERIMENT STATION,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

¹Out of print.

THE SCHOOL OF FINE ARTS

The School of Fine Arts was organized by the Board of Curators in December, 1923. It offers to its students opportunities for professional training in music and the other fine arts and affords students in other divisions of the University an opportunity to cultivate these subjects as elements in liberal education.

THE SCHOOL OF FINE ARTS OFFERS:

a. Four-year courses in Theory of Music, in Piano, in Voice, in Violin and in Violoncello, leading to the degree of Bachelor of Fine Arts (B. F. A.) in Music.

b. Courses in Clarinet, Flute and other orchestral instruments, not leading to a degree in themselves, but which are accepted for credit in the courses listed under Sections a and c.

c. A four-year course in Public School Music, administered conjointly with the School of Education, leading to the degree of Bachelor of Science in Education (B.S. in Ed.), and carrying a life certificate to teach as Supervisor of Music.

d. Four-year courses in Theory, Practice and History of the Graphic and Plastic Arts, with underclass subjects furnishing proper background, and upperclass subjects affording opportunity for specialization in Drawing and Painting, in Decorative and Applied Design, and in Art History and Appreciation, leading to the degree of Bachelor of Fine Arts (B.F.A.) in Art. Underclassmen in the College of Arts and Science can so arrange their work as to satisfy the requirements for the A.B. and B.F.A. degrees in five years, with the possible addition of a summer term in some cases.

e. A four-year course in Art Education, administered conjointly with the School of Education, leading to the degree of Bachelor of Science in Education (B.S. in Ed.), and carrying a life Certificate to teach as a Supervisor of Art.

f. Preparatory work in Piano, Voice, Violin, Violoncello, Flute, Clarinet and other orchestral instruments.

g. Opportunities for students in other colleges of the University to take the work in Music or Art, for which they are prepared. Such work is subject to the credit rules of the college in which regularly enrolled.

REQUIREMENTS FOR ADMISSION: For information in regard to requirements for admission see page 35.

ENTRANCE CREDITS IN MUSIC: For admission to Freshman standing in Piano, or in Voice, the student must be able to play acceptably at least three of the two-part Inventions of J. S. Bach, and one of the easier Sonatas of Haydn or Mozart.

For admission to Freshman standing in Violin, the student must have the ability to play the first ten of the Kayser Etudes, or the equivalent.

For admission to Freshman standing in Violoncello, the student must have the ability to play the first five Etudes in the second book of Dotzauer, or the equivalent, and scales through nine keys in one octave.

Three units of entrance credit will be given for the above degree of attainment, when it is accompanied by adequate work in Elementary Theory, Rudiments of Music, and Ear Training. Such credit will be given only on examination.

Students having entrance credits in academic subjects, but deficient in music, may take this work in the University and receive preparatory credit for it. They will be classified as "Freshmen, conditioned in Music." Such conditions must be removed by the end of the Sophomore year.

FEES: For information in regard to scholarships, fees, etc., see the sections under General Information.

ENROLLMENT: Students may enroll at any time for private lessons in Applied Music. Credit will not be given, however, unless enrollment is made at the beginning of a semester.

All University work, including private lessons, conforms to the University calendar. Lessons falling at times when the University is not regularly in session are not given.

Lessons missed through the student's own negligence will not be made up.

Students may not take less than two lessons per week without special consent of the Dean. The maximum credit granted for one lesson per week in Applied Music, will not exceed one hour per semester.

Under exceptional conditions single lessons in applied music may be had by special students with the approval of the Dean at single lesson rates. Such lessons must be paid for in advance.

No refund will be allowed for cancellation of work in applied music, except in cases of long continued illness.

CONCERTS AND RECITALS: Concerts and recitals by visiting artists and musical organizations are given from time to time in the University Auditorium. The admission is kept as low as possible, in order that such opportunities of hearing good music may be within the reach of all. Attendance is required of all music students.

Recitals, public and private, are given at frequent intervals by members of the faculty of the School of Fine Arts and by advanced students. Attendance at these recitals is required of all music students. Students are required to take part in such recitals whenever called upon to do so by their instructors.

MUSICAL ORGANIZATIONS: The University Chorus rehearses once each week, and prepares some large choral work for presentation with soloists and orchestra, at its concert in the spring. Faculty,

students, and singers from the community are admitted to membership after conference with the director of the chorus. All vocal students in the School of Fine Arts, subject to the approval of their teacher and the Dean, are required to sing in the University Chorus. All members of the Men's Glee Club and the Women's Glee Club, subject to the approval of the director of the chorus, and the leaders of the Glee Clubs are required to sing in the University Chorus. Credit, two hours at the end of the second term.

The University Orchestra rehearses once each week. Concerts are given from time to time. Faculty, students, and players of orchestral instruments from the community are admitted to membership after conference with the director of the orchestra. Credit, two hours at the end of the second term.

The University Band, see page 230 of this Catalog.

The Men's Glee Club and the Women's Glee Club are student organizations. They give local and out-of-town concerts, and are open to any regularly enrolled student in the University who can meet their vocal requirements. Members of both these organizations are required to sing in the University Chorus, subject to the approval of the director of that organization, and the leaders of the Glee Clubs.

ART COLLECTIONS AND EXHIBITIONS: Besides a number of well lighted and suitably equipped studios and lecture rooms the University has a collection of plaster casts of famous statues and reliefs, and a large number of lantern-slides and photographs to illustrate the world's art.

Exhibitions of original paintings, etchings, crafts, architectural drawings, etc., are held regularly which art students are required to study. These represent modern as well as older practice.

Several organizations, such as the sketch club, give students an opportunity for original endeavor. The designing of stage sets, posters, etc., is encouraged.

The student's work is the property of the school whenever desired for exhibition or other purposes; all work must be turned in at the end of the term or whenever requested by the instructor. Work not needed will be returned to the student.

REQUIREMENTS FOR GRADUATION: The School of Fine Arts confers the Degree of Bachelor of Fine Arts, qualified by the department in which the major work is done. In order to receive the degree of Bachelor of Fine Arts, the candidate must meet the following requirements:

1. He must have been regularly admitted to the School of Fine Arts.

2. The work of the senior year must have been done in residence at the University.

3. He must have completed a total of 126 hours of University work, including 40 hours of academic subjects, seventy hours of professional subjects and 6 hours (women 2 hours) of required

military and Physical Education (an hour is one class period per week for one semester).

4. He must have completed a total of 126 points. Each hour of credit is valued in points as follows: The grade of E carries 3 points; S, 2 points; M, 1 point; passed grades and advanced standing are treated as of M grade. No points are given for I grades.

IN MUSIC

5a. He must complete the equivalent of one of the courses outlined below and containing the following:

In piano, voice, violin or violoncello

Theoretical and Historical Music.....	36 hours
Applied Music.....	38 hours
Academic Subjects.....	40 hours
Elective (Women 10 hours).....	6 hours
Military and Physical Education (Women 2 hours)	6 hours

126 hours

In Theory of Music

Theoretical and Historical Music.....	46 hours
Applied Music.....	28 hours
Academic Subjects.....	40 hours
Elective (Women 10 hours).....	6 hours
Military and Physical Education (Women 2 hours)	6 hours

126 hours

b. In Applied Music at the end of the junior year he will appear before a Faculty Committee on Senior Standing in Music. This Committee will pass upon the students' advancement, and senior standing will be granted in accordance with the actual musical ability of the individual student irrespective of the number of credit hours already earned.

c. In Applied Music at the end of the senior year he must present from memory a recital program of one hour in length, of a grade of difficulty, meeting the approval of the Committee on Senior Standing in Music.

d. In Theory of Music he must present a program of original compositions occupying at least one hour. He must also present as a thesis a composition in one of the larger forms, either for a single instrument or for some combination of instruments meeting the approval of the Committee on Senior Standing in Music.

IN ART

6a. He must complete the equivalent of the fundamental course prescribed for the first two years of Art Work. See page 187.

b. By the end of the sophomore year the student elects his field of specialization and selects from the following Junior-Senior schedules the one suited to his needs. Before he can be graduated he must have completed all the original and other work in a manner acceptable to the faculty of the Department of Art. See pages 187 to 189.

SUGGESTED CURRICULUM IN PIANO

Freshman

	<i>Hours</i>		<i>Hours</i>
Harmony, 1f and w.....	2	Harmony, 2f and w.....	2
Dictation and Ear Training, 5f and w.....	1	Dictation and Ear Training, 6f and w.....	1
Piano, 82f and w.....	3	Piano, 83f and w.	3
English.....	3	English.....	3
Citizenship.....	2	Citizenship.....	2
Language (French or German)...	5	Language (French or German)	5
Military or Physical Education. $\frac{1}{2}$ or $1\frac{1}{2}$		Military or Physical Educa- tion..... $\frac{1}{2}$ or $1\frac{1}{2}$	
<hr/> 16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		<hr/> 16 $\frac{1}{2}$ or 17 $\frac{1}{2}$	

Sophomore

	<i>Hours</i>		<i>Hours</i>
Harmony, 3f and w.....	3	Harmony, 4f and w.....	3
Dictation and Ear Training, 7f and w.....	1	Dictation and Ear Training, 8f and w.....	1
Piano, 84f and w.....	4	Piano, 85f and w.....	4
Ensemble (Piano), 75f.....	1	Ensemble (Piano), 76w.....	1
Appreciation of Music, 51f.....	2	Appreciation of Music, 52w..	2
Physics, Literature, History or Psychology.....	5	Physics, Literature, History or Psychology.....	5
Military or Physical Educa- tion..... $\frac{1}{2}$ or $1\frac{1}{2}$		Military or Physical Educa- tion..... $\frac{1}{2}$ or $1\frac{1}{2}$	
<hr/> 16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		<hr/> 16 $\frac{1}{2}$ or 17 $\frac{1}{2}$	

Junior

	<i>Hours</i>		<i>Hours</i>
Counterpoint, 109f.....	3	Counterpoint, 110w.....	3
Musical Form, 111f, or		Musical Form, 112w, or	
Musical Analysis, 113f.....	2	Musical Analysis, 114w.....	2
Piano, 182f and w.....	5	Piano, 183f and w.....	5
Ensemble (String), 77f.....	1	Ensemble (String), 78w.....	1
History of Music, 153f.....	3	History of Music, 154w.....	3
¹ Electives.....	2	¹ Electives.....	2
<hr/>		<hr/>	
16		16	

Senior

	<i>Hours</i>		<i>Hours</i>
Musical Electives.....	4	Musical Electives.....	4
Selected from following:		Selected from following:	
Composition, 115f, 2 hours;		Composition, 116w, 2 hrs.;	
Orchestral Instruments, 179f,		Orchestral Instruments,	
2 hrs.; History of Music, 255f,		180w, 2 hrs.; History of	
2 hrs.; Polyphonic Forms, 121f,		Music, 256w, 2 hrs.; Poly-	
2 hrs.		phonic Forms, 122w, 2hrs.;	
		Instrumentation, 118w, 2	
		hrs.	
Piano, 184f and w.....	5	Piano, 185f and w.....	5
Piano Teaching, 140f and w....	1	Piano Teaching, 141f and w..	1
¹ Electives.....	5	Aesthetics (Philosophy) 117w.	3
		¹ Electives.....	2
<hr/>		<hr/>	
15		15	

¹Sociology, Literature, History, General Psychology, Music Systems (Psychology 12f), or Philosophy, are suggested as suitable electives for the junior and senior years.

SUGGESTED CURRICULUM IN VOICE

Freshman

	<i>Hours</i>		<i>Hours</i>
Harmony, 1f and w.....	2	Harmony, 2f and w.....	2
Dictation and Ear Training, 5f		Dictation and Ear Training,	
and w.....	1	6f and w.....	1
Voice, 86f and w.....	2	Voice, 87f and w.....	2
² Piano, 82f and w.....	1	² Piano, 82f and w.....	1
English.....	3	English.....	3
Citizenship.....	2	Citizenship.....	2
Language (Italian).....	5	Language (Italian).....	5
Chorus, 71f.....	0	Chorus, 72w.....	0
Military or Physical Educa-		Military or Physical Educa-	
tion.....	$\frac{1}{2}$ or $1\frac{1}{2}$	tion.....	$\frac{1}{2}$ or $1\frac{1}{2}$
<hr/>		<hr/>	
16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		16 $\frac{1}{2}$ or 17 $\frac{1}{2}$	

²Students in voice lacking entrance requirements in piano will study piano throughout their four-year course. In no case will this relieve them of other regular requirements for the degree.

Sophomore

<i>Hours</i>		<i>Hours</i>	
Harmony, 3f and w.....	3	Harmony, 4f and w.....	3
Dictation and Ear Training, 7f and w.....	1	Dictation and Ear Training, 8f and w.....	1
Voice, 88f and w.....	3	Voice, 89f and w.....	3
Piano, 83f and w.....	2	Piano, 83f and w.....	2
Appreciation of Music, 51f.....	2	Appreciation of Music, 52w..	2
Language (German).....	5	Language (German).....	5
Chorus, 71f.....	0	Chorus, 72w.....	0
Military or Physical Education.....	$\frac{1}{2}$ or $1\frac{1}{2}$	Military or Physical Education.....	$\frac{1}{2}$ or $1\frac{1}{2}$
	16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		16 $\frac{1}{2}$ or 17 $\frac{1}{2}$

Junior

<i>Hours</i>		<i>Hours</i>	
Counterpoint, 109f.....	3	Counterpoint, 110w.....	3
Musical Form, 111f or Musical Analysis, 113f.....	2	Musical Form, 112w or Musical Analysis, 114w.....	2
Voice, 186f and w.....	4	Voice, 187f and w.....	4
Language (French).....	5	Language (French).....	5
Chorus, 71f.....	1	Chorus, 72w.....	1
	15		15

Senior

<i>Hours</i>		<i>Hours</i>	
History of Music, 153f.....	3	History of Music, 154w.....	3
Voice, 188f and w.....	4	Voice, 189f and w.....	4
Voice Teaching, 144f and w....	1	Voice Teaching, 145f and w..	1
Chorus, 71f.....	1	Chorus, 72w.....	1
¹ Electives.....	7	Aesthetics (Philosophy) 117w.	3
		¹ Electives.....	3
	16		15

¹Sociology, Literature, History, General Psychology, Music Systems (Psychology 12f), or Philosophy, are suggested as suitable electives for the senior year.

SUGGESTED CURRICULA IN VIOLIN OR VIOLONCELLO

Freshman

<i>Hours</i>		<i>Hours</i>	
Harmony, 1f and w.....	2	Harmony, 2f and w.....	2
Dictation and Ear Training, 5f and w.....	1	Dictation and Ear Training, 6f and w.....	1
Violin, 90f and w or Violoncello, 94f and w.....	3	Violin, 91f and w or Violoncello, 95f and w.....	3
English.....	3	English.....	3
Citizenship.....	2	Citizenship.....	2
Language (French or German)..	5	Language (French or German)	5
Orchestra, 73f.....	0	Orchestra, 74w.....	0
Military or Physical Education.....	$\frac{1}{2}$ or $1\frac{1}{2}$	Military or Physical Education.....	$\frac{1}{2}$ or $1\frac{1}{2}$
	16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		16 $\frac{1}{2}$ or 17 $\frac{1}{2}$

Sophomore

	<i>Hours</i>		<i>Hours</i>
Harmony, 3f and w.....	3	Harmony, 4f and w.....	3
Dictation and Ear Training, 7f and w.....	1	Dictation and Ear Training, 8f and w.....	1
Violin, 92f and w or Violoncello, 96f and w.....	4	Violin, 93f and w or Violon- cello, 97f and w.....	4
Ensemble, 77f.....	1	Ensemble, 78w.....	1
Appreciation of Music, 51f.....	2	Appreciation of Music, 52w..	2
Physics, Literature, History or Psychology.....	5	Physics, Literature, History or Psychology.....	5
Orchestra, 73f.....	0	Orchestra, 74w.....	0
Military or Physical Educa- tion.....	$\frac{1}{2}$ or $1\frac{1}{2}$	Military or Physical Educa- tion.....	$\frac{1}{2}$ or $1\frac{1}{2}$
<hr/>		<hr/>	
16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		16 $\frac{1}{2}$ or 17 $\frac{1}{2}$	

Junior

	<i>Hours</i>		<i>Hours</i>
Counterpoint, 109f.....	3	Counterpoint, 110w.....	3
Musical Form, 111f, or		Musical Form, 112w, or	
Musical Analysis, 113f.....	2	Musical Analysis, 114w.....	2
Violin, 190f and w or Violoncello,		Violin, 191f and w or Violon-	
194f and w.....	5	cello, 195f and w.....	5
History of Music, 153f.....	3	History of Music, 154w.....	3
Orchestra, 73f.....	1	Orchestra, 74w.....	1
¹ Electives.....	2	¹ Electives.....	2
<hr/>		<hr/>	
	16		16

Senior

	<i>Hours</i>		<i>Hours</i>
Musical Electives.....	4	Musical Electives.....	4
Selected from the following:		Selected from the following:	
Piano; Composition, 115f, 2 hrs.; Orchestral Instruments, 179f, 2 hrs.; History of Music, 255f, 2 hrs.; Polyphonic Forms, 121f, 2 hrs.		Piano; Composition, 116w, 2 hrs.; Orchestral Instruments, 180w, 2 hrs.; History of Music, 256w, 2 hrs.; Polyphonic Forms, 122w, 2 hrs.; Instrumentation, 118w, 2 hrs.	
Violin, 192f and w or Violoncello, 196f and w.....	5	Violin, 193f and w or Violoncello, 197f and w.....	5
Violin Teaching, 142f and w or Violoncello Teaching, 148f and w.....	1	Violin Teaching, 143f and w or Violoncello Teaching, 149f and w.....	1
Orchestra, 73f.....	1	Orchestra, 74w.....	1
¹ Electives.....	5	Aesthetics (Philosophy) 117w.	3
		¹ Electives.....	2
<hr/>		<hr/>	
	16		16

¹Sociology, Literature, History, General Psychology, Music Systems (Psychology 12f), or Philosophy are suggested as suitable electives for the junior and senior years.

SUGGESTED CURRICULUM IN THEORY OF MUSIC

Students are not permitted to specialize in Theory of Music until they have reached the Junior year. In the Freshman and Sophomore years, they will take one of the regular courses for Piano, Voice, Violin, or Violoncello.

<i>Junior</i>			
	<i>Hours</i>		<i>Hours</i>
Counterpoint, 109f.....	3	Counterpoint, 110w.....	3
Musical Form, 111f.....	2	Musical Form, 112w.....	2
¹ Piano or Violin or Violoncello...	3	¹ Piano or Violin or Violoncello	2
Ensemble, 75f or 77f.....	1	Ensemble, 76w or 78w.....	1
History of Music, 153f.....	3	History of Music, 154w.....	3
Orchestral Instruments, 179f....	2	Orchestral Instruments, 180w	2
² Electives.....	2	Instrumentation, 118w.....	2
<hr/>		<hr/>	
16		15	

<i>Senior</i>			
	<i>Hours</i>		<i>Hours</i>
Polyphonic Forms, 121f.....	2	Polyphonic Forms, 122w....	2
Composition, 115f.....	2	Composition, 116w.....	2
Orchestration, 219f.....	2	Orchestration, 220w.....	2
¹ Piano or Violin or Violoncello..	3	Thesis.....	3
Teaching of Theory, 146f.....	1	Teaching of Theory, 147w...	1
History of Music, 255f.....	2	History of Music, 256w....	2
² Electives.....	4	Aesthetics (Philosophy) 117w	3
<hr/>		<hr/>	
16		15	

¹Candidates for the degree in Theory must play both the Piano and Violin or Violoncello to a moderate degree. The choice of instruments in the Junior and Senior years will be made in accordance with the students' needs.

²Sociology, Literature, History, General Psychology, Music Systems, (Psychology, 12f) or Philosophy, are suggested as suitable electives for the senior year.

SUGGESTED CURRICULUM IN PUBLIC SCHOOL MUSIC

<i>Freshman</i>			
	<i>Hours</i>		<i>Hours</i>
Harmony, 1f and w..	2	Harmony, 2f and w..	2
Dictation and Ear Training, 5f		Dictation and Ear Training,	
and w..	1	6f and w..	1
Voice, 86f and w..	1	Voice, 86f and w..	1
Piano, 94f and w..	2	Piano, 95f and w..	2
English.....	3	English.....	3
Citizenship.....	2	Citizenship.....	2
Language.....	5	Language.....	5
Chorus, 71f.....	0	Chorus, 72w.....	0
Military or Physical Educa-		Military or Physical Educa-	
tion..... $\frac{1}{2}$ ² or 1 $\frac{1}{2}$		tion..... $\frac{1}{2}$ or 1 $\frac{1}{2}$	
<hr/>		<hr/>	
16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		16 $\frac{1}{2}$ or 17 $\frac{1}{2}$	

Sophomore

	<i>Hours</i>		<i>Hours</i>
Harmony, 3f and w.....	3	Harmony, 4f and w.....	3
Dictation and Ear Training, 7f and w.....	1	Dictation and Ear Training, 8f and w.....	1
Voice, 87f and w.....	2	Voice, 88f and w.....	2
Piano, 96f and w or Violin or Violoncello.....	2	Piano, 97f and w, or Violin or Violoncello.....	2
Ensemble, 75f or 77f.....	1	Ensemble, 76w or 78w.....	1
Appreciation of Music, 51f.....	2	Appreciation of Music, 52w..	2
General Psychology or Physics..	5	General Psychology or Physics	5
Chorus, 71f.....	0	Chorus, 72w.....	0
Military or Physical Educa- tion.....	$\frac{1}{2}$ or $1\frac{1}{2}$	Military or Physical Educa- tion.....	$\frac{1}{2}$ or $1\frac{1}{2}$
	<hr/>		<hr/>
	16 $\frac{1}{2}$ or 17 $\frac{1}{2}$		16 $\frac{1}{2}$ or 17 $\frac{1}{2}$

In the Junior and Senior Years, students will enroll in the School of Education, leading to the degree of Bachelor of Science in Education. For curricula in these years see under School of Education, page 161.

SUGGESTED CURRICULA FOR THE DEPARTMENT OF ART

FUNDAMENTAL COURSE

Freshman

	<i>Hours</i>		<i>Hours</i>
English.....	3	English.....	3
Citizenship...	2	Citizenship.....	2
Introduction to Art, 2f	5	Design, 10w or Representation	
Geology, 1f; Zoology, 1f; or		4w.....	5
¹ Physics, 1f.....	5	Art Craft III, 101w.....	2
Choice of:		Choice of:	
¹ Shades and Shadows, 6f;		¹ Perspective, 7w; Master-	
Masterpieces (History of Art)		pieces (History of Art) 115	
113f, or Classical Mythology		w, or Classical Mythology	
(Classical Archeology), 2f.....	1	(Classical Archeology).....	1
Military or Physical Educa-		Elective.....	3
tion.....	½ or 1 ½	Military or Physical Educa-	
		tion.....	½ or 1 ½
<hr/>		<hr/>	
16 ½ or 17 ½		16 ½ or 17 ½	

Sophomore

	<i>Hours</i>		<i>Hours</i>
French, 1f.....	5	French, 2w.....	5
Design, 10f, or Representation, 4f	5	Advanced Representation, 150w.....	5
Psychological Principles of Art, 100f.....	3	Introduction to History, 1w..	5
General Mathematics, 1f, or ¹Architectural Drawing, 5f....	3	Elective.. . . .	1
Military or Physical Educa- tion.....	½ or 1 ½	Military or Physical Educa- tion.....	½ or 1 ½
<hr/>		<hr/>	
16 ½ or 17 ½		16 ½ or 17 ½	

SPECIALIZED COURSES

Drawing and Painting; Illustration and Commercial Design; Decorative Design.

Junior

	<i>Hours</i>		<i>Hours</i>
Advanced Design, 155f.	5	Pictorial Composition, 157w. 2 or 3	
Architecture, 104f.	3	Painting, 156w.	6
Choice of:		Choice of:	
Elementary Anatomy, 158f;		English Literature; Music;	
Structural Design, 140f; or		Dramatic Interpretation, or	
The News (Journalism) 102f..	3	Classical Literature.	2 or 3
Life I, 122f.	5	Life II, 124w.	5
	<hr/>		<hr/>
	16		16

Senior

	<i>Hours</i>		<i>Hours</i>
Development of Modern Theory		Aesthetics (Philosophy) 117w.	3
and Practice, 180f.	3	Advanced Decorative Com-	
Advanced Pictorial Composition,		position, 170w.	6
160f.	6	Special Problems, 175w.	5
Advanced Painting, 165f.	5	Elective.	2
Elective.	2		
	<hr/>		<hr/>
	16		16

APPLIED AND STRUCTURAL DESIGN

(Interior Decoration, Stage Design, Costume Design, Hand Crafts)

Junior

	<i>Hours</i>		<i>Hours</i>
Advanced Design, 155f.	5	Interior Decoration, 111w, or	
Architecture, 104f.	3	Applied Design, 141w.	3
Structural Design, 140f.	3	Life II, 124w (Modeling) ...	2 or 3
Life I, 122f (Drawing).	2	Historic Ornament and Style,	
Elementary Landscape Garden-		142w, or Art Craft IV, 102w	2
ing, 6f.	3	Choice of:	
		English Literature, Music,	
		Dramatic Interpretation, or	
		Classical Literature.	2 or 3
		Painting, 156w.	6
	<hr/>		<hr/>
	16		16

Senior

<i>Hours</i>		<i>Hours</i>	
Development of Modern Theory and Practice, 180f.....	3	Aesthetics (Philosophy) 117w.	3
Historic Projects, 145f; or		Decorative Composition, 170w	6
¹ Architectural Sources, 116f...	6	Special Problems, 175w; or	
Technical Craft, 146f; or ¹ Plan-		¹ Architectural Design, 117w	5
ning of Domestic and Civic		Elective.....	2
Buildings, 110f.....	5		
Elective.....	2		
<hr/>		<hr/>	
16		16	

¹For students who specialize in Applied Design with major interest in Architecture. Such students may elect five hours of mathematics each semester in place of other work during the Sophomore and Junior Years.

ART HISTORY AND APPRECIATION

Junior

<i>Hours</i>		<i>Hours</i>	
Ancient History.....	2	European Culture (History),	
Life I, 122f.....	5	155w.....	2
History of Greek Art, 106f....	3	Elective in Modern Language	5
Architecture, 104f.....	3	Painting, 156w.....	6
Elective.....	3	History of Greek Art, 107w..	3
<hr/>		<hr/>	
16		16	

Senior

<i>Hours</i>		<i>Hours</i>	
Development of Modern Theory and Practice, 180f.....	3	Aesthetics, (Philosophy) 117w	3
Pictorial Composition, 157f....	5	Choice of:	
Structural Design, 140f.....	3	English or Classical Litera-	
History of Italian Renaissance		ture, Music, Dramatic In-	
Painting, 111f.....	3	terpretation.....	3
Elective.....	2	Art Elective (practice or his-	
		tory or both).....	5
		Social Science Elective.....	5
<hr/>		<hr/>	
16		16	

ART EDUCATION

In the Junior and Senior Years, students in Art Education will enroll in the School of Education, leading to the degree of Bachelor of Science in Education. For suggested curricula, see page 158.

A special bulletin, issued each year, contains a detailed announcement of entrance requirements, rules and regulations of the School of Fine Arts, and should be consulted by persons desiring full information concerning the school. For this bulletin, address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information regarding the School of Fine Arts, address

JAMES T. QUARLES,
DEAN, FACULTY OF FINE ARTS,
UNIVERSITY OF MISSOURI,
COLUMBIA MISSOURI.

GRADUATE SCHOOL

The University of Missouri offers graduate instruction in classical languages and archaeology, modern languages, philosophy and psychology, education, social sciences, journalism, mathematical and physical sciences, biological sciences, the fine arts, home economics, agriculture, and engineering. The Faculty of the Graduate School has charge of all graduate work in the University.

ADMISSION: Graduates of the colleges and universities comprising the Missouri College Union and of other reputable colleges and universities are admitted to the Graduate School. Graduates of Missouri State Teachers Colleges, whose first regular enrollment for college work in a teachers college was subsequent to September 1, 1916, and who have completed the 120-hour curriculum, will be admitted to the Graduate School. The list of universities and colleges approved by the Association of American Universities (see Twenty-sixth Annual Conference, 1924, pp. 35-39, and subsequent issues) will be used as a guide in the case of graduates of institutions not included in that list.

Admission to this school, however, shall not be understood as implying admission to candidacy for advanced degrees, which is subject to the regulations indicated below.

Students are admitted to the Graduate School by the Registrar of the University, to whom applications for admission and official transcripts of records, including statement of degree or degrees, should be sent before the opening of the session.

GRADUATE SCHOLARSHIPS AND FELLOWSHIPS: For statements regarding scholarships and fellowships offered to graduate students, see page 66.

REGISTRATION: While the details of registration are subject to frequent change, a few general directions may be useful to the prospective student. After the student has been admitted to the Graduate School by the Registrar and has received the matriculation card, he should present himself at the office of the Dean of the Graduate Faculty and receive such blanks and preliminary advice as he is then in need of. He should have made up his mind before then as to the major and minor or minors he will elect. In case he has any doubts on this matter, he should consult the dean. Students who have not majored as undergraduates in the particular subject which they wish to pursue in the Graduate School will often be unable to complete the requirements for the graduate degree in the prescribed time.

After the student has reported to the Graduate Office, he will then present himself at the offices of the departments in which he

wishes to major and minor and confer with the chairman and such other professors as directed. The candidate for the master's degree should from the outset plan the work for the entire year or four summers.

PART-TIME REGISTRATION BY TEACHERS ACTIVELY ENGAGED IN
SERVICE AND OTHERS WHO MAY BE WITHIN REACH OF
COLUMBIA BY MOTOR AND RAIL

Rapid progress in road-building makes it possible for teachers, ministers, professional men, and others who are within easy reach of Columbia by motor or rail to register for graduate seminaries, individual conferences, and courses which are given only once or twice a week and which, if due request is made, may be scheduled at a time convenient to the members of the class. Residence credit is given for this work.

REGULATIONS GOVERNING THE DEGREE OF MASTER OF ARTS

1. GENERAL STATEMENT

The degree of Master of Arts is offered to students who have spent in residence at least two semesters or four summer sessions (with the exception noted below) exclusively devoted to advanced courses of study and who have submitted an acceptable dissertation, when required by the department of the candidate's major subject, and passed a final examination.

2. ACCEPTANCE OF CANDIDATES

After admission to the Graduate School, a student wishing to become a candidate for this degree must fill out, in consultation with his major and minor advisers, upon a blank form provided for the purpose, a full statement of all the work he proposes to offer for the degree, and must present it to the Dean of the Graduate Faculty not later than one month after his or her registration.

In making application for candidacy, the student must indicate the subject of the dissertation, when one is required, and the course of study selected by him with the advice of his major adviser, whose signature he must secure to the blank form indicated above, before it is presented to the dean for final action. He may, however, defer submitting the subject of the dissertation for not more than two weeks after filing the application.

Students who fail to make application for candidacy in due time may not be recommended for the degree at the appropriate commencement.

3. REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

Two semesters of sixteen weeks each, or four summer sessions of eight weeks each, devoted to advanced courses of study are required for the degree of Master of Arts.

a. *Course of Study.*

The completion of a total of thirty-two hours of credit, of which not less than sixteen must be in courses numbered 200 and above, is required. The remaining sixteen hours may, with the consent of the adviser, be selected from the courses numbered 100-199, as listed in this Bulletin. In case of courses not so listed, the student should consult the Dean of the Graduate Faculty. Courses numbered below 100 do not receive credit toward any advanced degree. Courses transferred through advanced standing or taken by correspondence or otherwise in absentia may be applied toward a graduate degree only with the approval of the candidate's adviser.

b. *Dissertation.*

The dissertation, when required, must demonstrate the student's capacity for research and independent thought and must be submitted to the Graduate Faculty on or before the final date set in the Graduate School Calendar. The student should consult the chairman of the department in which he wishes to major in regard to the requirements for the dissertation and the Dean of the Graduate Faculty for information regarding the form in which the dissertation must be submitted. The number of hour's credit represented by the dissertation may be from four to eight, at the discretion of the major adviser.

c. *Final Examination.*

Each candidate for the degree of Master of Arts is required to pass a final examination evincing a mastery of the fundamental principles of his major subject.

4. SUMMER SESSIONS

Four summer sessions, in which the student may receive credits of eight hours each, are required for the completion of the requirements exclusively in the summer. Eight hours, or the equivalent of one of the four summer sessions, may be earned through the University of Missouri Extension Division, either by correspondence or by extension under certain conditions, or by work *in residence* in some other University having a recognized graduate school. The student must see to it that, in every case, such courses receive credit under these regulations. In the case of correspondence work, only four out of eight hours of credit may be acquired before the establishment of residence, provided all other regulations pertaining to admission and matriculation are satisfied. For further information in regard to these courses, the student should correspond with the Director of University Extension. The Graduate School will not undertake to transfer credits earned through correspondence or extension, nor will it accept such credits from any other institution.

5. ADVANCED STANDING FOR THE MASTER'S DEGREE

a. *From other institutions.*

Not more than eight hours' credit, or one-fourth of the year required for the master's degree, may be done away from the university by graduate students and will be accepted only in case the other institution has a recognized graduate school.

b. *From the University of Missouri.*

Seniors, who at the beginning of any session have a graduation requirement for the bachelor's degree of fifteen hours or less, may be permitted, with the approval of the appropriate deans, to register simultaneously in the Graduate School for courses sufficient to make up a full program. Students who graduated with excess undergraduate credits before 1920 will *not* receive credit for the same hereafter. Students who graduated between 1920 and 1925 will receive credits as heretofore; but each year, in order, one of the years between 1920 and 1925 will be eliminated from this category until in February, 1932, this privilege will be abolished altogether.

Similar credits may be allowed a student for excess undergraduate work from another institution having a recognized graduate school, to the extent of one-half of one semester (namely, eight hours), if such advanced standing would be granted by the graduate school of that institution. If the institution in question has not a graduate school that may be recognized as such, no advanced standing will be allowed.

The student will be held responsible in the master's examination for credits in advanced standing presented in candidacy for the degree.

The attention of the student is called to the fact that graduate work cannot be subjected to rigid regulation, and the Graduate Faculty reserves the right to deal with each case on its individual merits.

6. RECOMMENDATION FOR THE DEGREE

With the approval of the professors concerned, such candidates as have fully met all requirements, may at the close of the winter term or any summer session, be recommended by the Graduate Faculty for the degree of Master of Arts.

REGULATIONS GOVERNING THE DEGREE OF DOCTOR OF PHILOSOPHY

1. GENERAL STATEMENT

The degree of Doctor of Philosophy is offered to students who have pursued advanced courses of study without serious interruption for a period of at least six semesters and who have submitted an acceptable dissertation and passed all prescribed examinations.

In order to be accepted by the Graduate Faculty as a candidate for the degree of Doctor of Philosophy, the student must give evi-

dence that he has completed an undergraduate course of study such as is offered by colleges of good standing and that he has received a baccalaureate degree equivalent to the baccalaureate degree of the University of Missouri.

The faculty reserves the right to decide in each case whether the antecedent training has been satisfactory, and, if any of the years of advanced work have been passed away from this University, whether they may be properly regarded as spent in university studies under suitable guidance and favorable conditions. Private study or study pursued at a distance from libraries and laboratories will not be considered as equivalent to university work. In any case, the student must spend the two semesters immediately preceding his final examinations in residence at the University of Missouri.

It should be emphasized that the requirements for this degree are not computed in terms of time and courses but that the degree is conferred only upon such students as have reached, after long study, a high attainment in some special branch of learning and have given the clearest evidence of their ability to carry on independent, original research by reason of having made an actual contribution to knowledge of a character approved by competent judges.

2. ACCEPTANCE OF CANDIDATES

A student wishing to make application for the degree of Doctor of Philosophy must fill out a blank form, provided for the purpose, secure thereto the signature of the instructor under whose direction he desires to take his major subject and present it to the Dean of the Graduate Faculty for approval. He must also, at least two semesters in advance of being admitted to candidacy, give satisfactory evidence of ability to translate French and German readily at sight. In special cases, students may be allowed to substitute other languages.

3. REQUIREMENTS FOR THE DEGREE

(a) *Subjects of Study.*—Every candidate for the degree must select one principal or major subject and at least one and not more than two subordinate or minor subjects, the combination to be approved by the Graduate Faculty. The instructor under whose direction the student is taking his major subject is his official adviser.

The student's principal work must be in the major subject. Although no regulations are laid down with respect to the time to be devoted to the major and minor subjects, in general it may be stated that the major subject should represent two-thirds of the student's entire time.

(b) *Dissertation*.—The dissertation, embodying the results of original investigation, must be written upon a subject approved by the adviser and must be submitted in typewritten form on or before May 2, when it becomes the property of the University. A brief biographical sketch of the writer must be appended to the dissertation. The student should consult the Dean of the Graduate Faculty for information regarding the form in which the dissertation must be presented.

Upon receiving the dissertation a committee is appointed whose duty it is to report upon it in writing to the Graduate Faculty.

The candidate is required to print the dissertation with such revision as the faculty may allow. Before his degree is conferred, the candidate is required to deposit 150 printed copies of his dissertation in the University Library. Or, in case the dissertation has not been printed before the conferring of the degree, the candidate may (1) deposit with the dean a statement from a responsible publishing agency certifying to the fact that a contract has been entered into for the printing of the dissertation, and that the required number of copies will be furnished within a reasonable time: or (2) the candidate may deposit with the Secretary of the University a financial guarantee sufficient to print the required number of copies for the University. With the special permission of the Dean of the Graduate Faculty, the publication of the substantial contribution to knowledge may be accepted in lieu of the publication of the entire dissertation.

(c) *Examinations*.—A committee, consisting of the professor of the candidate's major subject and the professor of his minor subjects, is appointed to take charge of all examinations and to report upon the same to the Graduate Faculty in writing.

At least one year before the final examination, a candidate for the degree of doctor of philosophy is required to pass a preliminary examination, either written or oral or both, in his major and minor subjects, given by a committee designated by the Dean of the Graduate Faculty, with the advice of the instructor in charge of the major subject; this requirement may, with the consent of the dean, be met at the beginning of the last year of residence.

In addition to final written examinations, the candidate may be required to take an oral examination in the presence of the faculty.

(d) *Conferring of Degree*.—Upon the satisfactory completion of all requirements, the candidate may be recommended by the Graduate Faculty for the degree of Doctor of Philosophy.

The courses of study open to graduate students may be found in Section III of this catalog.

A special bulletin of the Graduate School is issued each year. This contains a detailed announcement of all courses, entrance requirements, rules and regulations of the Graduate School, and should be consulted by persons desiring full information concerning this school. For this bulletin, address

REGISTRAR OF THE UNIVERSITY,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information concerning the work of the Graduate School, address

DEAN OF THE GRADUATE FACULTY,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

SCHOOL OF JOURNALISM

The School of Journalism is a professional school for training in journalism, taking rank with the Schools of Business and Public Administration, Education, Law, and Medicine.

It is the oldest school of journalism in the world, having begun instruction leading to a degree in journalism in the fall of 1908. It has more than seven hundred graduates, most of whom are at work in some phase of journalism.

The *Columbia Missourian*, giving news of Columbia and its vicinity, as well as telegraphic news, is issued thruout the calendar year. On this newspaper the students supplement class instruction by work in gathering, handling, and presentation of news; and also in advertising, business management, editorial interpretation and comment, and illustration. A weekly magazine is published as part of the *Missourian*.

In addition, the students in a course dealing with the country weekly newspaper are given the opportunity to do all the news-gathering and editorial work involved in the publication of the *Columbia Herald-Statesman*, a weekly newspaper of general circulation in Boone county.

Ten members of the school's faculty devote their full time to teaching the professional courses, of which about fifty are offered. A full list of the courses will be found in another section of this catalog, pages 287-290.

The work of the School of Journalism is designed to give not only thorough training in the technique of journalism, but also a broad general education. Two years of college work are required for entrance, and a fair amount of time is given to academic studies after the student enters the school. A list of academic courses especially valuable for journalism students is printed in the special yearly announcement of the School of Journalism, and so far as possible students should elect from this list. Credit is given for two courses in Religious Journalism, which are taught in the Bible College of Missouri.

While a broad general education is provided for, however, there is opportunity for specialization if the student desires. The student may so shape his course as to emphasize writing, advertising, rural or agricultural journalism, or illustration.

GRADUATE WORK: The School of Journalism offers graduate work by which a person who holds a bachelor's degree in journalism may in one year additional receive the degree of Master of Arts.

SUMMER COURSES IN JOURNALISM: In the eight-week summer term most of the fundamental courses in journalism are offered.

A course originated by the School of Journalism is one in Special Correspondence, in which qualified students spend about a month in a field trip, acting as traveling correspondents for newspapers. In the summer of 1923 the trip covered South Missouri and North Arkansas. In the summer of 1924 the trip covered Northwest Missouri, South Dakota, and several cities between Missouri and South Dakota. The 1925 trip was to Mexico City, and in 1926 the class visited places of historical interest in Central Missouri. Details of each year's trip may be obtained by writing to the School of Journalism about May.

Two summer courses are offered primarily for high-school teachers who supervise student publications. One is The School Newspaper and Annual, and the other is Advertising Promotion in School Publications. School Publicity is offered for graduate students in education.

For further information about the journalism courses offered in the summer term, consult the special Summer Session Announcement, which is issued early each calendar year. Copies may be obtained from the Registrar of the University.

EQUIPMENT: The School of Journalism is housed in Jay H. Neff Hall, a building donated by Ward A. Neff, a graduate of the school. The basement of the building is equipped with printing machinery for the publication of the school's daily newspaper, the *Missourian*. A photo-engraving laboratory is also included.

The Journalism Library, which occupies a large room on the first floor of Jay H. Neff Hall, has 1,800 volumes, either books on journalism or reference works. It receives about 300 periodicals and newspapers from all parts of the United States, and from other countries.

SCHOLARSHIPS AND PRIZES: In addition to general University scholarships, the following are offered each year exclusively for journalism students: The Eugene Field Scholarship, five John W. Jewell Scholarships, and the Jay L. Torrey Scholarship (restricted to women).

The China Weekly Review Prize is given each semester for the best editorial on an assigned subject. The Homer Croy Prize is given annually for the best example of writing of any sort. A Special Distinction Award is given annually to a woman student.

For details of scholarships and prizes see pages 66 to 84.

FEES: For fees see pages 50 to 60.

REQUIREMENTS FOR ADMISSION AND GRADUATION

ADMISSION: The requirements for admission to this division of the University are stated on page 33. It is desirable, altho not required, that the student should have a knowledge of typewriting before entering the school.

All students who are candidates for a degree are regular students. In addition, persons of proper qualifications may be ad-

mitted to take work in the school without reference to the degree. Such students are subject to the general rules of the University regarding special students. See page 37.

DEGREE: The School of Journalism confers one undergraduate degree, Bachelor of Journalism (B. J.). A student specializing in agricultural journalism will have the notation (*in Agricultural Journalism*) made upon his diploma.

GRADUATION: To obtain the degree of Bachelor of Journalism, the student must fulfill the following conditions:

1. He must be regularly admitted to the school.
2. He must complete a major of at least 30 hours in journalism including 6 hours of history and principles of journalism, 3 hours of the news, 6 hours of reporting, 6 hours of copy reading, and 3 hours of principles of advertising.
3. He must complete at least 20 hours in courses for upper-classmen in some of the following departments: Economics and commerce, English, Germanic or Romance languages, history, philosophy, political science and public law, psychology, and sociology.

These requirements may be in part waived on condition that the work presented by the student at admission shows, in the opinion of the Dean, sufficient acquaintance with a given subject.

4. He must complete a total of 60 hours.

To obtain the degree of Bachelor of Journalism in Agricultural Journalism, the student must fulfill the following conditions:

1. He must be regularly admitted to the school.
2. He must complete a major of at least 30 hours in journalism, including 6 hours of history and principles of journalism, 3 hours of the news, 6 hours of reporting, 6 hours of copy reading, 3 hours of principles of advertising, and 3 hours of the agricultural press.

These requirements may be in part waived on condition that the work presented by the student at admission shows, in the opinion of the Dean, sufficient acquaintance with a given subject.

3. He must complete 30 hours of technical courses in agriculture.
4. He must complete a total of 60 hours.

All regular students must pass, near the close of the second term in journalism, a test of their proficiency in English. Those who fail will be given a further test the following year. No student will be recommended for any degree until his English is satisfactory.

No student may take more than 16 hours nor less than 12 hours a term, except that the Dean may reduce the minimum in special cases.

The following suggested curriculum gives the best order for the required courses for the B. J. degree:

First Semester

History and Principles of Journalism..	3 hours
The News.....	3 hours
Principles of Advertising.....	3 hours
Elective (maximum).....	7 hours

Second Semester

History and Principles of Journalism...	3 hours
Reporting I.....	3 hours
*Copy Reading I.....	3 hours
Elective (maximum).....	7 hours

Third Semester

Reporting II.....	3 hours
*Copy Reading II.....	3 hours
Elective (maximum).....	10 hours

Fourth Semester

Elective (maximum).....	16 hours
-------------------------	----------

*May be delayed one semester.

This permits a total of forty hours of elective studies in the two years. At least six of the forty must be in journalism to meet the requirements for graduation. Generally speaking, a student's program will be about half journalism and half academic subjects.

A special bulletin, issued each year, contains a much more detailed announcement of the requirements and work of the School of Journalism, and should be consulted by persons desiring full information concerning the school. For this bulletin, address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information regarding the School of Journalism, address

WALTER WILLIAMS,
DEAN, FACULTY OF JOURNALISM,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

SCHOOL OF LAW

The School of Law began work in 1872 with two instructors and a two years' curriculum. The number of instructors has been increased from two to seven. In 1901 the curriculum was lengthened to three years. The standards for admission of students have gradually been made higher, as the conditions in the state have justified and demanded it. Between 1898 and 1907 the requirements were raised from one year to four years of high school work. In 1910 one year of college work was required for entrance. Beginning with the fall term of 1911 two years of college work were required for all regular students. The school has been a member of the Association of American Law Schools since the organization of that association. It has been designated a "Class A" school by the Council of the Section on Legal Education and Admission to the Bar of the American Bar Association.

EQUIPMENT

BUILDING: The School of Law now occupies a large brick building on the quadrangle of the main campus of the University. This building was erected in 1893. It contains five library rooms, opening into each other; three lecture rooms; six offices for resident professors; a practice court room completely equipped with furniture and books used in actual work.

The school will soon occupy a modern fire-proof stone and brick building located at the southeast corner of Francis Quadrangle. This building is now in the process of erection. It is to cost \$150,000. Half of the cost was provided for by a gift of \$75,000 from Mr. and Mrs. Frank R. Tate of St. Louis, in memory of their son, Lee H. Tate, LL. B., University of Missouri, 1913. The other half was appropriated by the Fifty-second General Assembly of Missouri. This building will be completed during 1927, and when completed will be a most convenient and attractive building containing the latest and best ideas of design and arrangement for law school purposes.

LIBRARY: The law library contains more than 26,500 volumes, and includes both the original and the reprints of the English reports; a complete set of the Irish, Scotch, and Canadian Reports; several sets of the reports of the Supreme Court of the United States; a set of the Federal Cases and of the Federal Reporter; all of the state reports; full sets of the National Reporter System; the necessary digests, and a valuable collection of statutes, session

laws, standard treatises, legal periodicals, and encyclopedias. It also contains a large collection of portraits of judges and jurists.

The library is in charge of a trained librarian, and is open to students from 8 o'clock in the morning until 10 o'clock at night.

AIMS OF THE SCHOOL

The School of Law exists for serving the state and its bar. The primary aim is to equip students for the practice of law. To this end, its methods conform to the most modern standards of legal education. While each teacher is left free to express his own individuality in his work, the school is committed to the case system of instruction. Written examinations are given in all courses at the end of each term. Regular attendance is required at all class exercises.

The School of Law does not merely seek a large number of students, and the entrance requirements are such as to admit only those whose education and maturity fit them for serious study. Also, the school recognizes a duty to the state beyond the equipment and training of practitioners. Many of the University students who do not intend to practice find its courses valuable training for citizenship, for business careers, and for the service of the public on commissions and in the Legislature. The school attempts to serve the bar of the state by the publication of the Law Series of the University of Missouri Bulletin, hereinafter described.

HONORS AND PRIZES

KARNES SCHOLARSHIP	} See announcement of scholarships and prizes under general information, pages 66 to 84.
ROLLINS SCHOLARSHIP	
WILLIAM MACK PRIZE	

ADMISSION

PRELIMINARY TRAINING: The requirements for admission are the satisfactory completion of (1), a four-years' high school course, or its equivalent, and (2), two-years' work, and 60 hours' credit (exclusive of the required work in physical training and military science) in the College of Arts and Science, or any other division, of the University of Missouri or its equivalent. However, a student who has had two years of college work may enter with a minimum of 54 hours' credit, but any deficiency in college credit must be made up within two terms from the date of entrance into the Law School, unless the time be extended by the Faculty of the School of Law.

METHODS OF ADMISSION: Admission may be either by entrance examinations, or certificate from colleges and universities composing the Missouri College Union, or from other reputable colleges and universities. (Acceptance of such certificates lies wholly with the Committee on Entrance of the University, and all

correspondence regarding admission should be addressed to the Registrar.)

ADMISSION TO ADVANCED STANDING: To be admitted to advanced standing, students must present satisfactory evidence that they have pursued successfully in an approved law school the study of the subjects for which they wish credit, and on examination prove themselves proficient in those subjects. Certificates from law schools approved by the faculty, showing that the applicant has accomplished with passing grades the work for which he wishes credit, *may* be accepted in lieu of examination. No law school conferring a degree in law for less than three school years of systematic study of the law will be considered an approved school within the meaning of this requirement. Examinations for advanced standing will not be given to persons not fulfilling the foregoing requirements. In no case will advanced standing be awarded for more than two years' work at an approved law school. Hence, at least one full year's work must be done at this law school in order to receive our law degree.

ADMISSION OF SPECIAL STUDENTS: In recognition of the fact that experience and maturity tend to compensate in a measure for the lack of scholastic attainments, persons who are more than 21 years old and graduates of an accredited high school or its equivalent and demonstrate their fitness to pursue profitably the study of law, may be admitted to the Law School as special students. However, the number of special students permitted to enter the Law School for the first time shall not exceed in any one year 10 per cent of the average number per year of all students entering for the first time during the two preceding years. It is estimated that the permitted number of special students entering for the first time in the year 1927-1928 will be 3 or 4. If more than the permitted number of special students apply for admission they will be admitted in the order of their application and acceptance by the Registrar and the Committee on Entrance. Special students are expected to do especially good work in the subjects which they choose, and are required to take all regular examinations. If at any period of the session their work becomes unsatisfactory their connection with the University will be severed by the dean.

Special students cannot become candidates for the degree by later making up the preliminary college credit required of regular students.

In extraordinary cases the dean may permit a special student to enter classes in advanced courses in law without having completed the required work of the first year.

Applications for candidates for admission as special students will not be considered more than 4 months prior to the opening of the semester in which the applicant seeks to be admitted. All applicants must accompany applications with satisfactory credentials and no application will be considered unless supported by satisfactory credentials.

Our requirements for admission of students (regulars and specials) are the requirements for member schools of the Association of American Law Schools, and in conformity with the standards for legal education recommended by the American Bar Association.

ADMISSION OF HEARERS: For detailed statement, see page 37 of this catalog.

ELIMINATION OF STUDENTS

Some students qualified for admission fail to measure up to the high standard maintained in the school. Such delinquent students are eliminated in accordance with the rules stated on page 92 of this catalog. Special students will be eliminated whenever their work does not meet the approval of the dean.

CURRICULUM—DEGREE

THREE-YEAR CURRICULUM: The curriculum of the School of Law extends thru three school years of two terms each. In order to be graduated, a student must have completed, with passing grade, eighty-two (82) hours of work, exclusive of military science and physical training. The work of the students will normally be distributed as follows: Thirty (30) hours in the first year, twenty-seven (27) and twenty-five (25) in each of the succeeding years.

In addition, the student must have received 50 points. Points are given as follows: 3 points for each hour of those courses in which the student receives the grade of E; 2 points for each hour of those courses in which the student receives the grade of S, and one point for each hour of those courses in which the student receives the grade of M. No points are given for those courses in which the student receives the grade of I.

The curriculum requires six terms in residence for its completion, and no student will be graduated without six terms of attendance except on account of admission to advanced standing for work in other institutions. The degree of Bachelor of Laws (LL. B.) is conferred upon regular students who have satisfactorily completed the course.

¹PROPOSED CURRICULUM, 1927-1928

<i>First Year</i>			
Fall Term		Winter Term	
Subjects	Hours	Subjects	Hours
Contracts.....	3	Contracts.....	3
Torts.....	3	Torts.....	3
Property I.....	3	Property I.....	3
Legal Ethics.....	3	Agency.....	3
Common Law Pleading.....	3	Criminal Law.....	
Total.....	15	Total.....	15

Junior Year

*Equity.....	2	*Equity.....	3
*Evidence.....	3	*Evidence.....	2
*Code Pleading.....	2	*Code Pleading.....	2
Quasi Contracts.....	2	Sales.....	3
Bills and Notes.....	3	Wills.....	3
Property II.....	2	Property II.....	3
Criminal Procedure.....	2		
<hr/>		<hr/>	
Total.....	16	Total.....	16

Senior Year

Conflict of Laws.....	3	Partnership.....	3
*Practice.....	2	*Practice.....	3
Property III.....	3	Public Utilities.....	3
Corporations.....	4	Constitutional Law.....	2
Constitutional Law.....	3	Taxation.....	3
Trusts.....	3	Bankruptcy.....	3
<hr/>		<hr/>	
Total.....	18	Total.....	17

All first-year courses are required. Courses in the Junior and Senior years marked () are required, the others are elective.

†It is possible there may be some changes in the proposed courses though it is the settled policy of the school to adhere to the proposed curriculum.

A detailed description of the courses in law may be found in section III of this catalog.

COMBINED CURRICULUM IN ARTS AND LAW: Seniors in the College of Arts and Science may elect courses from the first year in the School of Law for a maximum credit of 30 hours. Under special circumstances this privilege may be extended to juniors with the consent of the deans of the Faculty of Arts and Science and the Faculty of Law. A combined curriculum of this character will enable a student to obtain the degrees of A. B. and LL. B. in twelve terms.

LAW SERIES, UNIVERSITY OF MISSOURI BULLETIN

In November, 1913, appeared the first number of the Law Series of *The University of Missouri Bulletin*. Four numbers of the bulletin are published annually and will be sent to any member of the Missouri bar or to any graduate of the School of Law, free on request. The publication of this series is undertaken for the purpose of presenting to the members of the Missouri bar the results of legal study and research having to do with problems of Missouri law, which are carried on at the School of Law. The bulletins of this series contain three departments. There is an article in each bulletin dealing with some special phase of Missouri law, written by a member of the Faculty of the School of Law. Another department is one of notes

on recent cases, which is in charge of a board of student editors under the chairmanship of a member of the faculty. In this department appear brief discussions of questions of law applied in recent Missouri decisions.

The third department is the official publication of the Missouri Bar Association, which has combined its publication with that of the School of Law.

It is believed that these discussions are of interest and value to the lawyers of the state, and that their preparation constitutes valuable training for the student editors in the use of authorities, and in the handling of legal problems. Students are elected to the editorial board by the Faculty of the School of Law as a result of general excellence in their law school work.

MOOT COURTS

Moot court work is done by the local chapters of the law fraternities and other groups of students, with the guidance and assistance of members of the faculty.

A special bulletin of the School of Law is issued each year. This contains a detailed announcement of all courses, books used, entrance requirements, rules and regulations of the School of Law, and should be consulted by persons wishing full information concerning the school. For this bulletin address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information concerning the School of Law, address

J. P. McBAINE,
DEAN, FACULTY OF LAW,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

SCHOOL OF MEDICINE

HISTORICAL: The medical department of Kemper College ("McDowell Medical College"), founded in St. Louis in 1840, was the first medical school established west of the Mississippi River. In 1845 this school became the medical department of the University of Missouri. Shortly before the Civil War it was discontinued. It was re-established in Columbia in December, 1872. The curriculum was at first only two years in length, but this was extended to three years in 1891, and to four years in 1899.

In 1910 the last two years of the medical curriculum were temporarily suspended, owing to the limited clinical facilities in Columbia. This part of the work will be resumed as soon as it is practicable to establish it with adequate clinical facilities. In the meantime, the first two years of the medical curriculum has been continued at Columbia and still further strengthened.

POLICY: The School of Medicine has always stood for the highest standards of medical education, and was a pioneer in introducing and developing the laboratory method. Laboratory work in anatomy, chemistry, and microscopy was required of students from the date of re-establishment in 1872. A few years later laboratory work in pathology and in physiology was added, and in 1891 the laboratories of histology and bacteriology were established. The School of Medicine of the University of Missouri was also one of the first schools to place these fundamental medical sciences in charge of specialists who are not allowed to practice medicine, but who are required to devote their time exclusively to teaching and investigation.

A most thorough course of instruction with the highest standard of scholarship has been established and maintained.

The aim of the School of Medicine is threefold:

(1) To give a thorough laboratory training in those scientific subjects which are fundamental to medicine and form an indispensable preparation for the clinical work.

(2) To contribute to the advancement of medicine by original investigation in the various sciences upon which modern medicine is based.

(3) To promote the diffusion of medical knowledge among the citizens of the state. For this special purpose the department of preventive medicine exists.

EQUIPMENT

MEDICAL LABORATORY BUILDING: This is a stone and brick building, 48x150 feet, three stories high, with a special system of steam heating and forced ventilation. It was specially designed for the medical laboratories, and is well equipped to meet the needs of modern laboratory instruction and research. An addition to the

building, increasing its size by almost one-half, is now in use. The following is a brief list of the various rooms and equipment in this building:

The department of anatomy occupies the third floor of the medical building. For class work there are available laboratories for human dissection, topographic and applied anatomy, and microscopic anatomy, with all the necessary equipment and material for a thorough study of these subjects. A lecture room and technical preparation room, and the laboratories of the staff with adequate equipment for research are also located on this floor.

The departments of physiology, physiological chemistry, and pharmacology occupy the following rooms: A large laboratory, with adjoining storeroom, equipped with tables, lockers, and sets of apparatus for the students in physiology and pharmacology; a blood-pressure room, particularly for mammalian experiments; a research laboratory, thoroughly equipped for advanced students in physiology and pharmacology; research laboratory in physiological chemistry; large students' laboratory with adjacent storeroom, thoroughly equipped for work in physiological chemistry; animal room; mechanics' shop; lecture room (in common with pathology).

Laboratories, and equipment of the rooms which serve as offices and work room for the personnel of the department of pathology are as follows; a large preparation or technician's room; store rooms; an animal room: a room for autopsies; a room for gross museum specimens, work in gross pathology and students in advanced and research pathology; a museum collection of specimens in Kaiserling for systematic demonstration of gross pathology; a student slide loan collection of over 300 slides representing so far as possible the various histological phases of the more common disease processes; modern microscopes with oil-immersion lenses for rental to students; equipment for a limited number of students in clinical pathology; balopticon projection apparatus for slides and opaque objects; microscope projection apparatus; lantern slides; an extensive collection of demonstration slides for microscope projection; teaching laboratory and lecture room.

ANIMAL HOUSE: The animal house is a brick structure, well lighted, heated, and ventilated, providing excellent facilities for rearing and preserving animals, and for investigations in the various lines of medical science.

CHEMISTRY BUILDING: The Chemistry Building is used in common by the School of Medicine and other divisions of the University. It contains several large laboratories and lecture rooms, with many smaller rooms. The building is thoroughly equipped. Schweitzer Hall, the agricultural chemistry building, also offers splendid facilities for instruction.

BIOLOGY BUILDING: In the department of zoology the medical students receive instruction in embryology, a well-equipped laboratory, with lecture room and museum, being available for this purpose.

OTHER BUILDINGS: In several other buildings on the University campus instruction is offered in many lines open to medical students as electives, and of especial service to those taking the combined curriculum in medicine and in arts and science.

MEDICAL LIBRARY: The medical library located in ample new quarters in the medical building is open 7½ hours daily, except Sunday. It contains 8,621 bound volumes, and a large number of pamphlets. The principal medical works of reference are included and 138 leading medical periodicals are received regularly and placed on file. Complete sets of most of these journals are available. The main University library also contains works of interest and value to the medical sciences.

The library has a complete card catalog of all its books and periodicals. Books may be loaned to any reputable physician in the state provided he pay transportation charges on them. The out-of-town borrower should indicate the subject on which he wants information if he is unable to give the author and title of the books.

FEES AND EXPENSES

A library, hospital, and incidental fee of \$30.00 a term is required of students admitted to the School of Medicine. In addition, certain laboratory fees and deposits are required to cover the cost of materials used. Textbooks and stationery cost from \$25 to \$50 per year. Students who are nonresidents of Missouri must pay also a tuition fee of \$10 a term. For cost of board and lodging, see page 62.

ROLLINS SCHOLARSHIP

The Rollins scholarship in the School of Medicine is a prize of \$50, which is awarded to that member of the first-year class (third year of combined curriculum) who has made the best record during the course.

EXTENSION LABORATORY SERVICE

The departments of pathology and bacteriology will, within the limits of their capacity, receive for examination and diagnosis such material as may be submitted by physicians of the state. Expert opinion and advice concerning matters of public and personal hygiene may be had by addressing inquiries to Department of Preventive Medicine, University of Missouri, Columbia.

REQUIREMENTS FOR ADMISSION

The School of Medicine is open alike to men and women.

ADMISSION TO FIRST YEAR CLASS: For detailed statement, see page 33. The classes are limited in membership because of the inability of the school to properly accommodate all qualified applicants for admission. Application for admission should be in the hands of the Registrar at the earliest possible time prior to the opening of the session.

New students are not enrolled in the classes at the beginning of the winter term unless they have finished satisfactorily all the courses that have been taken by the class into which admission is requested.

ADVANCED STANDING: Every applicant for advanced standing is required to present credentials from an acceptable college showing satisfactory completion of courses equivalent to those for which he seeks credit. Moreover, the usual entrance requirements to the first-year class must be satisfied, and evidence of good moral character must be presented to the Dean of the School of Medicine.

Special students will not be admitted to the School of Medicine.

THE COMBINED COURSES IN ARTS AND MEDICINE

Students in the Division of Medicine will receive the degree of Bachelor of Science (B. Sc.) upon compliance with the following regulations:

1. Regular enrollment in the School of Medicine.
2. Completion of the work of the second year of the medical curriculum in residence in this School.
3. Completion of (1) a four years' high school course or its equivalent, and (2) two years of college work—60 normal credit hours, exclusive of required work in military science or physical education, as follows: English Composition and Literature, 6 hours; German or French 8 hours; general zoology, 8 hours; general physics, 8 hours; inorganic chemistry, 8 hours; organic chemistry, 5 hours; general bacteriology, 3 hours; and such other subjects as are included in the under-classman requirements of the College of Arts and Science of the University of Missouri.
4. Passage in the Junior test in proficiency in English as required in the College of Arts and Science.
5. Completion of the required curriculum in the School of Medicine, or its equivalent.
6. Completion of a total of 123 points in subjects required for admission to the school and the required subjects of the medical curriculum. Fifty-eight of the 123 points must have been earned in the required subjects in the medical curriculum. Each hour of credit to be evaluated as follows: E, 3 points; S, 2 points; M, 1 point, "Passed" grades and advanced standing to be treated as of M grade. No points to be given for I and F grades.

Attention is called to the change in requirements for admission effective September 1, 1928.

Students who have completed the junior year in the College of Arts and Science may count toward the A. B. degree a year's work of 30 hours in the School of Medicine. They must, however, meet the major and minor requirements in Arts and Science.

All correspondence regarding admission should be addressed to The Registrar, University of Missouri, Columbia, Missouri.

CURRICULUM

First Year

Hours exclusive of examination periods.

	<i>Total Clock Hours</i>	<i>Credit Hours</i>
<i>First Semester:</i>		
Anatomy.....	289	8
Embryology.....	85	3
Histology.....	170	5
Totals.....	544	16
Class Room Hours per Week, 32.		

Second Semester:

Anatomy.....	136	4
Neuro-Anatomy.....	102	3
Physiological Chemistry.....	187	5
Physiology.....	68	2
Materia Medica.....	85	2
Totals.....	578	16
Class Room Hours per Week, 34.		

Second Year

	<i>Total Clock Hours</i>	<i>Credit Hours</i>
<i>First Semester:</i>		
Physiology.....	238	6
Bacteriology.....	136	3
Topographical and Applied Anatomy.....	85	3
Electives.....	85	3
Totals.....	544	15
Class Room Hours per Week, 32.		

Second Semester

Pathology.....	306	8
Pharmacology.....	136	4
General Hygiene.....	34	2
Minor Surgery.....	51	1
Physical Diagnosis.....	85	1
Totals.....	612	16
Class Room Hours per Week, 36.		

The above work outlined in the regular medical curriculum provides a thoro training in the various subjects usually included in the first two years of medicine. It meets the requirements of the Association of American Medical Colleges, of which this school is a member, and follows closely the ideal courses of the laboratory subjects recommended by the Council on Medical Education of the American Medical Association.

ELECTIVES

With the consent of the dean, medical students may take any accessory work offered in other departments of the University.

Students preparing to enter the School of Medicine may take course 10 in the Greek department which has to do with the derivation and meaning of medical terms.

SCHEDULE OF HOURS FOR THE FIRST YEAR CLASS

First Semester

	8-9	9-10	10-11	11-12	1-2	2-3	3-4
Monday.....	Anatomy.....				Histology		Embryology
Tuesday.....	Anatomy.....				Anat.		
Wednesday.....	Histology.....				Embryology		
Thursday.....	Anatomy.....						
Friday.....	Anatomy.....				Embryology		
Saturday.....	Histology.....						

Second Semester

	8-9	9-10	10-11	11-12	1-2	2-3	3-4
Monday.....	Physiology.....				Materia Medica.....		
Tuesday.....	Mat. Med.	Physiological Chem.			Anat.		
Wednesday.....	Phys. Chem.	Anatomy.....			Neuro-Anatomy.....		
Thursday.....	Mat. Med.	Physiological Chem.					
Friday.....	Anatomy.....				Neuro-Anatomy.....		
Saturday.....	Physiological Chemistry.....						

SCHEDULE OF HOURS FOR THE SECOND YEAR CLASS

First Semester

	8-9	9-10	10-11	11-12	1-2	2-3	3-4
Monday...	Physiology.....				Bacteriology.....		
Tuesday...	Physiology.....					Elective.....	
Wednesday.	Physiology.....				Bacteriology.....		
Thursday..	Physiology.....		Topographical and Applied Anatomy.		Elective.....		
Friday.....		Topo. and Applied Anat.			Bacteriology...		
Saturday...							

Second Semester

	8-9	9-10	10-11	11-12	1-2	2-3	3-4
Monday...	Path.	Hyg.	Minor Surg'y	Phys. Diag.	Pathology.....		
Tuesday..	Path.	Phys. Diag.		Pharm.	Pharmacology.....		
Wednesday.	Path.	Hyg.	Phys. Diagnosis		Pathology.....		
Thursday..	Path.	Minor Surgery		Pharm.	Pharmacology.....		
Friday.....	Pathology.....						
Saturday...	Pathology.....						

A special bulletin of the School of Medicine is issued each year. This contains a detailed announcement of all courses, entrance requirements, a roster of students in the school, rules and regulations of the School of Medicine, and should be consulted by persons desiring full information concerning the school. For this bulletin, address

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

For further information concerning the School of Medicine, address

GUY L. NOYES,
DEAN, FACULTY OF MEDICINE,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

PARKER MEMORIAL AND UNIVERSITY HOSPITALS STAFF

DAN G. STINE.....	Medicine
DUDLEY S. CONLEY.....	Surgery
GUY L. NOYES.....	Eye, Ear, Nose, and Throat
A. W. KAMPSCHMIDT.....	Anesthesia
M. P. RAVENEL.....	Bacteriology
M. P. NEAL.....	Pathology
A. W. KAMPSCHMIDT.....	Radiographer
CHAS. W. DIGGES.....	Consulting Dental Surgeon

OFFICERS

LOUISE HILLIGASS, R. N.....	Superintendent and Assistant Professor of Nursing
FRANK E. DEXHEIMER, M. D.....	Resident Physician
HUBERT PRESTON MCCUISTION, M. D.....	Physician, Student Health Service
MYRIEL F. GATES, R. N.....	Night Supervisor
GLADYS D. KRAHN, R. N.....	Clinic Supervisor

By the gift of William L. Parker, the University has an excellent hospital. In the words of the donor, the hospital is "for the benefit of the School of Medicine." The building is a handsome, modern structure, on high ground at the west side of the campus.

A surgical amphitheater adjoining the hospital has been provided by the gift of the late Adolphus Busch. Clinical laboratory service of the very best kind is available for all patients. Very modern and complete X-ray, Metabolic, Electrocardiographic and Violet-Ray equipments have been installed in the hospital.

The Parker Memorial Hospital is owned and operated by the University primarily for the benefit of the University students.

It is also open to the sick of Missouri for the treatment of acute and chronic curable diseases.

The new University Hospital, connected with Parker Memorial Hospital and operated with it, is now in use and offers every modern facility for the care of patients needing hospital attention.

With the opening of the new hospital, facilities for teaching are very largely increased and are made use of as is necessary for the few clinical courses now offered in the School of Medicine.

A limited number of beds are available for those who suffer from communicable diseases.

Those who suffer from chronic, incurable diseases are not admitted to the hospitals.

Patients are admitted to the hospitals at any hour of the day. Application for admission should be addressed to the superintendent of the hospital.

RATES AND TERMS: The following rates are for the maintenance of patients who are not students of the University, including bed, board, and general nursing, but not including medical or surgical service.

General medical and surgical cases: Single room, \$28 a week and upward; wards, \$21 a week and upward.

Special nursing may be arranged at the regular rates for registered nurses.

Clinical patients: \$21.00 a week, including medical and surgical attention when given by members of the staff.

THE SCHOOL OF NURSING FACULTY

PEARL B. FLOWERS, R. N.

Principal and Assistant Professor of Nursing

LOUISE HILLIGASS, R. N. Assistant Professor of Nursing

AMY L. LEGER, R. N. Instructor in Nursing

JOHANNA HORROCKS, R. N. Assistant in Nursing

The School of Nursing of the University of Missouri was organized in 1901. The school is conducted in connection with the University Hospitals.

Students in the School of Nursing are also regularly enrolled in the College of Arts and Science. Upon completion of all the work of the nursing curriculum nurses are granted the degree of Graduate Nurse.

By strict adherence to the curriculum of the School of Nursing and by fulfilling the junior and senior requirements in the College of Arts and Science, one may gain the Degree of Graduate Nurse and the A. B. degree in five years.

The course in nursing covers a period of three full years. The first four months of residence in the school are probationary. At the expiration of that time the student is regularly enrolled as a member of the school, provided she is found acceptable.

During the third year of the student's course in nursing an affiliation will be arranged in some other nursing school or schools for the work in such subjects as may not be taught in the University of Missouri at present.

REQUIREMENTS FOR ADMISSION: All candidates for admission to the School of Nursing must be approved by the principal of the School of Nursing and must, in addition, satisfy the requirements for admission to the College of Arts and Science of the University of Missouri.

ADVANCED STANDING: Students who have completed courses in the College of Arts and Science of this University or in others of equal rank may, upon admission to the school, have advanced standing for such required courses as have been taken elsewhere. Nurses who have completed courses in nursing equivalent to the courses required in this school may have advanced standing in the School of Nursing, provided they satisfy all the requirements for admission to the school.

A special announcement, giving detailed information concerning the School of Nursing, will be sent on request if such requests are addressed to Principal, School of Nursing, University Hospital, Columbia, Missouri.

ADVANCED STANDING FOR GRADUATE REGISTERED NURSES: Graduate registered nurses who may wish to receive their A. B. degree from the University of Missouri will be granted credit for their nursing work provided such courses in nursing have been taken in schools of nursing which satisfy the requirements of the School of Nursing of the University of Missouri, and provided further, that such students are approved for admission to the College of Arts and Science.

Application for advanced standing should be made to the CHAIRMAN DEPARTMENT OF NURSING, UNIVERSITY HOSPITALS, UNIVERSITY OF MISSOURI, COLUMBIA, MISSOURI.

SCHOOL OF MINES AND METALLURGY

(at Rolla)

GENERAL INFORMATION

In 1870 the General Assembly, in accepting the donation by the federal government of lands for educational purposes, established an Agricultural College and School of Mines and Metallurgy, "the leading object of these colleges" being "to teach such branches as are related to agriculture and mechanic arts and mining, including military tactics, and without excluding other scientific and classical studies, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." The Statutes fix the status of the School of Mines and Metallurgy as a division of the University of Missouri. Its affairs are under the immediate supervision of the Executive Committee, consisting of three members of the Board of Curators of the University.

ADMISSION

Information concerning the requirements for admission is given on page 33.

LOCATION

The School of Mines and Metallurgy is at Rolla, the county seat of Phelps County, on the St. Louis & San Francisco Railroad, approximately half way between St. Louis and Springfield.

Rolla is on the crest of the Ozark uplift. It has an elevation of 1,140 feet above the sea level and enjoys an agreeable and notably healthful climate. It is within easy reach of the lead and zinc districts of the southwest, and of the lead and iron regions of the southeast, where opportunities to observe processes of mining and smelting the latter ores are at hand. The numerous and varied smelting and chemical plants in and about St. Louis likewise offer good opportunity for the study of processes.

EQUIPMENT

GROUNDS AND ATHLETIC FIELD: The campus of the School of Mines is situated in the highest part of the City of Rolla and is thirty-two acres in extent. It contains beautiful lawns, groves of native oak and maple shade trees. The Jackling Athletic Field has a baseball diamond, a football gridiron, and a four-hundred-forty-yard running track and tennis courts. The golf links of the school, containing approximately eighty acres, are situated just west of the city limits and within four blocks of the campus.

BUILDINGS: There are twelve buildings on the campus: Power Plant, Chemical Hall, Rolla Building, Workshops, Director's Residence, Mechanical Hall, Norwood Hall (engineering building), Ore Dressing Building, Parker Hall, Gymnasium, Mine Experiment Station Building and Garage.

LIBRARY: The library contains 30,000 carefully selected volumes, not including unbound material. Works on engineering, mathematics, chemistry, physics, mining, metallurgy, geology and mineralogy afford students reading in connection with their class work. The library also contains standard works in English and American poetry, fiction, biography, and history. It is well provided with encyclopedias and works of general reference.

LABORATORIES

BIOLOGY: The biological laboratories are well equipped for work in this field. The equipment includes microscopes, autoclaves, incubators, electro-titration apparatus, surface tension machine, microtome, centrifuge, and a rather comprehensive medical library. Specimens of the flora and fauna of the Ozarks are collected and preserved for class use.

CHEMISTRY: One entire building is devoted to chemistry. The laboratories for general chemistry include desks and equipment for 192 students. The quantitative laboratories include desks and equipment for 120 students (including analytical weights, platinum crucibles, and standardized burettes). The physical laboratories accommodate 48 students. The organic laboratories accommodate 30 students. The industrial laboratory will accommodate from 10 to 15, and the refining laboratory, 8. The machines installed in the industrial laboratory include mixing and grinding machines, filter presses, centrifuges, apparatus for dry distillation of woods, petroleum stills for distillation and cracking of crude petroleum, standard apparatus for oil testing as found in modern oil laboratories, etc., caustic pot, nitrator, sulphanator, fusion kettle, autoclave, glass enameled, non-corrosive and standard kettles, drying ovens, mixing and storing tanks, and the incidentals necessary for the operation of these units.

CIVIL ENGINEERING: The equipment for field practice includes 24 transits, 20 plane tables, 21 levels, and other necessary equipment. A number of transits are equipped with solar attachments and others with auxiliary telescopes for mine surveying. Apparatus is provided for laboratory work in hydraulics, compressed air, and structural material. A Highway Testing Laboratory has been recently equipped with apparatus for the testing of cement, sand, gravel, and stone, according to prescribed specifications.

GEOLOGY AND MINERALOGY: The equipment includes reference, working, and cabinet collections of minerals, ores, rocks, and

fossils; a working collection of wooden and glass models and natural crystals, full sets of maps and reports, and set of geological relief models. There is also a collection of 3,500 specimens representing the mineral wealth of Missouri. Rock-breaking and section machines, instruments for geological surveys, and microscopes for petrographic work are included in the equipment.

DRAWING: Four large rooms on the third floor of Norwood Hall are used as drawing laboratories and lecture rooms. These are equipped with locker desks, large drawing boards, steel tee squares, steel protractors, and other instruments intended for precise drawing in advanced classes. A large collection of models is available for drawing exercises. A separate copy room equipped with modern Pease electric blue-printing outfit, mimeograph, and other miscellaneous copying and printing equipment is maintained.

ELECTRICAL ENGINEERING: The equipment of the electrical engineering laboratories includes instruments for the study of the methods of electrical measurements and for the testing of the magnetic properties of iron and steel; practically all types of modern electric machines and the necessary instruments for making standard tests on these machines; power control equipment; and instruments and apparatus for the study of radio communication.

METALLURGY AND ORE DRESSING: The department, recognizing the distinct fields of physical and process metallurgy, has laid out its curriculum and secured its equipment with this in mind. Laboratories are provided for process metallurgy-pyrometallurgy, hydrometallurgy, and electrometallurgy. Also for the various thermal, chemical, and physical tests, as well as structure study in the physical metallurgical field. The laboratories are amply equipped and adequate facilities are provided so as to promote and enable students to carry out original research work in any of these fields. The State Experiment Station's equipment affords an opportunity for the more advanced students, interested in metallurgy and ore dressing to carry out research problems in this branch of the metallurgical field.

MINING: The mining department occupies the second floor of the Experiment Station building. The space includes a large lecture room, drafting room, exhibit room and four offices. On display in the exhibit room are a number of models illustrating mining method, head frames, mine timbering, reversible mine fan, rock drills in section, safety lamps, mine-rescue apparatus, explosives, wire ropes, and various other mining appliances. The department has several hundred lantern-slides of mining scenes and mining machinery and also many mine maps and drawings. The surveying equipment, already referred to under Civil Engineering, includes a number of mining transits with auxiliary telescopes, which are used for the field work in mine surveying.

The north sub-basement of the Experiment Station building is used by the mining department for a rock drilling laboratory. The

equipment includes a Leyner-Ingersoll 5A drill sharpener, an oil-fired forge and several different types of rock drills. The work done in this laboratory is largely experimental and includes investigations of rock drill bits and drill steel. Large blocks of red granite, imported from Southeast Missouri, are used for the experimental drilling.

In order to provide a laboratory where practical instruction in mining and mine surveying can be given, the school has equipped a small experimental mine. This mine has all equipment necessary for its operation.

PHYSICS: The department has the necessary equipment for instruction in physical measurements in mechanics, sound, heat, light, and electricity.

RESEARCH: The mining and metallurgical research laboratories are provided with the necessary equipment both for scientific study of the fundamental physical and chemical principles underlying mining and metallurgical technology and for the testing of commercial processes on an experimental or semi-commercial scale. The work is conducted in co-operation with the United States Bureau of Mines.

SHOP PRACTICE: The wood bench work room contains 20 double benches with separate sets of hand tools. The lathe room is equipped with 20 wood lathes. The forge room contains 24 down-draft forges, a power hammer and other equipment for forge work, and six oxy-acetylene stations for welding instruction. The metal-working room contains the latest design of motor-driven, iron-working machinery.

EXPENSES

TUITION FEE: Tuition is free to all students who are residents of Missouri. Non-residents of Missouri pay a tuition fee of \$20.00 per year.

CONTINGENT DEPOSITS: A deposit of \$30.00 is required from each student to cover the cost of extra supplies and damage to apparatus. This deposit must be renewed if at any time exhausted, and at the end of the school year whatever sum may remain to the credit of the depositor is returned to him.

REGISTRATION HOSPITAL, AND LIBRARY FEE: A registration hospital, and library fee of \$16.00 a semester will be charged all students.

LABORATORY FEE: A uniform charge of \$15.00 per semester is made to cover the cost of materials used in the laboratories of the school. In case of withdrawal from school within two weeks of the opening of a semester this fee will be refunded. In case of withdrawal between the second and the tenth week of a semester one-half of this fee will be refunded.

ATHLETIC FEE: A fee of \$5.00 per semester is charged for the use of the gymnasium and for admission to all athletic contests, and for the use of the golf course.

DIPLOMA FEE: A fee of \$5.00 is charged to any student to whom a diploma is issued.

INSPECTION TRIPS: The senior inspection trips required in Mining, Metallurgical, Civil, Electrical, and Chemical Engineering courses cost from \$40.00 to \$100.00.

LIVING EXPENSES: Table board costs about \$30.00 per month at the present time. Room rent costs from \$8.00 to \$15.00 per month, depending on the nature of the accommodations.

PHYSICAL TRAINING

For the physical training of students excellent opportunities are afforded by the Jackling Gymnasium and the Jackling Field. The former, completed in 1915, at a cost of seventy thousand dollars, is a strictly modern fire-proof building and is equipped with baths, dressing rooms, lockers, a swimming pool 20 feet wide and 60 feet long and various kinds of apparatus and game courts usually found in modern gymnasiums. Class work, consisting of games, setting-up exercises, developing exercises, calisthenics, the use of dumb-bells, clubs, and wands is given under the supervision of the Director of Physical Training. Instruction in swimming and wrestling is also given, the aim of this work being to develop health, strength, vitality and cohesion of movement.

Jackling Field, constructed in 1909, by virtue of a gift of Mr. D. C. Jackling, '92, adjoins the Gymnasium and provides a football gridiron, a baseball diamond, and a quarter-mile running track for class and intercollegiate games and events. A number of tennis courts about the campus are maintained in good order. An excellent 9-hole golf links near the campus is maintained for the benefit of the students.

The school encourages rational athletics and a participation in intra and intercollegiate sport, all branches of which are under the direct supervision of the Director of Physical Training and management of the Board of Control. The membership of the Board of Control consists of the Director of Physical Training, the Chairman of the Faculty Committee on Athletics, the President and Student Manager of the Athletic Association, and the Secretary of the Executive Committee of the Board of Curators as ex-officio treasurer.

MILITARY TRAINING

The War Department maintains at the Missouri School of Mines an Engineer Unit of the Reserve Officers' Training Corps.

Military Science and Tactics is required of all physically fit Freshmen and Sophomores and may be elected by Juniors and Seniors. When a student joins the R. O. T. C. the War Department

furnishes his equipment and uniform for the freshman and sophomore courses and commutation of uniform, amounting to \$30.00 and \$6.00 for the junior and senior courses respectively. The student who fully completes the school year satisfies completely his financial obligation and is no further financially bound, although he is under the moral obligation to continue his uniform in service during the ensuing year if he remains a member of the R. O. T. C. After two years' service the uniform becomes the exclusive property of the student. The uniform worn by the freshmen and sophomores is that of the Regular Army, with some modifications, and that worn by the juniors and seniors is of a distinctive cut and color, so that it may be worn as civilian clothes later by removing certain insignia.

The four-year instruction is divided into the basic course and the advanced course. The basic course consists of the first two years in the department of Military Science and Tactics and corresponds to the freshman and sophomore years of the academic department. Two credit hours per semester are given toward graduation for the basic course. When a student has satisfactorily completed the basic course and is recommended for further training, he may elect the advanced course for the two remaining years. The advanced course consists of theoretical work at the institution and practical work during a R. O. T. C. summer camp elsewhere described in this catalog. During the two years' advanced course the student receives in addition to his uniform, a cash remuneration amounting to about \$9.00 a month, or nearly \$175.00 in all. He also receives four credit hours per semester.

RULES AND REGULATIONS

THE SCHOOL YEAR: The regular school year comprises two semesters of eighteen weeks each. The curricula are based on the fall and spring semesters, and are normally completed in four years. However, an opportunity may be offered in some courses to make up deficiencies or complete prerequisites during the summer.

THE CREDIT HOUR: A credit hour is the credit obtained for satisfactorily passing a course of one hour in the classroom per week for one semester. In computing the relation between laboratory and classroom hours, three laboratory hours are considered the equivalent of one classroom hour.

THE NORMAL SCHEDULE: The standard schedule carries not less than sixteen and not more than twenty-one credit hours. Departure from these limits requires special permission of the Faculty.

SYSTEM OF GRADING: The following system of recording grades has been adopted:

E—Excellent	95–100 %
S—Superior	85– 95 %
M—Medium	75– 85 %
I—Inferior	65– 75 %
F—Failure, below	65 %

MINIMUM REQUIREMENT: Any student who fails to complete satisfactorily 10 credit hours of work per semester will be dropped from the roll of the school. A student who fails in three subjects for two consecutive months will be required to drop at least one subject.

ABSENCES: Any student who absents himself from any class during the day immediately preceding or the day succeeding any regular holiday or vacation period of the School of Mines shall be reported to the Student Adviser, and, unless he can offer a satisfactory explanation, the Student Adviser shall instruct the Registrar to record against him on his record card additional requirements in credit hours for graduation to the amount of not less than one, or more than six, hours for each offense.

A student shall have added to his requirements for graduation one credit hour for each total of sixteen absences during a semester.

DEGREES

BACHELOR'S DEGREES: Bachelor of Science, Bachelor of Science in Mine Engineering, Bachelor of Science in Metallurgy, Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Science in Electrical Engineering and Bachelor of Science in Chemical Engineering.

The candidate for the degree of Bachelor of Science, or Bachelor of Science in an engineering curriculum, shall complete, in residence for at least the Senior year, the prescribed course of study in General Science, or in the corresponding engineering curriculum.

COMBINATION CURRICULA: Combination curricula leading to two engineering degrees can be arranged for any two of the foregoing degrees. The amount of additional time will be at least forty semester hours in excess of that required for one degree, and may be more. For instance, a joint curriculum, Mechanical and Electrical Engineering, can be taken in five years. Where the curricula are more diverse, such as Civil Engineering and Mechanical Engineering, six years may be required.

MASTER'S DEGREES: Master of Science, Master of Science in Mine Engineering, Master of Science in Metallurgy, Master of Science in Civil Engineering, Master of Science in Mechanical Engineering, Master of Science in Electrical Engineering, Master of Science in Chemical Engineering.

The candidate for the degree of Master of Science shall hold the degree of Bachelor of Science, or its equivalent, from an institution of recognized standing. The candidate for the degree of Master of

Science in an engineering curriculum shall hold the degree of Bachelor of Science in that curriculum from an institution of recognized standing. Candidates for either degree must complete in residence a one year's course of graduate work, approved by the Committee on Graduate Students, and shall submit an acceptable thesis.

ENGINEER OF MINES, METALLURGICAL ENGINEER, CIVIL ENGINEER, MECHANICAL ENGINEER, ELECTRICAL ENGINEER AND CHEMICAL ENGINEER.

The candidate for an engineering degree shall hold a degree of Bachelor or Master of Science in an engineering curriculum from this institution, and shall submit an acceptable thesis covering professional investigation within the chosen field, together with a satisfactory record of at least five years' professional experience in this field, provided that if the degree of Bachelor or Master of Science has been granted in the same Department in which the engineering degree is desired, then a satisfactory record of at least three years of professional experience shall be submitted.

An engineer holding two bachelor's degrees may obtain two engineering degrees provided that he satisfies the requirements as stated above for each of the two degrees. This means that at least three years, must elapse between the granting of two engineering degrees.

DOCTOR OF PHILOSOPHY: Candidates for the degree of Doctor of Philosophy (in Mining, Metallurgy, Chemistry and Geology) must register with the Graduate School of the University of Missouri and be subject to all the regulations of the Graduate School. A complete statement of the rules governing the granting of the degree of Doctor of Philosophy may be found on pages 194 and 196. Work done in residence either at Rolla or at Columbia may count towards the degree. The examinations are conducted by a committee appointed by the chairman of the Committee on Graduate Students at Rolla and the Dean of the Graduate School at Columbia. The degree is conferred by the University of Missouri.

CURRICULA

CURRICULA OFFERED: The School of Mines and Metallurgy offers the following curricula. The Roman numerals identify the curricula:

- I. Mine Engineering.
- II. Metallurgy.
- III. Civil Engineering.
- IV. General Science.
- V. Mechanical Engineering.
- VI. Electrical Engineering.
- VII. Chemical Engineering.
- VIII. Ceramic Engineering.

The several courses of study are arranged to contain all the necessary fundamental sciences and language and the essential technical subjects in such order as to lead to a logical and coherent technical education. In recognition of the demand from the mineral industry and the engineering profession for specific technical training, certain definite options are offered. The mine engineering student who does not care to take the General Mining Course may specialize in (a) Coal Mining, (b) Mining Geology, (c) Petroleum Engineering. Students are strongly advised to take the General Course unless they have special qualifications or reasons for pursuing one of the options. The choice of the Coal Mining Geology, or Petroleum Engineering Option, should be made in the Sophomore year. Preceding the work of the Junior year, the courses are largely fundamental, and all regular students are required to take full work in English, Physics, General Chemistry and Mathematics.

The General Science curriculum IV differs from the Engineering curricula in that it contains no required applied science subjects, but pure science subjects only. The graduates from the course are fitted to pursue research work or to enter the teaching profession in high school or college work in the sciences.

CREDIT REQUIRED FOR DEGREE: In order to receive a degree it will be necessary to obtain credit in all of the required subjects listed in one of the regular curricula and sufficient additional credit in elective subjects to make a total of 158 credit hours, exclusive of the required physical education of the freshman and sophomore years, for a degree in one of the engineering curricula, or 138 credit hours for a degree in General Science.

GRADUATE COURSES: Graduate work is offered in all departments. The work is elective, under the advice of the faculty.

LABORATORY TRAINING: The School of Mines and Metallurgy maintains adequate laboratories for practical instruction. The school has been in existence for fifty years and has acquired, especially in geology and mineralogy, metallurgy, and mining, and chemistry, excellent collections and equipment. The surroundings of the school lend themselves well to field work in geology. The Mining Department operates an experimental mine, located within a short distance from the school campus. Every effort is made thoroughly to ground the students in the fundamental sciences, and to make the technical instruction practical as well as scientific. The school keeps in close touch with the mining and metallurgical operations in the several mining districts of the state. All curricula except that in General Science, IV, are the same in the Freshman year and differ but slightly in the Sophomore year. The student thus need not make a choice of special work until after being well started in his course.

PHYSICAL TRAINING AND MILITARY SCIENCE AND TACTICS: Military Science and Tactics and Physical Training are required of all physically fit male students in the Freshman and Sophomore

years. For further information on military instruction and the Reserve Officers' Training Corps, refer to the section in the catalogue on "Military Science and Tactics."

PRACTICAL WORK: Before receiving a degree in any engineering course, in addition to completing a curriculum as outlined, the student must have worked not less than eight weeks in the industry or line of work in which he is specializing. If he is not able to fulfill this requirement, he may spend not less than four weeks in observation, note-taking and sketching, at some mine, mill or other industrial plant, or on any work designated by the department concerned. A regularly supervised inspection trip may be taken in place of this prescribed work, if offered by the department.

Suitable reports and satisfactory credentials are required on all the work described above. This work should be done during the summer following the Junior year, if possible.

Students in curricula I, II, III, VI, VII, and VIII, are also required to take an inspection trip during the Senior year.

A special catalog of the School of Mines and Metallurgy is issued each year. It contains a detailed announcement of all curricula, statement of courses, entrance requirements, rules and regulations of the school of mines and metallurgy, and should be consulted by persons desiring full information concerning this school. For copy of this catalog, address

REGISTRAR,
SCHOOL OF MINES AND METALLURGY,
ROLLA, MISSOURI.

For further information concerning the work of the School of Mines and Metallurgy, address

CHARLES H. FULTON, Director
SCHOOL OF MINES AND METALLURGY
ROLLA, MISSOURI.

THE MISSOURI STATE MILITARY SCHOOL

RESERVE OFFICERS' TRAINING CORPS

The Missouri State Military School is an integral part of the University of Missouri (Revised Statutes of Missouri) and provides the instruction in military tactics contemplated by the act of Congress July 2, 1862. In 1917 an infantry unit of the Reserve Officers' Training Corps was established at the University under the provisions of Section 41 of the Act of Congress approved June 3, 1916, and in 1919 a field artillery unit of the Reserve Officers' Training Corps was established. All military instruction and training at the University including that contemplated by the act of Congress of July 2, 1862, is now included in that given in these two units.

The Missouri State Military School provides systematic military instruction with two definite objects in view. The first object is to qualify selected students for appointment as reserve officers in the military forces of the United States. Those who take all or a part of the course and fail to qualify for appointment as reserve officers are nevertheless a valuable military asset to the country. Thus the school is a very vital agency in making effective the plans for national defense. The second object is to inculcate in the student certain qualities such as loyalty, patriotism, obedience and respect for laws, concentration, leadership, self-confidence, self-respect, organization and teamwork, co-ordination of mind and muscle, physical fitness—qualities as useful and important in civil life as in the army.

ARRANGEMENT OF WORK: In so far as practicable instruction is given by the applicatory method and is co-ordinated with subjects taught in other departments of the University. The course is divided into two parts, the Basic Course consisting of the first four semesters and the Advanced Course consisting of the last four semesters including one summer camp of about six weeks' duration.

The Basic Course requires five hours per week of the student's time including class room work, practical instruction, and the time required for study. The Advanced Course similarly requires six hours of the student's time.

During the period December 1 to March 1st, Freshmen and Sophomores, pursuing the military courses, take two hours per week in physical training in lieu of an equivalent number of hours in military instruction.

REQUIRED COURSE: All physically fit male students are required to complete the Basic Course of four semesters in military and physical training. This course, which is pursued normally during the freshman and sophomore years is a prerequisite for graduation.

No qualified student will be excused therefrom except for reasons of great weight presented to and approved by the Faculty Committee appointed by the Executive Board. For this course the student receives a credit of one and one-half hours per semester or a total of six credit hours for the Basic Course.

ELECTIVE COURSE: Selected students who have completed the basic course or its equivalent are eligible for the advanced course. Students in this course receive two credit hours for each semester successfully completed in the College of Agriculture, School of Engineering, School of Journalism, School of Business and Public Administration, School of Fine Arts and the College of Arts and Science, except that a 12-hour maximum limit is allowed in the School of Fine Arts and the College of Arts and Science for all courses in Military Science and a 4-hour maximum limit is allowed in the School of Journalism for the advanced course.

The War Department pays to each advanced course student commutation of subsistence at the rate of 30 cents a day. The period of time for which this payment is made includes one summer vacation, less the six weeks spent in camp, where the Government provides subsistence and, in addition, pays each student about 70 cents per day.

Summer Camps: During the summer, the War Department holds camps in the several corps areas for R. O. T. C. students. The purposes of these camps is to give more practical application to the theoretical work of the classroom than is given at the institutions.

These camps usually begin about June 15th, and continue for six weeks. While they are established primarily for advanced course students, a limited number of basic course students may be selected to attend. Five cents a mile to and from camp is paid each student to cover railroad fare and other traveling expenses. All outer clothing, quarters, bed and bed clothing, medical attention, and food are furnished free. In addition to these supplies, the Federal Government authorizes a special ration for the summer camp students.

It is the present policy of the War Department to send advanced course students to camp after they have completed the first year of the advanced course. However, special authority may be given to the students who have signed the contract for the advanced course to attend the first advanced camp following their completion of the basic course, or to postpone attendance at camp until they have completed the four semesters of school work of the advanced course.

Uniforms: According to present regulations, the Government allows commutation for uniforms at the rate of \$30.00 per man for the first and third years, and \$6 per man for the second and fourth years. Accordingly, the University is not responsible for any changes which may be made relative to uniforms because of changes in the above War Department policy.

The following are the regulations relative to the uniform:

A deposit of \$15 is required on each uniform issued, of which \$3 is retained to cover additional uniform equipment and other expenses of the course. Failure to return uniforms within ten days after date of excuse or close of class work will result in a reduction of the amount refunded. For details see regulations issued to students enrolled in military courses.

In case a uniform becomes so worn or soiled as to be unfit for wear, the student may be held responsible to the extent (determined upon by proper authority) of the cost of the uniform.

All cadets are required to attend formations for practical instruction in uniform, and to observe military courtesy and discipline while in uniform.

Organizations: The Cadet Corps consist of a provisional regiment of Infantry, a provisional regiment of Field Artillery, and a cadet band.

The R. O. T. C. Band: A full band of approximately fifty pieces is organized under a band leader employed by the University. Students of the R. O. T. C. who are selected to become members of the band receive credit for certain practical military instruction for their work in the band. As members of the band they are required to rehearse approximately three times per week, and to play in all formal ceremonies given by the R. O. T. C. and in a number of concerts given during the school year.

EQUIPMENT OF INFANTRY

600 Springfield rifles, Model 1903, caliber, 30.

A supply of regulation infantry packs including mess equipment and shelter tents.

Colt's automatic pistols, caliber .45.

Gallery rifles and gallery ammunition.

Service ammunition and target material for practice on target range.

Eight Browning machine guns, Model 1917.

Four machine gun tripods, Model 1917.

Four machine gun tripods, Model 1918.

Machine gun fire control equipment, including panoramic sights and range finder, 80 cm. base.

Machine guns, carts and harness.

Eighteen Browning automatic rifles.

Two 37mm. guns and carts.

Two 3-inch trench mortars.

A supply of sketching boards, topographical equipment including compasses, alidades, etc., maps and other instructional equipment.

A supply of Type EE field glasses.

EQUIPMENT OF FIELD ARTILLERY

Gun Equipment: One complete 3-inch battery American material and one complete battery of French 75 mm. guns; one gun, with accessories and caisson for the following types: 155 mm. rifle French; 155 mm. Howitzer, American; 75 mm. field gun, British Model, 1917; 75 mm. field gun, American Model, 1916; 75 mm. field gun, French Model, 1897; Browning machine guns; Browning automatic rifles; Colt's automatic pistols, caliber .45; Battery reel cart.

Motor Equipment: Two 5-ton field artillery tractors (Holt); two 1½ ton cargo trucks (White); two 3-ton four-wheel-drive ammunition trucks; one 3-ton artillery repair truck, with complete machine shop; one reconnaissance car, 12-passenger (White); one Dodge touring car; two motorcycles, with side cars (Harley-Davidson).

Fire Control Equipment: Ten battery commander's telescopes, model 1917; four American aiming circles; 8 French aiming circles; 30 field glasses, type EE; 5 range finders (1 meter base), and other instructional equipment.

ENGINEER EQUIPMENT: Plane tables and sketching outfits; alidades, compasses, etc.

SIGNAL EQUIPMENT: Telephones, switchboards, and eight field radio sets for two-way communication. The Field Artillery unit, R. O. T. C., maintains in the headquarters building a complete 50-watt-radio station. It is included in the Army radio net.

ANIMALS: Sixty-five horses are used in the classes of Equitation. B.C. Detail work, and Driving and Draft.

EXTENSION DIVISION

The University of Missouri wishes to bring a complete practical education within the reach of every citizen of the state. To assist in accomplishing this purpose, the Extension Division has been established. By means of correspondence courses, extension lectures, and extension class courses, a thorough course of training at the lowest possible cost is offered to all who have been unable to attend established institutions. Through a wider use of the University library, and through the establishment of information bureaus, practical information upon a wide range of subjects will be furnished free to all who desire it.

The University means to go even farther than this in its efforts to be of service to the public. It intends to interest itself in the solution of all live problems, to bring itself into closer touch with the daily life of the people, and to assist, wherever proper and legitimate, in forwarding every beneficial movement which concerns the interests of the state.

The Extension Division of the University was formally established by the Board of Curators in January, 1910, though extension lectures and extension teaching had been carried on for many years. It is the aim of the curators to increase, as rapidly as possible, the amount and variety of such work. The extension work is being administered by the following committee:

President Stratton D. Brooks, Chairman; Professor J. D. Elliff, Professor J. H. Coursault, Professor C. E. Germane, Professor R. W. Selvidge, and Professor Charles H. Williams, Director.

DEPARTMENTS OF EXTENSION WORK

The Extension Division at the present time offers the following lines of service:

1. Correspondence Courses.
2. Extension Class Courses.
3. Department of Public Information.
4. Visual Education Service.
5. Debating Service.
6. Municipal Reference Bureau.

CORRESPONDENCE COURSES

By means of the mail the college is taken to the student. Teaching by correspondence has been proved successful after thorough trial and has many advantages of its own, among them thoroughness of instruction.

PROCEDURE: Any person desiring to take courses by correspondence should write for application blanks and for a copy of the last announcement of the Extension Division, then select such course or courses from the announcement as seem desirable, fill out the blank with all the information called for, and return it. When the application has been approved, the applicant will be notified to remit the fee. Upon receipt of the fee, lessons with instructions for study and directions for returning prepared lessons and reports will be forwarded. The student is permitted to pursue his studies as rapidly as is consistent with good work, though ordinarily a 5-hour course, consisting of about forty assignments, can be done by the average student in twenty weeks, with a minimum time for study of two hours a day for six days a week.

COURSES OFFERED: Courses are offered in the following subjects: Agriculture, astronomy, chemistry, classical archaeology, economics, education, English, French, geology, German, history, home economics, Latin, mathematics, physical education, physics, physiology, political science, psychology, preventive medicine, sociology, Spanish, zoology.

The courses in agriculture meet the needs of persons desiring to teach agriculture or to pass state examination in that subject.

COST OF COURSES: The enrollment fees are as follows:

1-hour course (8 assignments).....	4.00
2-hour course (16 assignments).....	8.00
3-hour course (24 assignments).....	12.00
4-hour course (32 assignments).....	16.00
5-hour course (40 assignments).....	20.00

An additional fee of one dollar per hour's credit will be charged to students who are not residents of Missouri.

The instructor in any particular course may require assignments to be rewritten, or may vary the total number of assignments in case it is found necessary to do so.

The fees barely cover the actual expense of conducting the courses. They do not include textbooks, though by proper arrangements students may borrow from the University library books other than texts when they are not in use.

Students are expected to pay full postage both ways on manuscripts sent to the University.

The cost of taking work in the regular session, including room and board, is about \$20 a credit hour, counting \$300 a term as average expenses of a student. The cost of taking a course by correspondence (exclusive of postage) is \$4.00 a credit hour, which represents only about one-fifth the total cost of courses to students in attendance at the University. Correspondence work affords an excellent opportunity for those students who wish to do part of their college course at a minimum expense while engaged in other work.

GENERAL INFORMATION ON CORRESPONDENCE COURSES: For admission to courses for University credit a student must meet the regular University entrance requirements or be 21 years old and qualified for the work desired. The ability of the student to enter upon the work of any individual course is passed upon by the instructor in charge of the course.

Students less than 21 years old who are not graduates of a four-year high school, fully accredited by the University of Missouri at the time of their graduation, should communicate with the Registrar of the University, Columbia, Missouri, concerning their admission to the University before making application for correspondence courses.

Correspondence work is as thorough as that done in actual attendance.

Courses may be begun at any time (including vacation).

No preliminary examination is required.

Students are not allowed, except by special permission, and then only when they are carrying less than the maximum amount of work, either to begin or to continue correspondence courses while taking work in residence at the University of Missouri or at any other school.

The time required for preparation of lessons is usually from one and a half to two hours daily, depending upon the ability of the student.

Courses by correspondence are also offered in high school subjects. Persons interested in those subjects should write for the University Bulletin on high school subjects.

In no case shall extramural work be counted in lieu of the requirement of two terms' resident work. In all cases where correspondence courses are to count for credit in the senior year, students must secure the approval of the dean.

Students who are prepared to enter the Graduate School of the University of Missouri, but who have not taken any graduate work in residence, can begin their work by correspondence with the University of Missouri and secure full credit, provided the work taken fits in with their subsequent courses and can be counted upon their major subjects. Usually (but not always) any one of the courses offered by one of the departments for graduate credit will count upon the major in that department, but it may not count upon the major in another department. The student taking graduate courses by correspondence before coming to the University should, upon taking up work in residence, consult with his adviser and the dean of the Graduate School with reference to including his pre-residence correspondence work in the major which he has chosen. There will then probably be little trouble about the correspondence work counting upon the A.M. degree.

The maximum graduate credit which can be secured before residence is four hours. (The student may secure eight hours' credit by extension class work before the establishment of residence.)

Correspondence or extension work with other institutions will not be accepted for graduate credit at the University of Missouri.

This action taken by the Graduate Faculty means that scores of teachers all over the State of Missouri, who are interested in procuring their A. M. degree, can now make a substantial beginning, while carrying on their regular work.

Students who have been in attendance at the University of Missouri for one summer session in the Graduate School can, with the approval of the dean of the Graduate School, take a maximum of eight hours' work by correspondence for graduate credit. Students who have taken four hours' graduate credit by correspondence before enrolling in residence in the Graduate School can take only four hours' additional by correspondence after enrolling.

The maximum work by correspondence, extension centers, and extension class courses, is limited to ten normal credit hours for one calendar year, except by special permission.

The time allowed for completion of a correspondence course is one year from the date of enrollment, except by special permission upon the payment of an extension fee. During an instructor's vacation, a substitute is provided to carry on his course whenever possible.

No fees paid for correspondence courses will be refunded.

If information on courses not here announced is desired, write the Director of University Extension. In case high school subjects are desired, ask for the High School Bulletin. Every effort will be made to assist you. The constant aim of the University is to come into vital touch with the people of the state.

PAYMENT OF FEES: All remittances for correspondence or extension class courses should be made payable to the University of Missouri and mailed to the Secretary, University of Missouri, Columbia, Mo.

EXTENSION CLASS SERVICE

EXTENSION CENTER COURSES: Work was offered by the lecture method of extension centers during 1926-27, chiefly in the subject of education.

HOW EXTENSION CENTERS ARE FORMED: Interested people in any community should write to the Extension Division stating that they wish an extension lecture course. Information will be promptly given, advising what courses are available.

HOW UNIVERSITY CREDIT IS OBTAINED AT EXTENSION CENTERS: Students enrolled in extension centers who desire University credit for a course must, in addition to attending lectures given by the instructor, write papers in each course and take a final examination.

The tuition for extension center courses is \$12.00 per student for a three-hour credit course, a proportionate amount being charged for courses giving different credit. In addition, where the instructor is to travel any considerable distance from the University it may be necessary to charge an extra fee to assist in defraying traveling expenses.

EXTENSION CLASS COURSES

In order to serve better the needs of the state, and especially the needs of the teachers of Missouri, the Extension Division of the University has inaugurated a new plan of Extension Classes. Under this plan a large number of courses regularly offered at the University will be offered by local instructors in cities and towns of the state where satisfactory arrangements can be made. The teachers will be special members of the Faculty of the State University and the courses will be in every way the equivalent of the same courses offered in residence at the University.

REGULATIONS

1. Extension class instruction may be given in co-operation or connection with other schools of the state wherever satisfactory arrangements can be made.

2. The instructors in such courses shall be chosen, appointed and paid by the University of Missouri.

3. The minimum qualifications of instructors in such work shall be as follows:

- a. The M. A. degree.
- b. Adequate special training in the subject taught.
- c. Superior teaching ability.

4. The instructors must be approved by the chairman of the department, the dean of the school or college concerned, and by the Director of University Extension.

5. Only regularly approved courses may be offered and the instructor must follow the syllabus supplied by the chairman of the University department concerned.

6. At the close of each course a final written examination, consisting of questions supplied by the chairman of the University department concerned, shall be held, covering the entire course, and the examination papers, after having been graded by the instructor, shall be filed with the Director of University Extension.

7. In extension class courses the instructor must meet the class approximately the same number of hours which instructors in the University meet their classes carrying the same amount of credit.

8. A tuition fee of \$4.00 per credit hour shall be paid by each student at the time the course begins. Such fee must be paid before the student is entitled to take the work of the course. No tuition fees will be refunded.

9. Before any such course can be definitely approved by the University, satisfactory arrangements for the necessary reference books, laboratory equipment, and laboratory supplies must be made either by the school co-operating or by the class receiving this instruction.

ARRANGEMENT OF COURSES: Groups of teachers wishing to arrange for an extension class course should communicate with the Extension Division, stating the number of persons interested and giving information as to the qualifications of the person in the community best adapted to act as instructor. In case no such person is available in the community the University will arrange to send an instructor who is qualified whenever possible.

For information concerning Extension Center or Extension Class courses, write to Extension Class Service, Law Building, Columbia, Missouri.

DEPARTMENT OF PUBLIC INFORMATION

The Department of Public Information includes the following branches:

1. Women's Club Service.
2. The Package Library Service.
3. Play and Recitation Service.
4. High School Debating League Packages.
5. Investigation and Response to Individual Inquiries.

WOMEN'S CLUB SERVICE: The Women's Club Service includes special club program outlines and package libraries. Special provision will be made whenever possible for a representative from the Women's Club Department to be sent to State and District meetings, and to give any service the clubs desire in lectures, discussions, etc. A representative will be sent to local meetings whenever expenses can be paid by the local organization.

THE PACKAGE LIBRARY SERVICE: The Package Library Service is designed especially for women's club work, but is available to any person in the State. It includes material taken from newspapers, magazines, pamphlets, books, lectures or any other available source. The material is collected with the special idea of presenting information on both sides of any subject. Package Libraries will be sent to any one in the State requesting it.

PLAY AND RECITATION SERVICE: The Play and Recitation Service of the Department of Public Information aims to supply suitable plays and recitations for the schools of the state—to assist high school principals, teachers, rural schools, dramatic societies, or any individual in securing good plays and recitations quickly and economically. This service endeavors to secure, free of cost, except for postal charges, the best plays and recitations available for school use.

HIGH SCHOOL DEBATING LEAGUE: The packages of debating material for loan to the members of the High School Debating League are actually handled at the present time by the Department of Public Information, although the immediate direction of all matters relating to the League is under the personal charge of Director C. H. Williams, Secretary of the League, acting under the supervision of the Executive Committee of the League.

INDIVIDUAL INQUIRIES: Any inquiry by any citizen of the State of Missouri will be given prompt and courteous attention by the Department of Public Information and, if possible, information will be secured and supplied to the writer. All inquiries in connection with the Department of Public Information should be sent to Department of Public Information, 1 Law Building, Columbia, Missouri.

VISUAL EDUCATION SERVICE

Nearly one hundred fifty sets of lantern slides containing from 10 to 100 slides each and motion picture films upon approximately 200 subjects can be furnished to schools, churches, farmers' clubs, colleges and other educational institutions for a small inspection fee and transportation charges. A rental fee is charged for a few special films. Charts on Agricultural subjects and several sets of stereographs and mounted prints are also available.

For information concerning films, slides, or charts, write to Visual Education Service, 1 Law Building, Columbia, Missouri.

MISSOURI HIGH SCHOOL DEBATING LEAGUE

At the meeting of Missouri high schools at the University in May, 1914, arrangements were made for the organization of a Missouri High School Debating League. Any high school or academy of Missouri which is on the accredited list of the University of Missouri may become a member of this league by paying the annual dues, which are \$3.50. Debating contests are held between the various schools composing the league, and a final contest determining the winning team for the state is held at the University on High School Day. A scholarship of the value of \$125 is given to the best individual debater. This scholarship is not transferable. The subject for debate by the league during 1926-27 was: *Resolved, That the adherence of the United States to the Permanent Court of International Justice (the World Court) under the conditions approved by the United States Senate on January 27, 1926, is a wise public policy.*

For the year 1927 debating packages are available upon the following subjects:

The Child Labor Amendment	170 packages
Commission-Manager Plan of City Government . . .	105 packages
Government Ownership of the Coal Mines	60 packages
Open and Closed Shop	60 packages
Government Ownership of the Merchant Marine . . .	30 packages
National Labor Party	30 packages
Compulsory Arbitration	29 packages
Government Ownership of Railroads	29 packages
Independence of the Philippines	160 packages
Minimum Wage System	9 packages
Illiteracy Test for Immigration	2 packages
Compulsory Old Age Insurance	3 packages

The Extension Division of the University, through special arrangements with the University Library, is ready to furnish to Missouri high schools packages of debating material, free of charge, except for cost of transportation. Material is included upon both the affirmative and negative sides of the questions concerned. Packages are sent to schools in the order of application. Packages are not sent to any one school upon more than two subjects at one time, nor upon more than one subject at a time unless the supply exceeds the demands of the schools. Whenever the material is not in use in high schools, it is available for clubs or community centers, upon guarantee that it will be properly cared for and returned.

MUNICIPAL REFERENCE BUREAU

During the year 1915-16 the University established a Municipal Reference Bureau, which furnishes information free of charge to cities and towns of Missouri on questions relating to civic affairs. The information to be furnished covers such topics as lighting, paving, equipping waterworks, installing sewers, providing public buildings, and other municipal undertakings. Ordinances will be drafted or revised on request, and advice given as to powers of the municipality in handling local problems as they arise. The information supplied is strictly non-partisan in character. All inquiries from citizens or public authorities of towns and cities in Missouri will receive prompt attention.

Send all inquiries concerning civic affairs or municipal administration to Municipal Reference Bureau, Law Building, Columbia, Missouri.

BULLETINS OF INFORMATION

Special investigations are constantly being made by the University upon questions both of general and of special interest. Several special bulletins have been issued by the Extension Division of the University. *Technical Manual Arts for General Educational Purposes* and *Handwork in Grades One to Six* are of particular interest to the teacher of manual arts. Other available bulletins are: *The House Fly*, *School Improvement Agencies*, *Care of Free Textbooks*, and *A Manual for the Mental and Physical Examination of School Children*. Copies of bulletins are furnished free to persons applying for them.

For information regarding correspondence courses or any general information concerning University extension activities, write to

CHARLES H. WILLIAMS,
DIRECTOR OF UNIVERSITY
EXTENSION,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI.

SUMMER SESSION

UNIVERSITY OF MISSOURI, COLUMBIA, MISSOURI

The Summer Session of the University of Missouri at Columbia, is organized as an integral part of the University. The session is eight weeks in length. All regulations concerning fees, entrance requirements, requirements for graduation, fellowships, scholarships and rules for the government of students are in effect in the Summer Session.

GRADUATE WORK: The Summer Session places emphasis on graduate courses leading to the Master's Degree. The offerings are varied from year to year to meet the needs of students who wish to do all the work for a Master's Degree in Summer Session.

The Summer Session offers special advantages to teachers and others who are unable to attend during the regular year, as well as to those who desire to extend their educational program by studying in the summer.

The Summer Session for 1927 will open on Thursday, June 9. Detailed announcements of the courses and other matters concerning the summer session are made in a special bulletin issued by the University. This bulletin will be ready for distribution by February 1st. For copy of bulletin, address the Registrar, University of Missouri, Columbia. For additional information concerning the Summer Session, address the Director of Summer Session, University of Missouri, Columbia, Missouri.

SECTION III

STATEMENT OF COURSES

For the convenience of the student in making out his schedule of studies, the subjects in the following statement of courses are arranged alphabetically, as follows:

- Agricultural Chemistry, page 243.
Agricultural Economics, page 244.
Agricultural Education, page 245.
Agricultural Engineering, page 245.
Anatomy and Histology, page 246.
Animal Husbandry, page 247.
Art, Theory and Practice of, page 248.
Art, Applied, page 250.
Art, History of, page 256.
Astronomy, page 251.
Bible College, page 251.
Botany, page 253.
Chemistry, page 254.
Citizenship, page 256.
Classical Archaeology, page 256.
Clinical Medicine and Surgery, page 257.
Dairy Husbandry, page 257.
Economics and Commerce, page 259.
Education, page 260.
Engineering, page 268.
 Curricula in, pages 171 to 175.
 Agricultural, page 245.
 Chemical, page 254.
 Civil, page 268.
 Electrical, page 270.
 Mechanical, page 271.
English, page 273.
Entomology, page 276.
Field Crops, page 277.
French and Italian, page 278.
Geology and Geography, page 279.
Germanic Languages, page 280.
Greek, page 281.
History, page 282.
Home Economics, page 283.
Horticulture, page 285.
Journalism, page 287.
Latin, page 290.
Law, page 291.
Mathematics, page 294.
Medical Bacteriology and Preventive Medicine, page 295.
Meteorology, page 296.
Military Science and Tactics, page 296.
Music, page 297.
Pathology, page 302.
Philosophy, page 303.
Physical Education, page 303.
Physics, page 306.
Physiology and Pharmacology, page 307.
Political Science and Public Law, page 308.
Poultry Husbandry, page 310.
Psychology, page 311.
Rural Sociology, page 311.
Sociology, page 313.
Soils, page 315.
Spanish, page 316.
Veterinary Science, page 317.
Zoology, page 318.

Courses for underclassmen are distinguished by numbers below 100; courses for upperclassmen and graduates, by numbers 100 to 199; courses primarily for graduates, by numbers 200 to 299. A

capital letter preceding the number of a course indicates one of the special classes of courses into which the work of a large department is divided, as in the case of Education A102f and Education C150w.

The letter following the number of the course indicates in which term the course is offered; thus, 100f is offered in the fall term; 100w, the winter term. For statement of courses offered in the Summer Session, write to the Registrar for the special announcement of the Summer Session.

The number of hours' credit for each course is given in parentheses at the end of the description of the course, just before the name of the teacher. A separate schedule of courses is issued for each term, giving the hours and places of meeting, as well as an indication of the divisions in which credit is allowed for the various courses. Students will obtain these schedules when they register.

Students are advised to consult the announcements of the schools and colleges in Section II of this catalog before making out their programs of study. See also *Regulation of Studies*.

AGRICULTURAL CHEMISTRY

101w. AGRICULTURAL ANALYSIS. Prerequisite, chemistry 15 and chemistry 25. Quantitative analysis of foods, feedingstuffs, fertilizers, soils, and dairy products. (3) MR. RITCHIE.

110f, 111w. ADVANCED AGRICULTURAL ANALYSIS. A continuation of course 101. Analytical practice may be obtained in any of the fields recognized as pertaining to Agricultural Chemistry. Laboratory work with a conference period to be arranged. (3-5) MR. RITCHIE.

200f, 201w. SEMINARY. (1) MR. HOGAN.

204f. PHYSIOLOGICAL CHEMISTRY OF THE DOMESTIC ANIMAL. Prerequisite, 3 hours of Organic Chemistry. Designed to meet the requirements of students fitting themselves for investigation in animal nutrition. Offered in alternate years; given in the year 1927-28. (4) MR. HOGAN.

205w. PLANT CHEMISTRY. Prerequisite, 3 hours of Organic Chemistry. An introduction to the chemistry of plant products, dealing with the isolation, determination, properties, and physiological significance. This course is designed for students interested in horticulture, botany, or work of similar nature. Three laboratory periods, two lectures. Offered in alternate years; given in the year 1927-28. (4-6) MR. HOOKER.

206w. DAIRY CHEMISTRY. Theories of milk secretion; the chemistry of milk constituents, their properties and physiological significance; the chemical processes involved in the manufacture of dairy products; offered in alternate years; not given in the year 1927-28. (4) MR. BRODY.

207f. COLLOID CHEMISTRY. Prerequisite, 3 hours of Physical Chemistry. General principles of colloid chemistry and properties of the naturally occurring colloids of importance in agriculture and biology. Three lectures, two laboratory periods. Offered in alternate years; not given in the year 1927-28. (4-6) MR. BRADFELD.

211f, 212w. RESEARCH. This course may be elected either as major or minor and may include a thesis showing the results of the investigations. Subjects may be selected in (a) animal nutrition; (b) composition of animal tissues; (c) composition of feedingstuffs, fertilizers, soils, etc.; (d) the chemical problems

involved in the dairy industries; (e) the chemical composition of plant tissues; (f) quantitative methods of determining plant constituents; (g) problems involving colloidal behavior. (4-8) MR. HOGAN; MR. HOOKER; MR. BRADFIELD; MR. BRODY.

AGRICULTURAL ECONOMICS

2f and w. PRINCIPLES OF RURAL ECONOMICS. Designed for those who desire an introduction to the principles of economics and their application in the field of agriculture. (5) MR. GROMER.

101f. MARKETING AND CO-OPERATION. The economic basis of marketing, and problems involved in the functioning of our present marketing machinery. The last half of the course is devoted to a study of the principles underlying successful co-operative marketing as illustrated by existing organizations of farmers. (3) MR. THOMSEN.

103f. THE PRESENT ECONOMIC ORDER INCLUDING CO-OPERATION. Prerequisite, either course 2 or consent of the instructor. A study of the present economic order including co-operation especially from the standpoint of co-ordinating demand and supply of farm products at an equitable price and the problem of the farm surplus. (2) MR. GROMER.

105f. FARM ACCOUNTS. Methods and practice in keeping farm accounts; especial attention to farm financial records, feed records, labor records, production records, and methods of determining livestock and crop production costs. (3) MR. FRAME.

107w. FARM FINANCE. A study of the credit needs of the farmer and how they may be supplied, based on a brief introduction to the principles of money, exchange, the joint-stock bank, and the Federal Reserve system; loan agencies, including the Federal Farm Loan Bank, the Intermediate Credit Bank, financing co-operative societies, and co-operative insurance. (3) MR. GROMER.

110w. GENERAL FARM MANAGEMENT. A study of the factors determining the success of a farming program; the principles to be considered in determining the type of farming to be followed and those which guide us in choosing a farm and organizing a farm business for maximum efficiency. (3-4) MR. JOHNSON.

111f. FARM LABOR PROBLEMS. A study of the farm labor problem from the standpoint of labor supply, immigration, farm wages, methods of hiring farm labor, regularity of employment and its relation to type of farming and ability of agriculture to compete for labor. (2) MR. FRAME.

112f. ADVANCED FARM COST ACCOUNTING. Practical uses to which cost accounting results can be put in the management of farms. Also a study of methods of procedure as they affect cost accounting results. (3) MR. FRAME.

120f. AGRICULTURAL GEOGRAPHY, HISTORY AND POLICY. A study of certain theories concerning the effects of climate on farming, the salient factors in the development of agriculture, our delicately adjusted economic organization, the world's food supply, and the outlook for the future. (3) MR. GROMER.

125f. AGRICULTURAL STATISTICS. This course includes a study of the collection, analysis and presentation of agricultural statistics, and is designed to furnish a knowledge of statistical method sufficient for all ordinary requirements in agricultural work. (3) MR. JOHNSON.

127f. AGRICULTURAL PRICES. A study of the various factors that affect the prices of farm products, and the use of current market information in planning what to produce and where and when to sell. (2) MR. THOMSEN.

193w. RURAL TAXATION. A study of taxation with reference to the farmer. (2) MR. GROMER.

195w. CURRENT ECONOMIC PROBLEMS OF AGRICULTURE. Analysis of the more important current economic problems of the farmer, together with proposed remedies. This course should familiarize students with the use of source material and the sifting of ideas. (2) MR. GROMER.

200f, s and w. SEMINARY. Special lectures and reports on current economic problems in agriculture (1).

202f. ADVANCED FARM MANAGEMENT. A study on individual farms of the applications of farm management principles. From 25 to 40 farms will be visited and detailed studies made. (3) MR. JOHNSON.

216w. LAND UTILIZATION. A study of land resources, values and problems of ownership and tenancy; land settlement and colonization and general land policies in regard to transfer of title, accession of land, utilization of public lands, etc. (2) MR. JOHNSON.

240f, s and w. RESEARCH IN AGRICULTURAL ECONOMICS. Credit arranged and teacher elected by student.

AGRICULTURAL EDUCATION

See *Methods in Agriculture*, page 265.

AGRICULTURAL ENGINEERING

2f and w. FARM, SHOP II, WOODWORK AND CONCRETE. Testing materials for use in concrete. Practice in building concrete floors, posts, tile, and blocks. Drawing plans. Framing, rafter cutting, and general construction of buildings and farm equipment. (3) MR. WOOLEY.

10f, w. FARM SHOP I, METAL WORK. Methods of repairing farm machinery and equipment. Practice in soldering, babbitting, drilling, threading, elementary forging, tempering tools, saw sharpening, harness sewing, rope work, belt lacing, and pipe fitting. (2) MR. JONES.

11f, w. FARM GAS ENGINES. Study of gas engine principles as applied to both single and multiple-cylinder engines. Engine mechanisms, carburetion, valve-timing, cooling, lubrication, and ignition. Practice in operating, overhauling adjusting, and testing. (3) MR. JONES.

21f. SURVEYING AND DRAINAGE. Use, care, and adjustment of surveying instruments. Running levels for drains, terraces, and ditches. Designing farm drainage systems. Effects of drainage. Prevention of erosion. Drainage law. The course is planned to meet the needs of county agents, Smith-Hughes teachers, and farm superintendents. Lectures and field work. (3) MR. WOOLEY.

30w. FARM MACHINERY. Adaptability, construction, principles of operation, adjustment, troubles, and care of the different types of machines, both tractor and horse-drawn, for cultivating, seeding, harvesting, and handling of farm crops. (2) MR. JONES.

103w. FARM BUILDINGS AND THEIR EQUIPMENT. Arrangement of buildings on the farmstead. Requirements of the farm house, barns, hog houses, poultry houses, silos, granaries, etc., as to convenience, sanitation, ventilation and cost. Heating, lighting, water and sewage disposal systems for the farm home. Lectures, laboratory and recitations. (3) MR. WOOLEY.

104w. FARM BUILDING DESIGN. Prerequisite, agricultural engineering 103 or registration therein. A laboratory course. Designing farm houses, barns, hog houses, poultry houses, granaries, septic tanks, etc., to meet the needs of the modern farm. Drafting. (2) MR. WOOLEY.

100f and w. SPECIAL PROBLEMS. Prerequisites, agricultural engineering 103, 10, 11, 21, or 30, depending upon the nature of the work elected. Problems

in farm buildings, farm machinery, farm motors, or farm drainage. (2-5) MR. WOOLEY, MR. JONES.

112f. FARM TRACTORS. Prerequisite, agricultural engineering 11 or its equivalent. Construction, principles of operation, adjustment, and care of farm tractors. Advanced study of gas engines, clutches, transmissions, differentials, and final drives. Field work, testing. (2) MR. JONES.

122f. IRRIGATION AND DRAINAGE. Prerequisite, agricultural engineering 21 or its equivalent. Water rights. Irrigation by pumping. Methods of applying water to the land. Irrigation of different crops. The measurement of water. The drainage of irrigated land. The course covers irrigation and drainage from the farmer's point of view. (2) MR. WOOLEY.

200f and w. RESEARCH. Investigations pertaining to farm machinery, farm motors, farm buildings, drainage or irrigation. (2-5) MR. WOOLEY; MR. JONES.

AGRICULTURE

See announcement of curricula, pages 113 to 136. See also

Agricultural Chemistry, page 243.	Field Crops, page 277.
Agricultural Economics, page 244.	Home Economics, page 283.
Agricultural Education, page 245.	Horticulture, page 285.
Agricultural Engineering, page 245.	Poultry Husbandry, page 310.
Agricultural Journalism, page 287.	Rural Sociology, page 311.
Animal Husbandry, page 247.	Soils, page 315.
Dairy Husbandry, page 257.	Veterinary Science, page 317.
Entomology, page 276.	

ANATOMY

102f. HUMAN DISSECTION. A study of the gross structure of the human body, dissection progressing in the following order: Extremities, head, and neck. (8) MR. CHARLTON, MR. BAKER, MR. ARVIN.

103w. HUMAN DISSECTION. A continuation of course 102f; dissection of the thorax, abdomen and pelvis (4).

104f. HISTOLOGY. The microscopic structure of the human body is undertaken from the embryological viewpoint. (5) MR. NEEDLES, MR. BAKER.

105w. NEUROLOGY. The gross and microscopic structure of the central nervous system and the sense organs are studied. (3) MR. ALLEN, MR. ARVIN.

106f. TOPOGRAPHIC AND APPLIED ANATOMY. A course devoted to the study of cross sections of the human body and to the practical consideration of the principal structures stressed in clinical surgery. (102f and 103w are prerequisite), (3) MR. ALLEN, MR. BAKER.

107f. ELEMENTARY ANATOMY. A study of the bones, muscles, joints and ligaments of the human body including a brief survey of the chief systems and organs. (Prerequisite, five hours of biological science.) MR. ALLEN, MR. ARVIN.

108f. ANATOMICAL TECHNOLOGY. An opportunity for trial of standard methods of gross or microscopic preparation of anatomical material. This may include the preparation of bones, preservation of specimens, injection of organs, or the microscopic technique of slide preparation. (3-6). MR. ALLEN; MR. CHARLTON.

206f and 207w. ADVANCED ANATOMY. The intensive study of regions or systems as preparation for specialization in medicine. This may include developmental and microscopic as well as gross anatomy. (102 to 105 are prerequisite.) (Hours to be arranged.) MR. CHARLTON.

208f and w. RESEARCH. The facilities of the department are available to students qualified to undertake investigation in anatomy. (4 to 6.)

209f and w. SEMINAR. The presentation and discussion of original investigation and current literature. Open to students in courses numbered above 200 (1).

ANIMAL HUSBANDRY

1f and w. TYPES AND MARKET CLASSES OF LIVE STOCK. Required. A general survey of the development of the live stock industry and present conditions. The fundamentals of live stock judging and its relation to production. The work covers horses, mules, cattle, sheep, and hogs. (3) MR. CHITTENDEN; MR. FOSTER; MR. CLARK.

2f. BREEDS OF LIVE STOCK. Elective. History, development, and characteristics of the leading breeds of live stock; pedigrees and performances of superior individuals among horses, cattle, sheep, and swine. (3) MR. CHITTENDEN.

3w. LIVE STOCK JUDGING. Elective. Prerequisite, course 1. A study of various classes of farm animals, with particular reference to breed, character, and differences. Comparative judging, supplemented by reference reading and illustrated lectures. (3) MR. CHITTENDEN.

4f and w. SLAUGHTERING OF DOMESTIC ANIMALS AND CUTTING AND CURING OF MEATS. Elective. Prerequisite, course 1. (2) MR. FOSTER.

5f. CUTTING AND CURING OF MEATS. This course is for women. Special attention will be given to the selection and utilization of the cheaper cuts of meat. (1) MR. FOSTER.

100f. PRINCIPLES OF ANIMAL NUTRITION. Required. Must be preceded or accompanied by organic chemistry, course 15. The laws of animal nutrition; adaptation of facts of physiological chemistry of feeding of domestic animals. (3) MR. HOGAN.

101w. ANIMAL BREEDING. [Prerequisite, general zoology, course 1. Principles and practices involved in the improvement of the domestic animals. Reproduction, variation, heredity, selection, line breeding, in-breeding, cross-breeding, grading, and correlated subjects. (3) MR. TROWBRIDGE.

102f. ADVANCED LIVE STOCK JUDGING. Elective. Prerequisite, course 3, live stock judging. A continuation of the comparative judging work given in course 3; includes excursions to live stock shows and noted breeding farms. (3) MR. CHITTENDEN.

103w. BEEF PRODUCTION. Elective. Prerequisites, courses 1 and 100. Practical methods of beef production, consideration of successful practices in feeding for market, fitting for show, and general care and management. (3) MR. WEAVER.

104f. SHEEP PRODUCTION. Elective. Prerequisites, courses 1 and 100. Best systems of sheep husbandry; rearing for mutton and wool; production of spring lambs; fattening sheep and lambs for the market; general care and management of the breeding flock. (2) MR. FOSTER.

105w. PORK PRODUCTION. Elective. Prerequisites, courses 1 and 100. Systems of swine management; adaptability of various foodstuffs to pork production; the feeding and management of market hogs, commercial and pure-bred breeding herds. (3) MR. WEAVER.

106f. HORSE PRODUCTION. Elective. Prerequisites, courses 1 and 100. Statistics of horse and mule industry; breeds and market types; pedigree records, and stallion laws. Production of breeding and market horses. (2) MR. CHITTENDEN.

107w. STOCK FARM MANAGEMENT. Elective. For juniors and seniors. Successful methods of operating farms devoted chiefly to live stock production. A study of systems applied to Missouri conditions. (2) MR. TROWBRIDGE.

109f, 110w. SPECIAL PROBLEMS. Primarily for advanced under graduates; topics assigned or chosen subject to approval. MR. TROWBRIDGE AND MEMBERS OF DEPARTMENT.

120f. ANIMAL BREEDING INVESTIGATIONS. Prerequisites, 101w and Veterinary Science 1f. Study of specimens and original investigations; current literature on anatomy and physiology or reproduction and problems in heredity. (3) MR. TROWBRIDGE; MR. MCKENZIE.

125. LIVE STOCK JUDGING AND MANAGEMENT. Elective. Prerequisites, courses 1 and 100 or equivalent. Adapted to high school teachers of vocational and general agriculture. Basic and current live stock types and methods of production. MR. TROWBRIDGE.

200f and 201w. SEMINAR. Special investigation of selected lines of animal husbandry. Preparation and presentation of papers for discussion. (1) MR. TROWBRIDGE.

204w. ANIMAL NUTRITION. Prerequisite, 100f. A study of the more important contributions to the knowledge of animal nutrition; designed for students specializing in some phase of animal industry. (2) MR. HOGAN.

207w. LIVE STOCK FEEDING INVESTIGATIONS. Prerequisite, any one of the following courses: 103, 104, 105, 106. A study of more important investigations in feeding cattle, hogs, sheep, and horses. (2) MR. TROWBRIDGE; MR. WEAVER.

209f, 210w. RESEARCH IN ANIMAL HUSBANDRY. Advanced studies of special phases of animal production. MR. TROWBRIDGE; MR. WEAVER.

212f, 213w. RESEARCH IN ANIMAL BREEDING. Advanced studies of reproduction, inheritance and development in the domestic animals. MR. MUMFORD.

215f, 216w. RESEARCH IN ANIMAL NUTRITION. Fundamental studies of nutritional problems. MR. HOGAN.

220f, 221w. RESEARCH IN THE PHYSIOLOGY OF REPRODUCTION. A project will be assigned to the student and conducted by him. MR. MCKENZIE.

ART

Theory and Practice

SKETCH CLUB. The department maintains a sketch club on Wednesday evening from 7 to 9, to which anyone interested in sketching is invited, provided he plans regular attendance. (No credit.)

2f and w. INTRODUCTION TO ART. Open to all students. The elementary principles of design and representation, including elements of architecture, are presented in illustrated lectures. Practice with pencil, pen and ink, wash, and water colors. (5) MR. HANSEN; MR. MITCHELL.

4f and w. REPRESENTATION. Prerequisite, course 2. A more advanced study of drawing and of the principles of representation than course 2. Including architectural indication, rendering, and presentation. (5) MR. HANSEN.

5f and w. ARCHITECTURAL DRAWING. Drawing of the orders and the rendering of simple architectural compositions. (3) MR. BILL.

6f. SHADES AND SHADOWS. Application of the principles of geometry in casting conventional shadows. (1) MR. BILL.

7w. PERSPECTIVE. Mechanical methods of architectural perspective; conventional renderings of architectural subjects. (1) MR. BILL.

10f and w. THEORY OF DESIGN. Prerequisite, course 2 or equivalent. The study of design as an art activity fundamental to fine arts. (5) MR. GENTRY.

100f and w. PSYCHOLOGICAL PRINCIPLES OF ART. Prerequisite, course 2. It is desirable that the student have completed also course 4 and a course in the history of art. (3) MR. MEYER.

104f. HISTORY OF ARCHITECTURE I. Prerequisite, course 2, waived in case of engineering students. An introduction to architecture planned for all students, including those in journalism and engineering, who wish a general acquaintance with the subject. (3) MR. BILL.

105w. HISTORY OF ARCHITECTURE II. An amplification of 104, with special emphasis upon the great periods in their relation to modern architecture. (3) MR. BILL.

110f. PLANNING OF DOMESTIC AND CIVIC BUILDINGS. Planning with special reference to American conditions. (5) MR. BILL.

111f and w. INTERIOR DECORATION. Design applied to the decoration of interiors. (3) MR. BILL.

116f. ARCHITECTURAL SOURCES. Library investigation and laboratory study of historic periods of architecture and furniture with the designing and rendering of problems in the manner of specific historic periods. (6) MR. BILL.

117w. ARCHITECTURAL DESIGN. Continuation of Course 110. (5) MR. BILL.

122f and w. LIFE I. Drawing of human, animal, and plant forms. (2-5) MR. ANKENY; MR. GENTRY.

124f and w. LIFE II. Continuation of Life I carried out in modeling. (2-5) MR. ANKENY; MR. GENTRY.

127f and w. ADVANCED LIFE I. (2-5) MR. ANKENY.

129f and w. ADVANCED LIFE II. (2-5) MR. ANKENY.

140f. STRUCTURAL DESIGN. Simpler structural phases of applied design. (3-5) MR. BILL; MISS DOBBS.

141w. APPLIED DESIGN. Projects in color to suit chosen craft. (3) MR. ANKENY; MISS DOBBS; MR. HANSEN.

142w. HISTORIC ORNAMENT AND STYLE. Drawing and modeling details of some period. (2) MR. BILL; MR. ANKENY.

145f. HISTORIC PROJECTS. Projects in applied and structural design to conform to some historic period. (6) MR. ANKENY; MR. BILL.

146f. TECHNICAL CRAFT. Advanced technique in chosen craft. (5) MR.

150f and w. ADVANCED REPRESENTATION. (5) MR. GENTRY.

155f and w. ADVANCED DESIGN. (5) MR. ANKENY; MR. HANSEN.

156w. PAINTING. Prerequisite, course 4. It is desirable that the student shall have completed course 10. Lectures; practice in painting in the principal modes. Lectures only (3), lectures and laboratory work (6) MR. ANKENY; MR. GENTRY.

157f and w. PICTORIAL COMPOSITION. Prerequisite, courses 4 and 10. Pictorial expression through representation and design; hence, a fundamental course in painting, illustration, and advertising. (3-5) MR. ANKENY; MR. HANSEN.

158f and 159w. TONE. An advanced painting course. (2-5) MR. ANKENY; MR. GENTRY.

160f. ADVANCED PICTORIAL COMPOSITION. Drawing, painting, and modeling dominated by pictorial ideas. (2-6) MR. ANKENY; MR. GENTRY.

165f. ADVANCED PAINTING. Tonal Painting in life, portrait, landscape or draped model. (5) MR. ANKENY; MR. GENTRY.

170w. ADVANCED DECORATIVE COMPOSITION. Original projects. (2-6) MR. ANKENEY; MR. BILL; MR. GENTRY; MR. HANSEN.

175w. SPECIAL PROBLEMS. Original work in student's chosen field (5) MR. ANKENEY; MISS DOBBS; MR. BILL; MR. GENTRY.

180f. DEVELOPMENT OF MODERN THEORY AND PRACTICE. Achievements, developments, and problems of art since the 18th century. (3) MR. ANKENEY.

202f and w. PROBLEMS OF DESIGN. Prerequisite, courses 10 and 155, and possibly 104, 106, or 111. (2-5) MR. ANKENEY; MISS DOBBS; MR. BILL.

206f and w. PROBLEMS OF FORM. Prerequisite, courses 4 and 10 and 150, and possibly 122. (2-5) MR. ANKENEY; MR. GENTRY.

Of the following four courses only one will be given in any one term by the same member of the art staff:

210f and w. TRADITIONS OF PAINTING. Prerequisite, courses 10, 105, 106. (2-3) MR. ANKENEY.

220f and w. ORIENTAL PAINTING. (3) MR. ANKENEY.

230f and w. CONTEMPORARY ART. (2) MR. ANKENEY; MR. BILL.

250f and w. SEMINARY. (Credit hours to be arranged.) MR. ANKENEY; MISS DOBBS; MR. BILL.

Applied Art

50f and w. ART CRAFT I. An introduction to the problems of construction and the fundamental principles of design as related to materials. It emphasizes the essential value of the elements of beauty in daily life. It is planned to meet the needs of students who have had little or no previous training and are unaware of any artistic ability. Projects in paper, cloth, leather, clay, stenciling, lettering, and the principles of costume design. Practical work with lectures and discussions on principles of design. (3) MISS DOBBS; MISS BEDFORD.

60f. ART CRAFT II. Toymaking. This course deals with toymaking as a craft. Emphasis is given to its use as an elementary school project, its use as a medium in occupational therapy, and its commercial value. Processes involve fundamental mechanical principles, the use of common tools and materials and the application of principles of design. Practical work, with emphasis upon procedure and methods of presentation. (2) MISS DOBBS.

101f and w. ART CRAFT III. Prerequisite, Art Craft I or Introduction to Art. Problems similar to those in Course 50 but of greater difficulty, including block printing, woodcarving and hand-loom weaving. Emphasis in projects relating to house furnishing. (2) MISS DOBBS; MISS BEDFORD.

102f and w. ART CRAFT IV. Prerequisite, Art Craft III. Problems similar to Art Craft III but of greater difficulty. Includes also elementary projects in pottery and art metal. (2) MISS DOBBS.

103f and w. BASKETRY. Practical work with reeds, splints, raffia, pine needles and other materials. (2½) MISS DOBBS; MISS BEDFORD.

109w. BOOKBINDING. Includes the making of books and binding of magazines, together with some preliminary work with cardboard in making portfolios, boxes, etc. (2) MISS BEDFORD.

See also, Methods in Industrial Education.

G 120f. HANDWORK FOR PRIMARY GRADES. Description on page 267.

G 121w. HANDWORK FOR INTERMEDIATE GRADES. Description on page 267.

ASTRONOMY

1f, w. DESCRIPTIVE ASTRONOMY. Prerequisite, two units of high school mathematics. An introduction to astronomy. Students prepared to elect course 101 will not be admitted to course 1. (5) MR. HAYNES.

3f. OBSERVATORY PRACTICE. Prerequisite, course 1. Elementary observations with the instruments of the observatory. Laboratory course. (2) (Not given in 1927-28) MR. HAYNES.

101w. GENERAL ASTRONOMY. Prerequisite, analytic geometry and elementary physics. An introductory course with emphasis on the application of mathematical methods and mechanical principles to the elementary problems of astronomy. Students who have completed course 1 may not elect this course for full credit. (5) MR. HAYNES.

102f. MODERN ASTRONOMY. Prerequisite, course 1. A descriptive course in sidereal astronomy. (Not given in 1927-28) (2) MR. HAYNES.

103f. HISTORY OF ASTRONOMY. Prerequisite, course 1. (3) MR. HAYNES.

104f. PRACTICAL ASTRONOMY. Prerequisite, trigonometry. Determination of azimuth, time, longitude and latitude, chiefly with the engineer's transit and the sextant. Laboratory course. (2) MR. HAYNES.

105w. ADVANCED PRACTICAL ASTRONOMY. Prerequisite, course 104. Precise observations with the instruments of the observatory. Laboratory course. (2). MR. HAYNES.

In case of demand, one of the following courses may be elected with the permission of the chairman of the department.

201w. THEORY OF OBSERVATIONAL ERRORS. (3) MR. HAYNES.

202f. THEORY OF INTERPOLATION AND MECHANICAL QUADRATURES. (3) MR. HAYNES.

205f. CELESTIAL MECHANICS. (3) MR. HAYNES.

206w. THEORY OF ORBIT DETERMINATION. (3) MR. HAYNES.

BIBLE

Courses in Biblical and religious subjects taught in the Bible College of Missouri at Columbia may be taken for credit toward degrees in the University of Missouri.

3f and w. FUNDAMENTAL MORAL AND RELIGIOUS VALUES. An investigation of moral and spiritual qualities vital to the individual and society. Credit for freshmen only. (2) MR. GIBBS.

7f and w. BIBLE AS LITERATURE I. The historic, story, and wisdom materials of the Bible. Prerequisite, sophomore standing. (2) MR. EDWARDS.

8f and w. BIBLE AS LITERATURE II. The lyric and prophetic materials of the Bible. Prerequisite, sophomore standing. (2) MR. EDWARDS.

(The two preceding courses supplement each other. They seek a knowledge of the contents, and an appreciation of the Holy Scriptures as works of literary art.)

9f and w. LIFE AND LITERATURE OF THE NEW TESTAMENT. A study of the central documents of the Christian religion to determine their origin, authorship, literary structure, nature, and permanent value. Prerequisite, sophomore standing. (2) MR. GIBBS.

21. INTRODUCTION TO NEW TESTAMENT GREEK. Characteristics of the language; drill in forms and syntax; building of a New Testament vocabulary; translation of Mark. Three times per week the first semester and twice per week the second. Prerequisite, Greek 1 and 2. (5) MR. GIBBS.

106f and w. HEBREW HISTORY. An interpretation of the significance of the history and mode of thinking of the Hebrew race. The history of the Hebrews

is related to that of neighboring nations; all available light from archeological research is used in connection with the Biblical narrative. Prerequisite, junior standing. (3) MISS STAFFORD.

108f and w. ORIGINS OF THE CHRISTIAN CHURCH. A study of the ideals and environment out of which the Christian Church sprang, and of its early development. Source materials: Pre-Christian life and literature of the Jewish people; customs, philosophical and religious beliefs of contemporary nations; New Testament and other first century writings. (2) MISS STAFFORD.

109f and w. HISTORY OF THE CHRISTIAN CHURCH. A survey of the outstanding developments in the life of the church from the Apostolic age to the present. (3) MISS STAFFORD.

110f and w. PSYCHOLOGY OF RELIGION. An inquiry into religious behavior, and into the psychological bases for religious beliefs. Prerequisite, introductory course in Psychology or Sociology. (3) MR. TOWNER.

113f and w. SOCIAL TEACHINGS OF JESUS. Present day problems are studied in the light of Jesus' teachings, and present movements for social harmony are evaluated. Prerequisite, introductory course in Sociology. (2) MR. THOMAS.

115f and w. HISTORY OF RELIGION IN AMERICA. The course will include a description of the religious background in Europe, the distinctive features of American religious history, and the effect of the frontier on the growth of denominations and types of worship. (2) MISS STAFFORD.

116. HEBREW LANGUAGE. Grammatical principles of the language; acquisition of a vocabulary; translation of Genesis I-VIII, and sight reading. Three times per week through two semesters. (6) MR. EDWARDS.

121f and w. COMPARATIVE RELIGION. Primitive religion and the world's great religions are compared with Christianity. Prerequisite, junior standing. (2) MR. THOMAS.

122f and w. CHRISTIAN ETHICS. This course singles out from the general field of ethics those ideals called Christian as found in the life and teachings of Jesus; places them historically in relation to other ideals, and compares their values. Prerequisite, junior standing. (2) MR. GIBBS.

123f and w. MODERN RELIGIOUS THOUGHT. Materials of ancient and medieval religious thought are studied briefly as a background against which to trace the outlines of modern thinking about man, nature, and God. Prerequisite, History of Philosophy. (2) MR. THOMAS.

158w.* ORGANIZATION AND ADMINISTRATION OF RELIGIOUS EDUCATION. A survey of the modern school organized to meet the needs of childhood, youth, and adult life. Practical consideration of equipment, administration, development of leadership, courses of instruction, training in worship, and expressional activities. (2) MR. TOWNER.

159f and w.* PRINCIPLES OF RELIGIOUS EDUCATION. Principles, methods, and curriculum are carefully studied; also the church as an educational institution. Prerequisite, introductory course in Psychology. (2) MR. TOWNER.

161f and w.* TEACHING RELIGIOUS EDUCATION. An examination of the methods of religious education; observation, and practice teaching. Prerequisites, Educational Psychology, and History of Education. (2) MR. TOWNER.

167w.* HISTORY OF RELIGIOUS EDUCATION. Jewish education in religion; significant early epochs in the development of a system of Christian education, including catechetical, monastic, court, and Reformation schools; religious education in America; the development of Sunday schools; evolution of the teacher

*Credit in the School of Education, and in Curriculum V in Social Service as adapted.

training movement, and of promotion agencies in religious education; beginnings of week-day religious instruction; the development of religious education in higher institutions of learning, and present tendencies in religious education. (2) MR. TOWNER.

168w.* PRINCIPLES AND METHODS OF TEACHING THE BIBLE. An intensive study of the value of the Bible to moral and religious education; an evaluation of current methods of interpretation; a critical evaluation of text-books; the proper organization and sequence of courses; and a study of the most effective methods of teaching the Bible, including a study of Biblical Knowledge Tests. (3) MR. GIBBS.

169f.* THE CURRICULUM OF RELIGIOUS EDUCATION. History of curriculum-making in the development of Religious Education in America, examination and evaluation of current graded texts for Sunday and week-day religious instruction; theories, standards, and methods in curricula making; practice in the selection, adjustment, and creation of curriculum for local needs. (2) MR. TOWNER.

190w.† RELIGIOUS JOURNALISM I. To acquaint the student with sources of religious information, ecclesiastical terminology, current religious movements, outstanding religious leaders, organization of leading denominations, and religious journals. Practice is given in the writing of religious articles. (2) MR. TOWNER.

191w.† RELIGIOUS JOURNALISM II. Laboratory in the writing of religious articles and news stories. (2) MR. TOWNER.

BOTANY

Juniors or seniors taking course 1 receive 4 hours' credit. Course 13 Greek for Botany Students is recommended for students majoring in Botany.

1f, w. GENERAL BOTANY. A fundamental training course in the subject. (5) MR. ROBBINS; MR. MANEVAL; MR. RICKETT; MR. NAYLOR.

3f, w. GENERAL BACTERIOLOGY. Prerequisites, general botany or general zoology, and general inorganic chemistry. A general course in the fundamental principles of bacteriology. (3) MR. ROBBINS; MR. MANEVAL.

10w. ADVANCED GENERAL BOTANY. A continuation of Course 1. Morphology, classification and characteristics of vascular plants, both native and cultivated. Lecture, laboratory, and field work. (3 or 5). MR. RICKETT.

100w. PLANT PHYSIOLOGY. Lectures and laboratory work on the physiology of the common cultivated plants. (5) MR. ROBBINS.

102f. PLANT PATHOLOGY. A study of special groups of fruit, vegetable, and cereal diseases, with reference to symptoms, life histories of parasites, and methods of control. (3) MR. MANEVAL.

104f. HISTOLOGICAL METHODS. Methods used in the preparation and preservation of class material and in fixing, sectioning and staining sections for microscopical study. (3) MR. NAYLOR.

106f. HEREDITY AND GENETICS. Theories and facts of heredity, with applications to plant breeding, evolution, and eugenics. (3) MR. RICKETT.

107w. MYCOLOGY. A systematic study of the fungi, with special reference to those causing plant disease. (3) MR. MANEVAL.

111f, 112w. SPECIAL PROBLEMS. On consultation with the teachers concerned, properly prepared students may take up special problems in the various fields of botany. (Credit to be arranged.) MR. ROBBINS; MR. MANEVAL; MR. RICKETT; MR. SCOTT.

*Credit in the School of Education, and in Curriculum V in Social Service as adapted.

†Credit in the School of Journalism, and in Curriculum V in Social Service as adapted.

200f and w. SEMINARY. Special subjects of botanical work will be taken up and discussed, including the results of investigations carried out in the department. A reading knowledge of French and German is essential. (2) MR. ROBBINS.

201w. ADVANCED PLANT PATHOLOGY. A general course in phytopathological technique, including preparation and reaction of culture media, isolation, cultivation, and physiological study of fungi, inoculation of host plants and relation of host to pathogene. (3) MR. SCOTT.

202f and w. ADVANCED PLANT PHYSIOLOGY. Prerequisite, course 100f or equivalent. Lectures and laboratory work on problems in plant physiology related to plant production. (2-5) MR. ROBBINS.

203f and 204w. SPECIAL TOPICS. Study of subjects in botany not included in the courses regularly offered. Designed especially for graduate students whose major interest or whose research work demands additional directed training (3-5). MR. ROBBINS; MR. MANEVAL; MR. RICKETT; MR. SCOTT.

206f, and 207w. RESEARCH. Students who have had adequate preparation will be assigned some special problem for investigation. A reading knowledge of French and German is essential. (Credit and hours to be arranged.) MR. ROBBINS; MR. MANEVAL; MR. RICKETT; MR. SCOTT.

CHEMISTRY

Course 11, Greek, Derivation of Scientific terms in Chemistry, is recommended to students in Chemistry.

Students who do not present entrance credit in at least one of these subjects: chemistry, physics, or mathematics (2 units), are advised to precede or accompany chemistry 1 by a college course in mathematics, (Mathematics 1, or 2).

1f and w. GENERAL INORGANIC CHEMISTRY. An introductory course. Students with one year high school chemistry may enter course 2 or take course 1 for 4 hours' credit, or the lectures and conferences only for 2 hours' credit. Seniors enrolling in this course will receive only 4 hours' credit. (5) MR. SCHLUNDT; MISS DOVER; MISS GRIFFITH AND ASSISTANTS.

2f and w. GENERAL INORGANIC CHEMISTRY. Prerequisite, course 1 or its equivalent. A continuation of course 1. Courses 1 and 2 are prerequisites to all courses in chemistry. (3) With laboratory work (5). MISS DOVER; MR. SCHLUNDT AND ASSISTANTS.

15f and w. ELEMENTARY ORGANIC CHEMISTRY. Introductory course. Prerequisites, courses 1 and 2. May be accompanied by course 113 for three additional hours. (3) MR. FRENCH.

25f and w. ANALYTICAL CHEMISTRY. Prerequisite, courses 1 and 2. Elective for students preparing to take medicine or home economics. A brief survey of the qualitative and quantitative analytical methods. (5) MR. STEARN AND ASSISTANTS.

27f and w. QUALITATIVE ANALYSIS. A laboratory course. Must be preceded or accompanied by course 2. (3) MR. HOWARD.

110f and w. ORGANIC CHEMISTRY. Prerequisite, should be preceded by ten hours' work in chemistry. Medical students will be admitted to this course with eight hours' chemistry. (5) MR. CALVERT, MISS NIGHTINGALE AND ASSISTANTS.

112f and w. ORGANIC CHEMISTRY. Completion of the subject matter of course 110. Recommended to students specializing in chemistry. (3) MR. CALVERT.

113f and w. ORGANIC SYNTHESIS AND ANALYSIS. A laboratory course in synthetic organic chemistry. May be taken with courses 15 or 110. (3) (4) or (5). MR. CALVERT; MISS NIGHTINGALE.

121f and w. QUANTITATIVE CHEMICAL ANALYSIS. Prerequisite, course 27. The general principles. (5) MR. HOWARD.

122f and w. QUANTITATIVE CHEMICAL ANALYSIS. Prerequisite, course 121. The analysis of commercial materials and products. (5) MR. HOWARD.

124f and w. QUANTITATIVE ORGANIC ANALYSIS. Must be preceded or accompanied by course 121. Quantitative analysis of commercial organic products. (3) MR. FRENCH.

130w. PHYSICAL CHEMISTRY. Prerequisites, college course in physics, three hours of quantitative analysis, three hours of organic chemistry. (3) MR. STEARN.

131f. PHYSICAL CHEMISTRY. Prerequisites, 110, 121, college course in physics and preceded or accompanied by Mathematics 106. (5) MR. STEARN

133w. ELECTRO-CHEMISTRY. Prerequisite, same as 131. Generally offered alternate years. Given in 1926-27. (5) MR. STEARN.

135w. RADIOACTIVITY AND STRUCTURE OF MATTER. Prerequisite, undergraduate courses in physics and chemistry. Generally offered alternate years. Will be given in 1927-28. (4). Credit to graduate students (3), but with 200 rating. With laboratory (5) or (6). MR. SCHLUNDT.

141f. INDUSTRIAL ORGANIC CHEMISTRY. Prerequisites, courses 2 and 110. (3) (4) or (5) MR. ———.

142w. INDUSTRIAL ORGANIC CHEMISTRY. Prerequisites, same as for course 141. (2) or (3) MR. ———.

Courses above 200 must be preceded by a major in chemistry or accompanied by courses required to complete the major.

201w. ADVANCED INORGANIC CHEMISTRY. Lectures and recitations. (3)

207f. COLLOID CHEMISTRY (See Agricultural Chemistry).

211f. ADVANCED ORGANIC CHEMISTRY Lectures on selected topics, supplemented by reading and reports. In the selection of the subjects the special needs of the student will be considered. (4) MR. CALVERT.

212w. ADVANCED ORGANIC CHEMISTRY. Lectures on selected topics, supplemented by readings and reports. (4) MR. CALVERT.

225w. QUALITATIVE ORGANIC CHEMISTRY. (4) MR. FRENCH.

227w. ADVANCED ANALYTICAL CHEMISTRY. Chiefly laboratory work. The work of the course is varied to meet the needs of the individual. Credit to be arranged. MR. HOWARD.

232f. ADVANCED PHYSICAL CHEMISTRY. Lectures on selected topics. A reading knowledge of German and French is very desirable. Credit to be arranged. MR. STEARN.

233w. ADVANCED PHYSICAL CHEMISTRY LECTURES ON SELECTED TOPICS. Prerequisites, same as for course 232f. Credit to be arranged. MR. STEARN.

260f and 261w. SEMINAR. Meetings at which subjects of a chemical interest are discussed by students of sufficient attainment and members of the teaching staff. A reading knowledge of French and German is very desirable. (1).

271f and 272w. RESEARCH. Arrangements for research should be made by consultation with the professor or instructor with whom the research is elected.

The University of Missouri Section of the American Chemical Society meets monthly. Students may attend these meetings.

CITIZENSHIP

1f and 2w. CITIZENSHIP. Problems in American citizenship. Required of all freshmen in the University. (2) MR. HECKEL.

CLASSICAL ARCHAEOLOGY AND HISTORY OF ART

Classical Archaeology

2f and 4w. CLASSICAL MYTHOLOGY. The myths as they are represented in literature and in Greek and Roman art. Recitations and illustrated lectures. (1) MR. PICKARD.

106f. GREEK ART TO AGE OF PERICLES. A preliminary study of Assyrian and Egyptian art, followed by a study of the development of Greek architecture and sculpture. (3) MR. PICKARD.

107w. GREEK ART FROM THE AGE OF PERICLES TO ROMAN TIMES. (Continuing course 106f.) (3) MR. PICKARD.

108f. MYCENAEAN ART OR ART OF PRIMITIVE GREECE. (1) MR. PICKARD.

109w. INTRODUCTORY STUDY OF GREEK VASES AND VASE PAINTING. (1) MR. PICKARD.

110f. ROMAN LIFE. A study of the extant remains, particularly those of Pompeii. Lectures and readings. Illustrated by use of plans, maps, and lantern slides. (2) MR. PICKARD.

118w. TOPOGRAPHY AND MONUMENTS OF ROME. Illustrated by use of plans, maps, and lantern slides. (2) MR. PICKARD.

214f and 215w. TOPOGRAPHY AND MONUMENTS OF ATHENS. Prerequisite, a reading knowledge of Greek, French, and German. Frazer's *Pausanias* will be taken as the basis of discussion. (2) MR. PICKARD.

216f and 217w. ARCHAEOLOGICAL SEMINARY. Hours and work to be arranged. MR. PICKARD.

Museum of Classical Archaeology: The museum is supplied with models of temples, plaster casts of specimens of sculpture, framed and unframed photographs, and lantern slides.

Art, History of

1f. HISTORY OF FRENCH PAINTING. Illustrated lectures and collateral reading. (2) MR. PICKARD.

3w. HISTORY OF ENGLISH PAINTING. Illustrated lectures and collateral reading. (2) MR. PICKARD.

5f. HISTORY OF MODERN BELGIAN AND MODERN DUTCH PAINTING. Illustrated lectures and collateral reading. (2) MR. PICKARD.

7w. HISTORY OF AMERICAN PAINTING. Illustrated lectures and collateral reading. (2) MR. PICKARD.

8f. HISTORY OF SPANISH PAINTING. Illustrated lectures and collateral reading (2) MR. SUHR.

9w. HISTORY OF GERMAN ART. Illustrated lectures and collateral reading. (2) MR. SUHR.

111f. HISTORY OF ITALIAN RENAISSANCE PAINTING. Illustrated lectures and collateral reading. (3) MR. PICKARD.

112w. HISTORY OF RENAISSANCE PAINTING IN THE NETHERLANDS AND IN GERMANY. Illustrated lectures and collateral reading. (3) MR. PICKARD.

113f. MASTERPIECES OF ARCHITECTURE AND SCULPTURE OF CLASSIC TIMES. Lectures fully illustrated by use of lantern slides. (1) MR. PICKARD.

115w. MASTERPIECES OF ARCHITECTURE, SCULPTURE, AND PAINTING OF MEDIAEVAL AND MODERN TIMES. Lectures fully illustrated by use of lantern slides. (1) MR. PICKARD.

210f. and 211w. SEMINARY IN THE HISTORY OF ART. Hours and work to be arranged.

Renaissance and Modern Painting: The collection of photographs, lantern slides, and other means of illustrating courses in these subjects has been very largely increased. The picture gallery near the Museum of Classical Archaeology is hung with carbon photographs, photogravures, and other reproductions of masterpieces of painting.

CLINICAL MEDICINE AND SURGERY

101w. PHYSICAL DIAGNOSIS. Lectures, demonstrations and practical exercises covering the field of the physical examination of the thorax. Practice in the use of instruments ordinarily used in auscultation and percussion especially with reference to the recognition of the physical signs of normal and disease processes in the respiratory and circulatory organs. (1) MR. STINE.

102w. MINOR SURGERY. The lectures on the general principles of surgery include the consideration of asepsis and antisepsis, inflammation, healing of wounds, hemorrhage and sepsis. Material for demonstration of the minor surgical lesions is obtained from the dispensary. The laboratory periods are devoted to a study of bandaging and the preparation and use of surgical material and dressings. Each student will have twelve lessons on the practical application of bandages, including the general principles in the use of plaster bandages, adhesive dressings, splints, etc. The preparation of dressings and instruments is studied in the hospital. (1) MR. CONLEY.

DAIRY HUSBANDRY

1f and w. ELEMENTS OF DAIRYING. Prerequisite, general chemistry. Teaches the fundamentals underlying the dairy industry in a usable form for the teacher and farmer. It includes a study of the composition and properties of milk, the testing of milk and cream for butterfat, the sanitary production and handling of milk, the use of milk and its products as a food, the selection of dairy cattle, milk secretion, the selection and use of farm separators and farm butter-making. (3) MR. RAGSDALE; MR. GIFFORD.

100w. DAIRY CATTLE AND MILK PRODUCTION. Prerequisite, dairy husbandry 1. Deals with the problems of the milk producer and dairy cattle breeder, giving practical instruction concerning the dairy cow on the farm, breeds of cattle, starting and building up a dairy herd, dairy herd records, selection and management of the herd sire, calf raising, feeding dairy cattle, the general care and management of the dairy herd, some common diseases and ailments of the dairy cow, dairy barns and equipment, breeding and selling dairy cattle, dairy cattle valuation and general factors making for successful dairy herd and farm management. (3) MR. RAGSDALE; MR. GIFFORD.

101f. DAIRY PRODUCTS. Prerequisite, dairy husbandry 1. The fundamental principles concerning the handling of market milk, and in the manufacture of butter, ice cream, cheese and dairy by-products are taught and applied in practice with special attention to the chemical and bacteriological processes involved. (3) MR. REID; MR. GARRISON.

102f. DAIRY BACTERIOLOGY. Prerequisite, dairy husbandry 1 and general bacteriology. An applied course teaching the general relation of bacteria to milk and its products. A study is made of common and important milk organisms,

contamination of milk, relation of milk to human health, the bacteriology of butter making, ice-cream manufacture and cheese making. (4) MR. WEBER.

103w. MARKET MILK AND MILK INSPECTION. Prerequisite, dairy husbandry 1. Classes of market milk, transportation, handling, delivery and marketing. Sanitary inspection, equipment of plants, business methods, and problems of public control. (4) MR. REID; MR. GARRISON.

104w. DAIRY CATTLE JUDGING. A study of the points in form and appearance of the dairy cow that have a bearing on her ability to produce milk and that are of value from a breed standpoint, and the use of the pedigree in dairy cattle selection. (2) MR. ELTING.

105w. DAIRY CATTLE FEEDING. Prerequisite, principles of animal nutrition. Makes application of the principles of animal nutrition to the special problems of feeding dairy cattle. Special attention is given to feeding for economical production, the most popular dairy feeds, commercial mixed feeds, rations used by successful breeders and feeders, and how to fit and feed cows for high production on official test. (2) MR. RAGSDALE; MR. ELTING.

106w. DAIRY CATTLE BREEDS AND BREEDING. Prerequisite, dairy husbandry 100. A study of the leading breeds of dairy cattle with respect to their early improvement, leading breeders, great sires, and the history, development and present status of important families within each breed. (2) MR. TURNER; MR. GIFFORD.

107w. DAIRY MANUFACTURES. Prerequisite, dairy husbandry 101. Study is made of advanced problems and factors concerned in the manufacture of butter, ice cream and cheese, and of refrigerating methods in modern creameries, ice cream and market milk plants. (4) MR. REID; MR. GARRISON.

108w. DAIRY PLANT MANAGEMENT. Prerequisite, dairy husbandry 103 or 107. A study is made of the organization, administration, operation and management of creameries, cheese factories, ice cream and market milk plants. (2) MR. REID.

109f and 110w. SPECIAL PROBLEMS. Primarily for advanced and well trained undergraduates who wish to make further studies in some special line of dairy husbandry. Subjects will be assigned or may be selected subject to approval. Credit to be arranged. MR. RAGSDALE; MR. REID; MR. BRODY; MR. TURNER.

200f and 201w. SEMINARY. The object of this course is to give the student a grasp of the methods employed in scientific research. A study is made of a few outstanding pieces of research followed by a close study of recent investigations. It is expected that the student will take the initiative in preparing and presenting the problems studied. (1) MR. RAGSDALE; MR. REID; MR. BRODY; MR. TURNER.

202f. DAIRY PHYSIOLOGY AND BIOCHEMISTRY. Selected topics in physiology and biochemistry adapted to the needs of students in Dairy Husbandry. (2) MR. BRODY.

203f and 204w. SELECTED STUDIES IN DAIRY MANUFACTURES RESEARCH. Study is made of selected investigations in the field of dairy manufactures to acquaint the student with research problems and the results of scientific research. Group discussions and individual conferences are held. (2) MR. REID.

205f and 206w. SELECTED STUDIES IN DAIRY CATTLE RESEARCH. A study is made of fundamental researches in the field of dairy production to acquaint the student with current research problems and the results of scientific research. Group discussions and individual conferences are held. (2) MR. RAGSDALE; MR. TURNER.

207f and 208w. SCIENTIFIC READINGS. Leading scientific journals and experiment station publications are studied to acquaint the student with research

methods and with problems under investigation in the general field of Dairy Husbandry. This includes reviewing the literature, defining and outlining the problem, technique in management; collecting and tabulating the data, interpretation and presentation of the results. MR. RAGSDALE; MR. REID; MR. BRODY; MR. TURNER.

210f and 211w. RESEARCH. The several phases of dairy husbandry included under dairy production and dairy manufactures offer many attractive problems for graduate research. Students may select special lines of experimentation, and in some cases assist with investigations under way in the Agricultural Experiment Station. MR. RAGSDALE; MR. REID; MR. BRODY; MR. TURNER.

ECONOMICS AND COMMERCE

In Arts and Science *the major in this department should ordinarily concentrate at least twenty of the twenty-four hours in one of the following groups: I General Theory, courses 1, 105, 115, 119, 211, 220, and 240; II Public Policy, courses 1, 105, 106, 110, 115, 119, and 124; III Commerce, courses 1, 105, 106, 124, 140, Geography 115, and Geography 116; IV Finance, courses 1, 17, 105, 115, 118, 124, and 220.*

The minor to support a major in any of the above-named groups should ordinarily be selected from the following departments: I General Theory—Philosophy, Psychology, History, Mathematics, Physics, Zoology, Sociology, and Political Science and Public Law; II Public Policy—History, Political Science and Public Law, Sociology, Zoology, Education, and Philosophy; III Commerce—Geology and Geography, History, Political Science and Public Law; IV Finance—Mathematics, Political Science and Public Law, and History.

1f and w. GENERAL ECONOMICS. An introduction to the general field of economics. Prerequisite to all courses in this department. In order to be eligible to any course in the department, numbered above 100, the student must make a grade of M or better in either 1 or 17. Courses 1 and 17 are not open to freshmen. (5) MR. BROWN AND OTHERS.

17f and w. ELEMENTARY ACCOUNTING. A study of the technique of accounts. Analysis of the balance sheet and income statement in their usual and special forms. (5) MR. ZIMMERMAN.

105f and w. MONEY, CREDIT AND BANKING. A study of the theories of money and of credit followed by a discussion of the American banking system and of other modern banking systems. A brief introduction to the mechanism of the foreign exchanges. (5) MR. ROGERS.

106f. TRANSPORTATION AND PUBLIC UTILITIES. Prerequisite, two courses in the department, or the consent of the instructor. A study of rates and charges and rate regulation. Particular attention is devoted to railroad rates, the problem of discrimination, and the decisions of the Interstate Commerce Commission. (3) MR. BROWN.

110f. LABOR PROBLEMS. The genesis of "the labor problem;" the policies and methods of organized labor; analysis of specific measures and comprehensive programs for the protection of labor and the safeguarding of public interests in employment relations; possibility of the improvement of condition of wage-earning class, etc. (5) MR. WATKINS.

115w. PUBLIC REVENUES. Prerequisite, either course 105 or consent of the instructor. A study of the finances and financial methods of governments, with especial reference to taxation. (3) MR. BROWN.

117f and w. ADVANCED ACCOUNTING. Prerequisite, course 17. An intensive analysis of the balance sheet and income statement; a theoretical study of cost

accounts and of special problems such as those of partnership, corporate, and estate accounting. (4) MR. SCOTT.

118f. CORPORATION FINANCE. Prerequisite, course 105. The organization and finance of business corporations with special reference to the problems of securing capital, internal financial management, and corporate reorganization. (3) MR. ZIMMERMAN.

119f. TRUSTS AND COMBINATIONS. Prerequisite, two courses in the department or consent of the instructor. A survey of the evolution of industrial organization in modern times; the extent, character, and consequences of the consolidation movement; the significance of the development of trade associations; and the nature and soundness of current government policy in the control of business. (3) MR. WATKINS.

121f. INDUSTRIAL ACCOUNTING. Prerequisite, course 117. A study of industrial accounting technique and its place in the development of accounts. (2) MR. SCOTT.

122w. INVESTMENTS. Prerequisite, course 118. A study of the principles of investment, followed by a discussion of investment institutions, investors' services, and of the various types of investment securities. (2) MR. ROGERS.

124w. FOREIGN EXCHANGE AND TRADE. Prerequisite, course 105. (a) The principles and practice of foreign exchange; (b) analysis of principles underlying foreign trade. (2) MR. BROWN.

128f. STATISTICS AND BUSINESS MANAGEMENT. Prerequisite, mathematics 160. A study of the use of statistics for the purpose of the direction of business policy. (3) MR. SCOTT.

132w. BANK MANAGEMENT. Prerequisite, course 105. The work of the course is divided between a consideration of the managerial problems that confront bank executives and the technique of banking practice. (2) MR. ZIMMERMAN.

133w. MUNICIPAL ACCOUNTING AND BUDGETARY CONTROL. Prerequisite, course 117. A study of accounting and budgetary control of public funds with especial reference to municipal accounts. (2) MR. SCOTT.

134w. PUBLIC ACCOUNTING PRACTICE. Prerequisite, course 117. A study of auditing principles and problems. A summary review of accounting principles in their relation to the work of the practicing accountant. (3) MR. SCOTT.

137w. FACTORY MANAGEMENT AND EMPLOYMENT PROBLEMS. Covers the problems connected with building and equipping a manufacturing plant, as well as those connected with its internal administration and the methods and systems of hiring and handling employes. (3) MR. WATKINS.

138w. MERCANTILE ORGANIZATION AND CREDITS. Prerequisite, courses 17 and 137. (Course 137 may be taken along with this course.) A study of the administration of the relation of business enterprise with outside parties—current creditors, customers et al.—with special emphasis on retail distribution. (3) MR. ZIMMERMAN.

140w. HISTORY OF COMMERCE AND INDUSTRY. The evolution in historic forms of market organization will be analyzed, particularly in relation to changes in industrial processes, but also in relation to changes in political and social institutions. (3) MR. WATKINS.

150w. BUSINESS LAW. The emphasis of this course is chiefly upon the law of contracts and sales. Attention is also given to the law of agency, of bailments, and of negotiable instruments. (3) MR. WATKINS.

211f. ADVANCED ECONOMIC THEORY. A critical examination of the writings of the leading economists. (3-5) MR. BROWN.

215w. TAXATION. An intensive study of the theory of taxation. (3-5) MR. BROWN.

220w. SPECULATIVE MARKETS AND BUSINESS CYCLES. Prerequisite, course 105. (a) A theoretical study of prosperity, crisis, and depression, with due reference to speculative markets and to the effect of business changes on the prices of securities; (b) a statistical investigation by students taking the course of the current changes in bank rates, commodity prices, security prices, etc. (3) MR. ROGERS.

223f. and w. SEMINARY. Credit to be arranged. MR. BROWN; MR. ROGERS; MR. SCOTT; MR. WATKINS.

224w. INTERNATIONAL TRADE THEORY. A study of the theory of international trade, its mechanism, tariff restrictions, etc. (2-3) MR. BROWN.

231f. CURRENT MONETARY PROBLEMS. A discussion of the actual monetary problems of Europe and of the United States with special reference to their bearing on monetary theory. (3) MR. ROGERS.

235w. ADVANCED ACCOUNTING THEORY. A study of the functions of accounts; their development; their place in the current business régime, and their relation to the process of economic development. (3) MR. SCOTT.

240w. ECONOMICS OF THE PROFESSIONS. The origin of the professions, professional ethics, and the place of the professions in the economic life of a community. (2) MR. WATKINS.

EDUCATION

See announcement of curricula, pages 147 to 165.

(A) EDUCATIONAL PSYCHOLOGY

A102f and w. EDUCATIONAL PSYCHOLOGY. Prerequisite, either experimental psychology or a biological science. Introduction to the science of education; application of the methods and results of experimental psychology to the problems of training children. Lectures and laboratory. (3) MR. IRION.

A140w. DIAGNOSTIC TESTING AND REMEDIAL TEACHING. Technique of using educational and mental tests in the improvement of instruction. Primarily for elementary school teachers. Prerequisites, Educational Psychology A102, Technique of Teaching in Elementary School D121. (3) MR. SAUPE.

A176w. PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS. The applications of Educational Psychology to the teaching of elementary school subjects. For supervisors, superintendents, and advanced students of Educational Psychology. Prerequisite A102s. (2) MR. GERMANE.

A201w. CURRENT PROBLEMS. Current problems in education from the point of view of psychology. Informal discussions and reports of periodical literature in educational psychology. (2) MR. IRION.

A202f. INTELLIGENCE TESTING. Group intelligence testing including a critical study of various tests and practice in their administration. The course will also include a study of individual mental testing and the uses to be made of results in the classification and treatment of pupils. (3) MR. SAUPE.

A205f. THE PSYCHOLOGY OF EDUCATION. An advanced course covering the whole field of educational psychology. The course will consist of lectures and a study of the systematic and experimental literature in the field of educational psychology. For graduate students only. (3) MR. SAUPE.

A206f. MENTAL HYGIENE. Psychology of personal adjustment as related to the problems of junior and senior high school students. Will deal primarily

with emotions, personality development, hereditary tendencies, causes of maladjustment, guidance. (3) MR. IRION.

A207w. DIFFERENTIAL PSYCHOLOGY. Presented primarily from the research point of view. Application to school procedure will be stressed. Major emphasis will be placed on the causes of, conditions affecting, and the measurement of individual differences. Prerequisite 20 semester hours of professional work in Education, including at least two courses in Educational Psychology. (3) MR. IRION.

A208w. PSYCHOLOGY OF HIGH SCHOOL SUBJECTS. Deals with the specific applications of Educational Psychology to the teaching of the various high school subjects. For high school teachers and principals. Prerequisite same as for course 207. (3) MR. IRION.

A250f and w. SEMINARY IN EDUCATIONAL PSYCHOLOGY. Prerequisite, considerable training in both education and psychology. For thesis work. (Credit to be arranged.) MR. IRION; MR. PURDOM; MR. SAUPE.

A265f and w. RESEARCH IN EDUCATIONAL PSYCHOLOGY. Prerequisite, considerable training in both general and educational psychology, including training in psychological method. Investigation of problems in the field of educational psychology. Students from the point of view of comprehending research technique. (Credit to be arranged.) MR. IRION.

(B) *THE HISTORY AND PHILOSOPHY OF EDUCATION*

B150w. PRINCIPLES OF EDUCATION. A study of the nature and function of education, including the fundamental principles which should guide in educational procedure. (3) MR. COURSAULT.

B271f. PHILOSOPHY OF EDUCATION. A study of the fundamentals of education in the light of modern science and philosophy. (3) MR. COURSAULT.

B280f and B281w. SEMINARY IN THE HISTORY AND PHILOSOPHY OF EDUCATION. Thesis work for graduate degrees. (Credit to be arranged.) MR. COURSAULT.

(C) *EDUCATIONAL ADMINISTRATION*

C150f and w. HIGH SCHOOL ECONOMY. Problems of effective methods of school management from the standpoint of teachers in secondary schools. (2) MR. EIKENBERRY.

C170f. EDUCATIONAL STATISTICS. Statistical methods for teachers, supervisors, superintendents and beginning graduate students. (3) MR. CAPPS.

C180f. ADMINISTRATION OF PUBLIC EDUCATION IN THE UNITED STATES. A fundamental course in the principles and practices of national, state, and county educational administration. (3) MR. NEALE.

C200f. METHODS OF EDUCATIONAL RESEARCH. Prerequisite, course C170 or equivalent. Technique of scientific investigation in the field of education. The collection and tabulation of data, preparation of manuscript for theses, dissertations, and printed reports. Special treatment of methods of taking and filing notes and preparation of bibliographies. Recommended for all graduate students majoring in Education. (2) MR. CAPPS.

C205f and w. ADMINISTRATION OF EDUCATIONAL TESTS AND MEASUREMENTS. Designed to give the administrator, the supervisor, and the teacher the point of view, the knowledge, and the skill necessary to use tests, scales, and other modern measurements in improving classroom instruction in the elementary and secondary schools. (3) MR. SAUPE.

C206w. HIGH SCHOOL ADMINISTRATION. Deals with the problems of administration from the point of view of the high school principal. Prerequisite. C150 or its equivalent. (3) MR. EIKENBERRY.

C210W. CITY SCHOOL ADMINISTRATION. For principals, supervisors and superintendents. Deals with the chief problems of town and city school administration. (3) MR. NEALE.

C211w. SCHOOL PUBLICITY. A course in the effective presentation of school facts to teachers and general public. Includes training in school news writing and the management of school newspapers. (2) MR. NEALE.

C212f. SCHOOL SURVEYS. For students having considerable training and experience in education. (2) MR. NEALE.

C215w and s. HIGH SCHOOL SUPERVISION. This course will deal with methods of improving instruction in junior and senior high schools. (2½-3) MR. EIKENBERRY.

C220w. THE HIGH SCHOOL CURRICULUM. The historical development of the secondary school curriculum in the United States, the principles that should govern curriculum making, the obstacles to reform and the means of overcoming them, recent courses of study, especially those presented in the reports of Committee on the Reorganization of Secondary Education. (2) MR. EIKENBERRY.

C230w. THE JUNIOR HIGH SCHOOL. A survey of the progress of the junior high school, including a study of the more important problems of organization and administration. (2) MR. ELLIFF.

C240w. SCHOOL FINANCE. The legal basis of school finance; state aid, taxation and valuation; relation of school expenditures to wealth of district, to expenditures in past. School budgets and school accounting. (2) MR. NEALE; MR. SAUPE.

C250f and w. RESEARCH IN EDUCATIONAL ADMINISTRATION. Special investigations for advanced students. (Credit to be arranged.) MR. CAPPS; MR. EIKENBERRY; MR. ELLIFF; MR. NEALE.

C206f and w. SEMINARY IN EDUCATIONAL ADMINISTRATION. Thesis work for graduate degrees. (Credit to be arranged.) MR. CAPPS; MR. EIKENBERRY; MR. ELLIFF; MR. NEALE.

(D) SCHOOL SUPERVISION

D110f and w. TECHNIQUE OF HIGH SCHOOL TEACHING. A study of methods of class work with illustrations and observations in the high school grades. Prerequisite, education A102, educational psychology. (3) MR. WATKINS; MR. PURDOM.

D120f. ELEMENTARY SCHOOL ORGANIZATION AND MANAGEMENT. A study of the major problems of organization and management from the point of view of the teacher in the elementary school. (2) MR. PHILLIPS.

D121w and s. TECHNIQUE OF TEACHING IN ELEMENTARY SCHOOLS. A study of the current principles and practices relating to the instructional activities of the elementary classroom teacher. (3) MR. PHILLIPS.

D122f. CHILD STUDY. The purpose of this course is to provide a critical study of the physical, mental, social and aesthetic characteristics of children during the pre-school, kindergarten, and lower primary periods. An attempt will be made to evaluate children's activities in such a way as to furnish information for guidance to students who propose to direct children of these periods in their natural growth and development. (3) MISS TAYLOR.

D123w. KINDERGARTEN METHODS AND MANAGEMENT. A course in Kindergarten Theory and Practice. (2½) MISS TAYLOR.

D130f. SCHOOL HYGIENE. Technique of physical examination of school children and methods of carrying out the health program of the public schools. (For the present, Preventive Medicine will be accepted in lieu of this course.) (2) Mr. _____.

D150f and w. PRACTICE TEACHING IN HIGH SCHOOL. Hours and credits must be arranged with instructor before registration. Application should be made in the term preceding that in which the course is wanted. (Credit to be arranged.) Mr. WATKINS.

D151f and w. ASSISTANT IN THE ELEMENTARY SCHOOL. Hours and credit must be arranged with the instructor before registration. Application should be made in the term preceding that in which the course is desired. (Credit to be arranged.) Mr. PHILLIPS.

D155f. PRACTICE TEACHING OF VOCATIONAL AGRICULTURE. Application should be made in the term preceding that in which the course is wanted. This course is approved for credit under the Smith-Hughes Act. (5) Mr. DICKINSON.

D160f and D161w. PRACTICE TEACHING OF VOCATIONAL HOME ECONOMICS. Hours and credits must be arranged with instructor before registration. Application should be made in the term preceding that in which the course is wanted. This course is approved for credit under the Smith-Hughes Act. (Credit to be arranged.) Mr. WATKINS AND ASSISTANTS.

D165w. THE TEACHING OF READING. Fundamental problems in the teaching of silent reading. For teachers, supervisors, and superintendents. Selection of material and methods for grades I to IX. (2) Mr. GERMANE.

D170f. ELEMENTARY SCHOOL CURRICULUM. A study of the modern elementary school curriculum from the point of view of objectives, methods and materials with suggestions regarding its practical reorganization. (2) Mr. PHILLIPS.

D172w. THE TEACHING OF GENERAL SCIENCE. A course in the subject matter and methods of general science. For teachers and supervisors of science. (2) Mr. WATKINS.

D184w. PROJECTS IN MORAL EDUCATION. In this course two of the vital points in character education will be stressed, namely: (1) What are the psychological and environmental factors in the home, school, and community which affect human conduct? (2) What are the social situations in the home, school, and community which offer greatest opportunity for a united training in the making of desirable and wholesome social adjustments? (2) Mr. GERMANE.

D204w. ELEMENTARY SCHOOL SUPERVISION. A study of the modern technique of improving the work of the classroom teacher in the elementary schools. (2) Mr. PHILLIPS.

D210w. PROBLEMS IN ENGLISH METHOD. Investigation of the aims, means, and methods of English instruction in the schools. (2) Mr. MOFFETT.

D225f. PRACTICE IN SCHOOL SUPERVISION. For supervisors, principals, and superintendents. (3) Mr. PHILLIPS.

D230f and D231w. SUPERVISION OF PRACTICE TEACHING OF VOCATIONAL HOME ECONOMICS. A course for those who are preparing to become supervisors of student teaching in home economics in institutions of college rank which train teachers of vocational home economics for secondary schools. This course includes supervised practice work in supervision. (Credit to be arranged.) Miss CAMPBELL.

D250f and w. RESEARCH IN HIGH SCHOOL METHODS. (2-4) Mr. WATKINS.

D265f and w. RESEARCH IN SCHOOL SUPERVISION. Special investigations for advanced students. (Credit to be arranged.) Mr. PHILLIPS.

D270w. CURRICULUM CONSTRUCTION. Study of the principles and technique of curriculum construction. For graduate students only. (2-3) MR. PHILLIPS.

D280f and w. SEMINARY IN SCHOOL SUPERVISION. Thesis work for graduate students. Opportunity is offered for experimental studies in the University Schools. (Credit to be arranged.) MR. PHILLIPS; MR. WATKINS.

(E) METHODS IN AGRICULTURE

E105f and w. SPECIAL METHODS IN TEACHING VOCATIONAL AGRICULTURE. This course deals with the methods of teaching vocational agriculture in secondary schools. (3) MR. DICKINSON.

E107f, and w. SUPERVISED PRACTICE IN VOCATIONAL AGRICULTURE. This course includes a study of the principles and practices involved in the use of the project as they should be applied in the teaching of Vocational Agriculture. Project study, outlining, planning and supervision are discussed in a manner applicable to actual conditions. (2) MR. DICKINSON.

E115f and w. MANAGEMENT OF VOCATIONAL AGRICULTURE. This course deals with the more important problems that occur from the time the teacher makes application for a position in a Smith-Hughes school until the work in agriculture is in successful operation. (2) MR. DIPPOLD.

E117w. VISUAL EDUCATION. A course in methods and technique of visual education. Special emphasis is placed on graphs, charts, slides, and motion pictures, their effective use in teaching and planning of lessons involving their use. Motion-picture machines and stereopticons are studied. Laboratory work in construction and use of visual aids. (2) MR. DICKINSON.

E120w. COMMUNITY EDUCATIONAL ACTIVITIES IN VOCATIONAL AGRICULTURE. A study of the work of the teacher of agriculture in his extension activities. Particular attention is given to the problems of Evening and Part-Time schools. (2) MR. DICKINSON; MR. DIPPOLD.

PRACTICE TEACHING OF VOCATIONAL AGRICULTURE. Described under School Supervision as Education D155f and w. MR. DICKINSON.

E210f and w. SPECIAL PROBLEMS IN VOCATIONAL AGRICULTURE. Discussion and presentation of papers on selected topics having to do with agricultural education. Open to students specializing in vocational agriculture. (1) (2) (3) MR. DICKINSON.

E236f and w. RESEARCH IN AGRICULTURAL EDUCATION. (Credit to be arranged.) MR. DICKINSON.

E240f and w. SEMINARY IN AGRICULTURAL EDUCATION. Thesis work for graduate degrees. (Credit to be arranged.) MR. DICKINSON.

(F) METHODS IN HOME ECONOMICS

F110f and w. METHODS OF TEACHING VOCATIONAL HOME ECONOMICS. This course deals with the application of psychological principles to the teaching of vocational home economics. It is designed for those who are anticipating teaching as well as for those who have taught but who wish to ascertain the more modern methods of developing pupils through the study of home economics. (2) MISS WELCH.

F116w. TEACHING OF RELATED SUBJECTS. This course deals with the selection of content and methods of teaching art and science as related to home economics. (2) MISS WELCH.

PRACTICE TEACHING OF VOCATIONAL HOME ECONOMICS. Described under School Supervision as Education D160f and D161w.

F175f and w. THE ORGANIZATION AND ADMINISTRATION OF VOCATIONAL HOME ECONOMICS. This course includes a study of the development and an analysis of the present status and trends in vocational home economics as a part of secondary education. (2) MISS WELCH.

SUPERVISION OF PRACTICE TEACHING OF VOCATIONAL HOME ECONOMICS. Described under School Supervision as Education D230f and D231w.

F273w. PROBLEMS IN HOME ECONOMICS EDUCATION. This course furnishes opportunity for experienced teachers to study individual problems of teaching, supervision, critic teaching or administration of home economics and related subjects. (Credit to be arranged.) MISS CAMPBELL.

F275f and w. RESEARCH IN VOCATIONAL HOME ECONOMICS. This course will deal with problems involved in the teaching, supervision and administration of home economics, and the related subjects. It is designed for those who have had experience in teaching, or in supervision and administration. (Credit to be arranged.) MISS CAMPBELL.

F276f and w. SEMINARY IN HOME ECONOMICS EDUCATION. Provision is made for students to present and to analyze portions of theses for graduate work covering special investigations in the field of home economics education. (Credit to be arranged.) MISS CAMPBELL.

(G) METHODS IN INDUSTRIAL EDUCATION

G1w. SHOPWORK FOR JUNIOR HIGH SCHOOLS. This is a teacher's course based upon what a boy who has completed the ninth grade or the junior high school should know and be able to do with respect to manipulative processes. Many of the projects are worked out in class, others are listed and effective methods of instruction and classroom management are developed. (3) MR. MILLER.

G2f. METAL WORK. Forging. Nature of cast iron, wrought iron, and steel. Forming, bending, welding and tempering. Oxy-acetylene welding and cutting. Bench work in cold metals. Chipping, filing, fitting, and polishing. (2) MR. PHILLIPS.

G4w. MACHINE WORK. A study of the principles of modern machine shop practice with practical work on machine tools. (2) MR. PHILLIPS.

G5f. TOOLS AND MATERIALS. Sharpening and care of tools, source and supply of materials, woods and wood finishes. Lectures and laboratory work. (2) MR. MILLER.

G10f. WOODWORK. This course deals with the tool processes and the fundamental problems of construction. The student may choose between the application of these principles to the construction of furniture or to carpentry projects. (2) MR. MILLER.

G105w. FURNITURE CONSTRUCTION. Deals with the problems of design, construction, and finish of furniture. Use of woodworking machinery. (4) MR. SELVIDGE.

MECHANICAL DRAWING. For mechanical drawing, pattern making and other shop courses, see Mechanical Engineering.

G160f. HOW TO TEACH A TRADE. Organization of teachable content and discussion of methods and management best adapted to teaching shop work in industrial schools and classes or on the job. (2) MR. SELVIDGE.

G165f and w. TRADE ANALYSIS. This is a course for those preparing to teach a trade. It consists of an analysis of a trade into its unit operations and the formulation of definite plans for teaching them. (4) MR. SELVIDGE.

G120f. **HANDWORK FOR PRIMARY GRADES.** Related to the first three grades from the standpoint of the regular grade teacher. Develops a practical method of relating the fundamental processes of home and industrial life to the dominant interests of the child through the exercise of the constructive instincts and organized play. Special emphasis upon the use of handwork as a method of teaching primary subject matter. (3) MISS DOBBS; MISS BEDFORD.

G121w. **HANDWORK OF INTERMEDIATE GRADES.** Related to the fourth, fifth, and sixth grades. The use of handwork as an illustrative factor in teaching geography, arithmetic, history, literature, and the industries, technique and organization of such forms of handwork as may be used successfully in the regular classroom by the regular teacher. Work in paper and cardboard, book-making, weaving of baskets and textiles, toy making, and work in thin wood. (3) MISS DOBBS; MISS BEDFORD.

G130w. **TEACHING INDUSTRIAL ARTS.** This course deals with the organization of the material of instruction, teaching plans, objectives, equipment, materials and class management in industrial arts. (2) MR. SELVIDGE.

G140w. **SUPERVISION AND CRITICISM OF ELEMENTARY HANDWORK.** Lectures, observations and discussion. Special emphasis on the theory and purposes of classroom projects in illustrative and technical handwork from the standpoint of the supervisor, principal, and superintendent. (2) MISS DOBBS.

G195f. **ADMINISTRATION OF INDUSTRIAL EDUCATION.** Designed especially for superintendents and principals. The course deals with the purpose and character of industrial work in the junior high school, senior high school and the continuation school. It gives plans for the organization of subject matter, methods by which administrative officers may check results, the kind of teachers required, the schedule, equipment and costs. (2) MR. SELVIDGE.

G221f. **EDUCATIONAL AND VOCATIONAL GUIDANCE.** The purpose and limitations of guidance, elements to be considered, personal, social and industrial factors, the accidental element, the source of material and the adviser's job. (2) MR. SELVIDGE.

G225f and w. **PROBLEMS IN INDUSTRIAL EDUCATION.** The study of special problems in the field of industrial education. (Credit to be arranged.) MR. SELVIDGE.

(H) METHODS IN OTHER SUBJECTS

H101w. **TEACHING OF ART.** (2) MR. ANKENEY.

H104f. **TEACHING OF BIOLOGICAL SCIENCES.** (2) MR. CURTIS.

H107w. **TEACHING OF CHEMISTRY.** (2) MR. SCHLUNDT.

H110f and 111w. **TEACHING OF ENGLISH.** Prerequisite, English 119f or its equivalent. (2) MR. MOFFET.

H116w. **TEACHING OF GERMAN.** (2) MR. ALMSTEDT.

H119w. **TEACHING OF PHYSICAL EDUCATION.** (2) MISS MCKEE.

H122w. **TEACHING OF HISTORY.** (2) MRS. PRIDDY.

H125f. **TEACHING OF LATIN.** (2) MISS CAUTHORN.

H128w. **TEACHING OF MATHEMATICS.** (2) MR. WESTFALL.

H129f and 130w. **ELEMENTARY SCHOOL MUSIC METHODS.** (2) MR. SLEEPER.

H131f. **HIGH SCHOOL MUSIC METHODS.** (3) MR. SLEEPER.

H133f. **TEACHING OF FRENCH.** (2) MR. JESSE.

H135w. **TEACHING OF SPANISH.** Methods, observation of classes, analysis of texts, examination of courses of study, etc. (2) MR. WARSHAW.

ENGINEERING

For curricula in *Engineering*, see pages 171 to 175.

For courses in *Agricultural Engineering*, see page 245.

For courses in *Chemical Engineering*, see under *Chemistry*, page 254.

CIVIL ENGINEERING

Topographical Engineering

2f and w. ELEMENTARY SURVEYING. Prerequisite, mathematics, course 2. Use and adjustment of ordinary surveying instruments. (3) MR. WILLIAMS; MR. RUBEY.

104f. HIGHER SURVEYING. Prerequisite, courses 2 and engineering drawing 1. Mining, hydrographic and topographic surveying; determination of azimuth, and plane triangulation. Control of surveys. (4) MR. WILLIAMS.

106w. CITY PLANNING. Prerequisite, courses 104. Planning city layouts and additions from topographic maps. (2) MR. WILLIAMS.

201w. GEODETIC SURVEYING. Prerequisite, course 104. Elements of geodesy, with practice in the use of precise instruments. (2) MR. WILLIAMS.

Railway and Administrative Engineering

111f. ROUTE SURVEYS. Prerequisites, course 2. Curves and earth work. The field and office design of location of engineering projects, including cost estimates. (4) MR. RUBEY.

112f. BUSINESS RELATIONS. Prerequisite, senior standing. The Engineer's business relations as developed in connection with the promotion, design, construction, operation and management of projects. Construction and contracting. (3) MR. RUBEY.

113w. ECONOMICS OF RAILWAY OPERATION. Prerequisite, course 111. Treated from the engineering viewpoint. (2 or 3) MR. RUBEY.

214w. RAILWAY ENGINEERING AND MANAGEMENT. Prerequisite, preceded or accompanied by course 113. Treated from the viewpoint of the engineering executive. (2 or 3) MR. RUBEY.

215w. CONSTRUCTION AND CONTRACTING. Prerequisite, course 112 or permission of instructor. Consideration of the larger and more complex projects. (2 or 3) MR. RUBEY.

Structural Engineering

120f and w. GRAPHIC STATICS. Prerequisite or accompanied by mechanics, course 101. Graphic analysis of stresses in simple trusses. (2) MR. HYDE; MR. WILLIAMS.

121f. STRESSES. Prerequisite, course 120. Algebraic solution of stresses in simple trusses. Complete stresses in a railroad truss bridge. (3) MR. HYDE.

122w. STRUCTURAL DESIGN. Prerequisite, course 120. Design and working drawings of beams, girders, columns and trusses with estimates. (3) MR. HYDE.

124w. MILL STRUCTURES. Prerequisite, course 120. Design of beams, girders, columns, grillage foundations, and roof trusses. (2) MR. HYDE.

125f. MASONRY STRUCTURES. Prerequisite, course 120. Materials and methods employed in masonry construction; theory of reinforced concrete structures. (3) MR. HYDE.

222f. BRIDGE DESIGN. Prerequisite, course 121. Design of stringer bridges, plate girders and steel railroad truss bridge, with working drawings and estimates. (3) MR. HYDE.

223w. HIGHER STRUCTURES. Prerequisite, course 222. Swing bridges; arches; suspension and cantilever bridges; deflection of trusses. (3) MR. HYDE.

226w. CONCRETE STRUCTURES. Prerequisite, course 125. Theory of reinforced concrete structures, with problems in design. (3) MR. HYDE.

227f. THEORY OF STRUCTURES. Prerequisite 223. Statically indeterminate structures; secondary stresses. (Credit to be arranged.) MR. HYDE.

Materials of Construction

32f and w. MATERIALS OF CONSTRUCTION. Prerequisite, chemistry, course 1. Properties of the more common materials used in engineering construction; tests for strength and elasticity of wood, iron, and steel; standard test for cement. (3) MR. LARUE.

133w. TESTING LABORATORY. Prerequisite, course 32. Experimental investigation of the properties of the materials of construction. (1) MR. LARUE.

134w. ROAD MATERIALS. Properties of materials used in highway construction; laboratory tests of road materials. (3) MR. LARUE.

231f or w. EXPERIMENTAL INVESTIGATION. Laboratory investigations concerning the properties and uses of the materials of construction. (Credit to be arranged.)

Hydraulic Engineering

140f and w. HYDRAULICS. Preceded by integral calculus. Fundamental principles of the mechanics of fluids, including hydrostatics and hydrodynamics. Elementary principles of hydraulic motors. (3) MR. RODHOUSE.

141f and w. WATER POWER. Prerequisite 140. Hydrology; stream measurement, weirs, current meters; storage reservoirs and dams; water-wheels; the problem, of a waterpower development. (3) MR. RODHOUSE.

142w. WATER SUPPLY. Prerequisite 140. Surface waters and storage; underground waters, deep wells; waterworks, pipe lines, meters, water towers; pumping station, service and deep-well pumps. (2) MR. RODHOUSE.

243f. IRRIGATION AND DRAINAGE. Prerequisite 140. Irrigation engineering, institutions, and practice; canals, ditches, reservoirs; land drainage. (2) MR. RODHOUSE.

Municipal Engineering

151f. ROADS AND PAVEMENTS. Materials and methods employed in the construction of roads and pavements. (2) MR. LARUE.

152f. SANITARY PROBLEMS. Prerequisite, mechanics of engineering, course 100 and hydraulics 140. Public water supplies, with special reference to quality. Methods of water purification. Problems in collection and treatment of sewage. (2) MR. McCaustland.

155w. HIGHWAY ENGINEERING. Prerequisite, course 151. Management, improvement and maintenance of earth roads; plans and estimates for road improvement; construction and maintenance of street pavements. (2) MR. LARUE.

157w. SANITARY DESIGN. Prerequisite, course 140. Design of sewerage systems and works for water and sewage treatment. (2) MR. McCaustland.

256f. HIGHWAY DESIGN. Prerequisites, courses 125 and 151. Design of highway structures, culverts, walls, small bridges; plans and estimates for highway improvements. (2) MR. LARUE.

257f or w. SANITARY ENGINEERING. Investigations and special problems in sanitary engineering. (Credit to be arranged.) MR. McCaustland.

General

298f and 299w. THESIS. An independent investigation or design, with complete report or discussion of results. (Max. of 6).

ELECTRICAL ENGINEERING

101f. ELECTRICAL MACHINERY A. Prerequisite, mathematics, course 106; physics, course 4. Fundamentals of electromagnetism. Voltage, current and power relations in electric circuits. The simple alternator and the direct current generator. (4) MR. WEINBACH; MR. LANIER; MR. GRANDY; MR. JOHNSON.

102w. ELECTRICAL MACHINERY A. Prerequisites, course 101f. Structure and characteristics of direct and alternating current generators and motors, transformers, converters, instruments, etc. (4) MR. WEINBACH; MR. LANIER; MR. GRANDY; MR. JOHNSON.

110f. ELECTRICAL MACHINERY B. Prerequisites, courses 101 and 102. The properties of the electrostatic, magnetic and electric circuits; voltage, current, power relations in single and polyphase circuits; power measurements; irregular electromotive force and current waves. The alternating current transformer; voltage regulations, losses and efficiency of single phase transformers; polyphase transformers, and polyphase banks of single phase transformers. (6) MR. WEINBACH; MR. GRANDY.

111w. ELECTRICAL MACHINERY B. Prerequisite, course 110f. Polyphase and single phase induction motors, performance characteristics; the induction generator. The synchronous generator; voltage regulation, losses and efficiency; parallel operation; the synchronous motor, performance characteristics; starting and stability of synchronous motors. (5) MR. LANIER; MR. JOHNSON.

131w. ELECTRIC MOTORS. Prerequisites, courses 101 and 102. Construction, characteristics, and application of electric motors to various classes of service. (2) MR. WEINBACH.

134w. TELEPHONY. Prerequisite, course 110. Sound waves; conversion of sound waves into electric waves and vice versa; propagation of electric waves along the transmission line; distortion and attenuation; artificial loading; inductive interference. (3) MR. WEINBACH.

143f. ELECTRICAL PROCESSES. Prerequisites, courses 101 and 102. Practical application of electricity in electro-chemical and metallurgical industries. Theory, construction, and operation of electric furnaces. (2) MR. WEINBACH.

210f. ELECTRICAL MACHINERY C. Prerequisite, course 111w. Commutating Type Machines. The direct current generator and motor; voltage, torque and speed relations; theory of commutation. The synchronous converter, single and polyphase. Inverted converter. Commutator type alternating current motors. (3) MR. LANIER.

220w. ELECTRICAL MACHINE DESIGN. Prerequisite, course 210f. Rational methods of determining over-all dimensions, and the proportions and arrangement of the electric and magnetic circuits of direct and alternating-current machines. Predetermination of performance. (3) MR. LANIER.

230f and w. **ELECTRIC POWER DISTRIBUTION.** Prerequisite, course 111. Detailed study of the generation, transmission, and distribution of electrical energy for lighting, power, and electric railways. (3) MR. WEINBACH.

240w. **CENTRAL STATION DESIGN.** Prerequisite, course 230. Selection and arrangement of equipment of electric power plants. Plans and designs of power plants. (2).

241w. **ELECTRIC RAILWAY ENGINEERING.** Prerequisites, courses 103 and 111. Electric railway systems; equipment and operation. Economic conditions governing the construction of an electric road. (2) MR. JOHNSON.

242w. **HIGH VOLTAGE TRANSMISSION.** Prerequisite, course 230. Transmission of electric power. Line regulation. Economical aspects, practical limitations, operating precautions. (3) MR. WEINBACH.

244w. **ANALYSIS OF DESIGN PROBLEMS.** Prerequisite, course 220. An analysis of some of the more important problems relating to the design of electrical machinery. (2) MR. LANIER.

250f. **SPECIAL ELECTRICAL LABORATORY.** Prerequisite, 111w. Advanced experimental studies of performance characteristics of electrical machinery; for example, alternator regulation, hunting of synchronous machines, commutation, induction motor performance studies, etc. (2) MR. LANIER.

280w. **APPLICATION OF MATHEMATICS TO ELECTRICAL ENGINEERING.** Prerequisite, mathematics, course 106. Stating the problem in mathematical form; application of complex numbers, exponential functions, and differential equations to electrical engineering problems. (2) MR. WEINBACH.

290f and w. **RESEARCH.** Original investigation in the field of electrical engineering. Students registered for research will have as advisers members of the staff conversant with the problem undertaken. Open to graduate students only. Problems at present under investigation or which may be undertaken are: "Tooth frequency iron losses in electrical machinery;" "Properties of insulating materials;" "Commutation in direct and alternating current machinery;" "Distortion phenomena in telephone transmission lines."

298f and 299w. **THESIS.** Investigation of some problem of practical value. Results of investigation must be presented at the end of the year in a carefully prepared dissertation. Weekly reports. Minimum. (4)

MECHANICAL ENGINEERING

Engineering Drawing and Machine Design

1f and w. **ENGINEERING DRAWING I.** Use of instruments, drawing to scale, the common geometrical curves, freehand lettering, sketching; orthographic projection, fundamental principles and applications. (3) MR. NEWTON; MR. BOYD.

2f and w. **ENGINEERING DRAWING II.** Prerequisite, course 1. Descriptive geometry. (2) MR. NEWTON; MR. SELVIDGE.

100f and w. **ADVANCED LETTERING.** Prerequisite, Drawing I, or equivalent. Freehand and mechanical lettering consisting of the analysis and construction of standard, plain, and ornamental alphabets with their application to the design of titles for maps, charts, and engineering drawings. (1) MR. NEWTON.

101f and w. **MACHINE DESIGN A.** Prerequisites, engineering drawing 1 and 2, materials of construction and integral calculus. Principles of mechanism and the practical application of theory to the design of machine parts, with problems on specific machines. (3) MR. NEWTON.

102f. TECHNOLOGY OF METALS. Prerequisites, pattern making, forge and machine work and materials of construction. The production and physical properties of the metals used for machinery. (2) MR. HIBBARD.

103w. MACHINE DESIGN B. Prerequisites, machine design A and all required work in mechanics of engineering. A continuation of course 101, particular attention being paid to machines subjected to dynamic forces. Mathematical and graphical analyses. Complete working drawings. (4) MR. NEWTON.

104f and 105w. PRIME MOVER DESIGN. Prerequisites, machine design A, and heat machinery B. Problems in the design of reciprocating steam and internal combustion engines, steam turbines, steam boilers, hydraulic motors and pumps. (3) MR. NEWTON.

201f and w. SPECIAL MACHINE DESIGN. Advanced work in kinematics, graphics, materials and the design of apparatus and machinery for specific work. (Credit to be arranged.) MR. NEWTON.

Industrial Engineering

25f and w. PATTERN MAKING. Includes use of lathe, analysis and planning of patterns and laboratory work illustrating the principles and practices in molding and pattern making. (2) MR. MILLER.

30f and w. FORGE AND MACHINE WORK. The work consists of forging and tempering steel, heat treatment of metals and study and practice in the operation of the principal machines in the machine shop. (2) MR. PHILLIPS.

142f and w. FACTORY PRODUCTION. Prerequisites, pattern making and forge and machine shop, or their equivalent. Study of industrial organization, analysis of production, scheduling, planning, routing, despatching, inspection, costs and factory instructions. This study illustrated by application of modern production methods of quantity manufacture of a small bench grinder. (4) MR. PHILLIPS.

145w. LABOR SUPPLY. Deals with shop organization, labor turnover, foreman training, training and compensation of labor and conditions of employment. (2) MR. SELVIDGE.

150f and w. MANAGEMENT ENGINEERING. Prerequisites, pattern making and forge and machine shop. The fundamental principles of industrial efficiency applicable to manufacturing, power-house operation, construction or other engineering business. (3) MR. HIBBARD.

211w. SHOPWORK ENGINEERING. Advanced analyses in production-engineering. Industrial betterment. New mechanisms in scientific management. Tests in laboratory and in commercial plants. (2) MR. HIBBARD.

Testing and Experimental Engineering

121f and 122w. MECHANICAL LABORATORY A. Prerequisites, heat machinery A, accompanied by heat machinery B. Accuracy and adaptability of measuring instruments and commercial testing of various kinds of heat machinery. (2) MR. WHARTON.

123f. MECHANICAL LABORATORY B. Prerequisite, mechanical laboratory A. Tests demonstrating thermodynamic and economic characteristics of steam, gas, and oil engines, boilers, gas producers, air compressors, steam turbines, hydraulic motors. (2) MR. WHARTON.

221f and w. SPECIAL MECHANICAL LABORATORY. Advanced work in experimental engineering research. (Credit to be arranged.) Offered by members of the staff in their respective lines.

Power Engineering

131f and w. **HEAT MACHINERY A.** Prerequisite, physics 3f. A general course treating of the operation, functions and relations of power plant equipment, accompanied by laboratory exercises and elementary thermodynamics. (3) MR. HIBBARD.

132f and 133w. **HEAT MACHINERY B.** Prerequisite, heat machinery A. Relations between heat and mechanical energy. Useful heat properties of solids, vapors and gases. Mechanics of steam engines, boilers, turbines, internal combustion motors. (4) and (3) MR. WHARTON.

134f. **STEAM POWER PLANTS.** Prerequisite, heat machinery B. Problem in creation, operation, or modernizing of a power or other engineering property. Graphic analysis. Effect of fixed charges, indirect cost, depreciation, obsolescence (4) MR. HIBBARD.

135f. **STEAM TURBINES.** Prerequisite, heat machinery B. Design of turbines, problems in balancing, nozzles, vanes, shafts. Economy. (2) MR. NEWTON.

151f. **HEATING AND VENTILATION.** Preceded or accompanied by heat machinery B. Principles of heating and ventilation. Methods of warming by hot air, water and steam. Design of heating and ventilation plants. (3) MR. NEWTON.

154f. **REFRIGERATION A.** Preceded or accompanied by heat machinery B. Artificial production of cold; cycles, efficiency, capacity, economic considerations. Compression and absorption machinery. Insulation. Tests. (3) MR. WHARTON.

161f and 162w. **RAILWAY MECHANICAL ENGINEERING.** Prerequisites vary with group elected. 1. Locomotive design. 2. Locomotive operation. 3. Car design. 4. Railway shops. (2) MR. HIBBARD.

231w. **APPLIED THERMODYNAMICS.** Prerequisite, heat machinery B. The advanced theory and practice of heat transformations and appliances related to commercial economy in heat machinery. (3) MR. WHARTON.

234f and 235w. **GAS ENGINEERING.** Prerequisite, machine design B; heat machinery B. Production, preparation, transmission, and use of industrial gases, together with the theory and practice of internal-combustion motors. (2) MR. NEWTON.

251w. **REFRIGERATION B.** Prerequisite, refrigeration A. Designs, plans, specifications, estimates for one or more selected studies, as: ice factory, cold storage, etc. Research, tests, appraisals, management. Credit to be arranged. MR. WHARTON.

Mechanics

100f and 101w. **MECHANICS OF ENGINEERING.** An introductory course in statics. Mechanics of materials, statics, dynamics. Prerequisite, integral calculus. (4) MR. DEFoe.

112f or w. **ADVANCED MECHANICS.** Problems in dynamics. (3) MR. DEFoe.

205f or w. **ELASTICITY.** Mathematical theory of elasticity. (3) MR. DEFoe.

ENGLISH

1f and w. **COMPOSITION AND RHETORIC.** Detailed study and practice in construction and the kinds of composition. (3) MR. RANKIN; MR. MOFFETT; MR. BORISH; MR. CLAPP; MISS FUNK; MR. GREEN; MISS HUGHEY; MR. JOHNSON; MISS KELLEY; MISS LEWIS; MR. READ; MR. ROSS; MR. WAINGER.

2f and w. COMPOSITION AND RHETORIC. A continuation of course 1. (3) MR. RANKIN; MR. MOFFETT; MR. BORISH; MR. CLAPP; MISS FUNK; MR. GREEN; MISS HUGHEY; MR. JOHNSON; MISS KELLEY; MISS LEWIS; MR. READ; MR. ROSS; MR. WAINGER.

Courses 1 and 2 are required work for freshmen.

3f. ENGLISH LIFE AND LITERATURE. A reading and lecture course upon phases of English life and the progress of English literature. (3; 2 for upper-classmen) MR. BELDEN; MR. WAINGER.

6w. MASTERPIECES. Critical study of selected masterpieces of English literature. (3; 2 for upperclassmen, except for those who have had no English beyond courses 1 and 2) MR. FAIRCHILD.

Courses 3 and 6 constitute an introduction to the study of English literature, open to all students of the first and second years, and designed for those who can take but one course in English literature, as well as for those who proceed to the further study of English. Courses 3 and 6, or their equivalent, are required for admission to upper-class courses in literature.

50f and w. NARRATION. Study and practice in writing the short story and other forms of narrative composition. Prerequisite, course 3 or 6. (3) MR. RAMSAY; MR. GREEN; MR. JOHNSON; MISS HUGHEY.

60f and w. EXPOSITION. The critical study of current exposition, with practice in writing. Recommended for those who intend to enter the professional schools. (3) MR. RANKIN; MR. WAINGER; MISS LEWIS.

75f and w. BEGINNING PUBLIC SPEAKING. The study and practice of the conversational mode of speaking; development of clear thinking and distinct speaking in every-day social relationships. (2; 3 in the Summer Session) MR. HULBERT; MR. CLAY; MR. RHYNSBURGER.

76f and w. ADVANCED PUBLIC SPEAKING. A continuation of course 75. Original speeches prepared for special occasions; practice in selecting, outlining, and delivering speech material; criticism. (2) MR. HULBERT; MR. CLAY; MR. RHYNSBURGER.

Course 75 or its equivalent is a prerequisite to course 76.

100w. THE SHORT STORY. An advanced course in the art of story writing, with criticism, discussion, and conferences. (3) MR. RAMSAY.

101f. ADVANCED COMPOSITION. Personal, individual advice and criticism to advanced students who have shown some talent in writing prose or verse. (3) MR. RANKIN.

103w. TECHNICAL WRITING. Training in the organization and presentation of the results of research; preparation of professional reports and of papers for the non-technical public. For students in the School of Engineering; no credit towards the A. B. degree. (2) MR. BELDEN.

104w. THE BOOK REVIEW AND CRITICAL ESSAY. Discussion of theories; practice in writing reviews and critical essays. (3) MR. RANKIN.

105f. ARGUMENTATION AND DEBATE. A systematic study of principles and practice. Special attention will be given to the analysis of propositions, evidence, brief-making, and the preparation of forensics. (3) MR. HULBERT.

106w. DEBATING. Investigation of special problems; practice in debate. Designed especially for members of the debating squad. (3) MR. HULBERT.

107f and 108w. DRAMATIC INTERPRETATION. Practical application of principles of stage technique and dramatic interpretation; rehearsal and performance; participation in class and public performances; standards of evaluation and appreciation for the best things in the theater. (3) MR. RHYNSBURGER.

109w. STAGECRAFT AND ACTING. Functions of stage settings; procedure in mounting a play; evolution of the design through sketches, diagrams, colored plates, and miniature models; research in period decoration and costume applied in the theater. Theory and technique of acting; principles of dramatic interpretation and characterization; participation in private class-exercise performances. (3) Prerequisite, course 107. MR. RHYSBURGER.

113f. VERSIFICATION. The principles of English verse; the function and values of verse in poetry. (3) MR. BELDEN.

119f and 120w. THE ENGLISH LANGUAGE. The present facts of the English language, with an introduction to the science of language; the past development of English, with an introduction to Old English. (3; in the Summer Session 2 1/2 or 3) MR. RAMSAY.

125f. CHAUCER AND HIS TIME. A careful study of some of the *Canterbury Tales* and rapid reading of other parts of Chaucer's work, together with a consideration of the social background of Chaucer's England. Introduction to Middle English. (3) MR. RANKIN.

135f and 136w. SHAKESPEARE. *Hamlet, Macbeth, Henry V., The Tempest.* (3; in the Summer Session 2 or 2 1/2) MR. FAIRCHILD.

145f. MILTON. Life, work, times. (3) MR. FAIRCHILD.

155f. THE AGE OF REASON. Dryden and his time; Pope, Swift, and the essayists. (3) MR. BELDEN.

156w. JOHNSON AND HIS TIME. Philosophy, criticism, and social ideas as reflected in English literature from 1730 to 1780. (2) MR. BELDEN.

161f. THE RISE OF PROSE FICTION. The development of the novel down to the opening of the nineteenth century. (3) MR. FAIRCHILD; MR. BORISH.

162w. THE NOVEL. The nineteenth century novel, beginning with Jane Austen and coming down to the present. (3) MR. FAIRCHILD.

165f. THE ROMANTIC PERIOD. A study of literary tendencies and representative authors. (3) MR. TISDEL.

166w. THE VICTORIAN PERIOD. A study of literary tendencies and representative authors. (3) MR. TISDEL; MR. MOFFETT; MR. RANKIN.

171f. MODERN PROSE WRITERS. A comparative study of the works of representative authors, with weekly reports and collateral reading. (3) MR. RANKIN.

175f and 176w. AMERICAN LITERATURE. (a) sectional development; (b) the growth of nationality; (c) present tendencies. (3) MR. BELDEN; MR. WOOD.

190w. MODERN POETRY. A study of representative poets and poetical movements in England and America during the last fifty years. Prerequisites, courses 3, 6 or any upperclass course in English literature. (3) MR. RAMSAY.

195f. THE MODERN DRAMA. The development of English and American drama during the last forty years, with a survey of some foreign dramatists who have influenced its course. Prerequisites, courses 3, 6 or one other course in English literature. (3) MR. RAMSAY.

198f and 199w. DISTINCTION. Special work for candidates for graduation with distinction. (3) MR. BELDEN; MR. FAIRCHILD; MR. RAMSAY; MR. RANKIN; MR. MOFFETT.

210f. PROBLEMS IN ENGLISH METHOD. Investigation of the aims, means, and methods of English instruction in the schools. (3; in the Summer Session 2) MR. MOFFETT.

215f and w. RESEARCH. Candidates for advanced degrees will meet with instructors for consultation upon their individual problems (1-6) MR. TISDEL; MR. BELDEN; MR. FAIRCHILD; MR. RAMSAY; MR. RANKIN; MR. MOFFETT; MR. WOOD.

222w. **BEOWULF.** The poem will be studied as an exercise in the linguistics of Old English, in text criticism, and in the investigation of early Germanic life and poetry. (3) MR. BELDEN.

236f. **ELIZABETHAN DRAMA.** History of the earlier Elizabethan drama; study of the works of Lyly, Kyd, Greene, Peele, and Marlowe; the doubtful plays of Shakespeare. (2) MR. FAIRCHILD.

260f. **ENGLISH BIBLIOGRAPHY AND METHOD.** A course in methods of research and the discovery, limitation, and mode of attack on graduate problems, illustrated by recent articles and studies. (3; in the Summer Session 2 or 2½) MR. RAMSAY.

267w. **TENNYSON AND BROWNING.** The investigation of special topics, historical and critical. (3) MR. TISDEL.

280w. **THE FOREIGN DEBT OF ENGLISH LITERATURE (LYRIC POETRY).** A study of the English lyric from the beginnings to the present time, with emphasis upon the foreign influences which have demonstrably affected the content, mood, or form of lyric verse. (3) MR. RANKIN.

ENTOMOLOGY

2f and w. **APPLIED ENTOMOLOGY.** A study of the fundamental principles of insect life with special reference to its economic importance, including a careful study of a limited number of insect pests and remedies for their control. (3) MR. HASEMAN; MR. SULLIVAN.

3w. **INSECTS AND BIRDS.** This course included primarily early morning field trips to study the bird life of the field and woods, and its relation to our insect life. Their feeding, nesting, breeding and migration habits are especially stressed. Opera or field glasses are important. (2) MR. HASEMAN; MR. SULLIVAN.

103w. **INSECT ANATOMY.** A laboratory course dealing with the comparative anatomy of a few representative forms. (Offered in odd years.) (2) MR. HASEMAN.

104f. **CLASSIFICATION OF INSECTS.** A laboratory course dealing with the classification for insects. (Offered in odd years.) (2) MR. SULLIVAN.

109f. **BEEKEEPING.** A technical study of the honey-bee and the science of beekeeping, supplemented with practical work in the apiary. (2) MR. HASEMAN; MR. SULLIVAN.

115w. **RELATION OF INSECTS TO DISEASES.** A detailed study of the transmission of diseases by insects, together with their life history, prevention, and control. Two lectures and one laboratory period. (3) MR. HASEMAN; MR. SULLIVAN.

116f. **MORPHOLOGY, HISTOLOGY, AND DEVELOPMENT OF INSECTS.** Prerequisites, courses 2, 103, 104 or their equivalent. (Offered in even years.) (3) MR. HASEMAN.

118w. **ADVANCED ECONOMIC ENTOMOLOGY.** Prerequisite, course 2. This course includes a detailed study of all the major insect pests including their life histories, injury and control measures. Lectures, laboratory and field work. (3) MR. HASEMAN; MR. SULLIVAN.

120f and 121w. **SPECIAL PROBLEMS.** Scheduled primarily for advanced undergraduates who wish to take up special problems in economic entomology. Hours to be arranged. MR. HASEMAN; MR. SULLIVAN.

200f and 201w. **RESEARCH.** Open to those who have had sufficient zoological and entomological training to fit them for original research. MR. HASEMAN; MR. SULLIVAN.

203f and 204w. SEMINARY. This course is intended to develop and foster the spirit of original research. It will consist of the presentation of papers and of the discussion of current literature and entomological investigations. (1) MR. HASEMAN; MR. SULLIVAN.

FIELD CROPS

1f and w. FIELD CROPS. Required of all freshmen. An introductory course dealing with fundamental factors in the production and management of crops. Students are advised to take this course in the fall or summer terms rather than in the winter term, to secure the great advantage of field studies. (3) MR. ETHERIDGE; MR. KIRKPATRICK.

100w. FIELD CROPS MANAGEMENT. Required of all juniors. Prerequisite, course 1. Crop rotations for Missouri conditions and the management of crops in various systems of farming will be studied both theoretically and through the medium of practical problems from Missouri fields. (2) MR. HELM.

101w. FIELD CROPS IMPROVEMENT. Prerequisite, course 1. A summary of the principles underlying the economic breeding of crop plants; studies in practical methods of plant improvement, in the testing and standardization of varieties, and the quality of seed. Offered in alternate years. (To be given in 1927-28.) (3) MR. STADLER.

102f. FIELD CROPS GRADING AND MARKETING. Prerequisite, course 1. Laboratory studies of the methods of grading grain and hay by the Federal standards; lectures on the methods of grain inspection and grain marketing; visits to important grain markets. (3) MR. KIRKPATRICK.

103f. FIBER CROPS PRODUCTION. Prerequisite, course 1. Studies of the production of the principal fibre crops, with special attention to the production and management of cotton in Missouri. (2) MR. ETHERIDGE.

104f. FORAGE CROPS PRODUCTION. Prerequisite, course 1. An advanced study of the production and preservation as hay or silage of the principal forage crops; special attention is given to the production and maintenance of pastures; the results of investigations in forage production are critically reviewed. (3) MR. HELM.

105w. GRAIN CROPS PRODUCTION. Prerequisite, course 1. An advanced study of the production of corn and other important grains; to reach a summary of the important results of investigations of factors related to the yield of each crop will be the essential aim of the course; some laboratory studies in grain grading and the taxonomy of the varieties of grains. (3) MR. ETHERIDGE.

200w. CROP EXPERIMENTATION. A study of the methods of experimentation and research with crops in the laboratory, greenhouse, and field; defining the problem; planning the investigation or research; technique and management; collecting and tabulating data; analysis and presentation of data; interpretation of evidence; considerations of the principal sources of error; methods of reviewing literature. For graduate students or specially prepared seniors who intend to enter the professional field of agronomy. Offered in alternate years. (Not given in 1927-28.) (3-5) MR. STADLER.

201f and 202w. SPECIAL PROBLEMS. A course scheduled by appointment for graduates or specially prepared juniors and seniors who wish to investigate along special lines the production of field crops. Problems will be assigned or will be chosen subject to approval. Credit to be arranged. The teacher may be elected

203f. ADVANCED FIELD CROP IMPROVEMENT. Prerequisite, course 101. An advanced study of the inheritance and improvement of the principal field crops; consideration of fundamental problems in the technique of crop improvement;

critical reviews of recent research and investigations. For graduate students and seniors. Offered in alternate years. (Not given in 1927-28.) (2) MR. STADLER.

204f and 205w. RESEARCH. Original research in problems in the production, management and improvement of field crops. MR. ETHERIDGE; MR. STADLER; MR. HELM.

206f and 207w. SEMINARY. Discussions of research problems in the production, management and improvement of field crops. Students will present before the class their abstracts of the literature on special topics. Required without credit of graduate students majoring in field crops, but specially prepared seniors may receive a credit of one hour. (1) MR. ETHERIDGE; MR. HELM; MR. STADLER.

FRENCH AND ITALIAN

French

1f, w. ELEMENTARY COURSE. (5) MR. JESSE; MR. SCHUTZ; MISS SPAULDING; MR. DORRANCE; MR. AUSTIN.

2f, w. INTERMEDIATE COURSE (5) MR. JESSE; MR. SCHUTZ; MISS SPAULDING.

3f and w. ADVANCED COURSE. Three hours of the credit for this course may be counted as upperclass work toward a major or minor in French. (5) MISS SPAULDING; MR. DORRANCE; MR. AUSTIN.

101f. PHONETICS. The organs of speech, sound formation, oral and aural drill. (1) MR. JESSE.

103f, w. COMPOSITION. Course conducted entirely in French. (5) MRS. HUDSON.

104f and w. ADVANCED COMPOSITION. Prerequisite, course 103. Course conducted entirely in French. (3) MRS. HUDSON.

108f. MASTERPIECES OF FRENCH LITERATURE. It is advisable that students take this course before taking others in French literature. (3) MR. JESSE.

109f. PROSE WRITERS OF THE 17TH AND 18TH CENTURIES. (3) MR. JESSE.

110w. FRENCH CLASSICAL THEATER. Alternates with course 111. (3) MR. JESSE.

111w. FRENCH COMEDY SINCE MOLIERE. Alternates with course 110. (3) MR. JESSE.

112f. FRENCH NOVEL TO 1900. Alternates with course 113. (3) MR. JESSE.

113w. CONTEMPORARY FRENCH NOVEL. Alternates with course 112. (3) MISS STEWART.

114. LYRIC POETRY FROM CHENIER TO VERLAINE. Course conducted entirely in French. Alternates with course 115. (3) MR. TROMBLY.

115f. LYRIC POETRY OF TODAY. Course conducted entirely in French. Alternates with course 114. (3) MR. TROMBLY.

116f. HISTORY OF THE FRENCH LANGUAGE. (3) MR. SCHUTZ.

117w. FRENCH RENAISSANCE. (3) MR. SCHUTZ.

199w. DISTINCTION. (3).

201f and w. OLD FRENCH. Given yearly. (2) MR. SCHUTZ.

203f. VULGAR LATIN. (2) MR. SCHUTZ.

204w. MIDDLE FRENCH. (2) MR. SCHUTZ.

206w. MOLIERE. (3) MR. TROMBLY.

207f, w. SEMINARY. MR. TROMBLY.

(H133w. TEACHING OF FRENCH. (2) MR. JESSE.)

Italian

- 20f. ELEMENTARY COURSE. (5) MR. TROMBLY.
 21w. INTERMEDIATE COURSE. (5) MR. TROMBLY.
 120f. MASTERPIECES OF ITALIAN LITERATURE. (3) MR. TROMBLY.
 121w. DANTE. (3) MR. TROMBLY.

GEOLOGY AND GEOGRAPHY

Geology

Greek 14 is recommended for students majoring in geology or geography.

- 1f and w. PRINCIPLES OF GEOLOGY. Earth history and materials. (5) MR. BRANSON; MR. TARR; MR. MEHL; MR. WILLIAMS; MR. MATHIAS; MR. KELLER.
 2f and w. PHYSICAL GEOLOGY. Like 1, but omits the historical part. (3) MR. KELLER.
 14f and w. COMMON ROCKS AND MINERALS. Prerequisite, course 1 or 2. (3) MR. MATHIAS.
 15f and w. ADVANCED GENERAL GEOLOGY. Prerequisite, course 1 or 2. (4) MR. WILLIAMS.
 50w. LIFE OF THE GEOLOGIC PAST. Prerequisite, course 1. (2) MR. MEHL.
 100f. ECONOMIC GEOLOGY. Prerequisite, course 1 or 2. Non-metallic earth products. (2) MR. TARR.
 101w. ECONOMIC GEOLOGY. Prerequisite, course 1 or 2. Metallic earth products. (2) MR. TARR.
 105s. FIELD COURSE. Prerequisite, course 1 and 14 or 15. Offered in the summer term. (4-6).
 107w. MINERALOGY. Prerequisite, course 15. (3) MR. TARR; MR. MATHIAS.
 118s. FIELD METHODS. Prerequisite, course 15. (2).
 120f. HISTORICAL GEOLOGY. Prerequisite, course 15. (3) MR. BRANSON.
 121w. INTRODUCTORY PALEONTOLOGY. Prerequisite, courses 50 and 15. (3) MR. WILLIAMS.
 135w. PETROGRAPHY. Prerequisite, course 107. (3-5) MR. TARR.
 140s. GEOLOGICAL REPORT. Offered in the summer term. (2).
 200w. GEOLOGY OF OIL AND GAS. Prerequisite, courses 100 and 120. (3-5) MR. MEHL.
 201f. MINERAL DEPOSITS. Prerequisite, courses 101 and 107. (3-5) MR. TARR.
 204f and w. SEMINARY. (1-2).
 207w. ADVANCED MINERALOGY. Prerequisite, course 107. Offered in 1927-28 and alternate years. (3-5) MR. TARR.
 208w. PRINCIPLES OF ORE DEPOSITS. Prerequisite, course 201. Offered in 1926-27 and alternate years. (3-5) MR. TARR.
 210f. and w. FIELD PROBLEMS. Prerequisite, course 105, and other courses, depending on the problems selected.
 216w. STRUCTURAL GEOLOGY. Prerequisite, courses 105 and 121. (3) MR. KELLER.
 224f. STRATIGRAPHY. Prerequisite, courses 105, 120 and 121. (5) MR. BRANSON.

233w. THE GEOLOGIC HISTORY OF THE VERTEBRATES. Prerequisite, course 121. (3) MR. MEHL.

234f and w. PALEONTOLOGY. Prerequisite, course 121. (5) MR. BRANSON; MR. WILLIAMS.

240f and w. RESEARCH.

Geography

6f and w. PRINCIPLES OF GEOGRAPHY. (3) MR. BRATTON; MR. ADAMS; MR. NAVARRE.

70f and w. INDUSTRIAL GEOGRAPHY. Prerequisite, course 6. (3) MR. ADAMS; MR. NAVARRE.

80f and w. INTRODUCTION TO REGIONAL GEOGRAPHY. Prerequisite, course 6 or 109. (2) MR. ADAMS; MR. NAVARRE.

109f and w. BUSINESS GEOGRAPHY. Credit in B. and P. A. only. (3) MR. BRATTON.

110f. GEOGRAPHY OF NORTH AMERICA. Prerequisite, course 80. (3) MR. ADAMS.

111w. GEOGRAPHY OF SOUTH AMERICA. Prerequisite, course 80. (3) MR. ADAMS.

112f. GEOGRAPHY OF EUROPE. Prerequisite, course 110 or 111. (3) MR. BRATTON.

113f. GEOGRAPHY OF ASIA. Prerequisite, course 80 (offered in 1926-27 and alternate years). (3) MR. NAVARRE.

114w. GEOGRAPHY OF CARIBBEAN AMERICA. Prerequisite, course 110 or 111.

116w. GEOGRAPHY OF TRADE. Prerequisite, course 70 or 109. (3) MR. ADAMS.

118f. GEOGRAPHY OF AFRICA. Prerequisite, course 80 (offered in 1927-28 and alternate years). (3) MR. NAVARRE.

119w. CONSERVATION OF NATURAL RESOURCES IN THE UNITED STATES. Prerequisite, fifty hours of college credit. Offered in 1926-27 and alternate years. (3) MR. BRATTON.

145f and w. PRO-SEMINARY. (1-3) Prerequisite, at least 15 hours in Geography. MR. BRATTON; MR. ADAMS; MR. NAVARRE.

211f. PLANT GEOGRAPHY. Offered in 1927-28 and alternate years. (3-5) MR. BRATTON.

212w. HISTORICAL GEOGRAPHY OF THE UNITED STATES. Offered in 1927-28 and alternate years. (3) MR. BRATTON.

213f. POLITICAL GEOGRAPHY. Offered in 1926-27 and alternate years. (3) MR. BRATTON.

214w. CARTOGRAPHY. Offered in 1926-27 and alternate years. (3-5) MR. BRATTON.

215f and w. SEMINARY. Prerequisite, at least two hours of Pro-seminary. (1-3) MR. BRATTON.

230f and w. RESEARCH. (2-5) MR. BRATTON.

GERMANIC LANGUAGES

1f and w. BEGINNING COURSE IN GERMAN. (5) MR. ALMSTEDT; MR. HOFFMAN.

2f and w. GERMAN READING, SYNTAX, AND COMPOSITION. Prerequisite, course 1. (5) MR. ALMSTEDT; MR. HOFFMAN.

3f, w. ADVANCED READING COURSE. Prerequisite, courses 1 and 2. (5) MR. HOFFMAN; MR. ALMSTEDT.

- 104f, w. MASTERPIECES IN MODERN GERMAN DRAMA AND LYRICS AND NOVEL. Prerequisite, course 3 or its equivalent. (3) MR. ALMSTEDT.
- 105f. OUTLINE COURSE IN GERMAN LITERATURE. (3) MR. HOFFMAN.
- 106w. LESSING. (3) MR. HOFFMAN.
- 107f. SCHILLER. (3) MR. HOFFMAN.
- 108w. GOETHE. (3) MR. ALMSTEDT.
- 109w. OUTLINE COURSE IN HISTORICAL GRAMMAR. (3) MR. ALMSTEDT.
- 110w. ADVANCED GERMAN COMPOSITION AND CONVERSATION. (2) MR. HOFFMAN.
- 111f. GERMAN DRAMA OF THE NINETEENTH CENTURY. (3) MR. HOFFMAN.
- 212w. ROMANTICISM. (3) MR. HOFFMAN.
- 213f. THE REFORMATION AND RENAISSANCE (1500-1750). (2) MR. HOFFMAN.
- 214f. MIDDLE HIGH GERMAN. (3) MR. ALMSTEDT.
- 215w. OLD HIGH GERMAN. (3) MR. ALMSTEDT.
- 216f. GOTHIC. (3) MR. ALMSTEDT.
- 217f and w. SEMINARY.

GREEK

1f and w. ELEMENTARY COURSE. Emphasis is laid on the Greek element in English, the vocabulary being confined to Greek words from which English words are formed. During the term the student learns the derivation of more than eight hundred English words and the fundamental principles of grammar together with the forms necessary for the reading of simple prose. (5) MR. MANLY.

2f and w. INTERMEDIATE COURSE. Reading of simple Greek prose with review of syntax and of Attic forms. (3) MR. MANLY.

3f or w. ADVANCED COURSE. Xenophon's *Memorabilia* two books, and Plato's *Apology* and *Crito*. Study of the personality of Socrates. (3) MR. MANLY.

4f or w. HOMER'S *ILIAD* OR *ODYSSEY*. Reading of several books of Homer with special attention to the dialect and reading metrically. (3) MR. MANLY.

6f and w. COMPOSITION AND READING. Rapid Reading and translation at sight. (2) MR. MANLY.

10f and w. GREEK FOR STUDENTS OF MEDICINE. Study of the derivation and meaning of medical terms. (1) MR. MANLY.

11f and w. GREEK FOR STUDENTS OF CHEMISTRY. Study of the derivation and meaning of scientific terms in chemistry. (1) MR. MANLY.

12f and w. GREEK FOR STUDENTS OF ZOOLOGY. Study of the derivation and meaning of scientific terms in zoology. (1) MR. MANLY.

13f and w. GREEK FOR STUDENTS OF BOTANY. Study of the derivation and meaning of scientific terms in botany. (1) MR. MANLY.

14f and w. GREEK FOR STUDENTS OF GEOLOGY. Study of the derivation and meaning of scientific terms in geology. (1) MR. MANLY.

20f and w. GREEK FOR STUDENTS OF MEDICINE. Advanced course. Prerequisite, course 10. (1) MR. MANLY.

108f or w. HOMER, ADVANCED. Rapid reading of the *Iliad* or *Odyssey* with discussion of the manners and customs of the Homeric age (2) or (3) MR. MANLY.

109f and w. GREEK MYTHOLOGY. The aim is to familiarize the student with the myths of Greece as an aid to the interpretation and appreciation of literature. (2) MR. MANLY.

110f or w. GREEK LIFE. Study of the manners and customs of the ancient Greeks. Lectures, assigned readings, and reports. Illustrated by maps, charts, photographs and stereopticon views. (2) MR. MANLY.

112f or w. GREEK LITERATURE IN ENGLISH TRANSLATION. General view of Greek literature intended primarily for non-classical students. (2) or (3) MR. MANLY.

116f or w. GREEK TRAGEDY IN ENGLISH TRANSLATION. Study of the origin of Greek tragedy and the Greek theater, and the reading of selected plays of Aeschylus, Sophocles, and Euripides. (1) MR. MANLY.

217. HOMER. THE ILIAD AND THE ODYSSEY. (2) or (3) MR. MANLY.

222. SEMINARY. Graduate work conducted in accordance with the needs of the graduate students in classics. MR. MANLY.

HISTORY

History 1 or its equivalent is a prerequisite for all other courses in history.

1f and w. INTRODUCTION TO HISTORY. A survey of general history, mainly European, from the beginning to the later 18th century. This course is a prerequisite to all other courses in history. Four hours credit only to Juniors and Seniors. (5) MR. WRENCH; MR. BRADY.

8f and w. AMERICAN HISTORY. A survey of the colonial and national periods. Four hours credit only to seniors. (5) MR. STEPHENS; MRS. TRENHOLME.

106f and w. CONTEMPORARY EUROPE. A survey of European history in the twentieth century, dealing with political and economic development and the insistent problems of world politics. Special emphasis on the causes of the World War and the Peace Conference. (3) MR. KERNER.

110f and w. RECENT UNITED STATES HISTORY. A study of the United States since 1876 as an historical background to present day problems. (3) MR. VILES.

117f. POLITICAL AND SOCIAL HISTORY OF ENGLAND. Medieval and early modern periods. (3) MR. ———.

118w. POLITICAL AND SOCIAL HISTORY OF ENGLAND. The modern period. (3) MR. ———.

123f. ANCIENT HISTORY. The Orient and Egypt. (2) MR. WRENCH.

124w. ANCIENT HISTORY. The Greek Period. (2) MR. BRADY.

125f. ANCIENT HISTORY. The Roman Period. (2) MR. BRADY. Courses 123f, 125w and 126f constitute a complete survey of ancient history and should be taken consecutively. Primarily for prospective teachers of history and the classics. For upperclassmen only, except by permission.

134f. THE NEAR EAST. The historical background of the problems of Western Asia. (2) MR. WRENCH.

137w. THE FAR EAST. The historical background of the present political and economic problems of the Far East. (3) MR. KERNER.

145f. THE EXPANSION OF EUROPE. The extension of European institutions and culture throughout the world in the modern period. (2) MR. (———)

146w. THE BRITISH EMPIRE. A survey of its growth and organization. (2) MR. (———)

155w. EUROPEAN CULTURE. The Renaissance Period, a survey of the cultural development of Europe from 1300 to 1600. (3) MR. WRENCH.

165w. RECENT RUSSIAN HISTORY. A general survey of Russian history from the Crimean war to the present time, with special emphasis on the historical

background, the origin and development of the revolution and present conditions. (3) MR. KERNER.

180w. SOCIAL FORCES IN AMERICAN HISTORY. The origins and development of American social and economic conditions, colonial and national. (3) MRS. PRIDDY.

182w. HISTORY OF THE WEST. A study of the frontier in American history, including its development and its influence on American ideals and politics. (3) MR. VILES.

185f. THE AMERICAN REVOLUTION AND THE FORMATION OF THE NATIONAL GOVERNMENT. (3) MRS. TRENHOLME.

190f. AMERICAN DIPLOMATIC HISTORY. A survey of the foreign relations of the United States, with special emphasis on the period since the Civil War. (3) MR. STEPHENS.

200f. HISTORICAL BIBLIOGRAPHY AND METHOD. A general introduction to the advanced study of history and other social sciences, including a survey of bibliographic aids and an examination of the methods of historical research. Lectures and practical exercises. Required of all graduate students in history and recommended to graduate students in the other social sciences. (2) MR. KERNER.

201w. HISTORICAL INTERPRETATION AND THE SOCIAL SCIENCES. A survey of the methods of great historians and of the relation of history to the other social sciences. For graduate students in the social sciences. (2) MR. KERNER and members of the departments of the Social Sciences.

208w. AMERICAN CONSTITUTIONAL HISTORY. Special attention is directed to the formation of the Federal Constitution and its interpretation in connection with the leading constitutional issues. (2) MR. VILES.

209w. RECENT DIPLOMATIC PROBLEMS. Selected topics in the foreign relations of the United States since 1895. (2) MR. STEPHENS.

216f. SEMINARY IN CONTEMPORARY EUROPE. Selected topics in the history of Eastern Europe and world politics. (2) (3) or (4) MR. KERNER.

218f. POLITICAL PARTIES IN THE UNITED STATES. (2) MR. VILES.

219w. SEMINARY IN THE HISTORY OF THE WEST (2-4) MR. VILES.

235w. PROBLEMS IN ORIENTAL HISTORY. (2) MR. WRENCH.

250f. SEMINARY IN HISTORICAL RESEARCH AND THESIS. (1) (2) (3) or (4) MR. KERNER; MRS. PRIDDY; MR. STEPHENS; MR. VILES; MR. WRENCH.

HOME ECONOMICS

See pages 125 to 129.

1f and w, 2f and w. FOOD AND NUTRITION. An elementary study of the production, composition, selection and preparation of food. (3-3) yr. MISS CLINE; MISS WHIPPLE.

10f and w. HOUSEHOLD PROBLEMS. A course planned to give the student a general insight into the field of home economics through a study of the problems of the modern home. (2) MISS CAMPBELL.

15f, 16w. APPLIED DESIGN. An introduction to the fundamental principles of design, effect of material on execution, fitness of various forms of media, space divisions and relations and color schemes. (2-2) yr. MISS HOWARD.

20f and w. HOME NURSING AND HEALTH. A study of the home care of the sick and of family health. (2) MISS FRENCH.

30w. FOOD IN RELATION TO HEALTH. A general course in nutrition planned for students who are not specializing in Home Economics. No prerequisites. No laboratory. Open to both men and women. (3) MISS HESSLER.

50f and w., 51f and w. **TEXTILES AND CLOTHING.** The selection and construction of clothing based on a general study of textile materials. (3-3) Miss BRIGGS.

55f. **MILLINERY.** A study of design as applied to millinery. Problems in selection and construction of hats suitable for various occasions and costumes. (2) Miss COLES.

101f and w. **HOUSEHOLD SANITATION.** Prerequisites, bacteriology or preventive medicine. A study of the problems involved in providing sanitary living conditions (2) Miss SHOLLEY.

110f and w. **HOME PLANNING AND FURNISHING.** Prerequisite home economics 15 and 16 or Introduction to Art. A study of the planning and furnishing of the home from the standpoint of convenience, economics, health and art not offered winter of 1927-28. (3) Miss HOWARD.

111w. **PROBLEMS IN HOME PLANNING AND FURNISHING.** Prerequisite, home economics 110. A study of the history of home furnishings—their origin, development and influence on modern interior decoration with their suitable applications to the problems (3) Miss HOWARD.

115f and w. **HOME MANAGEMENT.** A course dealing with the problems arising in the management of a home. Opportunity is provided through residence in a self-sustaining home, for developing judgment in the solution of typical problems. (4) Miss SHOLLEY.

120f and w, 121f and w. **FOOD AND NUTRITION.** Prerequisites, organic chemistry, physiology, bacteriology, home economics 1 and 2. A study of food constituents their occurrence in the different foods and their digestibility, food preservation. (3-3) yr. Miss WHIPPLE.

122f and w, 123w. **DIETETICS.** Prerequisite, home economics 121. A study of the food requirements of normals, considering the individual and his environment; the planning of dietaries including infant feeding and a study of diet in disease. (3-3) yr. Miss HESSLER AND Miss WHIPPLE.

124w. **FIELD WORK IN DIETETICS.** Prerequisite, home economics 123. Individual work, such as problems in child nutrition, institutional or clinical dietetics. (Credit according to amount of work done.) Miss HESSLER.

145f and w. **DRESS DESIGN.** Prerequisite, home economics 16. A study of the principles of design as applied to dress: Study of individual types; adaptation of historic to modern costume. Not offered winter of 1928-29. (2) Miss HOWARD.

146f. **ADVANCED DRESS DESIGN.** Prerequisite, home economics 145. A continuation of the foregoing course, planned especially for students who wish to specialize in dress design. (3) Miss BRIGGS.

150f, 151w. **CLOTHING PROBLEMS.** Prerequisite, home economics 51 and 145. A study of the selection, construction, and care of clothing for the infant, child, and adult from the hygienic, social, and economic standpoints. This course includes renovation problems and a study of textile fabrics. (3-3) yr. Miss COLES.

152f and w. **ADVANCED CLOTHING.** Prerequisite, home economics 145 and 151. Special application of the principles of art, with original designs carried out in clothing construction. (3) Miss BRIGGS.

155w. **ADVANCED TEXTILES.** Prerequisite, home economics 151 and organic chemistry. Analysis of the physical and chemical characteristics of the textile fibers; methods of testing textile materials; history of textile industry and studies in the economic and social aspects of the present problems in the textile and clothing industries. (3) Miss COLES.

160f and w. HOME CARE AND TRAINING OF CHILDREN. A study of problems arising in the normal physical, mental and social development of children. (3) MISS SHOLLEY.

170f. EXPERIMENTAL COOKERY. Prerequisite, 121. This course involves elementary research in the science of food preparation under controlled conditions. Quantitative analyses of food materials and products are made. (2) MISS CLINE.

200f and 201w. HOME ECONOMICS SEMINAR. The most recent work in various lines of home economics will be reviewed and discussed. (2) MISS CAMPBELL AND OTHER MEMBERS OF THE STAFF.

202f. METABOLISM. Prerequisite, home economics 121. A study of metabolism through urinalysis, calorimetry, and feeding experiments. (5) MISS HESSLER.

205f and w. RESEARCH IN FOOD PREPARATION. Prerequisite, home economics 121, 170 and chemistry 25 or equivalent. Special problems in food preparation investigated. A knowledge of French and German is desirable. (Credit to be arranged.) MISS CLINE.

210f and w. RESEARCH IN HOUSE FURNISHING. Prerequisite, home economics 110 and 111. (Credit to be arranged.) MISS HOWARD.

215f and w. SPECIAL PROBLEMS IN HOME MANAGEMENT. An advanced course planned for those having special preparation in Home Management. The content of the course which is largely determined by the needs of the students, may include preparation for supervision of Home Management and investigation of certain phases of the work. (Credit to be arranged) MISS SHOLLEY AND MISS CAMPBELL.

221f and w. PROBLEMS IN NUTRITION. Prerequisite, home economics 123. An extensive study will be made of special problems of interest in nutrition. (Credit to be arranged.) MISS HESSLER.

245w. SPECIAL PROBLEMS IN DRESS DESIGN. Prerequisite, home economics 146. (Credit to be arranged.) MISS HOWARD.

250f and w. RESEARCH IN CLOTHING. Prerequisite, home economics 152 and 155. (Credit to be arranged.) MISS COLES.

HORTICULTURE

1w. GENERAL HORTICULTURE. An introductory course dealing primarily with the location and management of the farm, orchard and garden. It embraces production, harvesting, and storing of fruits and vegetables; also the planning, planting, and management of the home grounds. Lectures, laboratory work, and assigned readings. (3) MR. TALBERT; MR. SWARTWOUT.

6f and w. ELEMENTARY LANDSCAPE GARDENING. Lectures, text, drafting of plans. Theory and principles of designing the home grounds and a study of plan making with reference to the arrangement of home grounds of the farm and town. (3) MR. MAJOR.

8f. FARM FORESTRY. The propagation, planting, care and marketing of woodlot products for commercial and local use. Applied especially to Missouri conditions as a valuable and necessary adjunct to successful farm management. Lectures, with text and assignments including outside laboratory on practical problems. (2) MR. MAJOR.

100f. GENERAL POMOLOGY. Prerequisite, course 1. A course dealing with the establishment and maintenance of orchards. Lectures, assigned readings, and laboratory work. (3) MR. TALBERT.

101w. GENERAL POMOLOGY. Prerequisite, course 1. A continuation of course 100, dealing especially with the subjects of pruning, fertilizing, and spraying orchards. (3) MR. TALBERT.

102f and w. ELEMENTARY LANDSCAPE DESIGN. Theory and principles of landscape design as applied to the development of public and private estates, including parks, churches, schools, railroad stations, cemeteries and country estates. Prerequisite, courses 6, 103, 104 and surveying. Lectures and laboratory. (5) MR. MAJOR.

103f. ORNAMENTAL HORTICULTURE. (Trees.) A study of the shade trees and ornamental trees used in landscape gardening; their identification, character, habits, adaptation and care. Lectures, laboratory and text. (3) MR. MAJOR.

104w. ORNAMENTAL HORTICULTURE. (Shrubs and vines.) A study of the ornamental, native and cultivated shrubs and vines used in landscape gardening; identification, character, habits, adaptation and care. Lecture and laboratory. (3) MR. MAJOR.

105f. SYSTEMATIC POMOLOGY. A study of classification and nomenclature with laboratory work in description, identification, and judging of fruit. Lectures, laboratory work, and assigned readings. (3) MR. SWARTWOUT.

106f. COMMERCIAL VEGETABLE GROWING. The use of irrigation, fertilizers, spraying equipment and forcing structures in their relation to vegetable growing with discussion on seed growing, truck farm management, and methods of marketing vegetables. Three lectures and assigned readings. (3) MR. QUINN.

109f. COMMERCIAL FLORICULTURE. A study of the location, construction and arrangement of the different types of greenhouses with practical experience in floriculture practices. One lecture and two laboratory periods. (3) MR. QUINN.

110w. COMMERCIAL FLORICULTURE. A continuation of course 109f. It deals especially with the cultural methods of florists, bench crops and potted plants. One lecture and two laboratory periods. (3) MR. QUINN.

112w. ADVANCED LANDSCAPE DESIGN. Prerequisite, undergraduate work in landscape gardening. Principles of landscape design, with tracings and original designs for home, school, church, cemetery, and railroad grounds. (3) MR. MAJOR.

113w. SPRAYING. A study of spray materials, spray machinery and results. Lectures, laboratory work and assigned readings. (3) MR. SWARTWOUT.

114f. COMMERCIAL POMOLOGY. The harvesting, grading, packing, storage, and marketing of fruits. Lectures, assigned reading, and laboratory exercises. (3) MR. MURNEEK.

115w. EVOLUTION OF HORTICULTURAL PLANTS. A study of the fundamental laws of genetics, as applied to evolution and breeding of horticultural plants. Lectures, assigned reading, and problems. (3) MR. MURNEEK.

116f,w and s. SPECIAL PROBLEMS. Topics in landscape gardening, pomology, vegetable gardening, and floriculture. Hours by appointment. MR. TALBERT; MR. HOOKER; MR. MAJOR; MR. MURNEEK; MR. SWARTWOUT; MR. QUINN.

119w. VEGETABLE FORCING. Types and equipment of forcing structures with discussions on crops. Two lectures and one laboratory period. (3) MR. QUINN.

131f. ADVANCED POMOLOGY. Prerequisite, course 100 or 101 and Botany 100. A study of the water relations, nutrition, temperature relations, fruiting habits, fruit setting, and geography of fruit plants. Lectures, assigned readings, and discussions. (3) MR. HOOKER.

133w. SMALL FRUIT CULTURE. Not offered in 1927-28.

200f, w and s. SPECIAL INVESTIGATIONS. Hours by appointment. Mr. TALBERT; Mr. HOOKER; Mr. MAJOR; Mr. MURNEEK; Mr. SWARTWOUT; Mr. QUINN.

203w. CHEMISTRY AND PHYSICS OF SPRAYING. Prerequisite, course 113w. A study of the composition, toxicity, compatability, deterioration, spreading, and adhesion of spray materials. (To be arranged) Mr. SWARTWOUT.

204w and s. BREEDING OF HORTICULTURAL PLANTS. Prerequisite, course 115w or equivalent. Study of literature and original investigations on breeding and selection of horticultural plants. Hours by appointment. Mr. MURNEEK.

205f. FRUIT STORAGE INVESTIGATIONS. Special problems in fruit and vegetable storage and physiology of fruits and vegetables. Review of the literature and original investigations. Hours by appointment. Mr. MURNEEK.

206w. FORCING PROBLEMS WITH TRUCK CROPS. A study of such problems as soil sterilization, temperature and humidity, training, pruning, pollination, and the use of fertilizers. (3) Mr. QUINN.

207f. SYSTEMATIC OLERICULTURE. A systematic study of the classification and nomenclature of vegetables. Description of varieties and their adaptation to different environmental conditions. (3) Mr. QUINN.

208s and w. NUTRITION. Not offered in 1927-28.

210f. METHODS OF HORTICULTURAL RESEARCH. A study of methods of procedure in work of investigation—outlining problems assembling and analyzing data and presenting results. Lectures, assigned readings, and problems. (3) Mr. HOOKER.

212s and w. PRUNING PROBLEMS. Prerequisite, course 100 or equivalent. The fundamental principles of pruning and its physiological effects upon deciduous fruit trees. Laboratory, assigned readings, and problems. (3) Mr. TALBERT.

215f and w. SEMINAR. A critical study of recent investigations in horticulture and of investigations in other fields as they relate to horticulture. (1) Mr. HOOKER; Mr. TALBERT; A. E. MURNEEK.

217f. ADVANCED SYSTEMATIC POMOLOGY. Prerequisite, course 105. The taxonomy and history of foreign and domestic species of fruits with especial reference to their horticultural value and to the development of contemporary types and varieties. (3) Mr. SWARTWOUT.

220f. ROOT STOCKS FOR DECIDUOUS FRUIT TREES AND VINES. Suitable stocks for apples, pears, and grapes. Propagation of apples and pears upon their own roots, by means of whole roots and crown grafts. Native grapes as stocks for the best commercial varieties. (Credit to be arranged.) Mr. TALBERT.

221f. MORPHOLOGY OF HORTICULTURAL PLANTS. Prerequisite, Botany 1. A detailed study of morphology and histological structure of horticultural plants of economic importance. (Credit to be arranged.) Mr. MURNEEK.

JOURNALISM

100f. HISTORY AND PRINCIPLES OF JOURNALISM—to 1850. No journalistic prerequisites. May be taken for credit in the College of Arts and Science. (3) Mr. WILLIAMS.

101w. HISTORY AND PRINCIPLES OF JOURNALISM—since 1850. No journalistic prerequisites. May be taken for credit in the College of Arts and Science. (3) Mr. WILLIAMS.

102f and w. THE NEWS. Introductory course, prerequisite to all other journalism courses except as noted in this list. Methods of gathering news, the work of press associations, the writing of news, news values. (3) Mr. MARTIN.

103f and w. REPORTING I. Follows course 102. Assignments on daily newspaper. (3) MR. MARTIN; MR. SHARP.

104f and w. REPORTING II. Continuation of course 103. (3) MR. MARTIN; MR. SHARP.

110f and w. COPY READING I. Theory of editing newspaper copy and writing headlines. Course 103 must be taken either before or with this course. (2) MR. MANN.

111f and w. COPY READING II. Practice in editing copy and writing headlines for daily newspaper. (4) MR. MANN; MR. MORELOCK.

120f and w. PRINCIPLES OF ADVERTISING. Advertising fundamentals in relation to modern business activities. There are no journalistic prerequisites for this course, which is itself prerequisite for all other courses in advertising except Advertising Promotion in School Publications. (3) MR. JOHNSTON; MR. YATES.

121f and w. WRITING OF ADVERTISING. The application of modern merchandising methods to the preparation of advertising copy, and to local and national campaigns. Follows course 120. Must be taken by students planning to take further advertising courses. (3) MR. JOHNSTON.

122f and w. SELLING OF ADVERTISING I. Applying the principles of salesmanship to specific lines of business by work on daily newspaper. Prerequisite, course 121. (5) MR. JOHNSTON; MR. YATES.

123f and w. SELLING OF ADVERTISING II. Continuation of course 122. (5) MR. JOHNSTON; MR. YATES.

124f and w. THE ADVERTISING LAYOUT. Designing advertisements with special consideration to layout, type, illustration, color, and lettering. May be taken with, but not before, course 121. (2) MR. YATES.

125f. ADVERTISING AND DISTRIBUTION. The mechanism and operation of markets, studied in relation to effect on distribution of advertising commodities and services. May be taken with, but not before, course 121. (2) MR. JOHNSTON.

126w. THE ADVERTISING CAMPAIGN. Planning and presenting a complete national campaign, with special reference to a practical investigation of a product or service. May be taken with, but not before, course 121. (2) MR. JOHNSTON.

127f and w. RETAIL ADVERTISING. Analyzing, from the advertising viewpoint, the retail selling and store management problems encountered in the local field. May be taken with, but not before, course 121. (2) MR. JOHNSTON.

128f and w. DIRECT ADVERTISING. Practice writing to a selected audience through all forms of media, and a consideration of the physical make-up of each. Prerequisite, course 121. (2) MR. JOHNSTON.

140w. COMPARATIVE JOURNALISM. Open only to seniors. Study of foreign and American newspapers. (3) MR. WILLIAMS.

141f and w. THE EDITORIAL. Open only to seniors. Practice work in editorial writing for daily newspaper, and discussion of editorial problems. (3) MR. MANN.

142f. NEWSPAPER DIRECTION. Open only to seniors. Conduct of newspapers from the editorial point of view. (3) MR. WILLIAMS.

143f. INTERNATIONAL NEWS COMMUNICATIONS. The use of cables and radio in carrying news between nations. (1) MR. SHARP.

144w. LAW OF THE PRESS. Study of libel, privacy, copyright, and constitutional guaranties of freedom of the press. (2) MR. MORELOCK.

145f and w. NEWSPAPER MAKING. Special laboratory instruction for advanced students. (1) (2) or (3) MR. WILLIAMS; MR. MARTIN; MR. MANN; MISS LOCKWOOD; MR. CASEY; MR. JOHNSTON.

150f and w. PRINCIPLES OF PHOTO-ENGRAVING. Lectures and laboratory study of modern equipment and of the making of all forms of engravings for the press. No journalistic prerequisites. (3) MR. BOHN.

151f and w. NEWSPAPER ILLUSTRATION I. Students preparing for professional illustration should elect a number of the fundamental courses in the theory and practice of art before entering this course. The equivalent of art courses 2, 4, and 10 is necessary for admission, while art courses 104, 105, 106, and 150 give the broader foundation so important for successful work. No journalistic prerequisites. (5) MR. BILL.

152f and w. NEWSPAPER ILLUSTRATION II. Continuation of course 151. (5) MR. BILL; MR. GENTRY.

153f and w. ADVANCED NEWSPAPER ILLUSTRATION I. Prerequisite, courses 151 and 152. Individual problems; specializing in newspaper and magazine illustration; cartooning and advertising design. (5) MR. ANKENEY; MR. GENTRY.

154f and w. ADVANCED NEWSPAPER ILLUSTRATION II. Continuation of course 153. (5) MR. ANKENEY.

160f and w. FEATURE WRITING. Prerequisite, course 103. Writing of feature articles. (3) MISS LOCKWOOD.

161f and w. THE SPECIAL ARTICLE. Writing of special articles for syndicates, newspapers, and magazines. Open only to seniors and graduate students. (3) MISS LOCKWOOD.

162f and w. LITERARY AND DRAMATIC REVIEWING. Critical study of modern books and drama; study of newspapers and magazines devoted entirely or in part to this type of journalism; preparation of book sections in the *Missourian Magazine*. Prerequisites, courses 103 and 110. (3) MISS LOCKWOOD.

163f and w. NEWSPAPER AND MAGAZINE DEPARTMENTS. Writing for and editing of special pages or departments. Prerequisites, courses 103 and 110. (3) MISS LOCKWOOD.

170f. THE AGRICULTURAL PRESS. Writing for and editing agricultural publications. For journalism and agricultural students who expect to become farm journal contributors, county agents, teachers, extension workers, or farm managers. No journalistic prerequisites. (3) MR. CASEY.

172f and w. PRINCIPLES OF RURAL JOURNALISM. Opportunities in country newspaper work and agricultural journalism. No journalistic prerequisites. (3) MR. CASEY.

174f and w. COUNTRY NEWSPAPER PRODUCTION. A laboratory course in which the students prepare all news and editorial matter for a typical weekly newspaper. Prerequisite, except by permission, course 111. (5) MR. CASEY.

175w. PRINCIPLES OF TYPOGRAPHY. Consideration of type styles and sizes and the mechanical equipment of the newspaper plant. No journalistic prerequisites. (1) MR. CASEY.

177w. TRADE AND TECHNICAL JOURNALISM. Study of trade and technical publications. Preparation of house organs. No journalistic prerequisites. (2) MR. CASEY.

178f and w. NEWSPAPER PUBLISHING. The business side of newspaper making, covering circulation building, advertising methods, and other publishing problems. No journalistic prerequisites. (3) MR. CASEY.

180f. THE NEWSPAPER LIBRARY. Study of reference books and selection and filing of clippings. No journalistic prerequisites. (1) MISS LOCKWOOD.

201f and w. RESEARCH IN JOURNALISM. Thesis course. (1 to 6) MR. WILLIAMS; MR. MARTIN; MR. MANN; MISS LOCKWOOD; MR. CASEY.

204f and w. RESEARCH IN ADVERTISING. A concentrated study of special problems, and methods, organization, and objectives of the retail and the national advertiser. Thesis course. (1 to 6) MR. JOHNSTON.

205f and w. COPY-DESK METHODS. The handling of copy; advanced headline writing; principles of headline display. (3) MR. MANN.

206f and w. NEWS-DESK METHODS. The handling of assignments and futures; direction of reporters. (3) MR. MARTIN.

LATIN

1f. BEGINNING LATIN. Training in the essentials of Latin forms and constructions. Easy reading. (5) MISS CAUTHORN; MISS JOHNSTON.

2w. CAESAR. Prerequisite, course 1. Intensive study of forms and constructions. Reading of the Gallic War, I-IV. (5) MR. ———.

10f. CICERO'S ORATIONS. Prerequisite, courses 1 and 2 or two entrance units. Selected orations and letters of Cicero; training in syntax and forms of the Latin language. (5) MR. ———.

20f and w. VIRGIL'S AENEID: I-VI. Prerequisite, courses 1, 2, and 10, or three entrance units in Latin. Study of the subject matter, forms, prosody, and syntax. (5) MISS JOHNSTON; MISS CAUTHORN.

30f. CICERO'S ESSAYS ON FRIENDSHIP AND OLD AGE. Prerequisite, courses 1, 2, and 10, or three entrance units in Latin. Careful review of forms and syntax. (5) MR. MILLER.

35w. SALLUST'S JUGURTHA. Prerequisite, courses 1, 2, and 10, or three entrance units in Latin. (3) MR. ———.

40w. OVID. Selected Poems. Prerequisite, course 20 or course 30, or four entrance units in Latin. (2) MR. ———.

50f and w. LATIN PROSE COMPOSITION. First course. (1) MISS CAUTHORN; MR. ———.

60w. LIVY: XXI-XXII. The war with Hannibal. (3) MR. MILLER.

101w. LATIN PROSE COMPOSITION. Advanced course. Prerequisite, course 50. (1) MISS CAUTHORN.

103f. CICERO'S LETTERS. Prerequisite, courses 170 and 180. (3) MISS JOHNSTON.

104w. JUVENAL'S SATIRES. Prerequisite, courses 170 and 180. (3) MISS CAUTHORN.

106f. CATULLUS: SELECTED POEMS. Prerequisite, courses 170 and 180 (3) MISS JOHNSTON.

108w. VIRGIL'S AENEID: VI-XII. Prerequisite, courses 170 and 180. (3) MISS JOHNSTON.

109w. LATIN COMEDY. Prerequisite, courses 170 and 180. (3) MISS JOHNSTON.

110f. TACITUS: ANNALS. Prerequisite, courses 170 and 180. (3) MISS JOHNSTON.

115f. and 116w. RAPID READING. Prerequisite, courses 170 and 180 or equivalent. Readings from representative authors. (2) MISS JOHNSTON; MR. MILLER.

125f. LUCRETIVUS. Prerequisite, courses 170 and 180. (3) MR. MILLER.

170f. HORACE: SATIRES AND EPISTLES. Prerequisite, courses 20 and 30 or equivalent. (3) MISS CAUTHORN.

180w. HORACE: ODES AND EPODES. Prerequisite, course 170. (3) MISS JOHNSTON; MR. ———.

210f and w. HISTORY OF LATIN LITERATURE. Studied through selections from the authors of various periods. (3) MISS JOHNSTON.

217f. and w. SEMINARY. The graduate work in Latin centers in the Seminary. The subject for the year 1927-28 will be a critical study of Horace, with interpretation of selected poems, and papers and discussions by the members. (3) MISS CAUTHORN.

230f. and w. RESEARCH AND THESIS. (3) MISS CAUTHORN; MISS JOHNSTON; MR. MILLER.

LAW

Required Courses for the First Year

100f. CONTRACTS. Mutual assent; consideration; contracts under seal; beneficiaries of contracts. (3) MR. PARKS.

Keener's Cases on Contracts, 2nd Edition.

100w. CONTRACTS. Course 100f is a prerequisite. Assignment of contract; express conditions, conditions implied in law; illegality. (3) MR. PARKS.

Keener's Cases on Contracts, 2nd Edition.

101f. and w. TORTS. Trespass, negligences, deceit, defamation, liability without fault, interference with advantageous relations, conversion and other topics. (3) and (3). 101f is a prerequisite to 101w. MR. LANGMAID.

Bohlen's Cases, 2d Ed.

102f. PROPERTY I. *Personal Property*. Distinction between real and personal property, acquisition of rights; bailments; lien; pledge; gift; fixtures. (3) MR. SCHNEBLY.

Bigelow's Cases.

103w. PROPERTY I. *Introduction to the Law of Real Property and Conveyancing*. Tenure; estates; seisin, future and incorporeal interests, disseisin, joint ownership, uses and trusts, mode of conveyance; boundaries; creation of easements; covenants for title; estoppel by deed; priority and record; accretion; possessory titles; prescription. (3) MR. SCHNEBLY.

Bigelow's Introduction to the Law of Real Property; Aigler's Cases on Titles.

104f. COMMON LAW PLEADING. Essentials of declarations in trespass case, trover, special and general assumpsit, debt, covenant and replevin; demurrers; pleas, replication *de injuria*, departure; motions based on the pleadings. (3) MR. BOUR.

Cook & Hinton's Cases on Pleadings at Common Law.

105w. AGENCY. Who can be agent or principal; appointment; power of agent to subject principal to liability for contracts and torts; agent's responsibility to strangers; parties to writing; undisclosed principal; reciprocal duties of agent and principal; delegation by agent; termination of agency; ratification. (3) MR. HEAD.

Mechem's Cases on Agency. 2nd Ed.

106w. CRIMINAL LAW. Jurisdiction; the criminal act, complete and incomplete; criminal intent, actual and constructive; insanity; intoxication; duress and mistake of fact or law; justification; parties in crime; crimes against the person; against property. (3) MR. HOWARD.

Mikel's Cases, 2d Ed.

107f. LEGAL ETHICS. History of the legal profession; the lawyers' qualifications; admission and discipline of lawyers; ethical duties of the lawyer to the courts, the public, clients, etc.

Costigan's Cases on Legal Ethics. (3) MR. BARNETT.

Required Courses for the Junior Year

120f and w. *Equity I.* The powers of courts of equity; principles governing the exercise of equitable powers; injunctions against torts; specific performance of contracts. (2) and (3). 120f is a prerequisite to 120w. MR. LANGMAID.

Cook's Cases, 1 vol. Ed.

121f and w. CODE PLEADING. Forms of civic actions. Parties to actions; the "real party of interest;" joinder of parties. The complaint: facts distinguished from conclusions of law and evidence; the statement of facts; the prayer for relief; the union of several causes of action. (2) and (2) MR. McBAINE.

Hinton's Cases on Code Pleading, 2nd Edition.

122f and w. EVIDENCE. Trial by jury; judicial notice; presumptions and burden of proof; demurrers to the evidence; admissions and confessions. Leading rules of exclusion; matters likely to mislead; collateral issues; character of the parties. Hearsay; exceptions to hearsay rules. (3) and (3) MR. BOUR.

Thayer's Cases on Evidence. Maguire's Ed.

Required Courses for the Senior Year

150f and 150w. PRACTICE. Commencement of actions; issuance and service of process; demurrers to the pleading; demurrers to the evidence; trial of issues of fact; declarations of law and instructions; verdict and judgment; motion for new trial and in arrest of judgment; exceptions; writs of error and appeal. Trial of practice cases. (2) and (3) MR. McBAINE.

Casebook to be announced.

Course 150f alone is required if the student in all other respects completes the work necessary for the degree at the end of the fall term.

Elective Courses of the Junior Year

123f. PROPERTY II. *Landlord and Tenant.* Estates for years, from year to year at will; surrender of leases; covenants in leases; nature, apportionment and suspension of rents; waste. (2) MR. SCHNEBLY.

Aigler's Cases on Titles; Bigelow's Cases on Rights in land.

124w. PROPERTY II. *Rights in Lands.* Possessory rights respecting air, water, and land; reversions; nature and extent of profits; easements, and licenses; covenants and other agreements respecting land; public rights in streams and ways. (3) MR. SCHNEBLY.

Bigelow's Cases on Rights in Land.

125w. WILLS AND ADMINISTRATION. Escheat; descent and distribution; making and operation of wills; probate and administration; executors and administrators. (3) MR. HEAD.

Costigan's Cases on Wills.

126w. SALES. Subject-matter; executory and executed sales; effect of fraud; rights and remedies of the seller, and of the buyer; commercial statutes. (3) MR. BOUR.

Williston's Cases on Sales.

127f. BILLS AND NOTES. Formal requisites; negotiability; acceptance; endorsements; rights of holders; liabilities of parties; presentment, protest and notice; discharge. (3) MR. HOWARD.

Britton's Cases.

128f. INSURANCE. Fire; marine; life; mutual benefit; accident and fidelity and guaranty; formation, construction, and terms of contract; standard policies; warranties and representations; waiver, estoppel; subrogation; insurance agents. (2) MR. HEAD. (Omitted 1927-28).

Casebook to be announced.

129f. QUASI CONTRACTS. Nature of; benefits conferred by mistake, under partially performed contract under compulsion, or voluntarily without contract. (2) MR. HEAD

Thurston's Cases.

130f. FEDERAL COURTS. Jurisdiction and practice in the Federal Courts both trial and appellate, including removal of causes from state courts. (2) MR. McBAINE. (Omitted 1927-28).

Case book to be announced.

131f. CRIMINAL PROCEDURE. Arrest, preliminary examination and bail; the criminal charge; indictments and information, their sufficiency in form and substance; demurrers and motions to quash; arraignment and pleas; jeopardy; trial, functions of the court and jury; judgment and sentence. (2) MR. McBAINE.

Casebook to be announced.

Elective Courses of the Senior Year

151f. TRUSTS. Nature and requisites of express trusts; nature of *cestui que* trust's interest; resulting and constructive trusts; transfer of trust property; duties of trustees. Course 120 is a prerequisite for admission to this course. (3) MR. LANGMAID.

Scott's Cases on Trusts.

152f. PRIVATE CORPORATIONS. The nature of a corporation; distinguished from partnership; disregard of the fiction; formation; powers; *de facto* corporations. (4) MR. HEAD.

Warren's Cases on Corporations, 2nd Edition.

153f and 153w. CONSTITUTIONAL LAW. Power of courts to pass on constitutionality of laws; general relation of the three departments to each other and of the states to the national government; general jurisdiction of the national government; due process of law; equal protection of laws; police power; taxation; eminent domain; commerce power; *ex post facto* laws; laws impairing obligation of contracts. (3) and (2) MR. HOWARD.

Hall's Cases on Constitutional Law.

154f. CONFLICT OF LAWS. Jurisdiction of courts and of sovereigns over persons and things; domicile; taxation; divorce; remedies; rights of action; procedure; creation of rights, personal and real, by inheritance, by contract and by tort; recognition and enforcement of rights and personal relations; administration of estates; recognition and enforcement of foreign judgments. (3) MR. PARKS.

Lorenzen's Cases on Conflict of Laws, 2nd Edition.

155w. PUBLIC UTILITIES. Privately owned business subject to extraordinary obligations; indiscriminating services, provision of adequate facilities, reasonable charges, governmental regulation. (3) MR. BOUR.

Case book to be announced.

156f. FUTURE INTERESTS. Conditions and future interests; executory devises, powers; rule against perpetuities; illegal conditions and restraints on alienation. (2) MR. SCHNEBLY.

Kales' Cases on Future Interests.

157w. BANKRUPTCY. Who may be bankrupt; who may be a petitioning creditor; acts of bankruptcy, including fraudulent conveyances and preferences; what property passes to trustees; provable claims; protection, exemption, and discharge of bankrupts. (3) MR. HEAD.

158w. **PARTNERSHIP.** Formation and nature of a partnership; duties and powers of partners; rights and remedies of creditors; dissolution of partnership; accounting and distribution. (3) MR. PARKS.

Casebook to be announced.

159w. **MORTGAGES.** Form of legal mortgages; title and lien theory; substance and element of mortgage; mortgages and mortgagor; transfer; competition for the mortgage, priority marshaling. (3) MR. PARKS.

Parks' Cases on Mortgages. (Omitted 1927-28).

160w. **TAXATION.** The taxing power: direct and indirect taxes, special assessments, income, inheritance, and corporation taxes treated from the standpoint of the state and federal governments. (3) MR. HOWARD.

Casebook to be announced.

*206f. **POLITICAL SCIENCE AND PUBLIC LAW.** (2) MR. BARCLAY.

*This course given in the School of Business and Public Administration may be elected by seniors in the School of Law who have not previously taken the course.

MATHEMATICS

In order to be eligible to any other course in the department except 7, the student must make a grade of M or better in either 1 or 2.

1f and w. **GENERAL MATHEMATICS.** Prerequisite, one entrance unit in algebra. (3).

2f and w. **TRIGONOMETRY AND ALGEBRA.** Prerequisite, one unit in algebra for entrance. Courses 1 and 2 cannot both be taken for credit. (5)

3f and w. **ELEMENTS OF THE CALCULUS.** Prerequisite, course 1 or its equivalent. This course will introduce the ideas of the calculus together with the simpler applications to geometry and physics. Courses 3 and 5 cannot both be taken for credit. (3)

4f and w. **ANALYTIC GEOMETRY.** Prerequisite, course 2, of which it is the natural continuation. Plane and solid analytic geometry and introduction to the calculus. (5)

5f and w. **DIFFERENTIAL CALCULUS.** Prerequisite, course 4. (5)

7f and w. **SOLID GEOMETRY AND SPHERICAL TRIGONOMETRY.** Prerequisite, plane trigonometry. This course will give the fundamental of three-dimensional geometry as an introduction to spherical trigonometry. (2)

104w. **MODERN GEOMETRY.** Prerequisite, course 3 or course 5. The elements of higher analytic geometry, and of projective geometry. (3) MR. INGOLD.

105f. **ADVANCED ALGEBRA.** Prerequisite, course 3 or course 5. This course includes determinants, theory of equations, and applications of algebra to geometry. (3) MR. WAHLIN.

106f and w. **INTEGRAL CALCULUS.** This course is the natural continuation of course 5, which is a prerequisite for this course. (5)

110f and 111w. **SECOND COURSE IN CALCULUS.** Prerequisite, either 104 and 105 or 106. (3) MR. WESTFALL.

120f and 125w. **DIFFERENTIAL EQUATIONS AND THEIR APPLICATIONS.** Prerequisite, course 106. (3) MR. BETZ.

155f and w. **THE MATHEMATICS OF BUSINESS AND INSURANCE.** Prerequisite course 1 or course 2. The fundamental methods and computations involved in annuities, depreciation, sinking funds, stocks and bond calculations. (3) MR. WESTFALL.

160w. **PROBABILITIES AND STATISTICS.** Prerequisite, course 1 or junior standing. (3)

161f or w. ADVANCED MATHEMATICAL STATISTICS. Prerequisite, course 3 and course 160. (3) MR. WESTFALL.

Courses above 200 must be preceded by a major in mathematics. A reading knowledge of French and German is advisable. Those unable to read the mathematical literature in those languages will be seriously handicapped.

200f and w. SEMINARY. This may be elected repeatedly in different terms for different work. Hours to be arranged.

210f and 215w. SELECTED TOPICS FROM GEOMETRY. (3) MR. INGOLD.

230f and 231w. SELECTED TOPICS FROM ANALYSIS. (3) MR. WESTFALL.

260f and 261w. SELECTED TOPICS FROM ALGEBRA. (3) MR. WAHLIN.

The following courses are offered from time to time:

220f. INTRODUCTION TO MATHEMATICAL PHYSICS: DEVELOPMENT IN SERIES. General theorems. Fourier Series and allied series. Differential equations of physics. (3)

225w. INTRODUCTION TO MATHEMATICAL PHYSICS: POTENTIAL FUNCTIONS. (3)

240f and 241w. THEORY AND FUNCTIONS OF COMPLEX VARIABLES. (3)

251f or w. ACTUARIAL SEMINARY. A continuation of the work of courses 155 and 160, which are prerequisite for this course. (3)

265f or w. VECTOR THEORY. (3)

270f and 271w. THEORY OF DIFFERENTIAL EQUATIONS. (3)

275f and 276w. THEORY OF NUMBERS. (3)

280f or w. CALCULUS OF VARIATIONS. (3)

MEDICAL BACTERIOLOGY AND PREVENTIVE MEDICINE

1f, w. PREVENTIVE MEDICINE. Open to all students of the University. No credit allowed in the medical curriculum. (2) MR. RAVENEL.

101w. GENERAL HYGIENE. Prerequisite, course 102. Deals in a somewhat detailed manner with the fundamental principles of public and personal hygiene. (2) MR. RAVENEL; MR. MOON.

102f. MEDICAL BACTERIOLOGY. Prerequisite, botany, course 3. Subject studied includes relation of bacteria to disease; the fundamental principles of immunity, serum diagnosis, serum and vaccinotherapy. Includes, also the study of the best-known diseases caused by protozoa. (3) MR. RAVENEL; MR. MOON.

201f or w. ADVANCED BACTERIOLOGY. Elective. Prerequisite, course 102. Amount and character of work will depend on needs and qualifications of student. MR. RAVENEL; MR. MOON.

202f or w. RESEARCH. Elective. Prerequisite, course 102. A reading knowledge of French and German recommended. MR. RAVENEL.

203f or w. CONDUCT OF PUBLIC HEALTH LABORATORIES. Elective. Prerequisites, courses 102 and 201. MR. RAVENEL; MR. MOON.

MEDICINE

See announcement of curriculum on pages 212 to 224.

Anatomy and Histology, page 246.

Medical Bacteriology and Preventive Medicine, page 295.

Pathology, page 302.

Physiology and Pharmacology, page 307.

METEROLOGY

1w. METEROLOGY. The earth's atmosphere; its composition, temperature, pressure, and general circulation. Weather and climate, and the relation to health habitability, occupations, and soil products. Weather forecasting, local and general. Open to all students. (1) MR. REEDER.

MILITARY SCIENCE AND TACTICS

Infantry, Basic Course

1f. INFANTRY. *First Semester.* Command and Leadership; Military Courtesy and Customs; Rifle Marksmanship; Military Hygiene and 1st Aid; Physical Training.

2w. INFANTRY. *Second Semester.* Command and Leadership; Combat Principles of the Rifle Squad; Physical Training.

3f. INFANTRY. *Third Semester.* Command and Leadership; Musketry; Combat Principles of Rifle Squad and Section; Physical Training.

4w. INFANTRY. *Fourth Semester.* Command and Leadership; Scouting and Patrolling; Automatic Rifle Marksmanship; Combat Principles of the Rifle Squad, Section and Platoon; Physical Training.

Infantry, Advanced Course

105f. INFANTRY. *Fifth Semester.* Command and Leadership; Military Sketching and Map Reading; Military Engineering; Combat Principles to include Infantry Companies; Physical Training.

106w. INFANTRY. *Sixth Semester.* Command and Leadership; Machine Guns (organization, employment, marksmanship); Combat Principles to include Infantry Companies; Physical Training.

107f. INFANTRY. *Seventh Semester.* Command and Leadership; Organization, employment, and marksmanship of 37mm Guns and 3 inch Trench Mortars; Combat Principles to include the Infantry Battalion; Physical Training.

108w. INFANTRY. *Eighth Semester.* Command and Leadership; Military History; Combat Principles to include the Infantry Battalion; Military Administration; Physical Training.

Field Artillery—Basic Course

1f and 1w. FIELD ARTILLERY. *First Semester.* Fundamentals of organization, dismounted drill, and pistol practice.

Field Artillery Drill Regulations. Gunnery, Calculation of firing data. Dismounted drill.

Physical Education. Riding and care of horses and equipment.

2f and 2w. FIELD ARTILLERY. *Second Semester.* *Field Artillery Drill Regulations.* Instruction as cannoniers.

Horsemanship. Horses and their care. Stable Management.

Physical Education. Riding and care of horses and equipment.

3f and 3w. FIELD ARTILLERY. *Third Semester.* *Mounted Instruction.* Harnessing and driving harnessed artillery teams.

Topography. Map reading. Sketching. Orientation. Telephone instruction.

Physical Education. Riding. Care of horses and equipment.

4f and 4w. FIELD ARTILLERY. *Fourth Semester.* *Motors.* Theory, design and maintenance.

Reconnaissance. The use of the battery detail.

Fire Control Instruments. Battery commander's telescope, aiming circle, range finder, and field glasses.

Physical Education. Riding and driving harnessed teams.

Field Artillery—Advanced Course

105f and 105w. FIELD ARTILLERY. *Fifth Semester.* Gunnery. Probabilities and dispersion. Firing data. Projectiles and fuzes.

Field Artillery Firing. Conduct of fire, theoretical and on terrain board.

Mounted Instruction. Advanced riding.

Motor Instruction. Driving and maintenance of tractors and trucks.

106f and 106w. FIELD ARTILLERY. *Sixth Semester.* Gunnery. Map firing and corrections of the moment.

Communications and Engineering. Artillery telephone nets. Battery emplacements.

Duties of the Battery Executive. Cannoneer drill and gunner's instruction.

Mounted Instruction. Advanced riding.

107f and 107w. FIELD ARTILLERY. *Seventh Semester.* *Military History and Policy of the U. S.* A survey of the incidents and policies which led to the adoption of the National Defense Act.

Minor Tactics and Map Maneuvers. Employment of field artillery in support of Infantry.

Mounted Instruction. Advanced riding and command of mounted batteries.

108f and 108w. FIELD ARTILLERY. *Eighth Semester.* *Military Law.* A study of its use in our army.

Battery Administration. Methods and papers used in the routine work of a battery.

Tactics. Map studies of artillery in various Military situations.

Mounted Instruction. Command of mounted batteries.

MUSIC

Students may take work in the University chorus and in the University orchestra, and receive credit of one hour a term. The total credit, however, for such work may not exceed four hours. For a course in the origin of musical scales, see Psychology, Music Systems.

Theoretical Courses

Rudiments of Music. A sub-freshman course for students not prepared to enter Course 1, Elementary Harmony.

1f and w, and 2f and w. ELEMENTARY HARMONY. Writing from figured basses; harmonizing melodies on paper and at the keyboard; recognition of chords through the ear; elementary form; creation and harmonization of original melodies; construction and interconnection of triads and their inversions and of dominant seventh chords and their inversions. Students taking these courses are required to take courses 5 and 6. (2) MRS. TELLO.

3f and w, and 4f and w. ADVANCED HARMONY. A continuation of elementary harmony; harmonization of melodies and figured basses employing all the resources of modern harmony; modulations and dissonantal combinations; writing of original melodies in the smaller forms. Courses 2 and 6 are prerequisite. Students taking these courses are required to take courses 7 and 8. (3) MR. MACLEOD, MR. SLEEPER, MR. JOLLIFF.

5f and w, and 6f and w. **DICTATION AND EAR-TRAINING.** A rudimentary course in notation, ear-training, dictation and sight reading. A course supplementing and strengthening the work in Elementary Harmony. No preparation is required. Two class periods per week, for which one hour of credit is given. Required of harmony students. (1) MR. VENABLE, MRS. TELLO, MR. WHITLOCK.

7f and w, and 8f and w. **ADVANCED DICTATION AND EAR-TRAINING.** A continuation of courses 5 and 6 which are prerequisite. Two recitations per week for which one hour of credit is given. No preparation required. Required of students taking courses 3 and 4. (1) MR. VENABLE.

109f and 110w. **COUNTERPOINT.** A course in principles of melodic construction and combination; including the consideration of strict Counterpoint in two, three, four and five parts in all five orders; double, triple and quadruple Counterpoint; imitation and imitative Counterpoint founded upon choral melodies. Prerequisite, courses 4 and 8, or the equivalent. (3) MR. JOLLIFF, MR. SLEEPER.

121f and 122w. **POLYPHONIC FORMS.** A continuation of the polyphonic treatment of choral melodies, including the construction of choral preludes and choral variations; the consideration of other polyphonic forms, including the Invention in two, three and four parts, the Canon in its various types, the Chaconne, the Passacaglia, and the Fugue. Prerequisite, course 110w or its equivalent. (2) MR. QUARLES.

111f and w, 112f and w. **MUSICAL FORM.** The construction of works in the various binary and ternary forms including hymn tunes, dance forms, such as the gavotte, the minuet, the waltz, the polonaise, the scherzo, the etude and various lyric forms, prerequisite, courses 4 and 8. (2) MR. QUARLES.

113f and w, 114f and w. **MUSICAL ANALYSIS.** The analysis of the construction of works in the various musical forms affording an intelligent basis for musical interpretation. (2) MR. MACLEOD.

115f and 116w. **COMPOSITION.** A practical application of the principles of musical form in works of large mold including the rondo and the sonata form, as well as modern derivatives therefrom. Prerequisite, courses 110w and 112w. (2) MR. QUARLES.

118w. **INSTRUMENTATION.** A course dealing with the capacities of the different instruments of the orchestra, singly and in simple combinations. Prerequisite, course 110. (2) MR. VENABLE.

217f and 218w. **ADVANCED COMPOSITION.** Writing in the larger forms for string quartet, chamber music ensemble or symphony orchestra. Prerequisite, courses 115 and 116, Composition; 118, Instrumentation; 121 and 122, Polyphonic Forms. (2 to 5 hours) MR. QUARLES, MR. ———.

219f and 220w. **ORCHESTRATION.** A course in writing and arranging for the full modern symphony orchestra. Required of students specializing in the course in the Theory of Music. Prerequisite, course 109 and 110, 118, 179 and 180. (2) MR. SLEEPER, MR. ———.

223f and 224w. **ADVANCED FUGUE AND CHORAL COMPOSITION.** The creation of works for soloists and chorus, with orchestral accompaniment. Prerequisite, courses 219 and 220, Orchestration; 115 and 116, Composition; 121 and 122, Polyphonic Forms. (2 to 5 hours) Not offered in 1927-28.

225f and 226w. **MUSICAL RESEARCH AND CRITICISM.** Hours and credit to be arranged.

Historical Courses

51f and 52w. APPRECIATION OF MUSIC. An illustrated lecture course, emphasizing the various phases of musical beauty; designed to furnish a rational basis for intelligent listening to music. An ability to differentiate pitch is essential. (2) MR. QUARLES.

153f and 154w. HISTORY OF MUSIC. A lecture course with collateral reading on the historical development of music. Emphasis is placed upon the relation that exists between the progress of civilization and the development of music, music being regarded as a beautiful expression of the inner life of mankind. Prerequisite, the course in Appreciation of Music or its equivalent. (3) MR. QUARLES.

255f and 256w. HISTORY OF MUSIC. The classical period. An intensive study of the works of Haydn, Mozart and Beethoven including the influence of the period on their works, biographical details as revealed in their works and a critical and analytical review of their works; research and collateral reading. Courses 153f and 154w prerequisite. (2 to 5 hours) MR. QUARLES, MR. ———.

Applied Music

The credit granted in Applied Music is the sum of the number of hours practice per day and the number of lessons taken each week—two half-hour lessons each week and two hours of daily practice for one semester is the equivalent of three hours credit; two half-hour lessons per week and three hours daily practice is the equivalent of four hours credit; two half-hour lessons per week and four hours daily practice is the equivalent of five hours credit. In no event will a greater amount of credit be granted than is commensurate with the amount of actual progress attained by the student, irrespective of the number of hours of lessons or of practice. The maximum credit for one lesson per week is one hour each semester.

Students majoring in applied music may in upper-class years take any orchestral instrument not offered for a degree, (flute, clarinet, etc.), for a maximum of four hours credit, to be counted among the free electives. Such students must have had at least one year of training on the instrument elected before credit can be given. Courses in such orchestral instruments will receive one hour credit per semester.

82f and w and 83f and w. FRESHMAN PIANO. (3) Two half-hours lessons per week.

84f and w and 85f and w. SOPHOMORE PIANO. (4) Two half-hour lessons per week.

182f and w and 183f and w. JUNIOR PIANO. (5) Two half-hour lessons per week.

184f and w and 185f and w. SENIOR PIANO. (5) Two half-hour lessons per week.

These courses consist of private instruction in the art of piano playing. The requirements for entrance in the freshman year are: The ability to play acceptably at least three of the two-part Inventions of J. S. Bach and one of the easier Sonatas of Haydn or Mozart, coupled with adequate work in Elementary Theory, Rudiments of Music and Ear Training. Each course is prerequisite to the succeeding one. MR. MACLEOD; MR. JOLLIFF; MRS. TELLO; ———.

94f and w and 95f and w. SUPERVISORS' PIANO. (2) Two half-hour lessons per week.

96f and w and 97f and w. SUPERVISORS' PIANO. (2) Two half-hour lessons per week.

These piano courses offer private instruction in those problems in piano playing needed by supervisors of music in public schools, and include the sight-reading of chorus accompaniments; transposition of school songs; the harmonizing of school songs at sight, the melody only being given; reading from four-part vocal score; memorizing of marches and patriotic songs suitable for school use. The entrance requirements are the same as those for the regular course in piano. MR. MACLEOD; MR. JOLLIFF; MRS. TELLO; —————.

86f and w and 87f and w. FRESHMAN VOICE. (2) Two half-hour lessons per week.

88f and w and 89f and w. SOPHOMORE VOICE. (3) Two half-hour lessons per week.

186f and w and 187f and w. JUNIOR VOICE. (4) Two half-hour lessons per week.

188f and w and 189f and w. SENIOR VOICE. (4) Two half-hour lessons per week.

These courses consist of private instruction in voice. The requirements for entrance in the freshman year are the same as for piano students. Each course is prerequisite to the succeeding one. MR. WALL; MR. WHITLOCK; MISS YOUNGS.

90f and w and 91f and w. FRESHMAN VIOLIN. (3) Two half-hour lessons per week.

92f and w and 93f and w. SOPHOMORE VIOLIN. (4) Two half-hour lessons per week.

190f and w and 191f and w. JUNIOR VIOLIN. (5) Two half-hour lessons per week.

192f and w and 193f and w. SENIOR VIOLIN. (5) Two half-hour lessons per week.

These courses consist of private instruction in the art of violin playing. The prerequisites for entrance in the freshman year are: The ability to play the first ten of the Kayser Etudes or the equivalent, coupled with adequate work in Elementary Theory, Rudiments of Music, and Ear Training. Each course is prerequisite to the succeeding one. MR. WHITMORE.

30f and w and 31f and w. FRESHMAN VIOLONCELLO. (3) Two half hour lessons per week.

32f and w and 33f and w. SOPHOMORE VIOLONCELLO. (4) Two half hour lessons per week.

130f and w and 131f and w. JUNIOR VIOLONCELLO. (5) Two half hour lessons per week.

132f and w and 133f and w. SENIOR VIOLONCELLO. (5) Two half hour lessons per week.

These courses consist of private instruction in the art of violoncello playing. The prerequisites for entrance in the freshman year are: The ability to play the first five etudes in the second book of Dotzauer or the equivalent, scales through nine keys in one octave, coupled with adequate work in Elementary Theory, Rudiments of Music, and Ear Training. Each course is prerequisite to succeeding one. MISS CHEVALIER.

34f and w. } FLUTE. (1) Two half hour lessons per week.

35f and w. }

37f and w. }

38f and w. }

CLARINET. (1) Two half hour lessons per week.

These courses consist of private instruction in the art of playing flute and clarinet. One year of work on these respective instruments is prerequisite to entrance to these courses. Credit granted only among free electives. MR. ALLEN.

Special Courses in Applied Music

These courses carry no academic credit. They are designed primarily for Special students in the School of Fine Arts, who do not wish to meet entrance requirements in Applied Music, or who may desire to do less work than is required for the regular courses in Applied Music leading to credit.

61f and w. SPECIAL PIANO. A course without credit, embracing work of all grades of difficulty. This course may be repeated indefinitely.

62f and w. SPECIAL VOICE. A course without credit, embracing work of all grades of difficulty. This course may be repeated indefinitely.

63f and w. SPECIAL VIOLIN. A course without credit, embracing work of all grades of difficulty. This course may be repeated indefinitely.

64f and w. SPECIAL VIOLONCELLO. A course without credit, embracing work of all grades of difficulty. This course may be repeated indefinitely.

65f and w. SPECIAL FLUTE. A course without credit, embracing work of all grades of difficulty. This course may be repeated indefinitely.

66f and w. SPECIAL CLARINET. A course without credit, embracing work of all grades of difficulty. This course may be repeated indefinitely.

Graduate Courses in Applied Music

282f and w and 283f and w. GRADUATE PIANO. (4).

286f and w and 287f and w. GRADUATE VOICE. (4).

290f and w and 291f and w. GRADUATE VIOLIN. (4).

Graduate students majoring in music may include a maximum of eight hours in applied music toward the Master's Degree. Such courses in applied music may not be counted among the sixteen hours required from courses numbered above 200. Courses in applied music numbered 100 to 200 will be counted for but three fourths of their normal credit.

Ensemble Courses

71f and 72w. UNIVERSITY CHORUS. The total credit in University Chorus and University Orchestra may not exceed four hours. Preparation and public performance of great choral masterpieces. A voice of pleasing quality and an ability to read a very simple hymn tune are prerequisite for membership in the University Chorus. Required of all students of Voice and Public School Music. Credit, two hours at the end of the second term. MR. QUARLES.

73f and 74w. UNIVERSITY ORCHESTRA. The total credit in University Chorus and University Orchestra may not exceed four hours. Students playing orchestral instruments may become members of the University Orchestra. Subject to an examination. Required of all students of stringed instruments. Credit, two hours at the end of the second term. MR. VENABLE.

75f and 76w. PIANO ENSEMBLE. A course in concerted piano playing; duos, duets and quartets for one and two pianos. Two hours a week for which one hour of credit is given. It affords valuable training in sight reading and for the development of the rhythmic sense. Open only to sophomores in the school of Fine Arts. (1) MR. _____.

77f and 78w. STRING ENSEMBLE. A similar course to the previous one for players of stringed instruments and accomplishing the same purposes. Two hours of class work for which one hour of credit is given. (1) MR. WHITMORE.

179f and 180w. PRACTICAL WORK IN ORCHESTRAL INSTRUMENTS. A course designed to give class instruction in playing various instruments. The violin and

other stringed instruments will be taken up during the first term. Wood-wind and brass will be taken up the second term. Discussion of methods for organization of School Bands and Orchestra. (2) MR. VENABLE.

Courses in Teaching

H. ELEMENTARY SCHOOL MUSIC METHODS. See Education H129f and w. (2) MR. SLEEPER.

H. HIGH SCHOOL MUSIC METHODS. See Education H131f and w. (2) MR. SLEEPER.

140f and 141w. PIANO TEACHING. A course in supervised teaching dealing with the materials at the teacher's disposal for the accomplishment of various purposes. (1) MR. MACLEOD.

142f and 143w. VIOLIN TEACHING. A similar course for violin students. (1) MR. WHITMORE.

144f and 145w. VOICE TEACHING. A similar course for voice students. (1) MR. WALL.

146f and 147w. THE TEACHING OF THEORY. A similar course for students specializing in Theory. (1) MR. QUARLES.

148f and 149w. VIOLONCELLO TEACHING. A similar course for Violoncello students. (1) MR. WHITMORE; MR. ———.

Courses 140, 141, 142, 143, 144, 145, 146, 147, 148 and 149 are open only to music seniors in the School of Fine Arts.

PRACTICE TEACHING IN PUBLIC SCHOOL MUSIC. See Education D150 and w. (2) MR. SLEEPER.

PATHOLOGY

101w. GENERAL AND SPECIAL PATHOLOGY. The course in general and special Pathology, illustrated by lantern slides, the projectoscope, and demonstrations, is given in 102 lecture or recitation hours, and 204 laboratory hours. A loan collection is furnished to students for use in histopathology; therefore none of the laboratory hours are used for staining or mounting sections. Systematic exercises in anatomic diagnosis, by means of Kaiserling specimens and available fresh material of the various lesions of each organ, are held regularly. General pathology, the first part to be considered, deals with the basic factors of disease; while special pathology, considered later, applies the principles of general pathology to the various organs and tissues of the body. Throughout the course emphasis is placed upon the relation between tissue changes, gross and microscopic in a given disease, and the symptoms or manifestations accompanying such changes. Stress is placed upon attendance at autopsies. Students are instructed in the methods of post-mortem examination and are required to prepare complete and orderly records of all autopsies seen. (8) MR. NEAL; MR. ROBNETT.

102f. CLINICAL PATHOLOGY. Elective for a limited number of students. A laboratory course supplemented by lectures and demonstrations covering a careful study in the chemical, bacteriological, and microscopical methods used in examining blood, urine, sputum, gastric contents, etc., for diagnostic purposes. Prerequisites: Physiological Chemistry and Histology. (3) MR. NEAL; MR. ROBNETT; MISS BROWN.

201f. and 202w. ADVANCED PATHOLOGY. Elective. The amount and character of the work will depend upon the needs and qualifications of the student. MR. NEAL; MR. ROBNETT.

204f. and 205w. RESEARCH. Elective. Open to properly qualified students. A reading knowledge of German is required and one of French is recommended. MR. NEAL; MR. ROBNETT.

PHILOSOPHY

Only course 1 may be counted toward the requirements of the first two years in the College of Arts and Science. No course in philosophy is open to freshmen.

1f and w. **ELEMENTARY LOGIC.** The formal principles of deduction and induction, with special attention to the criticism of arguments and the detection of fallacies. (3) MR. MORROW; MR. HUDSON.

101w. **INTRODUCTION TO PHILOSOPHY.** Prerequisite, sophomore standing. A general survey of the chief problems of philosophy, with a critical examination of typical historical systems. (3) MR. MORROW.

103f. **ETHICAL THEORY.** Prerequisite, sophomore standing. An introductory study of the main problems of ethics and of the chief methods of their solution, with constant reference to the principal historic schools for illustration and interpretation. (3) MR. HUDSON.

104f. **ANCIENT PHILOSOPHY.** Prerequisite, sophomore standing. The major part of Plato's Republic will be read. (3) MR. HUDSON.

105w. **MODERN PHILOSOPHY.** Prerequisite, sophomore standing. Properly follows course 104, although this is not required. The development of modern systems and their relation to science and to political and social movements. (3) MR. MORROW.

112w. **AMERICAN IDEALS.** Prerequisite, junior standing. A study of the philosophic interpretations of life implied in American social and political institutions of the present, including their international reference. (3) MR. HUDSON.

114f. **INTELLECTUAL HISTORY OF THE EIGHTEENTH CENTURY.** The development of political, economic, social, and religious ideas in England and on the Continent, from Locke to the close of the French Revolution. (3) MR. MORROW.

117w. **AESTHETICS.** Prerequisite, junior standing. The philosophy of beauty from an historical and critical standpoint. (3) MR. HUDSON.

121f. **CURRENT PHILOSOPHICAL PROBLEMS.** Prerequisite, course 105 or an equivalent. Representative systems and issues of the present, including Absolute and Pluralistic Idealism, Pragmatism, Neo-Realism, and Bergson's philosophy. (3) MR. MORROW. (Not given 1927-28.)

230f. **SEMINARY.** The Logic of the Sciences. (2 or 3) MR. MORROW.

230w. **SEMINARY.** Fundamental Problems in Ethical Theory. (2 or 3) MR. HUDSON.

PHYSICAL EDUCATION

Aims. The aims of the department are as follows: (a) To provide an incentive and an opportunity for every student to engage in exercise daily for the promotion of health and efficiency; (b) to train physical educators and play leaders.

Required Work. All men students are required to take two terms of physical training two hours a week during their freshman year. All women students are required to take four terms of physical training two hours a week during their freshman and sophomore years. A regulation gymnasium costume is required for all women students. This may be purchased at the University Co-operative Store in Columbia.

Medical and Physical Examinations. A medical and physical examination of all students will be required preliminary to their participation in the work of the department. No one will be permitted to engage in competitive athletics unless physically fit.

Enrollment and Assignment. All first-year men and first and second-year women will be assigned to classes in physical education at the time of registration.

Voluntary Exercise. All students are urged to exercise regularly as a balance to the sedentary demands of university life. The facilities of the entire department are open for such use except when required for class purposes. Inter-class, inter-college, and inter-group contests will be conducted in all sports and activities, and are open to all students. The University of Missouri is a member of the Missouri Valley Intercollegiate Conference and maintains representative teams in all intercollegiate sports. Membership on these teams is open to all students subject to the requirements of the Conference.

1f and 2w. **REQUIRED COURSE.** *Freshmen men.* In courses 1f and 2w two periods each week in athletics, gymnastics, and games are required of all freshmen taking military science and tactics. The courses are designed to promote health and physical efficiency, improve carriage and establish the habit of exercise. (1) **MEMBERS OF STAFF.**

3f and 4w. **REQUIRED COURSE.** *Freshmen women.* Two periods a week are required, as follows: In the fall, athletics; in the winter, gymnastics and athletics; in the spring, athletics. This course is designed to promote health and physical efficiency, improve carriage, and establish the habit of exercise. ($\frac{1}{2}$) **MEMBERS OF STAFF.**

7f and 8w. **REQUIRED COURSE.** *Sophomore women.* Two periods a week are required as follows: Work may be taken in athletics, gymnastics, dancing, swimming, or plays and games. ($\frac{1}{2}$) **MEMBERS OF STAFF.**

9f and 10w. **RECREATIONAL ATHLETICS FOR MEN.** Courses 9f and 10w require two periods of exercise a week. This is a general course for recreation, health and personal efficiency. ($\frac{1}{2}$) **MEMBERS OF STAFF.**

11f and 12w. **RECREATIONAL ATHLETICS FOR WOMEN.** This is a general course for recreation, health, and personal efficiency. Open to Juniors. ($\frac{1}{2}$) **MEMBERS OF STAFF.**

13f and 14w. **RECREATIONAL ATHLETICS FOR WOMEN.** This is a continuation of course 12w. Open to seniors. ($\frac{1}{2}$) **MEMBERS OF STAFF.**

PROFESSIONAL COURSES IN PHYSICAL EDUCATION

The demand for trained physical educators, recreation and athletic directors is increasing each year. The demand is due to the recognition of health problems, and educational and social values of athletics and the relation of leisure time to citizenship. The demand for trained directors is increasing because of the compulsory laws in physical education for elementary and secondary schools that have been passed in different states. Missouri has passed such a law. Educational administrators throughout the state look to the University of Missouri for responsible leaders and trained directors.

It is the purpose of this professional course to qualify men and women for these responsible positions. The degree of Bachelor of Science in Education and a University teacher's certificate are granted to students upon a satisfactory completion of the curriculum which satisfies the requirements in the first two years of Arts and Science and the last two years in the School of Education. See Education for suggested curriculum.

25w. **ELEMENTARY FOLK DANCING.** Selected and graded singing games and elementary folk dances suitable for use in the classroom, gymnasium and on the playground. (2) Miss McKee.

26f. **ADVANCED FOLK DANCING.** A continuation of course 25f. Dances suitable for advanced classes, and for exhibitions and pageants. (2) Miss McKee.

27f. **ELEMENTARY INTERPRETATIVE DANCING.** A course for free bodily control and poise, expression of thoughts and feelings through rhythmical movement; appreciation and expression of music through movement. (1) Miss _____.

28w. **ADVANCED INTERPRETATIVE DANCING.** A continuation of course 27f. (1) Miss _____.

29f. (1) **MAJOR SPORTS TECHNIQUE.** The technique of field hockey and basketball instruction and practice in coaching; team play; study of rules and duties of officials. Construction of a schedule. (2) MISSES WILSON AND CLINE.

29w. (2). **MAJOR SPORTS TECHNIQUE.** The technique of baseball and field and track. Baseball—instruction in coaching different positions; offensive and defensive team play; study of rules and duties of officials. Field and Track—theory and practice in the different events; methods of running off a meet; training rules; practice and coaching. (2) MISS WILSON.

30w. **MINOR SPORTS TECHNIQUE.** The technique of Archery, Tennis and Soccer. Rules in detail; methods of teaching; construction of ground and equipment; coaching and practice teaching. (2) MISSES McKEE AND WILSON.

34w. **TECHNIQUE OF SWIMMING LEADERSHIP.** Principles and methods of teaching, swimming, diving and life saving; training and coaching; rules of events. American Red Cross Life Saving Test is given. (1) MISS CLINE.

35f. **SCOUTCRAFT.** A course for the training of scout masters and executives of first aid. (2) MR. JOHNSON.

GYMNASTICS AND ATHLETICS. Freshman 41f, 42w; Sophomores 43f, 44w; Juniors 115f, 116w; Seniors 117f, 118w. Open only to majors and minors in Physical Education. Includes instruction in nomenclature, elementary organization of material, methods of leading sections and squads. The course covers four years for majors and two years for minors. All majors must complete at least two seasons of all major sports and at least one season of all minor sports. One credit in Freshman, Sophomore and Junior year and two credits in Senior year. MEMBERS OF STAFF.

51f. **PLAYGROUNDS.** Theories of play; functions of play; influences of present conditions upon play; organizations and administration of play activities; construction and equipment; the practical conduct of activities on the school ground and the playground. (2) Miss _____.

52f. **HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.** A historical survey of nations; the conditions that influence physical activities; relation of physical education to growth and development; selection and adaptation of activities to different conditions and ages. (3) MISS WILSON.

54w. **PLAYS AND GAMES.** Games suitable for playground, elementary and secondary schools ranging from the simplest primary school games to organized team games, including volley ball, dodgeball, playground ball, captain ball and soccer. (2) Miss _____.

55w. **ATHLETICS AND RECREATION FOR MEN.** Group competition, mass athletics, leadership and organization of general recreation and athletics for schools and colleges. (2) MR. CRANGLE.

101f. **PHYSICAL EXAMINATIONS AND REMEDIAL GYMNASTICS.** Methods of examination for the detection of physical defects; application of corrective exercises and massage; measurements and efficiency tests. Prerequisites, Anatomy and Kinesiology. (3) MISS McKEE and MISS ADAMS.

102f. **COACHING MAJOR ATHLETICS.** (1) Organization, Theory and Practice of Coaching Football and Basketball. (2) MR. HENRY; MR. EDWARDS.

111f. **KINESIOLOGY.** An analysis of joint and muscular mechanism of various movements involved in gymnastics and athletics in relation to the pro-

blem of bodily development and efficiency. Prerequisite, Anatomy. (3) Miss CLINE.

H1119W. TEACHING OF PHYSICAL EDUCATION. A graded course in tactics, calisthenics, and apparatus work for grades, high school, and colleges. Prerequisite, Kinesiology. (2) Miss MCKEE.

See Education D150f and w. PRACTICE TEACHING. Emphasis is placed on practice teaching under supervision. Methods of conducting work are analyzed. The student receives active teaching experience. Prerequisite, Gymnastic Teaching. (6) Three hours each semester. MR. WATKINS AND Miss MCKEE.

120W. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION. The problems of the administrator and supervisor. Policies to be followed in schools and colleges; finances; construction, equipment, and care of plant; selection of staff; organization and administration of activities; methods of handling enrollment, records, and reports. Prerequisites, Gymnastic Teaching and Major Sports Technique, or with the consent of the instructor. (3) Miss MCKEE.

121W. COACHING MAJOR ATHLETICS (2). Theory and practice of coaching baseball, track, and field athletics. Training, conditioning and handling minor sports will also be covered. (2) MR. HENRY; MR. CRANGLE.

128W. THEORY OF INTERPRETATIVE DANCING. The historical analysis of the dance as an art form. The place of the dance in the curriculum. Analysis and classification of fundamentals, study of dance forms, music, dance drama. Prerequisite 27f and 28w. (2) Miss ————.

PHYSICS

Two beginning courses are offered. Those who wish only a course for general information should take course 1, while those who desire a more thoro course, and have had trigonometry, should take 3 and 4. Course 1 is required of students in agriculture, and it, together with course 2, will meet the requirements of the Association of American Medical Colleges. No one may receive a total of more than 10 hours credit in courses 1, 2, 3, and 4 or their equivalent.

1f and w. ELEMENTARY COLLEGE PHYSICS. Prerequisite, plane geometry. (5).

2W. ELEMENTARY COLLEGE PHYSICS. A continuation of 1. Courses 1 and 2 together cover in an elementary way most of the field of physics. (3).

3f. GENERAL PHYSICS. Prerequisite, trigonometry. (5).

4W. GENERAL PHYSICS. A continuation of 3. Prerequisite, course 1 or 3 and trigonometry. (5).

104f. ELECTRICAL MEASUREMENTS. Prerequisites, courses 1 and 2, or 3 and 4, and calculus. (4) or (5) MR. STEWART.

Courses 110, 112, 113, 114, constitute together a general course in advanced physics. None of them includes laboratory work, but students who desire advanced laboratory work in physics would do well to elect, along with these courses, the corresponding courses in the group 106, 107, 108.

110f. ELECTRICITY AND MAGNETISM. Prerequisites, courses 1 and 2, or 3 and 4, and calculus. An advanced course, partly mathematical. (3).

112f. HEAT. Largely descriptive. Prerequisites, courses 1 and 2, or 3 and 4. (3).

113W. LIGHT. Largely descriptive. Prerequisites, courses 1 and 2, or 3 and 4. (3).

114W. MECHANICS. Prerequisites, courses 1 and 2, or 3 and 4. (3).

The following three courses consist of laboratory work only.

106w. IONIZATION OF GASES. A laboratory course involving experiments in the conduction of electricity through gases, electronic emissions, and radio-activity. Prerequisites, courses 3 and 4 and calculus. (1) or (2) MR. DUFFORD.

107f. ELECTRICITY. The work is the same as the laboratory part of 104f. Prerequisites same as for 104f. (1), (2), or (3) MR. STEWART.

108w. LIGHT. Advanced laboratory work. Prerequisites, courses 1 and 2, or 3 and 4. (1) or (2) MR. REESE.

Integral calculus and two years of physics are prerequisites for all courses numbered above 200. Courses 213, 214, 217, 221, 222, 223, and 224 are in mathematical physics.

203f and 204w. SPECIAL PROBLEMS. Largely laboratory work involving the study of the literature of special experiments. It is intended as an introduction to research methods. (1-4)

209f and 210w. SEMINARY. (1) MR. STEWART; MR. REESE.

211f and 212w. RESEARCH WORK. (1 to 5) MR. STEWART; MR. REESE.

The following group of four courses constitutes a survey of the modern methods and theories of physics. It is desirable that these courses be taken in the order given:

221f. DYNAMICS. (4).

222w. ELECTROMAGNETIC THEORY AND LIGHT. (4).

223f. MODERN ATOMIC THEORY AND RADIATIONS. (4).

224w. STATISTICAL MECHANICS AND RELATIVITY. (4).

PHYSIOLOGY AND PHARMACOLOGY

Majors and minors may be elected with considerable freedom of choices from the experimental physiological and physiological chemical courses in the department, in combination with prerequisite and sequence courses from zoology, botany, anatomy and chemistry. The student is reminded that he cannot use for his major subjects from the department in which he chooses his minor, and vice versa. For example, when the minor is chosen from zoology then the elective courses listed below cannot be offered as a part of the major either in physiology or physiological chemistry. If the minor is offered in chemistry then other chemical courses cannot be applied to a major in physiological chemistry or physiology. Minors in the department must include at least six hours elected from courses 100f, 101f, 103f, and 118w, and not less than 3 hours from the following courses in physiology: 103f, Alimentary Mechanisms (2); 105f, The Central Nervous System and Sense Organs (2); 108w, Pharmacology (4); 115f or 116w, Advanced Physiological Chemistry (5); 117f or 118w, Toxicology (2); 122w, Advanced Physiology of Respiration (3) 124w, Adv. Physiology of Cir. System (2-4); 231f and 232w, Physiological Problems.

2w. ELEMENTARY VERTEBRATE PHYSIOLOGY. Intended for students who desire a general knowledge of physiology. Three lectures and two laboratory periods a week. (5) MR. ELLIS.

100w. PHYSIOLOGY OF MUSCLE AND NERVE. An introductory course presenting the principles of the physiology of tissues as such, using the subject matter of muscle, nerve, and other tissue types. (2) MR. ELLIS; MR. SIDDLE.

101f. PHYSIOLOGY OF THE CIRCULATION AND RESPIRATION. (2) MR. GREENE; MR. ELLIS; MR. AHMANN.

103f. ALIMENTARY MECHANISMS. The physiology of the alimentary canal, of the secretory processes, digestive mechanics, absorption, excretion, metabolism, internal secretions, heat regulation and reproduction. (2) MR. GREENE; MR. SIDDLE.

105f. THE CENTRAL NERVOUS SYSTEM AND SENSE ORGANS. The reactions of the central nervous system and sense organs. (2) MR. ELLIS; MR. SIDDLE.

106w. METROLOGY AND PRESCRIPTION WRITING. Metrology, materia medica, pharmacutics, prescription writing, and physiological assay of drugs and drug preparations. (2) MR. AHMANN.

108w. PHARMACOLOGY. The physiological action of drugs on man and lower animals. (4) MR. GREENE; MR. SIDDLE.

111f. ELEMENTARY PHYSIOLOGICAL CHEMISTRY. A comparative survey of the field, but with principal emphasis on the conditions in man. Prerequisite, 5 hours biological science and 3 hours organic chemistry. Not open for medical credit. (3) MR. AHMANN.

112w. PHYSIOLOGICAL CHEMISTRY. Prerequisite, organic chemistry, course 110f or equivalent. (5) MR. GULICK; MR. AHMANN.

115f and 116w. ADVANCED PHYSIOLOGICAL CHEMISTRY. A course supplementing and extending course 112w. The prosecution of a short experimental problem is required. (2-4) MR. GULICK.

117f and 118w. TOXICOLOGY. (2) MR. GULICK.

219f. THE BLOOD. A chemical, physiological and clinical study. Prerequisite 112w. (3) MR. GULICK.

221f. ADVANCED RESPIRATION. An advanced consideration of the normal and modified respiratory activities of man and animals. The laboratory work includes a short detailed investigation. (3) MR. ELLIS.

223f. ADVANCED CIRCULATION. A detailed study of the blood vascular apparatus and its modification by drugs and by disease. (2-4) MR. GREENE.

224w. METABOLISM. A critical study of the heat-regulating mechanisms; of temperature, food and activity; of the thyroid and other internal secreting glands on the metabolic rate. (2-3) MR. GREENE.

227f and 228w. JOURNAL CLUB. Review of current literature by the staff and graduate students. (1) MR. ELLIS.

231f and 232w. PHYSIOLOGICAL PROBLEMS. Elemental problems in physiology, physiological chemistry, or pharmacology, are assigned in preparation for research. MR. GREENE; MR. GULICK; MR. ELLIS.

241f and 242w. RESEARCH. Opportunity is offered for research into questions of current interest. MR. GREENE; MR. GULICK; MR. ELLIS.

POLITICAL SCIENCE AND PUBLIC LAW

No course in this department is open to freshmen. Seniors electing courses 1 or 5 will receive reduced credit. Course 1 or its equivalent is a prerequisite to all other courses except 5. Students in Arts and Science should elect one of the following groups for a major or minor: Government group, 1, 102, 103, 105, 106, 107, 108, 112; public law group, 1, 102, 103, 109, 120, 190. Law students may elect courses 204 and 205 for credit toward the degree of Bachelor of Laws.

1f and w. AMERICAN GOVERNMENT. A basic course dealing with the fundamental principles of political science and the organization, principles, and functions of American government in all its divisions—national, state, and local. (5) MR. BARCLAY; MR. HEINBERG; MR. SHORT.

5w. INTERNATIONAL RELATIONS. Lectures and readings on contemporary international relations. (3) MR. MIDDLEBUSH.

102f. ENGLISH GOVERNMENT. The constitutional organization and practical working of the government of Great Britain and the self-governing dominions. (3) MR. HEINBERG.

103w. THE GOVERNMENTS OF CONTINENTAL EUROPE. The constitutional organization and practical working of the principal governments of continental Europe. (3) MR. HEINBERG.

105f. POLITICAL PARTIES. A study of the theory, organization, methods of action and functions of political parties, especially in the United States. (3) MR. BARCLAY.

106f. MUNICIPAL GOVERNMENT. A study of the growth of cities; their legal status; municipal organization in the United States, including mayor and council, commission and city manager plans; the chief problems of municipal politics. (3) MR. BARCLAY.

107w. MUNICIPAL PROBLEMS. A detailed study of certain problems of municipal government, including the problems of home rule; city charter; municipal organization; police administration; finance; zoning and excess condemnation. (2) MR. BARCLAY.

108w. STATE ADMINISTRATION. A study of the development, organization and functions of the executive branch of the American state governments. (3) MR. SHORT.

109f. INTERNATIONAL LAW. A general treatment of the laws governing international relations in peace and war. (3) MR. MIDDLEBUSH.

112f. NATIONAL ADMINISTRATION. The development, present organization and activities of the administrative departments, boards and commissions of the national government. (3) MR. SHORT.

115w. ADMINISTRATION OF AMERICAN FOREIGN RELATIONS. An examination of governmental organization in the United States for the control and conduct of foreign relations, with special reference to the diplomatic and consular services. (3) MR. SHORT.

120f. CONSTITUTIONAL LAW OF THE UNITED STATES. A consideration of the American federal system, with special reference to interstate commerce, the powers of Congress, governmental relations between the states and the United States. The interpretation of the constitutional limitations for the protection of life, liberty, and property; police power, taxation, eminent domain, protection to persons accused of crime. Not designed primarily for pre-law students but for those having a major interest in political science, economics, and history. (3) MR. BARCLAY.

175f. LEGISLATION IN THE UNITED STATES. The nature of the legislative power; constitutional limitations; organization, rules of procedure and practice of American legislative bodies; and bill drafting. (2) MR. SHORT.

190w. PRINCIPLES OF POLITICAL SCIENCE. Prerequisites, course 102-103, or special permission. A comparative study of the legal and theoretical basis of the modern state, the various forms of government and the structure and functions of the principal governmental organs. (3) MR. HEINBERG.

201w. PRINCIPLES AND PROBLEMS OF PUBLIC ADMINISTRATION. Open to seniors who have had course 108 or 112. Principles of administrative organization and procedure, methods of control of administration, the problems of personnel, purchasing, and budgetary procedure, and other topics will be examined in this course. (3) MR. SHORT.

203w. COLONIAL ADMINISTRATION. Prerequisite, course 102 or 103. An examination of the great historical colonial systems, and of the administration of modern dependencies, with special reference to the government of Porto Rico and the Philippine Islands. (2-3) (Not given in 1927-28) MR. MIDDLEBUSH.

204f and 205w. CONSTITUTIONAL LAW OF THE UNITED STATES. (3) and (2) MR. HOWARD.

206f. MUNICIPAL CORPORATIONS. The nature of municipal corporations, their creation and dissolution, rights under the national constitution and state constitutions, legislature control over them, construction of powers, liability for torts, governmental and police powers, remedies open to individuals against their action. (2-3) MR. BARCLAY.

207f. INTERNATIONAL ORGANIZATION. Prerequisite, 109. A study of the form and functions of the various co-operative international organizations with special reference to the League of Nations and Permanent Court of International Justice. (3) MR. MIDDLEBUSH.

208w. PROBLEMS IN INTERNATIONAL LAW. Prerequisite, course 109. A detailed study of certain specific problems in international law. (3) MR. MIDDLEBUSH.

210f. HISTORY OF POLITICAL THOUGHT. A review of the history of political thought from Plato to the present. (3) (Not given in 1927-28) MR. HEINBERG.

211f. MODERN POLITICAL THEORY. A review of modern political theories, with some attention to their historical settings. Recent tendencies in political theory will be considered. (3) MR. HEINBERG.

220f and 221w. SEMINARY. Opportunity is offered for research work in political science. Credit to be arranged. MR. BARCLAY; MR. HEINBERG; MR. MIDDLEBUSH; MR. SHORT.

POULTRY HUSBANDRY

1f. ELEMENTARY POULTRY RAISING. Deals with poultry house construction, yarding, fattening, killing, dressing, marketing, and a brief description of the more common breeds. (3) MR. KEMPSTER; MR. HENDERSON.

2w. POULTRY PRODUCTION. Feeding and general care; common diseases of poultry; incubating, brooding, and the handling of farm poultry. (3) MR. KEMPSTER; MR. HENDERSON.

3w. TYPES AND BREEDS OF POULTRY. History, development and characteristics of the leading breeds of poultry. (2) MR. KEMPSTER; MR. HENDERSON.

103f. MARKETING POULTRY PRODUCTS. Prerequisite, 1. A course dealing largely with the practices employed in commercial poultry and egg-handling establishments, both in reference to fattening and killing poultry and to the handling of eggs. (3) MR. KEMPSTER.

104f. POULTRY JUDGING AND BREEDING. Prerequisite, 1. Special attention is given to exhibition and production judging and breeding. (3) MR. KEMPSTER; MR. HENDERSON.

105w. POULTRY FARM MANAGEMENT. Must be preceded or accompanied by courses 1 and 2. A study of poultry farm methods and practices. (3) MR. KEMPSTER; MR. HENDERSON.

106w. INCUBATING AND BROODING PRACTICE. Must be preceded by or accompany course 2. The student hatches and raises chickens, keeping accurate records. A study of the organization and management of a Commercial Hatchery will be made. Nine weeks, by appointment. (3) MR. KEMPSTER; MR. HENDERSON.

107f and w. SPECIAL PROBLEMS. Primarily for advanced undergraduates. Topics will be assigned. MR. KEMPSTER; MR. HENDERSON.

200f and 201w. SEMINARY. Special investigations in poultry husbandry. Literature is reviewed and discussed by the class. (1) MR. KEMPSTER.

202f and 203w. **RESEARCH IN POULTRY HUSBANDRY.** Advanced studies of special phases of poultry production. Opportunity is offered students interested in this line for original investigation. In some cases they will assist in experimental work being conducted by the department of poultry husbandry. **MR. KEMPSTER.**

PSYCHOLOGY

1f and w. **INSTINCTS AND HABITS.** (General Psychology.) The beginner's course in psychology. A study of human life from the biological point of view. Human instincts and the educational development of those simple and complex habits which are of significance in human society. (4) **MR. MEYER.**

52w. **ABNORMAL PSYCHOLOGY.** The best sequence of course 1. A study of the aspects of human life which popularly appear under the names of idiocy, genius, somnambulism, hysteria, aphasia, neurasthenia, insanity, hypnosis, psychoanalysis, etc. (3 or 2. The third hour is for those who did not have course 1 as it is given in this University.) **MR. MEYER.**

63w. **THE PSYCHOLOGY OF DRUGS.** The causes leading to and the effects of the use of commercial drugs, alcohol, tobacco, coffee and tea, are discussed without prejudice. (1) **MR. MEYER.**

100f. **PSYCHOLOGICAL PRINCIPLES OF ART (ESTHETICS I).** An introduction to the problems of esthetics with reference to the representative and architectural arts. Prerequisite either training in psychology or some experience in representative art. (3) **MR. MEYER.**

112w. **MUSIC SYSTEMS (ESTHETICS II).** An introduction to the study of esthetics with reference to music. The origin of musical scales derived from fundamental psychological facts. Future possibilities and limitations in musical scales. Prerequisite some experience with music and some interest in simple arithmetical computations. (3) **MR. MEYER.**

125f. **SOCIAL PSYCHOLOGY.** The simplest social applications of psychology. The role played in the structure of modern society by the differentiation of individual abilities will be studied mainly by analyzing the concept of "intelligence." Prerequisite courses 1 and 52. (4 or 3. The fourth hour is for those who did not have course 52 as it is given in this University.) **MR. MEYER.**

150f, 151w. **VOCATIONAL CHOICE.** Open to juniors who take a serious interest in practical social work. Prerequisite course 125. The members of the class are required to visit a small number of freshmen in order to help them in considering the inherited individual traits most likely to lead to success in various vocations. (1) **MR. MEYER.**

208w. **EMPLOYMENT PSYCHOLOGY.** Industrial Psychology. (2) **MR. MEYER.**

209f. **PSYCHOLOGICAL TEXTBOOKS.** A comparative study of the psychological systems as found in the chief textbooks and laboratory manuals on psychology published during the last thirty years. (4) **MR. MEYER.**

210f and w. **RESEARCH.** Theoretical and experimental.

RURAL SOCIOLOGY

115f, w, s. **RURAL SOCIOLOGY.** A study of social conditions in rural communities and their improvement. Definite rural social problems are studied such as the drift to the cities, farming as an occupation, land problems, farm labor problems, co-operation, the rural school, the rural church, rural health and sanitation, the rural home, the social center. (3) **MR. MORGAN.**

117f, s. **RURAL COMMUNITY ORGANIZATION.** Prerequisite course, 115. An advanced course dealing with the social forces, factors, agencies, and institutions

to be found in various types of rural and small town communities. Special emphasis is placed on community studies and the different possible plans of organization applicable to rural communities, small towns, and counties, together with practical community programs to promote social progress. Organization methods are discussed in detail. The course is designed for teachers, social workers, county agricultural and home demonstration agents, recreation workers and others who serve the community through various agencies and organizations. Field work with additional credit optional. (3) MISS BRISLEY.

119f, w. SOCIAL CASE WORK. This course deals with the problems of social reconstruction of individuals and families. The general principles and processes of social treatment are considered and students are familiarized with recognized methods of modern social work as developed in rural communities, small towns, and cities. In connection with this course additional credit for field work may be arranged. (3) MISS BRISLEY.

120f. THE RURAL CHILD. A study of various maladjustments, social, educational, physical, commonly found in rural children, together with the causes and modern methods of treatment. The aim is to develop in the rural teacher the ability to recognize in her pupils the signs of their problems, and to utilize certain techniques in solving them. Each student will be expected to make an intensive study of the problems of the children in the community in which he works. (3) MRS. BASKETT.

121w. GROUP AND CLUB WORK. This course treats of the principles and procedure underlying the organization and conduct of various kinds of groups and clubs, such as Boy Scouts, Girl Scouts, Camp Fire Girls, Y. M. C. A., and Y. W. C. A., Boys' and Girls' 4-H Clubs, neighborhood social organizations and social centers. Special attention is given to the philosophy and purposes of group work; to practical methods for group and club leaders; and to the relationships of small groups to the larger community in its varied interests and inclusive organization. (2) MISS BRISLEY.

123f. VISITING TEACHER WORK. It is the purpose to acquaint the student with the present development of the work of the visiting teacher, and to show its relation to the general field of social work. Especial attention is given to the solution of the problems surrounding the disadvantaged child in school through an adjustment between the home, the school, and the child. The relations of the visiting teacher to the school teacher are also considered in detail. (3) MRS. BASKETT.

190w. LEADERSHIP. A study of the bases of leadership in their biological, psychological, and sociological aspects. Leaders in such fields as agriculture, education, religion, politics, and social organization, are analyzed for the traits that give them leadership. It is the purpose to train the student in the principles and methods involved in the discovery, enlistment, and development of leadership in community affairs. (3) MR. MORGAN.

191w. EXTENSION WORK. Prerequisite, courses 115, 117, and Agricultural Economics 2. A course designed to train students in the objects, organization, and methods of extension; particular attention is given to such subjects as extension organization, extension teaching, development of leadership, and county and local programs of work. Laboratory work optional. (3) MR. MEYER.

200f, w. SEMINARY. Selected literature and investigation of rural social problems. MR. MORGAN; MR. MEYER; MRS. BASKETT; MISS BRISLEY; MISS NIEDEMEYER.

219w. ADVANCED SOCIAL CASE WORK. Prerequisite, course 119. An advanced course in which special types of individual and family problems are studied. Administrative problems incident to the organization and conduct of

various forms of social and public welfare work are considered. Advanced field work training with additional credit is provided. (2) MISS BRISLEY.

231f. HISTORY OF SOCIAL WORK. An historical study of the philosophy, motives and methods of philanthropic and social work. From early beginnings the development is traced through Grecian and Roman times, the early Christian era, the medieval ages, through the growth of the English system, and of humanitarianism to the present day social philosophy, motives, methods, and trends. Field trips will acquaint the student with social agencies as they are found in counties and in cities. (2) MISS BRISLEY.

234w. FARMER MOVEMENTS. A critical study of the principal farmer movements in Europe and in America with a view to an evaluation of present day movements in the light of current trends in agriculture and country life. (2) MR. MORGAN.

235f. HISTORICAL AND COMPARATIVE RURAL LIFE. An historical study of the types of rural life existing in various periods in England, Denmark, Germany, and other countries. Comparisons are made between European conditions producing particular types and present day rural problems in the United States with a view to their possible solution. Consideration is given to the influences of climate, rainfall, topography, type of agriculture, and type and density of population upon the forms of rural society found in various sections of the United States. (2) MR. MORGAN.

239f, w, s. FIELD WORK. Practice work open to students taking courses 117, 119, 121, 123, 191, or 219. (1-3) MR. MORGAN; MR. MEYER; MISS BRISLEY; MRS. BASKETT; MISS NIEDEMEYER.

240f, w. RESEARCH IN RURAL SOCIAL PROBLEMS. Thesis required. (2-6) MR. MORGAN; MR. MEYER; MISS BRISLEY; MRS. BASKETT; MISS NIEDEMEYER.

248f, w. RESEARCH IN METHODS OF CONDUCTING AND ADMINISTERING CO-OPERATION EXTENSION WORK. Special studies in the field of co-operative extension work in agriculture and home economics under the Smith-Lever Act of Congress. Critical studies will be made of such problems as: (1) relative effectiveness of organized and unorganized communities in carrying out extension programs; (2) relative effectiveness of different types of extension teaching; (3) methods of measuring results of extension work; (4) the place of local leadership in the extension program; (5) systems of training local extension leaders; (6) methods of financing extension programs; (7) fundamentals of co-operation with outside organizations in the conduct of extension work, together with studies of all other factors that influence the effectiveness of extension activities. (2-5) MR. MEYER.

SOCIOLOGY

No course in sociology is open to freshmen. The course in Citizenship or its equivalent is required for entrance to General Sociology. For Social Service Courses see Curriculum V, School of Business and Public Administration, also description of courses in Rural Sociology.

1f GENERAL SOCIOLOGY. An introduction to the scientific study of social life, its origin, evolution, and organization. A study of a number of concrete problems. (5) MR. ELLWOOD; MR. DEGRAFF.

110f and w. SOCIAL PATHOLOGY. A study of the causes, extent, significance, and constructive treatment of the principal forms of pathology in modern society: Poverty, physical defectiveness, malnutrition, feeble-mindedness, insanity, un-directed leisure activities, and unstandardized commercial recreation, alcoholism, prostitution, vagrancy, and delinquency. (3) MR. KUHLMAN.

111w. **CRIMINOLOGY.** Prerequisite, course 1. This course deals with a study of the original tendencies of man and the problem of socializing these tendencies; the relation of physical and mental defectiveness and untoward influences in the home and neighborhood of crime; the development of criminological theory and procedure, emphasizing penal and reform methods, and especially modern methods of social treatment and prevention of crime. (3) MR. KUHLMAN.

112f. **CHILD WELFARE.** The following subjects are treated: Heredity and environment as social factors; infant conservation; welfare responsibilities of the school, emphasizing the physical and mental well-being of the child, play, and compulsory and industrial education; child labor, diagnosis and treatment of delinquency; care of the dependent and neglected child; child-caring agencies, public and private; and a community program of child welfare. (3) MR. KUHLMAN.

113w. **CONSTRUCTIVE SOCIAL POLICIES.** An intensive study of the theories and legislation dealing with such problems as eugenics, the Woman's movement, compensation, vocational re-education, and other methods of social insurance and social improvement. (2) MR. KUHLMAN.

114w. **THE FAMILY.** A sociological interpretation of the family as a natural and institutional group, stressing the conditions and influences that tend to modify its form and functions. Contemporary family disorganization and disintegration including current ideals and theories as to the future and the reconstruction of the family will be treated. Prerequisites, eight hours of Sociology. (2) MR. DE-GRAFF.

115f and w. **RURAL SOCIOLOGY.** (See Rural Sociology.)

116f. **URBAN SOCIOLOGY.** A study of the organization and social problems of urban communities, with special reference to social technology or the improvement of social and living conditions. The following subjects are treated: Municipal administration, city planning, housing, public health and sanitation, public safety, justice, welfare and leisure-time activities, and civic art. (2) MR. KUHLMAN.

117f. **RURAL COMMUNITY ORGANIZATION.** (See Rural Sociology.)

119w. **SOCIAL CASE WORK.** A study of the needs and possibilities of social service activities in rural communities, emphasizing especially the principles of social case work. A part of the work will consist of field work dealing with actual family rehabilitation. (2) MISS BRISLEY.

120f. **THE RURAL CHILD.** (See Rural Sociology.)

121w. **GROUP AND CLUB WORK.** (See Rural Sociology.)

123f. **VISITING TEACHER WORK.** (See Rural Sociology.)

125f. **GENERAL ANTHROPOLOGY.** A study of the origin and evolution of man as an animal and of the different races of mankind. The prehistoric human types, the principles of ethnology, and the characteristics of the Negro, Mongolian, American, and Caucasian races. Lectures and assigned reading. (3) MR. ELLWOOD.

126w. **CULTURAL ANTHROPOLOGY.** A study of social origins and of the earliest stages of cultural evolution; the stone and metal ages; the origins of industry, language, magic, religion, morals, science, art, and social organization in the family, horde clan, and tribe. Lectures and assigned reading. (3) MR. ELLWOOD.

190f and w. **LEADERSHIP.** (See Rural Sociology.)

219w. **ADVANCED SOCIAL CASE WORK.** (See Rural Sociology.)

220f. **PRINCIPLES OF SOCIOLOGY.** A critical study of sociological theory. The sociological theories of recent writers will be critically examined with a view to

laying the foundations for a constructive theory of the social life in modern biology and psychology. Discussions and papers by the class. (3) MR. ELLWOOD.

221w. THE THEORY OF POPULATION. A course of the biological basis of sociology. Among the topics treated will be the growth of population, heredity, variation and selection. The recent literature on the theory of population and its bearing upon social problems will be carefully reviewed. Discussions, assigned reading and research work. (2) MR. ELLWOOD.

222f. METHODS OF SOCIAL RESEARCH. A study of the various methods of research and investigation that can be applied to the study of social phenomena. Considerable time is given to the study of social statistics and the social survey. Special problems are assigned for research and field work. (2) MR. KUHLMAN.

227f. THE AMERICAN NEGRO. A study of negro problems in America; the social, economic, moral, and educational status of the negro population; the psychology of the color line, racial consciousness, and other facts of psychic and social nature will be given consideration. (2) MR. ELLWOOD.

230w. HISTORY OF SOCIAL PHILOSOPHY. Lectures on the development of social thought from Aristotle to the present; the social philosophies of Plato, Aristotle, St. Augustine, Thomas Aquinas, Machiavelli, Bodin, Hobbes, Locke, Vico, Montesquieu, Rousseau, Condorcet, and the sociological systems of Comte, Spencer, Shaeffle, Lilienfeldt, Gumpłowicz, Ratzenhofer, and Ward, will, among others, be considered. A large amount of assigned reading will be required in this course. The student is advised to correlate this course with related courses in economics, history, political science, and philosophy. (3) MR. ELLWOOD.

231f. HISTORY OF SOCIAL WORK. Open only to seniors and graduate students. An historical study of the motives, methods and developments in philanthropic and social work. Especial attention will be given to the early charity work of the church, to public relief in Greece and Rome, to the social movements of England in the nineteenth century, stressing development of public relief, to the tendencies and development of social work in the United States. (2) MISS BRISLEY.

232f. PUBLIC WELFARE WORK. Open only to seniors and graduate students. The purpose of this course is twofold: First, it aims to trace the development and organization of public welfare work in its varied aspects; second, it aims to give definite, practical and technical training in county public welfare work. Field work required. (2)

234w. FARMER MOVEMENTS. (See Rural Sociology.)

235f. HISTORICAL AND COMPARATIVE RURAL LIFE. (See Rural Sociology.)

239f and w. FIELD WORK. (See Rural Sociology.)

240f and w. SEMINARY. Research work upon special problems in sociology and philanthropy. (2-4) MR. ELLWOOD; MR. KUHLMAN; MR. MORGAN; MISS BRISLEY.

SOILS

1f and w. SOILS. REQUIRED. Prerequisites, chemistry 1 and geology 2. An introductory course dealing with the subject of soils and the principles underlying rational soil management. Three lectures and recitations and two laboratory or field periods. (5) MR. MILLER; MR. ALBRECHT.

2w. SOIL MANAGEMENT. Prerequisite, course 1. A course having to do with the practical management of soils, including tillage, liming, manuring and fertilization. (3) MR. MILLER.

100f. SOIL FERTILITY. Prerequisite, course 1. Agricultural chemistry 101 must precede or accompany this course. A course having to do with the essential

principles in maintaining soil fertility. Laboratory exercises may include work on soils from the home farms of students. One lecture and two laboratory periods.

(3) MR. ALBRECHT.

102f. SOIL SURVEYING. Prerequisite, course 1. Actual field practice in mapping soils and in the preparation of detailed soil maps. Discussion of principles that govern various soil conditions and soil changes. (2) MR. KRUSEKOPF.

103w. PHYSICAL CHEMISTRY OF SOILS. A physico-chemical study of soils with special reference to soil acidity, moisture and air relations, absorption, the character of the soil solution, and the nature and function of soil colloids. Limited to advanced under-graduates and to graduates. Offered in alternate years. Not given in 1927-28.) Three lectures two laboratory periods (3-5). MR. BRADFIELD.

104f. SOILS OF THE UNITED STATES. Prerequisite, course 1. The soils of the United States, their origin and development, field characteristics and systems of farming to which they are adapted. Particular attention given to the soils of Missouri. Offered in alternate years. (Given in 1927-28.) (2) MR. MILLER.

105w. SOIL BACTERIOLOGY. Prerequisite, course 1 and general bacteriology. Micro-organic life of the soil in relation to soil fertility, including studies of nitrogen transformations, decay of farm manures, soil inoculation and other biological processes. One lecture, two laboratory periods. (3) MR. ALBRECHT.

106f and 107w. SPECIAL PROBLEMS. Assigned problems in soil physics, fertility, or biology in connection with certain experiment station projects or problems chosen by the student with approval. Hours by arrangement. (2-5) MR. MILLER; MR. ALBRECHT; MR. KRUSEKOPF; MR. BRADFIELD.

200f and 201w. SEMINARY. Discussions of recent developments in soil science. Papers on assigned topics are presented for discussion. (1) MR. MILLER.

203w. SOIL INVESTIGATIONS. A course designed to familiarize students with the methods of conducting soil investigations. Particular attention is given to the matters of outlining problems, eliminating error, evaluating data and recording results. Special study is made of the more important lines of soil investigation now in progress in the United States and of some of those in foreign countries. Offered in alternate years. (Given in 1927-28.) (2) MR. MILLER; MR. ALBRECHT; MR. BRADFIELD.

205f and 206w. SOIL RESEARCH. Special investigations in soils. MR. MILLER; MR. ALBRECHT; MR. KRUSEKOPF; MR. BRADFIELD.

SPANISH

(Prerequisites: for 130, 136, 137, 139, 141, 15 hours of Spanish; for 131, 132, course 130; for 134, instructor's consent; for 142, course 136; for 145, 18 hours of Spanish.)

30f and w. ELEMENTARY COURSE. (5) MISS BOHANNON; MISS BUFFUM; MR. BURNER; MISS JOHNSON; MISS WALKER; MR. WARSHAW.

31f and w. INTERMEDIATE COURSE. (5) MISS BOHANNON; MISS BUFFUM; MR. BURNER; MISS JOHNSON; MISS WALKER; MR. WARSHAW.

32f and w. ADVANCED COURSE. Rapid reading of modern works. Three hours of the credit of this course may be counted as upperclassman work toward a major in Spanish. (5) MISS BOHANNON; MISS WALKER.

130f and w. COMPOSITION AND CONVERSATION. (3) MISS WALKER.

131f. ADVANCED COMPOSITION AND CONVERSATION. (2) MR. WARSHAW.

132w. COMMERCIAL SPANISH. (2) MISS WALKER.

134w. SPANISH LIFE AND LITERATURE. The work of the course is done in English. Alternates with course 133w, Spanish-American Life and Literature (given 1928-9). Can not be counted for credit toward a major or minor in Spanish.

(1) MR. BURNER.

136f. GENERAL SURVEY OF SPANISH LITERATURE. It is advisable that students take this course before taking others in Spanish literature. (3) MR. WARSHAW.

137f. MODERN SPANISH NOVEL. (3) MISS BOHANNON.

139w. MODERN SPANISH DRAMA. Alternates with course 140w, The Spanish Romantic Period (given 1928-9). (3) MR. WARSHAW.

141w. SPANISH-AMERICAN LITERATURE. (3) MR. BURNER.

142f. CERVANTES. Alternates with course 144f, Spanish Drama of the Sixteenth and Seventeenth Centuries (given 1928-9). (3) MR. BURNER.

145w. HISTORICAL SPANISH GRAMMAR. (2) MR. BURNER.

230w. OLD SPANISH. (2) MR. BURNER.

231f and 232w. SEMINARY IN SPANISH LITERATURE. (2), (3), or (4) MR. WARSHAW.

235f and 236w. ORIGINAL INVESTIGATION IN SPANISH LITERATURE AND PHILOLOGY. (1-4) MR. WARSHAW; MR. BURNER.

PHILOLOGY. Arrangements will be made in courses 231f, 232w, 235f, and 236w for students primarily interested in Spanish philology. Attention is called to courses in Vulgar Latin, Romance Philology, etc., offered in the Department of French and Italian.

(H135w. TEACHING OF SPANISH. [2] MR. WARSHAW.)

VETERINARY SCIENCE

1f. VETERINARY ANATOMY AND PHYSIOLOGY. Dissection and comparative study of the horse, ox, sheep, and pig. Special attention is given to the structure and functions of the organs concerned with nutrition and reproduction. (5) MR. UREN; MR. CONNAWAY.

2f and w. VETERINARY MEDICINE AND SURGERY. (Minor course.) Prerequisite, course 1. Diagnosis and treatment of the common ailments of farm animals, simple surgical operations. (3) MR. CRISLER.

100f. VETERINARY MEDICINE. (Advanced course.) Continuation of course 2 in the more advanced study of the non-infectious diseases. (3) MR. UREN.

101f. STOCK FARM SANITATION AND DISEASE PREVENTION. Prerequisites, courses 1, 2, and general bacteriology. (a) *Infectious Disease of Farm Animals*: A study of the causes, symptoms, pathology; special diagnostic methods; preventive measures—quarantine methods, disinfectants and their uses; preparation and use of vaccines and preventive sera. Lectures, laboratory, clinics, field demonstrations. (3) MR. CONNAWAY; MR. DURANT.

102w. STOCK FARM SANITATION AND DISEASE PREVENTION. (3) (Continuation of 101f.) (a) *Infectious Diseases*. (b) *Animal Parasites*. Study of internal and external parasites of farm animals. Clinic. Study of infested hosts; administration of appropriate remedies (3) MR. CONNAWAY; MR. DURANT.

103f and 104w. DISEASES OF POULTRY. Diagnosis and treatment of the common ailments of poultry; parasitic and infectious diseases; prevention and treatment. (2) MR. DURANT.

105f and 106w. SPECIAL PROBLEMS. Assignment of special problems for training in research in animal diseases. (For 1927-28—Special attention will be given to studies in diagnostic technique for infectious abortion in cattle and swine, and white diarrhea in poultry. Other problems assigned in special cases.) Open

to advanced students having prerequisite preparation. Hours by arrangement. MR. CONNAWAY; MR. DURANT; MR. NEWMAN.

200f and 201w. SEMINARY. (For 1927-28—Study of researches on the physiology and pathology of the mammary and generative organs of cattle and swine.) Open to advanced students specializing in dairy and animal husbandry.

(1) MR. CONNAWAY; MR. UREN.

202f and 203w. RESEARCH. Experimental investigation of animal diseases and of measures of prevention and treatment. Open to graduate students who have the requisite preparation. The student may assist in Experiment Station projects now in progress, or may be assigned a special problem. Proper credit is given toward an advanced degree. Hours by arrangement. MR. CONNAWAY; MR. DURANT; MR. NEWMAN.

ZOOLOGY

Seniors taking the course in general zoology will receive reduced credit. Course 12. Greek. Derivation of scientific terms in zoology is recommended to students of zoology.

1f and w. GENERAL ZOOLOGY. A course in the general principles of zoological science. (5) MR. CURTIS; MR. ROBERTSON; MR. TANNREUTHER; MISS GUTHRIE; MR. WOODS.

2w. THEORY OF EVOLUTION. Prerequisite, course 1. The purpose is to introduce the student to the subject of organic evolution, and to point out the general applications of evolutionary doctrines in biological science. (2) MR. CURTIS.

3f. ADVANCED GENERAL ZOOLOGY. Prerequisite, course 1. A continuation of the introductory course. (3) MR. WOODS.

4w. COMPARATIVE ANATOMY OF VERTEBRATES. Prerequisite, course 1. A comparative study of the structure of a series of vertebrates. (5) MISS GUTHRIE.

100f and w. EMBRYOLOGY OF VERTEBRATES. Prerequisite, at least 8 hours of underclass work. Designed to lay the foundation of vertebrate embryology. Successive stages in the development of the chick and pig are studied from preparations of entire embryos and from serial sections. These observations are used as a basis of comparison for the study of human embryology. (3) MR. TANNREUTHER.

101f. COMPARATIVE HISTOLOGY. Prerequisite, at least 8 hours of underclass work. A comparative study of the microscopic structure of animal cells, tissues, and organs. Microtechnique. (3-5) MISS GUTHRIE.

103w. PARASITOLOGY. Prerequisite, at least 8 hours of underclass work. A study of the principles of parasitology, including life histories and behavior of animal parasites, effects produced upon hosts, and the like. (3) MR. CURTIS.

110f. PROTOZOOLOGY. Prerequisite, at least 13 hours of underclass work or its equivalent in other biological lines. A study of the protozoa, with emphasis upon their relation to general biological problems. Methods of culture and technique. (3-5) MR. CURTIS.

111f. GENETICS. Prerequisite, at least 8 hours of underclass work in zoology or its equivalent in other biological lines. A course dealing with the experimental study of genetics and its relation to problems of breeding and evolution. Emphasis is laid on the phenomena of Mendelism and the mechanism of heredity. (3-5) MR. ROBERTSON.

112w. CYTOLOGY. Prerequisite, at least 13 hours of class work in zoology or an equivalent in other biological lines. A study of the cell, with special re-

ference to problems of development and inheritance. Cytological technique. (5) MR. ROBERTSON.

120f and 121w. SPECIAL PROBLEMS. Preparation for research in zoology. Hours to be arranged. MR. CURTIS; MR. ROBERTSON; MR. TANNREUTHER; MISS GUTHRIE.

200f and 201w. RESEARCH. A reading knowledge of French and German is essential. Investigation of unsolved problems of zoology, in which the student is trained in the exercise of original observation and thought. Hours to be arranged in accordance with the requirements of individual students. MR. CURTIS; MR. ROBERTSON; MR. TANNREUTHER; MISS GUTHRIE.

205f and 206w. SPECIAL TOPICS. Prerequisites, a reasonable foundation in undergraduate courses in zoology. Study of special subjects in zoology to suit the needs of individual students. Designed especially for graduate students in zoology or other departments who need to cover special fields of subject-matter rather than work leading directly to research as in case of course 120f and 121w. (3-5) MR. CURTIS; MR. ROBERTSON; MR. TANNREUTHER; MISS GUTHRIE.

210f and 211w. SEMINARY. A reading knowledge of French and German is desirable. Meetings at which problems of zoological investigation are discussed by instructors and students. Each student is required make reports during the term, and experience is thus gained in presenting, in the form of lectures, the results of reading and research. (1) MR. CURTIS AND STAFF.

SECTION IV

DEGREES AND CERTIFICATES—COMMENCEMENTS, 1926

AT COLUMBIA

June 9, 1926

DEGREES

COLLEGE OF ARTS AND SCIENCE

Degree of Bachelor of Arts (A. B.) with Distinction

In Art:

Clara Demeter

In English:

Pansye Alice Hawkins
Mary Matilda Janes
Dorothy Lavina Knappenberger
Eugene Emil Seubert
Arthur Nesbitt Stunz
Edward Howell Weatherly

In Economics:

William Joseph Abbott, Jr.
George Marshall Houx

In Geology and Geography:

Carl Colton Branson
Arthur Sebert Price
Carl Bonham Richardson

In Latin:

Estelle Thekla Farrar
Mary Elizabeth Hill

In Mathematics:

William Howell Ellett
Richard Dudley Shewmaker

In Philosophy:

Willis Carter Beasley

In Physics:

George Cramer, Jr.

Degree of Bachelor of Arts (A. B.)

Arthur Nottingham Adams, Jr.
Aubrey Kamp Anderson
Charles Homer Appleberry
Horace Rosser Austin
Sanford Broadhead Avis
John Franklin Barr
Nancy Barry
Henry Wesley Benton, Jr.
Hugo Fred Bergman
Marion Frances Berry
Herbert Ambrose Birmingham, Jr.

Leola Bishop
William Alexis Borders
Archie D. Boucher
Marian Louise Bowers
Benjamin Franklin Boyer
Walter Rinaman Brown
Virginia Faye Brubaker
Katherine Telfer Calvert
John Nicholas Carter
Evelyn Maurine Casady
Charles Edward Chapel

Emily Mursee Chiles
 Alice Chinn
 Donald Doyle Christen
 Cecil Hengy Coggins
 Harriett Myra Collins
 Samuel Paul Compton
 Corinne Payne Conner
 Allen William Cox
 Walter Martin Cross, Jr.
 Charles Wayne Crumley
 Arthur Glenn Davis
 Harlan Chauncey Davis
 Virgil Owen Decker
 Chester Hampton Denny
 Elizabeth Margaret Dietrich
 Ward Allison Dorrance
 George Lyman Driver
 Trenouth Wright Edmonds
 Emma Holliday Edwards
 Dorothy Marguerite Ellersieck
 Lucille Engelsman
 Irvine Jack English
 Aubrey Baird Gerhart Fellows
 Horace Harlan Ferrin
 Rosemary Flournoy
 Walter Taylor Foster
 Heyward Milburn Foreman
 Anne Rufina Gantz
 Selma J. Gartman
 Enoch Nelson Gentry, Jr.
 Mary Burton George
 Harry Chapman Griffiths
 Elinor Grubb
 Robert Donnell Haire, Jr.
 Frank Benjamin Harper
 Lillian Alden Hart
 Virginia Lesh Hart
 James William Henderson
 James Parker Hickok
 Sarah Margaret Hickok
 Elvet Thomas Hier
 Aline Kathleen Hillix
 Clifford Histed, Jr.
 Marcella Holbrook
 Frances Holtzward
 Margaret Elizabeth Hubbard
 Shelby Bond Hughes
 Ruth Frances Hurley
 Alida Hurtubise
 Mary Helen Inskeep
 Ada Whitfield Jack
 Allen Bond Kellogg
 Laurence Robinson Keltner

Ervin Samuel Kern
 Philip Stark Kilpatrick
 Revenell Casman Klein
 Maynard Clare Krueger
 Camille Fredericka Kuhne
 Clyde Harrington Landers
 Robert Edward Landman
 Ann Elizabeth Lewis
 Charles Luther Long
 Esther Nandeen Love
 Elizabeth Ellen Meek
 Maizie Mills
 Ernest Mindlin
 Robert Edward Minnis, Jr.
 George Carter Montgomery
 Mildred Morehead
 George Carver Motley
 Albert Harry Muench
 Virginia Elizabeth Mullinax
 Robert Cecil McClanahan
 John William McCune
 Ruth Adele McDaniel
 Helen McKarney
 Helen Nahm
 John Russell Nelson
 Richard Leedom Nelson
 David Caffee Newell
 John Yeagle Nicolds
 Void Bodkin Null
 Louise Oliver
 Esther Catherine Oxley
 Clinton Thompson Paddock
 George Roger Pinkley
 Esther Desire Platt
 Mary Elizabeth Polk
 Elizabeth Prichard
 Gladdon Albert Pugh
 Mary Kelso Quisenberry
 John Henry Radford
 Franklin Elmer Reagan
 Mary Louise Renfro
 Richard George Rieffling
 Constance Roach
 Walton Roth
 Olivia Joan Ruether
 Harry Rummell
 Clarence Henry Schettler
 William Lee Shepherd
 Allen Jefferson Sigler
 Sewell Elias Slick
 Maurine Smith
 Robert Henry Smith
 John Bostick Smoot

Clyde Hilliard Snider
 Paul Tutt Stafford
 Frances Hope Steele
 Charles Franklin Strop, Jr.
 John Nick Thomas, Jr.
 Charles Edwin Thomson
 Charles Lowell Viles
 John McKee Ware
 Marian Elizabeth Warnock
 William Bland Waters

Ancel H. Webb
 Louis Sanderson Wenkle
 Charles Herbert White
 Virginia Batie White
 Mary White
 Austin M. Wilkinson
 Zulu Ethel Williams
 Simeon Wright
 Taylor Otho Wright, Jr.
 Ruby Louise Young

COLLEGE OF AGRICULTURE

Degree of Bachelor of Science in Agriculture (B. S. in Agr.)

Gerald E. Annin
 Robert Blume Baker
 Urban Fred Berlekamp
 Glen Forsythe Boyel
 Robert Carl Calvert
 Elmer Roosevelt Coats
 Hobart L. Cooksey
 Nelson Crum
 Edward DeWitt Dail
 Gorus Laurel Davis
 Kenneth Reano Elmore
 Ralph Edward Ferguson
 Mary Todd Gentry
 Wallace Pemberton Gibbs
 George Mertor Gibson
 Lloyd Oval Gutting
 John Edgar Hoff
 Ralph Newell Hubbell
 George Taylor Hudson
 C. Allison Jackson
 Julian Almon Johnson
 James Osborne Martin

John S. Matthews
 Oscar William Meier (*In Agricultural Journalism*)
 Leona Vertese McCallister
 Fred Earl McClaskey
 William Ray Pennington
 Fred V. Peter
 Thomas J. Powell
 Eugene Taylor Reel
 Carl Ross
 James Porter Ross
 John Richard Sandige
 Alfred M. Smith
 George P. Smith, Jr.
 Henry Welty Smith
 Otto Bernhard Steiner
 Arthur Stupp
 Lester Boggess Swaney
 James Cecil Weidler
 Forrest Monroe Willhite
 Elmo Newell Wright

Bachelor of Science in Home Economics (B. S. in Home Ec.)

Martha Louella Hensley

SCHOOL OF EDUCATION

Degree of Bachelor of Science in Education (B. S. in Ed.)

Ella May Aldridge
 Clay Jefferson Anderson
 Alberta Andrews
 Aleen Deem Atkinson, A. E.
 Helen Margaret Autrieth
 Virgil V. Bachtel
 Roberta Grace Baldridge
 Edna Lee Baskett, B. J.

Helen Agnes Beck
 Mary Brady Biggs
 Mary Agnes Booth
 Joseph Thomas Botts
 Harriett Boyle
 Minnie Pearl Bozarth
 Ada Louise Brandle
 Frances Fethers Brewer

Ritchey Brinton
 Hattie Ritter Briscoe
 Bessie E. Browne
 Frances Mildred Broyles
 Frances Ardenia Burch
 Leola Burford
 Elizabeth Helen Burrell
 Gerald McKinley Carney
 James E. Clark
 Florence Marie Cobb
 Julia Agnes Combs
 John Robert Cope
 Laura Frances Cottingham
 Judith Corinne Craig
 Lucille F. Crews
 Willie Crews
 Mary Frances Davidson
 Donald Harry Davidson
 Thelma Irene Davis
 Ruth DeLano
 Dorothy Dolan
 Edna Adelle Drew
 Allie Drymon
 Nason Neill Duncan, A. B.
 Beulah Irene Ellis
 Dora E. Emmons
 Nellie Lee Evans
 Estelle Thekla Farrar
 Helen Marie Fenimore
 Catherine Fox
 Frances Marie Frazer
 Dorothy Frances Friedrich
 Mary Virginia Garner
 Nancy Mary Gibbs
 Ruth Gillaspay
 Ruth Elizabeth Glaves
 Lucille Webb Goza
 Gertrude Graham
 Carolyn Susan Gray, A. B.
 Mary Dorothy Halcomb
 Kathleen Hardesty
 Alice Elizabeth Hargus
 Helen Louise Harrison
 Perry Bertram Henderson
 Elizabeth Hale Henry
 Catherine May Hicks
 Opal L. Hill
 Margaret Hilliker
 Leeta Leona Holliday
 Zelma L. House
 James Sullivan Howe
 Wesley Warner Hoy
 Lynn Ellis Hummel

Louellen Husman
 Ida Belle Husted
 Helen Clare Jacob
 Edna Marie Johnson
 Mary M. Johnston
 Emily Browning Joslyn
 Kermit Samuel Keller
 Eugene L. Kelly
 Ruth Lee Kelly
 William Beatie Kuhne (Deceased)
 Robert Joseph Lackey
 Kathrine W. Lamon
 Rena Merle Lay
 Marion L. Lehr
 Madge Widner Lewis
 Sarah Louise Linch
 Leona E. Lindenmeyer
 Catherine I. Lorenz
 Laura Lorine Loyd
 Lois Luckhardt
 Lenore Barnard McCulloch
 Alice Elizabeth McFarland
 Hazel Anne Marvin
 Victor James Marsh
 Ellen Kathryn Maupin
 Virginia Mierhoffer
 Marian Melvin
 Dixie Miller
 Florence A. Miller
 Marie Margaret Mistele
 Ann Mitchell
 Laura Julia Nahm
 Mildred Keith Nelson
 Ruth Alice Nicholson
 Ola Mae Norris
 Louise Nowell
 Margaret Nowell
 Margaret Ellen Paynter
 Olive Pemberton
 Susan G. Peter
 Gerald McKinney Petty
 Rubey A. Petty
 Nellie W. Pollock
 Eunice Ratekin Potter
 Margaret C. Prather
 Theodosia Catheryn Prichard
 Mary Emily Pryor
 Marian Frances Ragland
 Nancy Suerena Reading
 Leona Reid
 Esther Elizabeth Reilly
 Doris Rhodes
 Mary Helen Rippey

Allie Robertson	Ehsabeth Statira Talbert
Dorothy D. Roney	Rosemary Thiekkitt
Lucille Rothgeb	Helen Marie Thomure
Irene Sanders	Helen Inez Thrash
Dorothy Margaret Sappington	Mary Delora Tilier
Nellie Saville	Mabel Steere Vanatta
Rose Savonovsky	Irene Mary Voigt
Ruth M. Schmidt	Geraldine Margaret Walker
Nelle L. Shelton	Myrtle Lillian Walters
Jessie Margaret Simeral	Irma Adell Warren
Ruth Ann Houck Sleeper	Elsie Anna Wease
Ruby Hirni Smith	Florannah A. Welsh
Margaret Lee Smoot	Elizabeth Baker White
Mary Belle Stacy	Chaney Orton Williams
Rose V. Stallings, A. B.	Margaret Houx Williams
Helen Mason Steers	Martha Elizabeth Williams
Letha Strickler	Fayne Harriett Witherup
Arthur Nesbitt Stunz	Elizabeth Worrell
Olivette Tacke	Verna Mary Wulfekammer

SCHOOL OF LAW

Degree of Bachelor of Laws (LL. B.)

Lynn Adams	Alexander Moore Meyer
Tom Burk Brown	James Wesley McAfee
Leland Willard Byars	Harvey Irwin McCoy
Robert Denning Crowe	Roland Walker McCoy
William Henry Depping	Paul Harrison Perreten
Stark O. Genuit	William Miller Peck
Edward Randall Hudson	Franklin Elmer Reagan
John C. Landis, III, A. B.	Horace Grant Sigman
James Andrew Lay, B. S. in Ed.	Isaac Newton Skelton, A. B.
Charles Luther Long	Clyde Hilliard Snider
Julius Max Meyerhardt	Lester Allan Vondereschmidt

COLLEGE OF ENGINEERING

1. *Degree of Bachelor of Science in Engineering (B. S. in Eng.)*

Sylvester C. Algermissen	Albert Meng Hudson
Earl B. Cohn	Herbert Henry Kansteiner
Frederick Judson Culver	Ervin Samuel Kern
Thomas Daniel Cunningham	Hudson Herbert Kibler
Richard Frank Evans	Frank Sales Koehler
Ralph W. Farwell	John George Leff
M. Clifford Francis	William Lehr
James Homer Glen	Harold Warner LeMert
Arthur Bruce Glover	Michael Weiner Levy
John M. Hannegan	Joseph Ashley Logan
Milton Jones Harden	Frederick Hernando Lowrance
Paul Hausmann, Jr.	Glenn Orear McDonald
Paul Richard Heaney	Barnard Mitchel Marks
Richard M. Hennessy	Arthur Binnette Maurer
(as of the class of 1925)	Clarence Sinelair Murch

Harry Newton Neal
 Charles Nelson Nebel
 Gus Nemzer
 Gerald Alden Nicholson
 Oliver Wilson Palmer
 Ralph Rex Parks
 Paul Melas Pittenger
 Ralph Everett Porter
 Harry T. Rall
 Folk Odell Reeves
 Norman Williams Remiey

Irl Louis Schweiger
 F. Howard Skelly
 Edward B. Sleeter
 Noble Victor Smith
 Chester Donald Sparrow
 Benjamin Goodall Symon
 Stanley F. L. Vallet
 William Elmer Wirtel
 Robert Swinney Wright
 Glenn S. Young

2. *Degree of Chemical Engineering (Ch. E.)*

Arthur Frank Wirtel, B. S. in Eng.

3. *Degree of Civil Engineering (C. E.)*

Forrest R. Hughes, B. S. in Eng.

SCHOOL OF JOURNALISM

Degree of Bachelor of Journalism (B. J.)

Dorothy Ann Adger
 William Lyndon Alcorn, A. B.
 Sara Ann Allen
 Harold Gardner Anthony
 Henry Clifton Blackmon, A. B.
 Bird Paul Bolton
 Virginia Bradstreet
 Thomas Jelks Bransford
 Andrew Joseph Brown, A. B.
 Arthur Vaughn Bullock
 Alma Burba
 Ralph Bronson Cowan, A. B.
 Marion R. Cracraft
 Marjorie Louise Dooley
 George Newton Elliott, Jr.
 Virginia Alice Farrington
 Jack Lucius Folk, Jr.
 Paul Po-Chi Fung, A. B.
 Dorothy Durer Geers
 Burke Gilliam
 Louis Regnald Grinstead (*In Agricultural Journalism*)
 Mary Turner Guitar
 Roselee Jo Hanlon
 Robert Leonard Hardee, A. B.
 Frank Benjamin Harper
 Peyton Elizabeth Hawes
 Olin Ethner Hinkle
 Frances Elizabeth Hubbard
 Alida Hurtubise

Ada Whitfield Jack
 Robert William Jacobs
 Clifford Rollin Johnson
 Della Emerzilla Mathews, A. B.
 Eugene S. McClintie
 Edward Delmar McCluskey
 Fredric McPherson
 Helen Frances Meredith
 Chester Harris Miller
 Joe Alex Morris
 Dora Maurine Osburn, A. B.
 Emery Foster Paxton
 Paul Reymon Pickens, B. S. in Ed.
 Sylvia Ragon
 Frederick Asmuth Reed
 Janise Wilson Rentchler
 Joseph Willard Ridings
 Benjamin Franklin Robertson, Jr.
 Laura Virginia Ruark
 Robert L. Sawyer
 J. Ewing Settle, Jr.
 Marion Mott Spencer
 Roy S. Stevens
 Dorothy Sutton
 Haruji Tawara
 Sarah Louise Thaxton
 Lloyd Francis Thomas
 Wilda Ruth Vehlow
 Jay Clark Waldron
 Erma Ruth Warren

Edward Howell Weatherly
Austin Marion Wilkinson
Edwin Moss Williams

Halliman P. Winsborough
Jean Herrin Winsborough, A. B.
Arthur Augustus Young

SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

1. *Degree of Bachelor of Science in Business Administration (B. S. in Bus. Admin.)*

Charles Merlin Barnes, Jr., A. B.
Rodney Day Beck
Wendell Walter Black
Alberta Briegel
Walter Thomas Carpenter
Turner B. Cox
John McNabb Deininger
John Davis Duncan
Alexander Wallace Easter
Arthur Allan Edwards
Donald Jerome Engleman
John William Graves
Arthur Evans Haggett
Walter Robert Hausmann
Sherlock Hibbs
Archibald Ritter Kasel
Clement Tallon Kelly
Robert Newton Laughlin
George Carver Motley

Theattus Ellis McIntosh
Walter Frank Olson
John Russell Peacher
Henry Rudolph Ponder
Ernest Owen Pulis
Hayden Maurice Robinette
Roy Shouse Rosier
Simon Rositzky
Moe W. Rothenberg
Robert William Russell
Helen Mary Schooley
Wayne Archie Sharp
Cecil Homer Smith
Earl Marion Solel
Kenneth Crane Taylor
John Francis Thomas
John Dysart Weidemeyer
Frederica Westfall
James Paul Wisegarver

2. *Degree of Bachelor of Science in Public Administration (B. S. in Pub. Admin.)*

Virginia Bamber
Blanche Olive Bardwell
Alice Lee Barrett
Daniel Robert Becker
Leo T. Hudson

Katherine Johnston
Corinne Kauffman McKenzie
Mary Lois Pyles
Esther Grace Severance
Ruth Thompson

SCHOOL OF MEDICINE

Bachelor of Science in Medicine (B. S. in Med.)

Greydon Gill Boyd, A. B.
Richard Lee Crouch, A. B.
Trenouth W. Edmonds
Paul Merrill Fuller, A. B.
Clyde Harrington Landers

Melvin Allen Mulvania, A. B.
Walter Allwein Ruch, A. B.
Baxter Wright Shelton, A. B.
Robert W. Southerland

SCHOOL OF FINE ARTS

Degree of Bachelor of Fine Arts (B. F. A.)

IN PIANO

Arthur Tillman Merritt, A. B., B. S. in Ed.

GRADUATE SCHOOL

1. *Degree of Master of Arts (A. M.)*

- Bower Aly, B. S. in Ed., *Southeast Missouri State Teachers College*
Education
- Nola Lee Anderson, B. S. in Ed.
Mathematics
- Clarence Louis Angerer, B. S. in Agr.
Agricultural Education
- Willard Francis Bailey, A. B.
Geology
- Roy Gilbert Bigelow, B. S. in Ed.,
Central Missouri State Teachers College
Education
- Edna Emilie Bothe, A. B., *Central Wesleyan College*
History
- Cleo Osborn Bounous, B. S. in Ed.,
Southwest Missouri State Teachers College
Education
- Joel Daniel Bounous, B. S. in Ed.,
Southwest Missouri State Teachers College
French
- Gladys Louise Brand, B. J.
Journalism
- Edward Arnold Burkhardt, Jr., A. B.
Pathology
- Joseph Marsh Clark, A. B.
Geology
- Virginia Lee Cole, B. J.
Journalism
- Gertrude Minnie Cope, B. S. in Ed.
Education
- Charles Calvin Crosswhite, B. S. in Ed.,
Central Missouri State Teachers College
Education
- Katharine Cravens Cullers, B. S. in Ed.,
Southwest Missouri State Teachers College
History
- Mary Morrow Derby, B. S. in Ed.
Education
- Miley Earl Downs, B. S. in Ed., *Northeast Missouri State Teachers College*
Political Science
- Nadah Epperson Eddins, B. S. in Ed.,
Northeast Missouri State Teachers College
History
- Nason Neill Duncan, A. B.
Geography
- Paul Po-Chi Fung, A. B., *Washburn College*
Journalism
- Raymond Loren Garnett, B. S. in Ed.
Education
- James Thomas Gibbs, Jr., B. S. in Agr.
Agricultural Education
- Aubrey Leon Glines, A. B.
Geology
- Lillian Secord Goucher, A. B.
Latin
- Cleo Griffith, A. B.
Chemistry
- Carl DeWitt Gum, B. S. in Ed., *South-east Missouri State Teachers College*
Education
- Lola Mae Hawkins, A. B., B. S. in Ed.
French
- Marion Frances Isely, A. B., *Texas Woman's College*
Zoology
- Josephine Johnston, A. B., B. S. in Ed.
English
- Donald Hugh Jones, B. J.
Journalism
- James Robert Kearney, Jr., B. J.
Journalism
- Walter David Keller, A. B.
Geology
- Mona Josephine Kelley, A. B.
Romance Languages
- Edna Kobs, A. B.
Botany
- Dale Homer Liese, A. B., *Central Wesleyan College*
Chemistry
- Richard Vincent Lott, B. S. in Agr.
Horticulture

- William Morrison McCall, A. B., *Westminster College*
Education
- Flossie Belle McDonnell, B. S. in Ed.
Education
- Winifred Mabry, B. S. in Ed., *Central Missouri State Teachers College*
Education
- Drexel Harland Martin, A. B., *William Jewel College*
Education
- Paul Dee Martin, B. S. in Ed.
Education
- Bessie Mae Meador, B. S. in Ed., *Southwest Missouri State Teachers College*
History
- Mary Catherine Moreland, B. S. in Agr.
Rural Sociology
- William Kyle Moseley, B. S. in Agr.
Dairy Husbandry
- Byron Dow Murray, A. B., *University of Missouri*, B. S. in Ed., *Northwest Missouri State Teachers College*
Education
- Elsa Louise Nagel, B. S. in Ed., *North-east Missouri State Teachers College*
History
- Louis James Needels, A. B.
Anatomy
- Fanny Pannill Nowlin, B. S. in Ed.
Latin
- Hikojiro Oshio, B. S. *Knox College*
Sociology
- Florence Cheerful Painter, B. S. in Ed., *Southwest Missouri State Teachers College*
Spanish
- Ola Mae Pennington, A. B., B. S. in Ed.
History
- Chester Julius Peters, A. B., B. S. in Ed.
Education
- Martha Mayfield Powell, B. S. in Ed.
Education
- Effie Russell, B. S. in Ed., *Southeast Missouri State Teachers College*
English
- Robert William Scanlan, B. S., *University of Illinois*
Soil
- Paul Owen Selby, B. S. in Ed., *North-east Missouri State Teachers College*
Education
- Myron August Spohrer, A. B., *Central Wesleyan College*
Political Science
- Margaret Burruss Squires, B. S. in Ed.
Rural Sociology
- Clyde W. Taylor, B. S. in Ed., *South-west Missouri State Teachers College*
Education
- Thomas Everett Vaughan, B. S. in Ed.
Education
- Nell Walker, A. B.
Spanish
- Hazel Marie Warshaw, B. S. in Bus.
Administration
- Spanish
- Orilla Werner, A. B., *Central College*
Physics
- Elizabeth Lee White, B. S. in Ed., *Central Missouri State Teachers College*
Education
- Chester Deward Whorton, A. B.
Geology
- Arthur Conrad Wilkening, B. S. in Ed., *Southeast Missouri State Teachers College*
Education
- Alma Beatrice Wilkinson, B. S. in Ed., *Central Missouri State Teachers College*
History
- Sadie Gertrude Winebrenner, A. B., B. S. in Ed.
English
- Farris Hardin Woods, A. B., *Central College*
Zoology
- William Henry Zeigel, Jr., B. S. in Ed., *North-east Missouri State Teachers College*
Education

2. Degree of Doctor of Philosophy (Ph. D.)

Finis Omer Duncan

A. M., University of Missouri

Dissertation: *An Extension of the Theory of Envelope*

Harold McCloskey Harshaw

B. S., University of Minnesota

M. S., University of Minnesota

Dissertation: *A study of the Nutrients Required by Mammals for Successful Reproduction*

John Francis Montague

B. S. in Ed., Southwest Missouri State Teachers College

A. M., University of Missouri

Dissertation: *Promotional Schemes in Secondary Schools*

Irl Thorpe Scott

B. S. in Agr., University of Missouri

A. M., University of Missouri

Dissertation: *Protein Analogies for the Mycelium of Fusarium locypersici*

Lucinda de Leftwich Templin

A. B., University of Missouri

B. S. in Ed., University of Missouri

A. M., University of Missouri

Dissertation: *A Sociological Survey of the Movement for the Higher Education of Women in Missouri*

THE HONORARY DEGREE OF DOCTOR OF LAWS (LL. D.)

1892

John Davison Lawson

1893

William Joel Stone

1894

William M. Bryant

Benjamin B. Minor

John James Tigert

1897

C. M. Hawkins (Doctor of Divinity)

Shepard Barclay

Andrew Walker McAlester

Paul Schweitzer

Lawrence Vest Stephens

1898

Elmer Bragg Adams

Dewitt C. Allen

Edwin Boone Craighead

James Britton Gantt

J. M. Greenwood

Frank G. Tyrell (Doctor of Divinity)

1899

Edwin Clay White

Howard Ayers

1901

Woodson Moss

1902

Robert Somers Brookings

Samuel Langhorne Clemens

Beverly Thomas Galloway

Ethan Allen Hitchcock

James Wilson

1903

Joseph Van Cleve Karnes

William Trelease

1904

Charles James Hughes

St. Clair McKelway

William Franklin Switzler

Hugh Gilzean-Reid

John Alexander Law Wadell

1905

Norman J. Colman

Edwin William Stephens

1906
John Green
Joseph Wingate Folk
Frederick Newton Judson

1907
Alexander Monroe Dockery
Frederick William Lehman
Frank Thilly
Gardiner Lathrop
William Keeney Bixby

1908
John Carleton Jones
L. M. Lawson
R. H. Richard
Albert Shaw

1909
Richard Henry Jesse
Charles William Eliot

1910
Herbert Spencer Hadley
James Hampton Kirkland
Daniel Sylvester Tuttle

1911
Edward Archibald Allen

1913
Paul Shorey

1914
David Franklin Houston
Cassins Jackson Keyser
Abbott Lawrence Lowell
William Mack

1917
Frederic Aldin Hall

1918
John William Withers

1919
Thomas Benton Catron
Edward Asahel Birge

1920
John Joseph Pershing
Enoch Herbert Crowder

1921
Jacob Gould Schurman
George Norlin
George Edward Kessler

1922
Charles Breckenridge Faris
Richard Lightburn Sutton

1923
Clarence Martin Jackson
Victor Clarence Vaughan

1924
Onward Bates
Carroll M. Davis
Michael Frederic Guyer
Thomas A. Johnston
Augustus Thomas

1925
Esme Howard
George Bannerman Dealey

1926
Robert E. Coontz
Robert Franklin Walker
Dwight Filley Davis
Jeremiah Wilson Sanborn
Hugh Lincoln Cooper
Joseph Marr Gwinn
Tsuneo Matsudaira

SCHOOL OF MEDICINE

Two-Year Certificates

Harry C. Griffiths
(as of the Class of 1925)

SCHOOL OF EDUCATION

1. *Certificate to Teach for Two Years*

Marion Frances Berry
Maurine Casady
Dorothy Louise Cheavens
Emily Murfee Chiles

Clara Demeter
Aline Kathleen Hillix
Ruth Frances Hurley
Marjorie Jones

Dorothy Lavina Knappenberger
 Laura M. Koetting
 Mary Margaret Lott
 Ada Celestia McHaney
 Maizie Mills
 Void Bodkin Null
 Louise Oliver
 Vadia Irene Rice
 Ivan Wesley Roark

Naomi Lee Sensintaffar
 Sewell Elias Slick
 Mildred Amelia Smallfeldt
 Helen Fry Thurman
 Mary Myrtle Tiffin
 Lena Mae Van Pelt
 Blanche Whitlow
 Ethel Kathryn Zachow

2. *Life Certificate to Teach*

Ella May Aldridge
 Clay Jefferson Anderson
 Alberta Andrews
 Aleen Deem Atkinson
 Helen Margaret Autrieth
 Virgil V. Bachtel
 Roberta Grace Baldridge
 Edna Lee Baskett
 Helen Agnes Beck
 Mary Brady Biggs
 Mary Agnes Booth
 Joseph Thomas Botts
 Harriett Boyle
 Minnie Pearl Bozarth
 Frances Fethers Brewer
 Ritchey Brinton
 Bessie E. Browne
 Frances Mildred Broyles
 Frances Ardenia Burch
 Leola Burford
 Elizabeth Helea Burrell
 Gerald McKinley Carney
 James E. Clark
 Florence Marie Cobb
 Julia Agnes Combs
 John Robert Cope
 Laura Frances Cottingham
 Judith Corinne Craig
 Lucille F. Crews
 Willie Crews
 Donald Harry Davidson
 Mary Frances Davidson
 Thelma Irene Davis
 Ruth DeLano
 Dorothy Dolan
 Edna Adelle Drew
 Allie Drymon
 Nason Neill Duncan
 Beulah Irene Ellis
 Dora E. Emmons
 Nellie Lee Evans
 Estelle Thekla Farrar

Helen Marie Fenimore
 Catherine Fox
 Frances Marie Frazer
 Dorothy Frances Friedrich
 Anne Rufina Gantz
 Mary Virginia Garner
 Nancy Mary Gibbs
 Ruth Gillaspy
 Ruth Elizabeth Graves
 Gertrude Graham
 Carolyn Susan Gray
 Mary Dorothy Halcomb
 Kathleen Hardesty
 Alice Elizabeth Hargus
 Helen Louise Harrison
 Elizabeth Hale Henry
 Catherine May Hicks
 Opal L. Hill
 Margaret Hilliker
 Ruth Ann Houck Sleeper
 Zelma L. House
 James Sullivan Howe
 Lynn Ellis Hummel
 Louellen Husman
 Ida Belle Husted
 Helen Clare Jacobi
 Karin E. Jansson
 Edna Marie Johnson
 Mary M. Johnston
 Emily Browning Joslyn
 Kermit Samuel Keller
 Eugene L. Kelly
 Ruth Lee Kelly
 William Beatie Kuhne (Deceased)
 Robert Joseph Lackey
 Rena Merle Lay
 Marion L. Lehr
 Madge Widner Lewis
 Sarah Louise Lynch
 Leona E. Lindenmeyer
 Catherine I. Lorenz
 Laura Lorine Loyd

Lois Luckhardt
 Lenore Barnard McCulloch
 Ruth McDaniel
 Alice Elizabeth McFarland
 Victor J. Marsh
 Hazel Anne Marvin
 Ellen Kathryn Maupin
 Virginia Meierhoffer
 Marian Melvin
 Dixie Miller
 Florence A. Miller
 Marie Margaret Mistele
 Ann Mitchell
 Mildred Keith Nelson
 Ruth Alice Nicholson
 Ola Mae Norris
 Louise Nowell
 Margaret Nowell
 Margaret Ellen Paynter
 Olive Pemberton
 Susan G. Peter
 Gerald McKinney Petty
 Rubey A. Petty
 Nellie W. Pollock
 Eunice Ratekin Potter
 Margaret C. Prather
 Theodosia Catheryn Prichard
 Mary Emily Pryor
 Mary Kelso Quisenberry
 Marian Frances Ragland
 Nancy Suerena Reading
 Leona Reid
 Esther Elizabeth Reilly
 Doris Rhodes
 Mary Helen Rippey
 Allie Robertson

Dorothy D. Roney
 Lucille Rothgeb
 Irene Sanders
 Dorothy Margaret Sappington
 Nellie Saville
 Rose Savonovsky
 Ruth M. Schmidt
 Nelle L. Shelton
 Jessie Margaret Simeral
 Ruby Hirni Smith
 Margaret Lee Smoot
 Mary Belle Stacy
 Helen Mason Steers
 Letha Strickler
 Arthur Nesbitt Stunz
 Olivette Tacke
 Elisabeth Statira Talbert
 Rosemary Thickett
 Helen Marie Thomure
 Helen Inez Thrash
 Mary Delora Tiller
 Mabel Steere Vanatta
 Irene Mary Voigt
 Geraldine Margaret Walker
 Myrtle Lillian Walters
 Irma Adell Warren
 Elsie Anna Wease
 Florannah A. Welsh
 Elizabeth Baker White
 Chaney Orton Williams
 Margaret Houx Williams
 Martha Elizabeth Williams
 Fayne Harriett Witherup
 Elizabeth Worrell
 Verna Mary Wulferkammer
 Ruby Louise Young

August 1, 1926

DEGREES

COLLEGE OF ARTS AND SCIENCE

Degree of Bachelor of Arts (A. B.) With Distinction.

IN ENGLISH:

Bernice Lucile Leech
 Dennis Lorin Murphy

IN ECONOMICS:

August Maffry

Degree of Bachelor of Arts (A. B.)

Hartley Garrard Banks
 Blanche Olive Bardwell, B. S. in Pub.
 Adm.
 Clemens Christian Alexander Beels

Irma Webb Brown
 George Harold Calvert
 Jack Harmsberger Cromwell
 Robert Ewing Dallmeyer

Jesse Walter Driver
 Rafael de la Espriella
 James Hedges Forsee
 Shapleigh Gardom Gray
 Henry Herman Helmkamp
 Helen Powell James
 Clella Louise Jenkins
 Katherine Johnston, B. S. in Pub.
 Adm.

Verna Lucinda Leech
 Dorothy Fellows Mayes
 Willa Ferne Meador
 Clotilde Rae Peitz
 Eulalie Reading
 Leon Akers Taylor
 Jewell F. Venter
 Frances Whiteside
 Myrtle Louise Wolff

COLLEGE OF AGRICULTURE

Degree of Bachelor of Science in Agriculture (B. S. in Agr.)

Cecil Noland Davis
 Curtis E. Grace
 Clarence Russell Grigsby
 Felix Edward Lacey
 Earle Forrest Low

Roy Maurice Luyster
 Joseph Clayton Moore
 Earl Noel McCubbin
 James Henry Thompson

Degree of Bachelor of Science in Home Economics (B. S. in Home Ec.)

Martha Louise White

SCHOOL OF EDUCATION

Degree of Bachelor of Science in Education (B. S. in Ed.)

Vida Naomi Adams
 Ruth Taylor Alloway
 Helen Esther Andrews
 Helen Mardele Aston
 Thurman Holt Bare
 Hazel Brown Baskett, A. B.
 Minnie G. Berry
 Ruby Blossom Boettler
 Dorothy K. Bradfield
 Theodore Clemens
 Edna Irene Cole
 Edgar Wesley Collins
 Margaret A. Crecelius
 Susie Howard Crockett
 Vera Cropper
 Agnes Helen Cuthbertson
 Mary Elizabeth Dillingham
 William Silas Drace
 George Mooney Duncan
 Helen Mary Catherine Enright
 Polly Fink, A. B.
 Ruth Elizabeth Fisher
 Gladys Florence Foster
 Mary Noe Fountain, A. B.
 Ruth Kathryn Fulkerson
 Grace Galbreath

Mildred Grace Gartin
 George H. Harrah
 Naomi D. Hawley
 Mary Jane Hilliker
 Mary Katherine Horine, A. B., B. J.
 Maxie Louise Horner, A. B.
 Victor M. Houston
 Minta Elizabeth Jacobs
 Eunice Irene Johns
 Elizabeth Kendrick
 Margaret Kirkpatrick
 Leona Kuntz
 Roy Aubrey Lathrop
 Merle Davidson Leach
 Esther Gladys Leech
 Verna Lucinda Leech
 Katie Hawk LeFever
 Edith Louisa LeHew
 Ruth Burton Leusley
 Elva Lora Liter
 Nadine Longshore
 Christine Bradford Melcher
 Harriet Lucile Meranda
 Elizabeth Bryan Miltenberger
 Ruth Augusta Morgan
 Ellison Morris

Nadine Nichols	Florence Almyra Sherwood
Mary Frances Noel	Phoebe Burney Shouse, A. B.
William Miles Oakerson	Howard William Smith
Virginia Ownbey	Gertrude T. Soash
Virginia Pepper	Julia Lurena Southard
Alberta Briegel Ponder, B. S. in Bus. Adm.	Cyrus A. Stauber, B. S. in Agr.
Alice Elizabeth Prichard, A. B.	Pauline Elizabeth Stoner
Sidney Albert Richmond, A. B.	Bethany Witt Studebaker
Georgie Wilkins Robinson	Mayme Eleanor Walters
Jessie Schaper	Florence Gertrude Woods
Leona Skidmore Sewell	Roy Lee Wright
	Ruby Louise Young

SCHOOL OF JOURNALISM

Degree of Bachelor of Journalism (B. J.)

Edward Boyd	Sam Burnett McCool, A. B.
Vera Elizabeth Christensen	Philip Ray Pond, A. B.
Jack C. Coffey, Jr.	Benjamin Franklin Reno
Ethline Coleman, A. B., A. M.	Harry B. Rutledge
Sarah Isabelle Lowis	George Alfred Trenholm, Jr.
Alma DeMoss Moore	Frank Witten

SCHOOL OF ENGINEERING

Degree of Bachelor of Science in Engineering (B. S. in Eng.)

James Crawford Dowell	Roy Morton McQuitty
-----------------------	---------------------

SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

(Degree of Bachelor of Science in Business Administration (B. S. in Bus. Admin.))

Zera Z. Baker	Nathan Hale O'Byrne
Walter Blankenship	William Edmund Pemberton
Stephen Bedford Burks	Fielding Parker Sizer, Jr.
Paul Sample Gilleland	Frank Ebenezer Whyte
Julian Howard Hayden	

Degree of Bachelor of Science in Public Administration (B. S. in Pub. Admin.)

Helen Margaret Douglass	Florence Greening
Alpha Loraine Rodenberger	

SCHOOL OF MEDICINE

1. <i>Graduate Nurse (G. N.)</i>	2. <i>Bachelor of Science in Medicine (B. S. in Med.)</i>
JEWELL WOODY	CRAIG B. JOHNSON

GRADUATE SCHOOL

1. *Degree of Master of Arts (A. M.)*

Lawrence Babb, A. B., B. J. English	Finis Ewing Engleman, B. S. in Ed., <i>Southwest Missouri State Teachers College</i> Education
Annette Betz, A. B., B. S. in Ed. Education	Clyde Evan Evans, Ph. B., <i>Dakota Wesleyan University</i> Education
Stephen Blackhurst, B. S. in Ed., <i>Northeast Missouri State Teachers College</i> Education	Leta Mariner Evans, A. B., <i>Dakota Wesleyan University</i> Education
Joseph Archibald Burnside, B. S. in Ed. Education	Robert Crump Fields, A. B. History
Jesse Lee Campbell, B. S. in Agr. Agricultural Education	Mary Lewis Flood, B. S. in Ed. Education
Catherine Elizabeth Clarahan, B. S. in Ed. History	Warren Gifford, B. S. in Agr., <i>Uni- versity of West Virginia</i> Dairy Husbandry
Frances Cleveland Cole, A. B., B. S. in Ed. Education	Lev-Ellen Clark Gilliam, B. S. in Ed. Education
Leslie Marvin Cook, B. S. in Ed., <i>Central Missouri State Teachers Col- lege</i> Education	Ida Ellen Graham, B. S. in Ed. Geography
Esther Marshall Cowan, A. B., B. S. in Ed. Education	D. Oty Groce, A. B., B. S. in Ed., <i>Central Missouri State Teachers Col- lege</i> Education
Nellie Crockett, B. S. in Ed. History	David Ulmo Groce, B. S. in Ed. Education
Luther Vincent Crookshank, B. S. in Ed., <i>Northeast Missouri State Teach- ers College</i> Education	William Roy Groce, B. S. in Ed., <i>Central Missouri State Teachers Col- lege</i> Education
Florence Baxter Currie B. L., <i>Mil- waukee-Downer College</i> , B. L. S., <i>Uni- versity of Illinois</i> History	Guy Gum, B. S. in Ed., <i>Southwest Missouri State Teachers College</i> History
Alva Rhoten Curry, B. S. in Ed. Education	Millard Martin Halter, A. B., <i>Central Wesleyan College</i> Education
Fred Bruner Dixon, B. S. in Ed. Education	Robert Valentine Harman, A. B., <i>William Jewell College</i> Education
Sister Anna Mechtilda Dolin, A. B. Latin	Mary Ann Hatton, A. B., B. S. in Ed. English
Author Hamner Eddins, B. S. in Agr. Field Crops	Mayme Yancey Hawkins, B. S. in Ed. English

- Wilhelmina Augusta Herwig, A. B.,
B. S. in Ed.
English
- William Henry Hessler, A. B., *Ohio Wesleyan University*
Political Science
- Anna Lyle Hill, B. S. in Ed.
History
- Leland Thornton Hoback, A. B., B. S. in Ed., *Central Missouri State Teachers College*
English
- Alva Leon Holt, B. S. in Ed., *North-east Missouri State Teachers College*
Education
- Roberta Lee Howell, B. S. in Ed., B. J.
Journalism
- Mildred Hudson, B. S. in Ed.
English
- Courtney Jackson, B. S. in Ed.
History
- Mary Polk Jesse, A. B., B. S. in Ed.
Education
- James Richard Johnson, B. S. in Ed.,
Northeast Missouri State Teachers College
Chemistry
- Harriett Durham Lawrence, B. S. in Ed.
Education
- Charles August Leker, A. B., *Park College*
Education
- William Raimen Lowry, B. S. in Ed.
Education
- Arthur Ellsworth Martin, B. S. in Ed.
Education
- Maurine Mays, B. S. in Ed.
Spanish
- Stella Sexton Meyer, A. B.
Spanish
- Harold M. Morrow, A. B., B. S. in Ed.
Southwest Missouri State Teachers College
Rural Life
- Anita Rosemil Mueller, B. J.
Journalism
- Marion McKinley Myers, A. B., *Central Wesleyan College*
Sociology
- Barbara Philippa McCarthy, A. B.,
Brown University
Archeology
- Mary Ann McDonald, B. S. in Ed.
Education
- Maynard Lee McDowell, A. B., *Central College*
Chemistry
- Delta May Neville, A. B., *Missouri Valley College*
Education
- Lena Lacey Notson, A. B.
English
- William Isaac Oliver, B. S. in Ed.
Education
- Albert Ollar, B. S. in Ed.
Chemistry
- Andrew Demar Pierson, B. S. in Ed.
Mathematics
- Joseph Gilbert Pummill, B. S. in Ed.
Education
- Irene Rhodes, B. S. in Ed.
French
- James Burton Rogers, B. S. in Ed.,
Northeast Missouri State Teachers College
Education
- Edwin H. Sanguinet, B. S. in Ed.
Education
- Eugene Webster Sharp, A. B., *Princeton University*, B. J., *University of Missouri*
Journalism
- George Simpson, B. S. in Ed.
Physics
- Helen Louise Slater, B. J.
Journalism
- Robert Morris Smith, B. S. in Agr.
Poultry Husbandry
- Florence Edna St. Clair, B. S. in Ed.
Education
- Joseph James Stone, B. S. in Ed.
Education
- Eugene Thomas Stout, B. J.
History
- Eugene Biswell Street, A. B., *William Jewell College*
Education

Charles William Wallace, B. S. in Ed. <i>Northwest Missouri State Teachers College</i> Education	Arthur Miller Wilson, B. S. A., <i>Uni- versity of Saskatchewan</i> Soils
Gilbert Raymond Watson, A. B., <i>Wil- liam Jewell College</i> Education	Fannie Esther Wilson, A. B., <i>Missouri Wesleyan College</i> , B. S. in Ed., <i>North- west Missouri State Teachers College</i> Education
Milton Wesley Weiffenbach, A. B., <i>Central Wesleyan College</i> Sociology	Berley Winton, B. S. in Agr., <i>University of Kentucky</i> Poultry Husbandry
Forrest Western, A. B., <i>Central College</i> Physics	

2. *Degree of Doctor of Philosophy (Ph. D.)*

John Ashton

B. S. in Agr., Texas Agricultural and Mechanical College

A. M., University of Missouri

Subject of Dissertation: *The Historical Investigation of Five European Breeds
of Cattle, with Special Reference to the Influences of Environmental Fac-
tors on Growth and Development.*

Roy Asa Crouch

A. B., Iowa State Teachers College

A. M., University of Iowa

Subject of Dissertation: *The Status of the Elementary School Principal.*

John William Diefendorf

B. S. in Ed., Central Missouri State Teachers College

A. M., University of Missouri

Subject of Dissertation: *Vocational and Trait Analysis of the High School
Teacher.*

Harry Lee Foster

A. B., A. M., Central College

A. M., University of Missouri

Subject of Dissertation: *A County School Organization for Missouri.*

SCHOOL OF EDUCATION

1. *Certificate to Teach for Two Years*

Leola Bishop, A. B.
Grace Allen Boehner
Della Douglas
Gladys Fife
Maud Sanford Fry
Mary Helen Inskeep
William Harry Justice
Margaret Lilly
Katie Hawk LeFever

Elizabeth G. McCluer
Marjorie McHugh
Marjorie M. Newton
Mary Louise Ray
Rachel Audrey Renfrow
Rita Woodside Smith
Marjorie Sneed
Effie M. Stephens
Grace Stumpe

2. *Life Certificate to Teach*

Vida Naomi Adams	Merle Davidson Leach
Ruth Taylor Alloway	Esther Gladys Leech
Helen Esther Andrews	Verna Lucinda Leech
Helen Mardele Aston	Edith Louisa LeHew
Thurman Holt Bare	Ruth Burton Leusley
Hazel Brown Baskett, A. B.	Elva Lora Liter
Minnie G. Berry	Nadine Longshore
Ruby Blossom Boettler	Christine Bradford Melcher
Dorothy K. Bradfield	Harriet Lucile Meranda
Theodore Clemens	Elizabeth Bryan Miltenberger
Edna Irene Cole	Ruth Augusta Morgan
Edgar W. Collins	Ellson Morris
Margaret A. Crecelius	Nadine Nichols
Susie Howard Crockett	Mary Frances Noel
Vera Cropper	Void B. Null
Agnes Helen Cuthbertson	William Miles Oakerson
Mary Elizabeth Dillingham	Virginia Ownbey
William Silas Drace	Virginia Pepper
George Mooney Duncan	Alberta Briegel Ponder, B. S. in Bus. Adm.
Helen Mary Catherine Enright	Alice Elizabeth Prichard, A. B.
Polly Fink, A. B.	Sidney Albert Richmond, A. B.
Ruth Elizabeth Fisher	Georgie Wilkins Robinson
Gladys Florence Foster	Jessie Schaper
Mary Noe Fountain, A. B.	Wava Muriel Scott, B. S. in Ed.
Ruth Kathryn Fulkerson	Leona Skidmore Sewell
Grace Galbreath	Florence Almyra Sherwood
Mildred Grace Gartin	Phoebe Burney Shouse, A. B.
George H. Harrah	Howard William Smith
Naomi D. Hawley	Gertrude T. Soash
Mary Jane Hilliker	Julia Lurena Southard
Mary Katherine Horine, A. B., B. J.	Cyrus Avery Stauber, B. S. in Agr.
Maxie Louise Horner, A. B.	Pauline Elizabeth Stoner
Victor M. Houston	Bethany Witt Studebaker
Minta Elizabeth Jacobs	Mayme Eleanor Walters
Eunice Irene Johns	Florence Gertrude Woods
Elizabeth Kendrick	Roy Lee Wright
Margaret Kirkpatrick	
Leona Kuntz	

SCHOOL OF MINES AND METALLURGY
(at Rolla)

June 5, 1926

DEGREES

Bachelor of Science in Mine Engineering

Bernard Degen Boyd	Ray Eustace Kollar
Kirk Vern Cammack	Mike Alford Ledford
Charles Dewey Craig	Edward Martin Lindenau
Samuel Edward Craig	Hollis Eugene McBride
James Donald Crawford	James Power Moore
Allan Victor Doster	Gerald Henry Pett
Erwin Gammeter	John Atwood Rood
Donald Norval Griffin	Durward Rice Schooler
Edward Harvey Griswold	W. Irwin Short
Charles Thompson Jones	Charless Cabanne Smith
Roy Ellsworth Keim	Guy William Staples
Paul Dean Kern	Morris Lee Tyrrell

Bachelor of Science in Metallurgy

Elmer Gammeter	Paul Dean Scott
Robert Karl Miller	

Bachelor of Science in Civil Engineering

Harry Chaffee Birchard	William Lyman Miller
Walter Angelo Burg	Harold Arthur Murphy
Ernest Wilson Carlson	Walter John Shaffer
Daniel Boone Jett	Paul Avery Smith
Daniel Kennedy	Ronald McGlashon White

Bachelor of Science in General Science

Wilbur Dixon East	Harold Scott Thomas
Jack William Nolen	Millard Kersey Underwood
Nadine Matock Sease	

Bachelor of Science in Mechanical Engineering

Clair Ailey Anderson

Bachelor of Science in Electrical Engineering

Thomas Cecil Adecock	Dryden Hodge
James Dillon Behnke	Wilbur Jay Moulder
Miguel A. Franco	Bennett Reginald Thompson

Bachelor of Science in Chemical Engineering

Albert Leonard Bradt
Bernard Michael Costello
William Godwin
Rodney Richmond Hickman

Edmond Carl Hunze
John Warren Merrill
Joseph Maple Wilson, Jr.

Master of Science

Wei-Tung Hu, E. M., Michigan College of Mines
Thesis, "Comparative Value of Various Grog Materials for the Manufacture of Zinc Retorts."
Robert Gibson O'Meara, B. S. South Dakota School of Mines
Thesis, "Specific Gravity of Some of the Southeast Missouri Lead Ores and Tailings."

Master of Science in Metallurgy

Ira Nathan Goff, Ph. B. Brown University
Thesis, "The Electrothermic Dry Distillation of Zinc."
Richard Elkanah Sears, B. S. Case School of Applied Science.
Thesis, "The Properties of Refractories in Zinc Metallurgy. Part III. Comparison of Various Clays."

Master of Science in Chemical Engineering

Bertie Lee Browning, B. S. Missouri School of Mines and Metallurgy. (*Cum Laude*)
Thesis, "A Study of Electrothermic Methods for Determining Selenium and Tellurium."
Frederich Adam Weirich, B. S. Missouri School of Mines and Metallurgy
Thesis, "A Study of the Reduction of Zinc Oxide by Hydrogen and Methane."

Engineer of Mines

George Elmer Abernathy, B. S. '14, M. S. M., and M. S., University of Kansas
Harry Herbert Hughes, B. S. '22, M. S. M.
Paul Donovan Windsor, B. S. '22, M. S. M.

SUMMARY, ENROLLMENT BY DIVISIONS

JUNE 1, 1926 TO JUNE 1, 1927

	<i>Men Women</i>		<i>Total</i>		<i>Total</i>
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	
College of Agriculture { Four-Year Curricula.	305	76	392	78	470
{ Two-Year Winter Course	87	2			
College of Arts and Science			1,429	819	2,248
School of Business and Public Administration			175	29	204
School of Education	118	717	237	1,002	1,239
*Summer Session for Teachers					
Collegiate	88	215			
Sub-Collegiate	31	70			
College of Engineering			456	0	456
School of Fine Arts			33	93	126
Graduate School			483	320	803
School of Journalism			181	131	312
School of Law			145	1	146
School of Medicine			86	3	89
School of Mines and Metallurgy (at Rolla)			418	24	442
Total Net Collegiate Enrollment			3,792	2,337	6,129
Total Net Non-Collegiate Enrollment			118	72	190
Total Net Enrollment (Resident)			3,910	2,409	6,319
Extension Division (Non-resident) June 1, 1925 to June 1, 1926					3,467

*A branch summer session conducted by the University at Rolla.

INDEX TO CATALOG, 1926-1927

—A—

Accredited schools, 40-47.
 Accredited junior colleges, 39.
 Administration, Officers of Instruction and.
 10-26.
 Admission (also see Entrance), 32-47.
 Acceptance of credits, 36.
 Agriculture, 32.
 Arts and Science, 32.
 by certificate, 35.
 Business and Public Administration, 33.
 Conditions, 34.
 Education, 33.
 Engineering, 32.
 Fine Arts, 32.
 from accredited junior colleges, 37.
 from accredited schools, 40.
 from teachers' colleges in other states, 37.
 from other colleges and universities, 36.
 from state teachers' colleges, 36.
 Graduate School, 34
 Hearers, 37
 Journalism, 33
 Mines and Metallurgy, 33
 Special students, 37
 Subjects accepted for, 35
 Advanced standing, 35
 Advertising, 287
 Agricultural Chemistry, 243
 Agricultural Economics, 244
 Agricultural Engineering, 245
 Agricultural Experiment Station, 134-136
 Agricultural Extension Service, 137-141
 Agricultural Journalism, 129, 130, 289
 Agriculture, College of, 113
 Methods in, 265
 Vocational, 121
 Aid to Students, 48-65
 Alumni Association, 88
 Anatomy and Histology, 246
 Animal Husbandry, 247
 Archaeology, classical, 256
 Museum of, 256
 Arts, School of Fine, 178
 Art, History of, 256
 Art, Theory and Practice of, 248
 Artillery, Field, 228-231, 296
 Arts and Science, College of, 94
 Assembly, University, 87
 Astronomy, 251
 Athletics,
 at Rolla, 218
 Fields, 30

—B—

Bacteriology and preventive medicine, 295
 Band, University, 230
 Bible College of Missouri, 251
 Board, 62

Board of Curators, 9
 Board, Eighty-third Report to the Governor,
 7
 Board of Visitors, 9
 Books, loan of, 29
 Botany, 253
 Buildings,
 Agriculture, 114
 Engineering, 166
 School of Mines, 219
 University, at Columbia, 28
 Business and Public Administration, School
 of, 142

—C—

Cafeteria, University, 62
 Calendar, University, 1927-1928, 3, 4
 Certificates and degrees,
 Commencement, 320
 Medical, 330
 to teach, life, 330, 331
 Two-year, 320, 337
 Chemical engineering, 254
 Chemistry, 254
 Churches, 86
 Citizenship, 256
 Civil engineering, 167, 169, 268
 Curricula in, 173
 at Rolla, 219, 225
 Classical archaeology,
 Course in, 256
 Museum of, 256
 Clinical medicine and surgery, 257
 College of,
 Agriculture, 113-141
 Arts and Science, 94-112
 Engineering, 166-177
 Commencement, 92
 Co-operative store, 88
 Corporation, 9
 Correspondence courses, 232
 Credits, explanation of, 92
 Credits, acceptance of additional, 35
 Curators, Board of, 9
 Curators, Eighty-third Report to the Gov-
 ernor, 7, 8
 Curricula,
 Agriculture, College of, 118-133
 Agriculture for men, 119-120
 Agriculture for women, 123
 Business and Public Administration, 143-146
 Engineering, 171-175
 Law, 205-206
 Medicine, 212-214
 Mines and Metallurgy, 225-226
 Two-year winter Agriculture course, 131
 Vocational agriculture, 121
 Vocational home economics, 162

—D—

Dairy Husbandry, 257
 Dairy manufacture, 132
 Debating league scholarship, 83
 Debating material, 238
 Degrees and certificates, 92
 Degrees and certificates, Commencement, 1926
 at Columbia, 320
 at Rolla, 339
 Delinquent students, 92
 Departmental fees, 50-60
 Design, mechanical engineering, 271
 Discipline, 86
 Dormitory for men, 61
 Dormitory for women, 61
 Drafting rooms, 29

—E—

Economics and Commerce, 259
 Editorial courses, 287
 Education, courses in, 261, 267
 School of, 147-165
 Elective system, 94
 Electives, Arts and Science, 108
 Electrical engineering, 167, 170, 174, 270
 Elementary School, University, 149
 Elimination of delinquent students, 92
 Employment bureaus, 63
 Engineering,
 agricultural, 166, 169, 171, 245
 chemical, 166, 169, 172, 254
 civil, 167, 169, 173, 268
 design, 271
 electrical, 167, 170, 174, 270
 hydraulic, 269
 industrial, 272
 mechanical, 271
 municipal, 269
 power, 273
 railway, 268
 structural, 268
 testing and experimental, 272
 topographical, 268
 Engineering Experiment Station, 176, 177
 Engineering, College of, 166-175
 English, Arts, 273
 English requirements,
 Arts and Science, 111
 Journalism, 200
 Endowment, Agricultural, 113
 Enrollment, summary of, 341
 Enrollment, by divisions, 341
 Entomology, 276
 Entrance (also see Admission), 32-47
 Communications, 32
 Conditions, 34
 Examinations, 36
 New Students, 38
 Equipment, 28-30
 Agriculture, 117
 Education, 148
 Engineering, 166
 Law, 202
 Medicine, 208
 Military, 230, 231
 Rolla, 218

Examinations,
 Entrance, 36
 Explanation, 91
 Time of, 36
 Excursions,
 Agricultural, 118
 School of Mines, 222
 Executive Board at Columbia, 9
 Executive Committee at Rolla, 9
 Exemption from fees, 49
 Expenses, estimated,
 at Columbia, 62
 at Rolla, 221
 Experiment stations,
 Agriculture, 134-136
 Engineering, 176, 177
 Extension centers, 235
 Extension,
 division, 232-240
 Agriculture, 137-141
 lectures, 236

—F—

Faculty (also see Officers),
 University, 10-26
 Farmers' Week, short course, 133
 Fees,
 at Rolla, 221
 Correspondence courses, 232
 Departmental, 49-60
 Diploma, 48
 Late registration, 48
 Library, hospital and incidental, 48
 non-resident students, 48
 Refund of, 49
 Fellows, 66
 Fellowships, scholarships and prizes, 66-84
 Field Crops, 277
 Films, 238
 Fine Arts, School of, 178
 Fraternities, 86
 French, 278

—G—

General information, 27-31
 Geology, 279
 Geology and Mineralogy (at Rolla), 218-227
 Geography, 279
 Germanic languages, 280
 Government, students, 85-89
 Grading, 91
 Graduate curriculum,
 for engineers at Rolla, 224
 in metallurgy, 225
 in mine engineering, 225
 Graduate School, 191-197
 Graduation, requirements for
 Agriculture, 119
 Arts and Science, 94
 Business and Public Administration, 143
 Education, 152
 Engineering, 168
 Graduate, 192
 Journalism, 199
 Law, 205
 Mines, 224

Greek, 281
 Gregory Educational Fund, 63
 Grounds,
 at Columbia, 28
 at Rolla, 218
 Gymnasiums,
 at Columbia, 26
 at Rolla, 218

—H—

Hearers, 37
 Hendrix Hall, 61
 High School, University, 149
 High schools, accredited, 40-47
 Historical statement, 27
 History courses, 282
 Home economics, 283
 Methods in, 265
 Vocational, 162
 Honor graduates, admission,
 from Missouri College Union, 80
 from state teachers' colleges, 80
 from secondary schools, 81
 from accredited junior colleges, 81
 Honors and prizes in law, 203
 Horticulture, 285
 Hospital,
 care, 65
 fee, 48
 Parker Memorial, 215
 Hour, definition, 90
 number of, 90
 Hydraulic engineering, 269
 Hygiene and Student Health (Rolla), 222

—I—

Industrial Education, 266
 Industrial engineering, 272
 Information, general, 27-31
 Instructors, 10-23
 Italian, 278
 Illustration, newspaper, 289

—J—

Junior colleges, accredited, 40
 Honor graduate scholarships, 81
 Journalism, School of, 198-201
 Agriculture, 289
 Courses in, 287

—K—

Knights of Columbus Home, 61, 87

—L—

Laboratories,
 Agricultural, 115-117
 at Columbia, 29
 at Rolla, 219-221
 Engineering, 166-168
 Medical, 208
 Languages,
 English, 273
 Germanic, 280
 Greek, 281
 Latin, 290
 Lantern slides, 238
 Latin, 290

Law, School of, 202-207
 Courses in, 291
 Curriculum in, 205
 Law series bulletins, 206
 Libraries,
 at Columbia, 29
 at Rolla, 219
 Library fee, 48
 Livestock equipment, 117
 Location,
 Columbia, 28
 Rolla, 218
 Lodging, 62

—M—

Majors and Minors, 94
 Masonic Home Scholarships, 83
 Master of Arts, 192
 Materials of construction, 269
 Material for extension use, 237
 Mathematics, 294
 Mechanical engineering, 167, 170, 171, 175,
 271
 Mechanics, 273
 Medals, 78
 Medical attention, 65
 Medical bacteriology, 295
 Medicine, School of, 208-215
 Memorial Hospital, Parker, 215-217
 Meteorology, 296
 Methods,
 in Agriculture, 265
 in Home Economics, 265
 in Industrial Education, 266
 Military School (Military Science),
 Courses in, 296
 Credit for, 228
 Required work, 228
 Statement, 228-231
 Mines and Metallurgy, School of, 218-227
 Mining curriculum, 225
 Missouri College Union, honor graduate
 scholarships, 80
 Missouri Union, 88
 Missouri State Military School, 228-231
 Municipal engineering, 269
 Municipal reference bureau, 239
 Museums, 29
 Music, 297

—N—

New Students, 38
 News writing, 287
 Nurses, School for, 215
 Preliminary course for, 217

—O—

Officers of Board of Curators, 9
 Officers of Instruction and Administration,
 Full list, 10-26
 Organization, 27

—P—

Parker Memorial Hospital, 215-217
 Pathology, 302
 Pharmacology, 307
 Philosophy, 303

Physical education,
 Courses in, 303
 Required work, 91
 Physician, University, 65
 Physics,
 Arts and Science, 306
 Physiology and pharmacology, 307
 Points, definition of,
 Arts and Science, 94
 Business and Public Administration, 143
 Law, 205
 Political science and public law, 308
 Poultry husbandry, 310
 Power application, 273
 Power engineering, 273
 Preventive medicine, 295
 Prizes,
 Agricultural Journalism Award, 78
 Chi Omega, 75
 Delta Theta Phi, 77
 Delta Sigma Pi, 75
 Dramatic Arts Club, 77
 Homer Croy, 76
 James A. Gibson Athletic Scholarship
 Trophy, 77
 Military, 76
 Norris Athletic Trophy, 75
 Pi Mu Epsilon Prize, 78
 Special Distinction Award, 76
 William Mack, 75
 William J. Bryan, 74
 Psychology, 311
 Educational, 261
 Publications, 31
 Public health laboratory, 208

—R—

Railway engineering, 268
 Read Hall, 61
 Recommendations, Committee on, 150
 Refund of fees, 49
 Registration,
 Fees, 48
 Late, 48
 New Students, 38
 Time of, 38
 Regulations governing student activities, 85
 Regulations, grades and degrees, 90
 Religious influences, 86
 Reports to parents, 92
 Reporting, 287
 R. O. T. C., 228
 Residence requirements,
 in Arts and Science, 112
 In Education, 151
 Rolla, School of Mines, 218-227
 Rollins Aid Fund, 63
 Rooms, 60
 Cost, 61
 Deposits, 62
 for women, 61
 Private, 62
 Regulations of, 60
 Rent, 60
 Rural Sociology, 311

—S—

Scholars, University, 66
 Scholarships and fellowships, 66
 Agricultural research, 67
 American citizenship, 69
 Isaac Hinton Brown, 72
 Clarence Clinton Crouch, 74
 Curators, 79
 Debating, 83
 Missouri Engineers of Chicago, 73
 Eugene Field, 71
 Frank P. Blair, 69
 General, 84
 Graduate, 80
 Gregory, 66
 Senior, 66
 Harry Tidd, 73
 Interscholastic, 83
 J. L. Torrey, 71
 James S. Rollins, 72
 John W. Jewell, 71
 Karnes, 72
 Masonic Home, 83
 Music, 74, 83
 Odd Fellows' Home, 83
 Peabody, 66
 Rhodes Clay, 70
 S. H. Ford, 72
 Teaching Fellowship, 68
 United Daughters of Confederacy, 70
 University, 66
 Jonas Viles, Jr., 74
 William Volker, 67
 School of,
 Business and Public Administration, 142
 146
 Education, 147-165
 Fine Arts, 178-190
 Graduate, 191-197
 Journalism, 198-201
 Law, 202-207
 Medicine, 208-217
 Mines and Metallurgy, 218-227
 Nurses, 215-217
 School supervision, 263
 Secondary schools, honor graduates from,
 81
 Short course in agriculture,
 for farmers, 131
 for women, 131
 Two-year Winter, 131
 Societies,
 Fraternalities and Sororities, 86
 Literary and scientific, 86
 Honorary, 86
 Sociology, 313
 Soils, 315
 Sororities, 86
 Spanish, 316
 Special students, 37
 State Military School, 228-231
 Structural engineering, 268
 Student activities,
 Regulations governing, 85

Students,
 summary of enrollment, 341
 Studies, regulation of, 90
 Extension division, 90
 number of hours, 90
 other divisions, 90
 Summer Session, 240
 Surgery, clinical medicine and, 257

—T—

Teachers, recommendation of, 150
 Teaching Fellowships, 68
 Testing and experimental engineering, 272
 Topographical engineering, 268
 Tuition, 48
 Two-year Winter Course in Agriculture, 131

—U—

Uniforms, military, 229
 Union, Missouri, 88
 University calendar,
 at Columbia, 3
 at Rolla, 4

University Assembly, 87
 University Co-operative Store, 88

—V—

Veterinary science, 317
 Visitors, board of, 9
 Vocational agriculture, 121
 Vocational home economics, 162

—W—

Women,
 Agriculture for, 123
 Dormitory for, 61
 Gymnasium, 31
 Provision for, 85
 Short course for, 131

—Y—

Y. M. C. A., 86
 Y. W. C. A., 87

—Z—

Zoology, 318

University of Missouri Libraries
University of Missouri

MU Catalogs

Source information

Identifier	MU-Catalog-1927-Announcements-1927-1928
Format	Book
Content type	Text
Notes	Digitized duplicate copy not retained in collection.

Capture information

Date captured	2018 June
Scanner manufacturer	Ricoh
Scanner model	MP C4503
Scanning software	
Optical resolution	600 dpi
Color settings	Grayscale
File types	Tiff
Notes	

Derivatives - Access copy

Compression	LZW
Editing software	Photoshop
Resolution	600 dpi
Color	Grayscale
File types	Tiffs converted to pdf
Notes	Image editing: pages lightened, contrast increased, and noise removed.