THE UNIVERSITY OF MISSOURI BULLETIN

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GENERAL SERIES

1926, No. 1

CATALOG

EIGHTY-FOURTH REPORT OF THE CURATORS
TO THE GOVERNOR OF THE
STATE, 1925-1926

ANNOUNCEMENTS 1926-1927

ISSUED FOUR TIMES MONTHLY; ENTERED AS SECOND-CLASS MATTER AT THE POSTOFFICE AT COLUMBIA, MISSOURI—30,000
JANUARY 1, 1926

CALENDAR, 1926

January

S	M	T	W	T	F	S
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CALENDAR, 1927

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September

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October

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December

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25	26	27	28	29	30	31
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UNIVERSITY CALENDAR

At Columbia

First Semester

1926

September 13 ..... Monday, 2 p. m., freshman conference.
September 14 ..... Tuesday, entrance examinations.
September 15, 16 ..... Wednesday, Thursday, registration.
September 17 ..... Friday, 8 a. m., class work begins.
September 17 ..... Friday, 10 a. m., opening convocation.
November 1 ..... Monday, 8 a. m., first term two-year winter course in agriculture begins.
November 25 ..... Thursday, Thanksgiving Day, holiday.
December 18 ..... Saturday, 12 noon, first term two-year winter course in agriculture closes.
December 18 ..... Saturday, 12 noon, Christmas holidays begin.

1927

January 3 ..... Monday, 8 a. m., Christmas holidays close.
January 3 ..... Monday, 8 a. m., second term two-year winter course in agriculture begins.
January 22 ..... Saturday to
January 29 ..... Saturday } Mid-year examinations.
January 29 ..... Saturday, 4 p. m., first semester closes.

Second Semester

January 31 ..... Monday, registration.
February 1 ..... Tuesday, 8 a. m., class work begins.
February 26 ..... Saturday, 4 p. m. second term two-year winter course in agriculture closes.
April 13 ..... Wednesday, 12 noon, to
April 20 ..... Wednesday, 8 a. m. } Easter holidays.
May 28 ..... Saturday to
June 4 ..... Saturday } Final examinations.
June 5 ..... Sunday, 11 a. m., baccalaureate address.
June 8 ..... Wednesday, 10 a. m., commencement exercises.

Summer Session

June 7 ..... Tuesday, registration.
June 9 ..... Thursday, 8 a. m., class work begins.
July 4 ..... Monday, Independence Day, holiday.
July 31 ..... Sunday, 11 a. m., baccalaureate address.
August 3 ..... Wednesday, 4 p. m., summer session closes.
August 3 ..... Wednesday, 8 p. m., commencement exercises.

All freshmen, whether previously registered or not, must report at this conference.

UNIVERSITY CALENDAR

At Rolla

Summer Session

1926

May 24 ..... Monday, registration of students in High School Department.
May 25 ..... Tuesday, 8 a. m., High School class work begins.
June 5 ..... Saturday, registration of students in College department.
June 7 ..... Monday, 8 a. m., College class work begins.
July 31 ..... Saturday, final examinations.
July 31 ..... Saturday, 4 p. m., Summer Session closes.

First Semester

1926

September 6 ..... Monday, entrance examinations and registration.
September 8 ..... Wednesday, 8 a. m., class work begins.
November 23 ..... Tuesday, 4 p. m., Thanksgiving holidays begin.
November 29 ..... Monday, 8 a. m., Thanksgiving holidays close.
December 22 ..... Wednesday, 4 p. m., Christmas holidays begin.

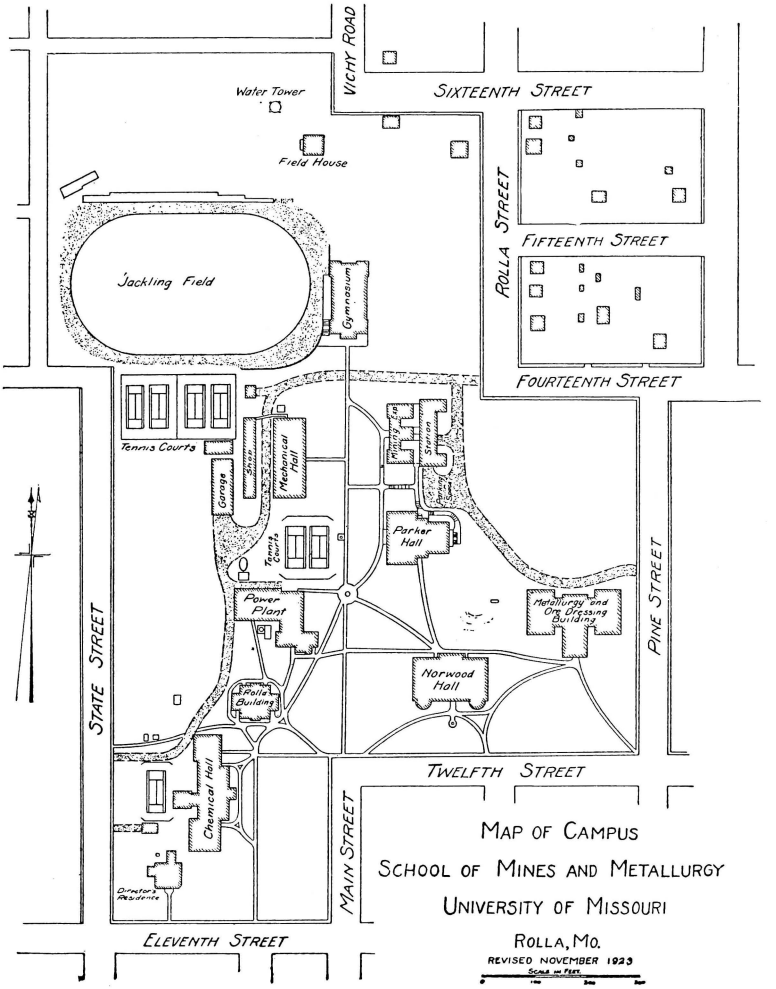
1927

January 3 ..... Monday, 8 a. m., Christmas holidays close.
January 21 ..... Friday, 12 noon, first semester closes.

Second Semester

January 24 ..... Monday, entrance examinations and registration.
January 26 ..... Wednesday, 8 a. m., class work begins.
February 22 ..... Tuesday, Washington's Birthday, holiday.
May 20 ..... Friday, 12 noon, senior class work closes.
May 22 ..... Sunday, baccalaureate address.
May 27 ..... Friday, 4 p. m., all class work closes.
May 28 ..... Saturday, commencement exercises.
May 30 ..... Monday, summer surveying class begins.
June 25 ..... Saturday, summer surveying class closes.

Teachers who take the county examinations on Saturday may register on Monday.


Vichy Road
Sixteenth Street
Water Tower
Field House
Rolla Street
Fifteenth Street
Jackling Field
Gymnasium
Fourteenth Street
Tennis Courts
Mechanical Hall
Garage
Parker Hall
Tennis Courts
Power Plant
Metallurgy and Ore Dressing Building
Pine Street
State Street
Norwood Hall
Twelfth Street
Chemical Hall
Main Street
Eleventh Street
Map of Campus
School of Mines and Metallurgy
University of Missouri
Rolla, Mo.
Revised November 1923

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REPORT OF THE BOARD OF CURATORS

Columbia, Missouri,
February 1, 1926.

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 1925-26.

The session of 1924-25 closed at Columbia on June 3, 1925, and at Rolla on June 6, 1925.

The work reviewed by this report began with the summer term at Columbia, which opened on June 6 and closed on August 1, 1925. The regular session of 1925-26 opened at Columbia on September 15, 1925, and at Rolla on September 14, 1925.

The student enrollment for the session of 1925-26 exceeds the enrollment of any preceding University year, and all portions of the state of Missouri are well represented in this enrollment. Many states of the Union as well as numerous foreign counties are represented on the campus. In seriousness of purpose and application to study and assigned duty, the student population at the University of Missouri compares favorably with those in attendance at similar educational institutions.

There have been some changes in the faculty brought about by resignation or other cause. Assurance may be given, however, that as presently constituted, as in the past, the members of the faculty rank high in their respective fields, and as individuals in departments, and as a faculty they are rendering devoted and worth-while service to the State and the University.

The colleges of arts and science, of agriculture, of engineering, of fine arts, and the school of mines and metallurgy, located at Rolla, offer four-year courses following graduation from high schools. The professional schools of journalism, of law, of medicine, of business and public administration, and of education require two years of college work for admission. The advanced work of all these schools and colleges is administered by the graduate school which offers three years of work leading to a doctorate.

For many years the University has encouraged the development of junior colleges, both private and public, with the result that it has been able to keep its enrollment of freshmen and sophomores within reasonable limits. Consequently it has a much higher percentage of students in the advanced years and in the professional

and graduate schools than is the case in many institutions. This condition affects favorably the quality of the work done in all departments.

The enrollment in the Graduate School has been rapidly increasing, last year reaching a total of over 500. In the School of Education the work has been doubled and the attendance more than doubled in the last two or three years. The School of Fine Arts, established in 1924, which gives special technical training in music and art and at the same time covers two-thirds of the regular college course, has already attracted national attention by the quality of its work.

The College of Agriculture has long been recognized as one of the leaders in experimental and research work. It maintains a State-wide extension system and several service bureaus of benefit to agriculture. Extension service outside of agriculture is under the administration of the University Extension Division which serves in various ways many thousands of citizens annually. Approximately 2,000 students are enrolled in correspondence courses, and a fourth of that number in extension classes.

In sight of its first centennial celebration, the alumni of the University of Missouri, as well as all citizens of the state, may survey with pride the achievements of the past, and look with confidence to the future for a continuation of service by the University to the State.

Respectfully submitted,

JAMES E. GOODRICH,

President.

CORPORATION

The Board of Curators

Term Expires January 1, 1927

E. Lansing Ray.....St. Louis
Frank M. McDavid.....Springfield
Charles F. Ward.....Plattsburg

Term Expires January 1, 1929

Mercer Arnold.....Joplin
J. P. Hinton.....Hannibal
Milton Tootle, Jr.....St. Joseph

Term Expires January 1, 1931

Frank H. Farris.....Rolla
James E. Goodrich.....Kansas City
H. J. Blanton.....Paris

Officers of the Board

James E. Goodrich.....President
Leslie Cowan (On leave of absence until June 1, 1926)....Secretary
O. M. Barnett.....Secretary
R. B. Price, Jr.....Treasurer

The Executive Board at Columbia

E. Lansing Ray, Chairman.....St. Louis
Frank M. McDavid.....Springfield
H. J. Blanton.....Paris

The Executive Committee at Rolla

Mercer Arnold, Chairman.....Joplin
Frank H. Farris.....Rolla
J. P. Hinton.....Hannibal
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 1925-26.
2. Officers or members of the faculty of the School of Mines at Rolla.
3. Those who have resigned during the year 1925-26.

FACULTY

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

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

DEANS

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ROBERT JOSEPH KERNER, Ph.D., *Professor of Modern History, Acting Dean of the Graduate Faculty*

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

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

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

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

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

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

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

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

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

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[2]JOSEPH WAYNE BARLEY, Ph.D., *Professor of English and Modern Languages*
[2]STUART 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*
ARLIE GLENN CAPPS, Ph.D., *Professor of Education*
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CHARLES WILSON GREENE, Ph.D., *Professor of Physiology and Pharmacology*
ADDISON GULICK, Ph.D., *Professor of Physiological Chemistry*
[2]ELMO GOLIGHTLY HARRIS, C.E., *Professor of Civil Engineering*
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[2]EDWARD H. WALTER, B.S. in C.E., Second Lieutenant, Corps of Engineers, United States Army, *Assistant Professor of Military Science and Tactics*

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

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ASSISTANT INSTRUCTORS

MABEL RUTH BANDY, A.B., *Assistant Instructor in Romance Languages*
ALBERT C. BERNTHAL, *Assistant Instructor in Romance Languages*
MARY E. BUFFUM, A.B., *Assistant Instructor in Romance Languages*
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[3]MRS. SAIDEE N. HAUSMANN, R.N., *Superintendent of Hospitals*
CLARA LOUISE HILLIGASS, R.N., *Superintendent of Hospitals*
[2]NOEL HUBBARD, *Assistant Registrar, School of Mines and Metallurgy*
ARTHUR ALLAN JEFFREY, A.B., *Agricultural Editor*
AUGUST W. KAMPSCHMIDT, A.B., M.D., *Radiographer in Hospitals*
[2]DOROTHY A. KIESLER, *Secretary to the Director, School of Mines and Metallurgy*
ANN W. LANDIS, B.S. in Ed., *Extension Assistant*
ARTHUR LORD WESTCOTT, M.E., *Superintendent of Buildings*
NELLE WORD, *Manager of the University Cafeteria*

LIBRARY STAFF

HENRY ORMAL SEVERANCE, A.M., M.Pd., *Librarian*
[2]EDITH CARRINGTON JONES, A.M., *Librarian, School of Mines and Metallurgy*
WILL HOWARD COLLINS, A.B., B.L.S., *Reference Librarian*
FLORENCE BAXTER CURRIE, B.L., B.L.S., *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*
[2]MARY R. BEACH, A.B., *Assistant Librarian*
[2]JOSEPHINE MARY BOWEN, *Assistant in Library*
JOHN HERMAN DOUGHERTY, A.B., *Assistant at Loan Desk*
ADA M. ELLIOTT, *Extension Reference Librarian*
[3]VIRGINIA CHARLTON FEARNLEY, *Assistant Cataloger*
FLOY EDNA FRENCH, *Assistant in Acquisitions Department*
JANE FRODSHAM, *Assistant in Charge of Agricultural Library*
MARY JANE HILLIKER, *Assistant in Acquisitions Department*
MRS. JANE A. HURTY, *Assistant in Charge of Engineering Library*
PRIESTLY H. MCCABE, *General Assistant*
FRANCES ETHLYN MCKEE, *Secretary*
MRS. FANNIE BOOTH MOORE, *Assistant in Charge of Arts and Science Reading Room*
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*
FRIEDA K. WILLIAMS, A.B., *Assistant Cataloger*

SECTION I

GENERAL INFORMATION

Historical Statement

The University of Missouri is eighty-seven 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 in the professions is offered.

Organization

The University of Missouri comprises the following divisions:

College of Arts and Science
College of Agriculture
College of Engineering
School of Business and Public Administration
School of Education
School of Fine Arts
Graduate School
School of Journalism
School of Law
School of Medicine
School of Mines and Metallurgy
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. It is reached by the Wabash and the Missouri, Kansas & Texas railways. Columbia is progressive and prosperous, with a population of approximately 15,000 and more than forty miles of paved streets. State highways numbers 2 and 7 pass through Columbia.

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, live stock 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.)

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 58.

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 231,366 volumes and 25,000 pamphlets. 2,942 periodicals are currently received at Columbia.

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 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 26,000 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 8,350 volumes.

The engineering library is shelved in the Engineering Building and is open 7½ hours daily, except Sunday. The collection consists of 6,500 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 13,924 volumes.

The journalism library is open 9½ hours daily and consists of 1,426 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 customary indoor activities, and also adequate locker and bathing facilities. Rollins Field, named in recognition of the generosity of the Rollins family, is one of the finest athletic fields in the west. A broad 12-lap track, out of doors; a quarter-mile cinder track, ample field space, three football and baseball fields, ten volley-ball and sixteen tennis courts. A nine-hole golf course, convenient to the campus, is maintained for the benefit of students. A small fee is collected and used in the upkeep of the course.

For Women: The women possess a new well-equipped gymnasium building with swimming pool. For out-of-door use they have adequate facilities for hockey, baseball, tennis, track, archery, volley ball and similar activities.

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.

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 32.

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.

Colleges and Schools

College of Arts and Science: Fifteen units, the equivalent of a four-years' high school course, are required for admission to the College of Arts and Science. Three units in English, one unit in mathematics, and two units in one foreign language are fixed requirements.[1] The remaining nine units may be selected from the list given on page 33.

College of Agriculture: Fifteen units, the equivalent of a four-years' high school course, are required for admission to the College of Agriculture. Three units in English and one unit in mathematics are fixed requirements.[1] The remaining eleven units may be selected from the list given on page 33. In preparation for admission to the College of Agriculture, students are strongly urged to take at least one laboratory science; if only one science is taken, it is recommended that it be physics.

[1]Graduates of fully accredited schools are admitted without reference to the fixed requirements, but the maximum and minimum number of units acceptable in each subject must be observed.

COLLEGE OF ENGINEERING: The requirements for admission to the College of Engineering are the equivalent of those required for admission to the College of Arts and Science.

SCHOOL OF FINE ARTS: Fifteen units, the equivalent of a four-years' high school course, are required for admission to the School of Fine Arts. Three units in English, one unit in mathematics, two units in one foreign language and one unit in history are fixed requirements.[1] For students entering Music Curricula three units in Music are required. See page 173. The remaining units may be selected from the list given on page 33.

SCHOOL OF MINES AND METALLURGY (AT ROLLA): The requirements for admission to the School of Mines are fifteen units, the equivalent of a four-years' high school course. Three units in English, one in algebra and one unit in plane geometry are fixed requirements. The remaining units may be selected from the list on page 33.

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 its 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 its 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 its 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 hours[2]—(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 hours[2] as follows:

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, and organic chemistry, 5 hours, of which at least 2 hours must be laboratory work; general bacteriology, 3 hours.

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.

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 173.)

[2]Normal credit refers to the credit hours obtained without regard to excess or diminished credit on the basis of the grades received. See page 84.

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.

A candidate for admission by certificate must be a graduate of an accredited school. 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.)

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	General Science	1	1
Algebra (elem.)	1½	1	Zoology	2	1
Plane geometry	1	1	Botany	2	1
Solid geometry	½	½	Hygiene	1	½
Plane trigonometry	½	½	Physical geography	1	½
**Arithmetic (adv.)	½	½	†Agriculture	1	1
**Algebra (adv.)	½	½	†Vocational agriculture	6	2
History	4	1	‡‡Music	‡	½
American government	½	½	Drawing	2	1
Latin	4	2	†Manual training	2	1
Greek	3	2	†Mechanical drawing	1	1
German	3	2	†Household art	2	1
French	3	2	†Vocational home economics	4	2
Spanish	3	2			
Physics	1	1	†Economics	½	½
Chemistry	2	1	Sociology	½	½
General biology	1	1	Community Civics	½	½

Subjects	Max.	Min.	Subjects	Max.	Min.
†Commercial arithmetic....	½	½	†Stenography, typewriting..	2	2
†Commercial law.....	½	½	†Typewriting.....	1	½
†Commercial geography.. .	½	½	††Teacher-training.....	3	3
†Bookkeeping.....	1	½			

**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 14, 1926. Entrance examinations may also be held on January 29, 1927, and June 7, 1927.

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 with-

out 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 some 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 maturity, 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 34 must take the entrance examinations. These will be held according to the program given on page 34.

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 35.

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 46.

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 Mo. S. T. C	Warrensburg.
Northeast Mo. S. T. C	Kirksville.
Northwest Mo. S. T. C	Maryville.
Southeast Mo. S. T. C	Cape Girardeau.
Southwest Mo. S. T. C	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.

ACCREDITED JUNIOR COLLEGES IN MISSOURI.

Christian College	Columbia.
Cottey College	Nevada.
Flat River Junior College	Flat River.
Hardin College	Mexico.
Howard-Payne College	Fayette.
Kansas City Junior College	Kansas City.

*Member Missouri College Union.

Kemper Military School	Boonville.
LaGrange College	LaGrange.
Missouri Christian College	Camden Point.
Palmer College	Albany.
St. Mary's Institute	O'Fallon.
St. Joseph Junior College	St. Joseph.
St. Teresa College	Kansas City.
Southwest Baptist College	Bolivar.
Stephens College	Columbia.
Synodical College	Fulton.
The Principia	St. Louis.
William Woods College	Fulton.
Will Mayfield College	Marble Hill.

Secondary Schools Fully Accredited With the University of Missouri

(List Corrected to January 1, 1926)

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
Advance
Alba
Albany:
    High School
    Academy of Palmer College
Alma (C. D.)
Alton
Amity
Amoret (C. D.)
Anderson
Appleton City
Arcadia:
    Ursuline Academy
Archie (C. D.)
Armstrong
Ash Grove
Ashland (C. D. No. 2)
Atlanta (C. D. No. 3)
*Aurora
Auxvasse (C. D.)
Ava
Avalon (C. D.)

Barnard
Bates City
Bell City
Belle (C. D.)
Bellflower
Belton
Benton
Bernie
Bethany
Bethel
Bevier
Bigelow (C. D.)
Billings
Birch Tree
Bismarck
Blackburn
Blackwater
Blairstown (C. D.)
Blodgett
Bloomfield
Blue Springs
Blythedale (C. D.)
Bogard
Bois D'Arc (C. D.)
Bolckow (C. D.)
Bolivar:
    High School
    Academy of Southwest Baptist College
Boomer:
    Forker
Bonne Terre
Boonville:
    *High School
    *Kemper Military School
Bosworth

Bowling Green
Braggadocio
Bragg City
Branson
Brashear
*Braymer
Breckenridge
Bridges (C. D.)
Bronaugh (C. D.)
Brookfield:
    *High School
    Pershing
    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
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
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
Conception:
    Conception College Academy
Conception Junction
Concordia:
    High School
    St. Paul's College Academy
Conway
Cooter
Corder
Corning
Cowgill
Craig
Crane
Crocker
Crystal City
Cuba

Dadeville (C. D.)
Darlington
Dawn (C. D.)
Dearborn (C. D.)
Deepwater
DeKalb
Delta
*Desloge

DeSoto
Dexter
Diamond (C. D.)
Diehlstadt (C. D.)
Dixon
Doe Run
Doniphan
Dover
Downing
Drexel
Duenweg
Durham

Eagleville (C. D.)
Easton
East Prairie
Edgerton (C. D.)
Edina:
    High School
    St. Joseph's
Eldon
Eldorado Springs
Ellington (C. D.)
Elmer (C. D.)
Elmo (C. D.)
Elsberry
Elvins
Eminence
Eolia (C. D.)
Essex
Esther
Eureka (C. D.)
Everton
Ewing (C. D.)
*Excelsior Springs
Exeter

Fairfax:
    High School
    Daleview (C. D.)
Fair Grove
Fairplay
Fairview (C. D.)
Farber (C. D.)
Farmington
Faucett (C. D.)
Fayette:
    *High School
    Academy of Howard-Payne College
*Ferguson
Festus
Fillmore (C. D.)
*Flat River
Forest City
Fornfelt
Forsyth (C. D.)
Fortescue (C. D.)
Frankford
Fredericktown
Freeman
Fulton:
    *High School
    *Academy of Synodical College
    *Academy of William Woods College

Gainesville
Gallatin
Galt (C. D.)
Garden City
Gideon
Gilliam (C. D.)
Gilman City
Glasgow
Golden City
Goodman
Gorin
Gower (C. D.)
Graham (C. D.)
Grain Valley (C. D.)
Granby
Grand Pass (C. D.)
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
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.)
Herculaneum
Hermann
Hickman Mills (C. D.)
Higbee:
    High School
    Meyers (C. D.)
*Higginsville
Holcomb (C. D.)
Holden
Holland (C. D.)
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
Illmo
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
    *Central
    *Country Day School
    De La Salle Academy
    French Institute of Notre Dame de Sion
    Loretto Academy
    *Manual Training
    *Northeast
    Redemptorist
    *Rockhurst
    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
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.)
Lemons
Leonard
Lewistown (C. D.)
Lexington:
    *High School
    *Wentworth Military Academy

Liberal
Liberty
Licking
Lilbourn
Lincoln
Linden (C. D.)
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
Martinsville (C. D.)
Maryville:
  *High School
  St. Patrick's School
Maysville
Maywood (C. D.)
Meadville
Memphis
Mendon (C. D.)
Metz (C. D.)
Mexico:
  *Academy of Hardin College
  *McMillan
  *Missouri Military Academy
Miami
Milan
Miller
Mindenmines (C. D.)
Mirable (C. D.)
*Moberly
Mokane
Monroe City:
  High School
  Holy Rosary Academy
Montgomery City
Monticello (C. D.)
Montrose:
  High School
  Johnston
Mooresville (C. D.)
Morehouse
Morley
Morrisville:
  Academy of Scarritt-Morrisville College
Mound City:
  *High School
  Holt County (C. D.)
  Mound City (C. D. No. 1)
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
Noel
Norborne
*Normandy (C. D.)
North Kansas City
Novelty
Novinger

Oak Grove
Oak Ridge

Odessa
Olean
Oran
Oregon
Oronogo
Orrick
Osborn
Osceola
Otterville (C. D.)
Overland:
    High School (C. D.)
    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
Philadelphia
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
*Rolla
Rosendale (C. D.)
Russellville
Rutledge

St. Charles:
    *High School
    Academy of the Sacred Heart
St. Clair
Ste. Genevieve:
    High School
    Valle
St. James
St. Joseph:
    Academy of the Sacred Heart
    *Benton
    Catholic
    *Central
    *Lafayette
    Roubidoux
St. Louis:
    *Academy of Sacred Heart, Maryland and Taylor
    *Academy of Sacred Heart College, Meramec and Nebraska
    Academy of the Visitation
    *Central
    *Grover Cleveland
    Hancock (C. D.), 9427 Broadway
    *Hosmer Hall

Loretto Academy
William Cullen McBride
*The Principia
*Roosevelt
Rosati-Kain
St. Alphonsus
St. Elizabeth Institute
*St. Joseph's Academy
*St. Louis University
St. Mark's
*Sancta Maria in Ripa
*Soldan
Ursuline Academy
*Yeatman
St. Mary's
Salem
Salisbury:
High School
St. Joseph's
Sampsel (C. D.)
Sarcoxie
*Savannah
Schell City
*Sedalia
Senath
Seneca
Seymour
*Shelbina
Shelbyville
Sheldon
Sheridan (C. D.)
Sikeston
Silex (C. D.)
Skidmore (C. D.)
Slater
Smithton (C. D.)
Smithville
Southwest City
Spickard
Springfield:
Greenwood
*High School
St. de Chantal Academy
Spruce:
Ballard (C. D.)
Stanberry
Steele
Steeleville
Steffenville (C. D.)
Stella
Stet (C. D.)
Stewartsville
Stockton
Stoutland
Stoutsville
Strafford (C. D.)
Sturgeon
Sullivan
Summersville (C. D.)
Sumner (C. D.)
Sweet Springs

*Tarkio
Thayer
Thomasville
Tina
Tipton
*Trenton
Triplett (C. D.)
Troy
Turney
Tuscumbia

Union
Union Star
*Unionville
*University City
Urbana
Urich
Utica

Van Buren (C. D.)
*Vandalia
Vanduser
Versailles
Vienna (C. D.)

Walker (C. D.)
Walnut Grove
Wardell
Warrensburg:
High School
Farmers' (C. D.)
*Training School C. M. S. T. C.
Warsaw
Washington
Watson (C. D.)
Waverly
Waynesville
Weatherby
Weaubleau (C. D.)
*Webb City
Webster Groves:
*High School
Nerinx Hall
Wellington

*Wellston
Wellsville
Westboro (C. D.)
Weston
*West Plains
Wheatland (C. D.)
Wheaton
Wheeling (C. D.)
Willard (C. D.)
Williamstown (C. D.)
Williamsville
Willow Springs
Windsor
Winfield
Winona (C. D.)
Winston (C. D.)
Worth
Wyaconda (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 77-79), 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 University, 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:

Length of Residence.	*Amount of fee to be refunded*
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 semester upon a report from the director of the band and the commandant of cadets showing that his work has been satisfactory.

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 1926-27 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 w	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 Engineering

Catalog No. of Course	Title of Course	Fee
2f or w	Farm Woodwork and Concrete	$5.00
10f or w	Farm Shop Practice	5.00
11f or w	Farm Gas Engines	3.00
21f	Farm Surveying and Drainage	2.00
30w	Farm Machinery	2.00
103w	Farm Buildings	1.00
104w	Farm Building Design	1.00
100f, 101w	Special Problems	‡
112f	Farm Tractors	5.00
210f, 211w	Research	‡

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

Anatomy and Histoloy

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

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

Art, Theory and Practice of

(See Fine Arts)

Astronomy

3f	Observatory Practice	$3.00
104f	Practical Astronomy	3.00
105w	Advanced Practical Astronomy	3.00

Botany

1f or w	General Botany	$6.00
3f or w	General Bacteriology	6.00
10w	Taxonomy	2.00
100w	Plant Physiology	6.00

Botany—Continued

Catalog No. of Course	Title of Course	Fee
102w	Plant Pathology	$5.00
103w	Advanced Plant Pathology	5.00
104f	Histological Methods	5.00
106f	Genetics and Heredity	1.00
107w	Mycology	5.00
111f	Special Problems	‡
112w	Special Problems	‡
202f	Research	‡
203w	Research	‡

‡$1.00 per credit hour.

Chemistry

1f or w	General Inorganic Chemistry	$12.00
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 125w	Quantitative Organic Analysis	14.00
130w	Physical Chemistry	7.00
131f	Physical Chemistry	12.00
135w	Radioactivity	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
104w	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

Catalog No. of Course	Title of Course	
1f or w	Elements of Dairying	$5.00
101f	Dairy Products	5.00
102f or w	Dairy Bacteriology	5.00
103w	Market Milk and Milk Inspection	5.00
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
A155w	Psychological Tests	2.00
A157w	Mental Measurements	2.00
A160f	Abnormal and Defective Children	2.00

Methods in Agriculture

E117f or w	Elements of Visual Education	$5.00

Theory and Practice of Teaching

D110f or w	Technique of Teaching in High School	$2.00
D121f or w	Technique of Teaching in Elementary School	2.00
D150f or w	Practice Teaching	5.00
D151f or w	Assistant in Elementary School	2.00
D152f or w	Assistant in Elementary School	2.00
D153f or w	Assistant in Elementary School	2.00
D160f or w	Practice Teaching in Vocational Home Economics	5.00

Electrical Engineering

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

English

107f	Dramatic Interpretation	$5.00
108w	Dramatic Interpretation	5.00

Entomology

Catalog No. of Course	Title of Course	Fee
103w	Insect Anatomy	$1.00
104f	Classification of Insects	1.00
110w	Insects of the House, Garden and Home Premises	1.00
111f	Insects of Field Crops	1.00
112w	Insects of Live Stock and Poultry	1.00
113f	Insects of Orchard and Truck Crops	1.00
114f	Field Practices in Insect Control	2.00
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
101w	Grain Crops	2.00
103f	Forage Crops	2.00

Fine Arts

Applied Art

50f or w	Art Craft I	$4.00
60f	Art Craft II	5.00
101f or w	Art Craft III	4.00
102w	Bookbinding	5.00
103w	Basketry	5.00
G120f	Handwork for Primary Grades	4.00
G121w	Handwork for Intermediate Grades	4.00

Art, Theory and Practice of

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
100w	Psychological Principles of Art	2.00
104f	Architecture	3.00
105f or w	Pictorial Composition	3.00
106w	Painting	3.00
107f	Tone	3.00
108w	Tone	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
116w	Architectural Research	3.00
117w	Architectural Design	3.00
122f or w	Life I	‡
124f or w	Life II	‡
127f or w	Advanced Life I	‡

Art, Theory and Practice of—Continued.

Catalog No. of Course	Title of Course	Fee
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
160f or w	Advanced Pictorial Composition	3.00
165f	Advanced Painting	3.00
170w	Advanced Decorative Composition	3.00
175w	Special Problems	3.00
180w	History of Modern Painting and Crafts	3.00
202f or w	Problems of Design	3.00
206f or w	Problems of Painting	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

	Applied Music, Private Instruction in Piano, Voice or Violin.	
	Elementary—Under Student Assistant:	
	Two half hours per week	$30.00
	One half hour per week	20.00
	College—	
	Two half hours per week	50.00
	One half hour per week	35.00
	Practice Rooms—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 78w	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
15f or w	Advanced General Geology	3.00
100f	Economic Geology	2.00
101w	Economic Geology	2.00

Geology—Continued

Catalog No. of Course	Title of Course	Fee
105w	Field Course	$15.00
106f	Mineralogy	5.00
107w	Determinative Mineralogy	10.00
118w	Field Methods	3.00
120f	Historical Geology of Paleozoic	3.00
121w	Historical Geology of Mesozoic and Cenozoic	3.00
125w	Rocks and Rock Minerals	4.00
130f	Optical Mineralogy	10.00
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
210f or w	Field Problems	1.00 to 15.00
216w	Structural Geology	3.00
234w	Paleontology	5.00

Geography

6f or w	Principles of Geography	$1.00
110f	Geography of North America	1.00
111w	Geography of South America	1.00
112f	Geography of Europe	1.00
113w	Geography of Asia	1.00
114w	Geography of Caribbean America	1.00
115f or w	Industrial Geography	1.00
116f or w	Geography of Trade	1.00
117w	Historical Geography of the United States	1.00
118f	Geography of Africa	1.00
119f	Conservation of Natural Resources	1.00
213w	Political Geography	1.00
214w	Cartography	1.00

Home Economics

1f or w	Foods and Nutrition	$5.00
2f or w	Foods and Nutrition	5.00
10f or w	Household Problems	1.00
15f or w	Elementary Design	3.00
16f or w	Elementary 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
101f or w	Household Sanitation	1.00
110f or w	Home Planning and Furnishing	3.00
111f or w	Problems in Home Planning and Furnishing	3.00
115f or w	Household Management	5.00
120f or w	Foods and Nutrition	5.00
121f or w	Foods and Nutrition	5.00
122f or w	Dietetics	5.00

Home Economics—Continued

Catalog No. of Course	Title of Course	Fee
123f or w	Dietetics	$5.00
124f or w	Field Work in Dietetics	‡
145f or w	Dress Design	3.00
146f or w	Advanced Dress Design	3.00
150f or w	Clothing Problems	5.00
151f or w	Clothing Problems	5.00
152f or w	Advanced Clothing	3.00
153f or w	Millinery	5.00
155f or w	Textiles	3.00
160f or w	Home Care and Training of the Child	1.00
170f or w	Experimental Cookery	5.00
200f	Home Economics Seminar	1.00
201w	Home Economics Seminar	1.00
202f or w	Metabolism	7.00
205f or w	Research in Food Preparation	‡
206f or w	Research in Food Preparation	‡
210f or w	Research in House Furnishing	‡
211f or w	Research in House Furnishing	‡
215f	Supervision of Household Management	‡
216w	Supervision of Household Management	‡
221f or w	Problems in Nutrition	‡

‡$2.00 per credit hour.

Horticulture

1f or w	General Horticulture	$3.00
100f	General Pomology	1.00
100w	General Pomology	1.00
105f	Systematic Pomology	1.00
133w	Small fruit Culture	1.00
114f	Commercial Pomology (Fruit Handling)	2.00
6w	Elementary Landscape Gardening	1.00
112w	Advanced Landscape Design	4.00

Industrial Education

G1w	Shopwork for Junior High Schools	$6.00
G2f	Metal Work	6.00
G4w	Machine Work	6.00
G5f	Tools and Materials	2.00
G10f	Woodwork	6.00
G130w	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

Catalog No. of Course	Title of Course	Fee
1f or w	Engineering Drawing I	$2.00
2f or w	Engineering Drawing II	2.00
25f or w	Patternmaking	7.00
30f or w	Forge and Machine Work	7.00
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
111f or w	Management Engineering	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
140f or w	Production Shop	6.00
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

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

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 the uniform 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	Advanced Pathology (per credit hour)	2.00
202w	Advanced Pathology (per credit hour)	2.00
203f	Research (per credit hour)	4.00
204w	Research (per credit hour)	4.00

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

**Students furnishing their own miscoscopes will receive a $4.00 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

Catalog No. of Course	Title of Course	Fee
1f or w	Elementary Physics	$6.00
2w	Elementary Physics	4.00
3f	General Physics	5.00
4w	General Physics	5.00
104w	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
107w	Electricity	*
108w	Light	*
109f or w	Advanced Work in General Physics	*
211f	Research	6.00
203f	Special Problems	5.00
204w	Special Problems	5.00
212w	Research	6.00

*$2.00 per credit hour.

Physiology and Pharmacology

2w	Elementary Physiology	$7.00
100w	Tissue Physiology	5.00
101f	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	*
221f	The Blood	6.00
222f	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

Catalog No. of Course	Title of Course	Fee
1f or w	Instincts and Habits	$2.00
110w	Music Systems	1.00

Rural Life

105f	Farm Accounts	$1.00
113f or w	Farm Administration	4.00
115f or w	Rural Sociology	1.00
117f or w	Community Organization	1.00
119f or w	Social Case Work	1.00
125f	Agricultural Statistics	1.00
219w	Advanced Social Case Work	1.00

Sociology

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

Soils

1f or w	Soils	$3.00
100f	Soil Fertility	5.00
102f	Soil Surveying	4.00
105w	Soil Bacteriology	5.00
106f	Special Problems	See note
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	$6.00
3f	Advanced General Zoology	6.00
4w	Comparative Anatomy of Vertebrates	6.00
100f or w	Embryology of Vertebrates	5.00
101f	Comparative Histology	5.00
103w	Parasitology	5.00

Zoology—Continued

Catalog No. of Course	Title of Course	Fee
110f	Protozoology	$5.00
111f	Genetics	*
112w	Cytology	6.00
120f or 121w	Special Problems	5.00
200f	Research	*
201w	Research	*

*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 Women.

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 81. 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 82. Applications should be addressed to the Secretary, The Knights of Columbus Student Home, Columbia, Missouri.

DeMolay Dormitory for Men: The order of DeMolay for Boys is planning to erect in Columbia a fine 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.

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.

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 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 ample variety.

ESTIMATED EXPENSES FOR ONE SEMESTER:

Fees	$45
Board	120
Rent	45
Laundry	15
Books and stationery	25
Miscellaneous	50
Total	$300

These estimates show the expenses of the *average* male student. Expenses for a woman will usually be $25 higher. 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 wishing to economize can save money by boarding at The Cafeteria. 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.

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 $250,000, 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." It is expected that assistance from this fund will be available from and after February 1, 1926. 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 boarding 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 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.

The Fellowship for the year 1925-26 was awarded to William Henry Zeigel, of Kirksville, Missouri, and the Scholarship for the year 1925-26 was awarded to Raymond Loren Garnett of Emden, Missouri.

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 Fellows 1925-26

Marjorie Katherine Carpenter (Latin and Greek),
A. B., B. S. in Ed., A. M., University of Missouri.
Fred James Ellerman (Economics),
A. B., Southwest Missouri State Teachers College.
Walter David Keller (Geology),
A. B., University of Missouri.

Gregory Scholars 1925-26

Clara Patience Haggard (Latin and Greek),
A. B., B. S. in Ed., A. M., University of Missouri.
Mona Josephine Kelley (French),
A. B., University of Missouri.

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 1925-26 was awarded to Joseph Ewing Johnston, of Willow Springs, 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 185.

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.

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.

Summer Session Scholarships

Summer Session Scholarships for Members of Faculties of Missouri Colleges: In order to make available to teachers in Missouri Colleges the resources of the University for graduate instruction, the Board of Curators has created five summer session scholarships for each college faculty in Missouri. These scholarships bear exemption from the library, hospital and incidental fees.

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, must be unable without pecuniary assistance to complete the University course, 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 the

local high school on the first Saturday in May, will include the following subjects described in the University catalog under "Subjects Accepted for Admission:" Three units in English, three 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 1926. 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 1925-26 was awarded to VIRGINIA BRUBAKER 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 1925-26 was awarded to MARY LOUISE RAMSEY of 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 the year 1925-26 was awarded to JANE QUAIT CLARKE of Kansas City, 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 1926.

The scholarship for the year 1925-26 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 1926.

The scholarship for the year 1925-26 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 1925-26 was awarded to EMERY FOSTER PAXTON of Kansas City, 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 1925-26 was awarded to JANISE WILSON RENTCHLER of Belleville, Illinois.

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 1925-26 were awarded to C. HERSCHEL SCHOOLEY of Effingham, Illinois; ROSALEE JO HANLON of Sedalia, Missouri; CHARLES W. SCARRITT, JR., of Kansas City, Missouri; RALPH BRONSON COWAN of Peterboro, Ontario, Canada; CLIFFORD R. JOHNSON of Aberdeen, South Dakota; HALLIMAN P. WINSBOROUGH of St. Louis, Missouri; FRED A. REED of Kansas City, Missouri; VIRGINIA LEE COLE of Columbia, Missouri.

THE ISAAC HINTON BROWN SCHOLARSHIP: The Missouri Woman's Club of New York City offers a scholarship of the value of $250 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 1926.

The scholarship for the year 1925-26 was awarded to MARIAN RAGLAND of Conway, 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 the year 1925-26 was awarded to THOMAS EVERET VAUGHN of Wellsville, 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 the year 1925-26 was awarded to JOHN MIDDLETON GERLASH of Tarkio, 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 1925-26 were awarded as follows:

College of Arts and Science:
AUGUST MAFFRY of Macon, Missouri.
GEORGE CRAMER, JR., of Rayville, Missouri.

College of Agriculture:
ANNA SIEVERS KARSTETER, of Columbia, Missouri.

School of Law:
JAMES WESLEY MCAFEE, of Brookfield, Missouri.

College of Engineering:
WILLIAM ELMER WIRTEL, of Kansas City, Missouri.

School of Medicine:
ENOCH N. GENTRY, JR., of Sturgeon, Missouri.

HARRY TIDD SCHOLARSHIP: This scholarship represents the annual income on $2,000 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 1925-26 was awarded to ARTHUR DOERR BOND of Perryville, Missouri.

THE MISSOURI ENGINEERS 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.

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 School of Fine Arts, University of Missouri, Columbia.

No award in 1925.

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 1925-26 was awarded to KENNETH GORDON, of Fort Collins, Colorado.

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 1926-27 the William J. Bryan Prize will be awarded for the best essay on "Workmen's Compensation 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 with 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.

At commencement in June, 1925, this prize was awarded to Daniel Leon Brenner of Kansas City, Missouri.

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, 1925, this prize was awarded to Mildred Emily Haas of Kansas City, Missouri.

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, 1925, this prize was awarded to ECKKA A. GORDON 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, 1925, this prize was awarded to ROBERT LORENZO HOWARD of Columbia, 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, 1925, these awards were distributed as follows:

The Military Cups:
Company "A," CADET MAJOR CHARLES M. BARNES.
Company "D," CADET CAPTAIN CHARLES J. HEIBERGER.

The Roy S. Gibson Cup:
Third Platoon, Company "B," CADET CAPTAIN ANDREW C. ELLISON.

The James J. Coghlan Cup:
Howitzer Platoon, CADET CAPTAIN JAMES R. WORMAN.

The Military Medals:
VIRGIL G. STEAD, Company "A," Infantry Unit.
RALPH P. SWOFFORD, Service Battery, Field Artillery Unit.

The Rifle Marksmanship Medal:
CADET MAJOR EUGENE C. BEAL, Infantry Unit.

The Pistol Marksmanship Medal:
CADET 1ST LIEUTENANT EDWARD K. CHORD, Field Artillery Unit.

CHINA WEEKLY REVIEW PRIZES: Two prizes of $50 each are offered by the China Weekly Review of Shanghai, China, thru J. B. Powell, its editor, an alumnus of the School of Journalism, to the students of the school writing the best editorial essays on a subject dealing with the problems of the Pacific as they affect America. One prize is awarded in the first semester and one in the second semester. A definite subject is announced for each semester.

At commencement in June, 1925, this prize was awarded to THOMAS MING-HENG CHAO of Nanking, China.

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, 1925, this prize was awarded to FOSTER BOWMAN HAILEY of Columbia, 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, 1925, this prize was awarded to MARJORIE LOUISE DOOLEY of Kansas City, 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 any student in the University. Plays submitted must be intended for actual performance and provided with a simple stage plan; if practicable, the Club will perform any suitable plays submitted in the contest, and for that reason desires that they be handed in as early in the session as possible. Altho preference will be given to plays that are strictly original, plays dramatized from stories or poems will also be considered, if accompanied by a copy of the source used. Manuscripts typewritten, signed with an assumed name, and accompanied by a sealed envelope containing both the assumed and the real name of the author, may be handed to the Secretary of the Club at any time before January 10, 1927.

At commencement in June, 1925, these prizes were awarded as follows: First—DAVID CAFFEE NEWELL of Kansas City, Missouri. Second—MONA JOSEPHINE KELLEY of St. Joseph, 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, 1925, this prize was awarded to JOHN MIDDLETON GERLASH of Tarkio, 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, 1925, this trophy was awarded to ARTHUR DOERR BOND of Perryville, 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 year. The M men of Missouri have now taken it over and will maintain it as a permanent yearly award.

At commencement in June, 1925, this trophy was awarded to ARTHUR DOERR BOND of Perryville, 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.

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.

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 1925.

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, 1925, this medal was awarded to MARIAN ALICE WADE of Columbia, 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, 1925, this medal was awarded to PHOEBE LOUISE WRIGHT of Valley Park, 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, 1925, this medal was awarded to RICHARD DUDLEY SHEWMAKER of Memphis, Tennessee.

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 1925-26, 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 August, 1925, this trophy was awarded to the Montgomery City High School.

CURATORS' SCHOLARSHIPS

HONOR GRADUATES: The Board of Curators, in an attempt to encourage higher scholarship, offers annually to the honor graduate, or the student attaining the highest scholastic rank in the graduating class of each of the following fully accredited Missouri colleges and schools, a scholarship amounting to exemption for the first two semesters, from the Library, Hospital and Incidental fee. To obtain the scholarship the student must enroll in the University within two years after graduation from the school in which the scholarship was earned and the scholarship must be completely used during the two-year period. Certification 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
Central College
Washington University
Westminster College
Drury College
Missouri Valley College
St. Louis University
Park College
Tarkio College
Central Wesleyan College
Missouri Wesleyan College
Culver-Stockton College
Lindenwood College

For the session 1925-26 a Curators' Scholarship was awarded to MYRON SPOHRER of Warrenton, Missouri, honor graduate of Central Wesleyan College (class of 1924), and to VIRGINIA SYMNS of Nevada, Missouri, honor graduate of Lindenwood College.

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
No award in 1925.

Junior Colleges as follows:

Central College for Women, Lexington
Christian College, Columbia
Cottey College, Nevada
Hardin College, Mexico
Howard-Payne College, Fayette
The Junior College of Kansas City
LaGrange College, LaGrange
Missouri Christian College, Camden Point
Palmer College, Albany
St. Mary's Institute, O'Fallon
St. Joseph Junior College, St. Joseph
St. Teresa College, Kansas City
Southwest Baptist College, Bolivar
Stephens College, Columbia
Synodical College, Fulton
The Principia, St. Louis
William Woods College, Fulton
Will Mayfield College, Marble Hill

For the session 1925-26 the Curators' Scholarship was awarded to NORMA IONE PURVIS, honor graduate of The Junior College of Kansas City.

Secondary Schools: All fully accredited secondary schools. Honor graduates of the following schools were awarded Curators' Scholarships during the session of 1925-26:

Anderson (class of 1924) ..... Irene Roark
Anderson ..... Margaret Louise Roark
Archie (Consolidated) ..... Lelia Feild
Ashland (Consolidated) ..... Simeon A. Christian
Auxvasse ..... Virginia Hatcher
Belle (Consolidated) ..... Victor Langenberg
Bogard ..... Oren M. Dickerson
Bolivar ..... Ruth Rice
Boonville ..... Hardey Adriance
Brunswick ..... Vetura Knight
Calhoun ..... John Arthur Wykoff
California (Aurora) ..... Elena Jane Heysel
Camden (class of 1924) ..... Loren Casteel
Camden Point ..... Olin Collier
Cape Girardeau (Central) (class of 1924) ..... Raymond Militzer
Carrollton ..... Christine Hoffman
Caruthersville ..... Earnest Moore
Centerview ..... Rodney Clinton Hull
Chilhowee ..... Pembrook Wantland
Chillicothe ..... Joe Mullin
Columbia (tied for honors—received exemption first semester) ..... Ruth Ingrum, Merrell E. Jones
Concordia ..... Lydia Frerking
Conway ..... Gretchen McKinney

Eolia	Margaret D. Beall
Flat River (class of 1924)	Francis A. Thompson
Grand Pass	William Howard Wilmot
Greenfield	Carl Courtney
Hallsville	Hulett Cooper
Holden	Homer E. Raber
Hollister (School of the Ozarks)	Jefferson Davis Reagan
Houston	Rupert Bridges
Houstonia (Consolidated)	Elizabeth Allen Parkhurst
Jasper	Clyde Taylor
Kahoka	Paul F. Krueger
Kansas City (Central)	Caroline Pratt
Lamar	Chester Nichols
Leadwood (class of 1924)	Harold Thornton
Lexington (tied for honors—received exemption first semester)	George Ewing Gilda Fiora
Louisiana	Lois Jacquin
Lucerne	Pearl Guyman
Monett	Norine Herron
Mountain View	Clinton C. Padgett
Napton (Consolidated)	Paul Richard Brayton
Neosho (class of 1924)	William Adams
Novinger (class of 1924)	Joe Verby
Odessa	Vincil Harmon
Osceola	William Gordon
Palmyra	Courtney Hamlin
Perryville	Robert Barber
Pickering	Veva Anthony
Ravanna (Consolidated)	Gladys Lowry
Richland	Barton Warren
Richmond	William Chenault
Rockville	Johnaphine E. Duley
Rocky Comfort	Paul Antle
St. James	W. Macy Pruitt
St. Louis University (High School)	Cyril Iffrig
Seneca	Beryl Edmondson
Silex	Norabelle Duncan
Skidmore	Lawrence Linville
Southwest City	Joe Woods
Sweet Springs	Wade Hampton Tisdale
Unionville (class of 1924)	Edwin Pollock
University (Columbia, Missouri)	A. Earl Ragland
Vandalia	Katy Lee
Versailles	Earl Bryant
Walker (class of 1924)	Amanda Level Dickson
Walnut Grove	Ena Lee McMehen
Wentworth Military Academy	Q. L. Carmichael
Weston	Maurice W. Chastain

Masonic Home of Missouri and Odd Fellows' Home: Scholarships in the College of Arts and Science are 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 two years 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. The subject for debate by the League in 1925-26 is: Resolved, That the Amendment to the United States Constitution enabling Congress to regulate Child Labor should be ratified by the several states. 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 1925-26 was awarded to PAUL KOCHAN of Maysville, 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.

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 organization 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 wholesome 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. The association has its office on the first floor of the Women's Gymnasium. Weekly meetings are held 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 organizations 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.; vice-president, G. E. Huggins, New York City; vice-president, Mrs. Charles Hebbard, Joplin, Mo.; treasurer, S. F. Conley, Columbia; secretary, 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 the students during their leisure hours and will be the permanent headquarters for the alumni and former students. The memorial feature of the Union Building is the tower, which will be 142 feet in height and will be the finest Gothic tower in America. Permanent alumni headquarters will be in the tower and there will be wings for the men and women on either side. The construction of the Union is progressing rapidly.

Work on the Memorial Stadium began in the fall of 1925. When completed, the stadium will have a seating capacity of 65,000 and will provide for physical culture and training for the entire student body.

The alumni, former students, students and friends of the University are being solicited for $800,000 to complete these memorial projects, $500,000 of which will be applied to the Union and $300,000 to the first unit of the Memorial Stadium. Practically the entire amount has already been subscribed.

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 1926-27 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 a 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, the department of military science and tactics, and in the school of nursing.

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 teaches the basic subjects required for admission to the professional schools of Law, Medicine, Education, Journalism, Business and Public Administration. In two years the student may fulfill all the Freshman-Sophomore requirements in the College of Arts and Science and the special requirements for admission to any one of the professional schools.

(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 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 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.

Requirements for Admission: For information in regard to requirements for admission, see page 30.

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 and 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 6 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, 105, 106, 150, 155); 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 102).

MAJOR SEQUENCES

Art, Theory and Practice

I. For Students Primarily Interested in Design and Representation

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	105f & w	Pictorial Composition	5
Art	106w	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 Painting 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	106w	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
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	103w	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 11, Derivation 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 industry	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	125s & w	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	125s or w	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.

Geology and Geography

I. Geology

General Subject	No. of Course	Special Title	Credit Hours
Geology	1f & w	Principles of geology	5
Geology	15f & w	Advanced general geology	4
Geology	50f & w	Life of the geologic past	2
Geology	105s	Field course	4
Geology	106f	Mineralogy	3
Geology	107w	Mineralogy	3
Geology	120f	Historical geology	3

II. Geography

General Subject	No. of Course	Special Title	Credit Hours
Geography	6f & w	Principles of geography	3
Geology	2f & w	Physical geology	3
Geology	100f or 101w	Economic geology	2
Geography	110f or 112w	Geography of North America, or Geography of Europe	3
Geography	111w or 113f	Geography of South America, or Geography of Asia	3
Geography	115f & w	Industrial Geography	3
Geography	116f & w	Geography of trade	3
Geography	119w	Conservation of natural resources in the United States	3
Geography	145f & w	Pro-seminar	1–2

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 101 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
Two of the following:			
History	1f or w	Introduction to history	5
History	6f or w	Europe 1750 to 1870	5
History	108f or w	American History to 1816	3
History	109f or w	American History 1816 to 1876	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
Required without options:			
History	106f or w	Contemporary Europe	3
History	110f or w	Recent U. S. history	3

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

English History

General Subject	No. of Course	Special Title	Credit Hours
History	117w	Pol. and Soc. Hist. of England	3
History	118w	Pol. and Soc. Hist. of England	3
History	145f	Expansion of Europe	2
History	146w	British Empire	2

Modern European History

General Subject	No. of Course	Special Title	Credit Hours
History	134f	The Near East	2
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 history	3
History	182w	History of the west	3
History	190f	American diplomatic history	3
History	195f	American constitutional history	3
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	3
History	137w	The far eastern question	2
History	190f	American diplomatic history	3
History	165f	Recent Russian history	2
History	209w	Recent diplomatic problems	2
History	145f	Extension of Europe	2
History	146w	The British empire	2
History	216f or w	Seminary in Comtemporary Europe	2,3 or 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	20s, 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
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
Latin	103f	Roman public and private life	3
Latin	104w	Roman public and private life	3
Latin	106f	Catullus and the Elegiac poets	3
Latin	108w	Catullus and the Elegiac poets	3
Latin	109s	Latin comedy	3
Latin	115f	Rapid reading	2
Latin	116w	Rapid reading	2

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:			
Physics	108w	Light	1 or 2
Physics	109f & 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 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.

General Subject	No. of Course	Special Title	Credit Hours
Not less than 12 hours from the following:			
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 syntheses and analysis	3–5
Botany	100w	Physiological botany	5
Zoology	100f or w	Embryology	3
Zoology	101f	Comparative histology	3
Anatomy	104f	Histology	5

General Subject	No. of Course	Special Title	Credit Hours
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 Political 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	5
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	5
Political science	109f or s	International law	2
Political science	110w or s	International law	2
Political science	190f	Principles of political science	5

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	2w	Abnormal psychology	2
Physiology*	2w	Elementary physiology	5
Philosophy*	105w	Modern philosophy	3
Education*	Elective	Mental measurements	2
Psychology	100f	Play and art	2
Psychology	125f	Social psychology	3
Psychology	Elective		2

*Students who minor in education, philosophy, or physiology 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.

Romance Languages

French

General Subject	No. of Course	Special Title	Credit Hours
Romance language	1f or w	Elementary French	5
Romance language	2f or w	Intermediate French	5
Romance language	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.

Spanish

General Subject	No. of Course	Special Title	Credit Hours
Romance language	30f or w	Elementary Spanish	5
Romance language	31f or w	Intermediate Spanish	5
Romance language	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 elect courses in composition.

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 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	Evolution and eugenics	2
Zoology	3f or w	Zoology of invertebrates or	5
		Comparative anatomy of vertebrates	5
Zoology	100f or w	Embryology of vertebrates	3
	or		
	101f	Comparative histology	3
Zoology	101f or 112w	Comparative hlstology	3
		or cytology	5
Zoology	103w	Parasitology	3
Zoology	110f or 120f	Protozoology	4 or 5
		or special problems	3
Zoology	111f	Genetics	2 to 5
Zoology	112w or 120f	Cytology or	5
		special problems	3

II. Preparatory to Medicine

General Subject	No. of Course	Special Title	Credit Hours
Zoology	1f or w	General zoology	5
Zoology	2w	Evolution and eugenics	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	4 or 5
Zoology	111f	Genetics	2 to 5
Zoology	112w	Cytology	5
	or		
	120f	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	Evolution and eugenics	2
Zoology	3f	Zoology of invertebrates	5
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	4 or 5
		Cytology	5
	or 111f	Genetics	2 to 5
Zoology	210f	Seminar	1

Zoology—Medical Sciences

General Subject	No. of Course	Special Title	Credit Hours
Zoology	2w	Evolution and eugenics	2
Zoology	4w	Comp. anatomy of vertebrates	5
Zoology	101f	Comparative histology	3
Zoology	103w	Parasitology	3
Zoology	100f & 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, 122. Meterology, 1 hour.

From the School of Business and Public Administration. Mathematics of business and insurance 155, 3 hours. Investments, 2 hours.

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, 119, 120, 153, 154, 155, and 156.

From the School of Journalism. History and principles of journalism for not more than 6 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 1½ 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; (6) 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 judgment 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.

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[1]It 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.

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 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 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 $20,000 to the Agricultural Experiment Station for the year ending June 30, 1926.

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, and Rural Life.

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 cheese-curing room in basement, rooms for creamery manufactures, cheese making, dairy work, milk-testing laboratory, offices and classrooms.

Schweitzer Hall: A two-story stone building for agricultural chemistry, with well-lighted basement. On the first floor are the offices and general chemical laboratories of the Agricultural Experiment Station, two large student laboratories, a nitrogen laboratory, two balance rooms, an ether extraction room, instructors' laboratory, and a small classroom. The second floor contains three large laboratories, a lecture room seating 100 students, a large classroom, balance rooms, offices and special laboratories. The student laboratories accommodate 260 students each term. 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 class rooms, 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 Building: Several new buildings are now available for instruction in poultry husbandry. Among them is a new 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, classroms, 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, shower baths, and toilet rooms.

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, modern in every detail, accommodates seventy-five dairy cows.

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 in-

cludes 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, feedingstuffs, 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 miscroscopes, microtomes, steam and steam-pressure sterilizers, incubators, balances, precision apparatus, and glassware. The herbarium amply illustrates the local flora.

Dairy Husbandry: Facilities for instruction in dairy manufactures include creamery room equipped with power separators, churns, pasteurizers, sterilizers, ice cream mixers and freezers, and butter printers; a cheese room provided with vats, cheese presses, and curing room; cream separators, milk-testing apparatus and churns; refrigerating plant and cold storage; and a laboratory for instruction and investigation in dairy bacteriology.

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 Ayrshire, Jersey and Holstein breeds. Complete milk and butter records are kept of each cow. The student is given instruction in the breeding, care and management of dairy cattle. Several cows in this herd hold milk records which rank them among the best specimens of dairy cattle ever produced.

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 13,924 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 185.

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 112.)

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 114).

C. Four-year curriculum in agriculture for women, leading to the degree of Bachelor of Science in Agriculture (B. S. in Agr.). (See page 116.)

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 117.)

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 121.)

F. Two-year Winter Course in Agriculture. (See page 123.)

G. Short Course in Dairy Manufactures. (See page 127.)

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 84) 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. 113, 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 Agricultural 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, all courses in rural life 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 cannot 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, including English composition	5	hours
Animal husbandry, 1f or w, types and market classes of livestock	3	"
Chemistry, 1f or w, general inorganic chemistry	5	"
Horticulture, 1f or w, general horticulture	3	"
Military and physical education	1½	"
	17½	hours

Citizenship, including English composition	5	hours
Field crops, 1f or w, field crops	3	"
Botany, 1f or w, general botany	5	"
Geology, 2f or w	3	"
Military and physical education	1½	"
	17½	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	"
	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	"
	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 economics or rural sociology	5	"
Animal husbandry, 101w, animal breeding, or Horticulture, 115w, evolution of cultivated plants, or Field crops, 101w, field crop improvement	3	"
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. To still further insure the successful training of these men for this important work, there has been organized a special department of agricultural education. 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 Smith-Hughes Act.

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 8 hours. Students who intend to teach must have had two years of continuous farm experience.

Curriculum B

Freshman and Sophomore

Freshmen and sophomores take the courses shown in the curriculum (A) on page 113, excepting that Education A102, educational psychology, must be taken in the first semester of the sophomore year in place of the three-hour elective, and poultry production, 2w, in the second semester in the sophomore year in place of the three-hour elective.

Junior

Veterinary Science, 1f anatomy and physiology	5 hours
Animal Husbandry, 100f principles of animal nutrition	3 "
Chemistry, 15f elements of organic chemistry	3 "
Agricultural Engineering, 10f farm shop practice	2 "
Education, D110f technique of high school teaching	3 "
	16 hours

Agricultural Chemistry, 101w agricultural analysis	3 hours
Animal Husbandry, 101w animal breeding or Horticulture, 115w evolution of cultivated plants or Field Crops, 101w field crops improvement	3 "
Rural Life, 2w principles of rural economics	5 "
Education, E105w special methods of teaching vocational agriculture	3 "
Elective	1 "
	15 hours

Senior

Agricultural engineering, 1f farm woodwork and concrete	2 hours
Rural Life, 110f farm organization	3 "
Education, E115f management of vocational agriculture	2 "
Education, D155f practice teaching	5 "
Elective	1 "
	13 hours

Field Crops, 100w field crops management	2 hours
Agricultural Engineering, 30w farm machinery	2 "
Education, E107w the project in vocational agriculture	2 "
Electives	6 "
	12 hours

Preferred Electives:

Animal Husbandry, 3w livestock judging	3 hours
Animal Husbandry, 103w beef production	3 "
Animal Husbandry, 105w pork production	3 "
Dairy Husbandry, 100w milk production	3 "
Education, E117f and w visual education	2 "
Education, E120w and s community educational activities in vocational agriculture	2 "
Education, C150f, w and s high school economy	2 "
Education, C160w high school administration	3 "
Education, E210f, w and s special problems in agricultural education	1 "
Education, E240f, w and s seminar in agricultural education (Thesis)	
English, 75f, w and s public speaking	2 "
Field Crops, 105f grain crops production	3 "
Rural Life, 115s, f, and w rural sociology	3 "

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, including English composition	5 hours
Home economics, 1f, foods and nutrition	3 "
Home economics, 10 household problems	2 "
Chemistry, 1f, general inorganic chemistry	5 "
Physical training	½ hour

Winter Term:

Citizenship, including English composition	5 hours
Chemistry, 2w, general inorganic chemistry	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, elementary 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, foods 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 116.)

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 life, 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, food and nutrition	5 hours
Home economics, 121w, dietetics	3 "
Home economics, 130f, metabolism and dietetics	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) worker; (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, including English composition	5 hours
Chemistry 1 or 2, inorganic	5 "
Physical Training	½ hour
Electives (chosen from the following courses)	5 hours

Foreign language (5 hours).
Home Economics, 1, Foods and Nutrition (3 hours).
Home Economics, 50, Textiles and Clothing (3 hours).
Home Economics 10, Household Problems (2 hours).
Home Economics 15, Elementary Design (2 hours).

15½ hours

Winter Term:

Citizenship, including English composition	5 hours
Botany 1 or Zoology 1	5 "
Physical Training	½ hour
Electives (chosen from the following courses)	5 hours

Foreign language (5 hours).
Home Economics, 2, Foods and Nutrition (3 hours).
Home Economics, 51, Textiles and Clothing (3 hours).
Home Economics, 20, Home Nursing and Health (2 hours).
Home Economics, 16, Elementary 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, Foods and Nutrition (3 hours).
Home Economics, 50, Textiles and Clothing (3 hours).
Home Economics, 10, Household Problems (2 hours).
Home Economics, 15, Elementary 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, Foods and Nutrition (3 hours).	
Home Economics, 50, Textiles and Clothing (3 hours).	
Home Economics, 15, Elementary 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	3 "
Home Economics Major electives	5 "
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	2 hours
Home Economics Major electives	10 "
Free Electives	3 "
	15 hours

Winter Term:

Home Economics Major electives	8 hours
Free Electives	7 "
	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, Foods and Nutrition.	6 hours
Home Economics 15 and 16, 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	3 "
Home Economics 155 Textiles	2 "
	28 hours

(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 "
Rural Life 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 130 Institutional Management	3 "
Chemistry 25 Analytical Chemistry	5 "
Physiological Chemistry 102	3 "
	28 hours

(b) *suggested supplementary courses:*

Home Economics 170 Experimental Cookery	2 hours
Home Economics 202 Metabolism	5 "
Economics 17, Elementary Accounting	3 "
Economics 110 Labor Problems	5 "
Rural Life 101 Principles of Marketing	3 "
Physiology 103 Alimentary Mechanisms	2 "

(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	3 "
Physiological Chemistry 102	3 "
Physiological Chemistry 115 Advanced	2 "
Chemistry 27 Qualitative Analysis	3 "
Chemistry 121 Quantitative Chemical Analysis	5 "
	28 hours

(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 Textiles	2 "
Chemistry 25 Analytical Chemistry	5 "
Chemistry 112 Organic Chemistry	3 "
	28 hours

(b) *suggested supplementary courses:*

Physics 1, elementary physics	5 hours
Home Economics 152 Millinery	2 "
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 Household Management	3 "
Education D. 110 Technique of Teaching	3 "
Education F. 110 Teaching of Home Economics	2 "
	28 hours

(b) *suggested supplementary courses:*

Home Economics 175 Field Work in Extension	3 hours
Home Economics 123 Dietetics	3 "
Home Economics 155 Textiles	2 "
Physiological chemistry 102	3 "
Horticulture 1 general horticulture	3 "
Rural Life 101 Principles of Marketing	3 "
Rural Life 105 Farm Accounts	3 "
Rural Life 118 Rural Community Organization	3 "
Rural Life 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:

Problems in citizenship, including English composition	5 hours
Animal husbandry, 1f, (types and market classes of livestock)	3 "
Chemistry, 1f, (general inorganic chemistry)	5 "
Horticulture, 1f, (general horticulture)	3 "
Military and physical education	1½ "
	17½ hours

Winter Term:

Problems in citizenship, including English composition	5 hours
Field Crops, 1w, (field crops)	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	1½ "
	17½ 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	1½ "
	17½ 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 Horticulture, 115w, (evolution of cultivated plants) or Field Crops, 101w, (field crops improvement)	3 hours
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, (the country newspaper)	3 "
Elective	10 "
	16 hours

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. Over 3,700 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

*Journalism (the Agricultural News) may be substituted in place of Journalism 170f (the Agricultural Press).

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, November 1, 1926, and the second term, Monday January 3, 1927.

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 required work of the Two-Year Winter Course will be given a certificate of graduation.

THE COURSE OF STUDY

In each term the student is required to take certain subjects. In addition to those required, he is permitted to choose one or more of the optional subjects open to him during that term. The required and optional subjects for each term are listed on pages 125, 126 and 127. In each term the required subjects cover in general the branches of agriculture practiced on Missouri farms. The student may then choose from the optional subjects those relating to the phases of farming in which he is most interested. A student does

not have a full course unless he takes all the required subjects and the full number of optional subjects indicated for each term.

Attention is directed to the fact that one may study along five special lines of farming by proper selection of the optional subjects during the four terms of the Two-Year Winter Course. He may train himself for the pure-bred live stock business, the pure-seed growing business, fruit growing, poultry raising, or dairying. The teachers who assist in registration are prepared to advise in the selection of optional courses.

If a student enters the University for the first time on November 1, 1926, he will take the courses under *First Year, First Term.* If he returns January 3, 1927, he will take the courses under *First Year, Second Term.* If a student cannot enter at the opening of the course on November 1, 1926, he can enter without inconvenience for the first time January 3, 1927. If he enters then he will take the courses listed under *First Year, Second Term,* arranged especially for those who enter then for the first time and outlined on page 127. This is the same course taken by those who entered for the first time at the beginning of the first term except that a course in stock judging adapted to the beginner is given, and the poultry course required of all students in the first term is included. If he returns for the fall term of 1927 he will then take the *First Year, First Term* courses. Those who have completed both terms of the first year will then enter the *Second Year, First Term.*

All the work is thoroly practical. Much of the instruction is given by having students actually do the work under proper direction.

First Year, First Term

November 1, 1926, to December 22, 1926

Required	*Periods a week*
Grain crops	5
Farm dairying, or	3
Farm horticulture	3
Judging market grades and classes of livestock	3
Feeds and feeding	5
Farm poultry management	3
Physical training	2

Electives	*Periods a week*
Farm beekeeping	3
Fruit handling	3
Farm masonry	3
Farm shop practice	3
Radio for the farm	2

First Year, Second Term

January 3, 1927, to February 26, 1927

Required	*Periods a week*
Prevention and treatment of animal diseases	4
Farm dairying	3
or	
Farm horticulture	3
Judging types and breeds of farm animals	3
Soil tillage	3
Forage crops	4
Physical training	2

Electives	*Periods a week*
Pork production	3
Beef production	3
Spraying	3
Pruning	3
Vegetable gardening	3
Poultry judging	3
Dairy cattle judging	2
Farm machinery	3
Farm woodwork	3
Farm shop practice	3

Second Year, First Term

November 1, 1926, to December 22, 1926

Requierd	*Periods a week*
Injurious and beneficial insects	3
Infectious diseases and farm sanitation	3
Farm accounts	3
Soils	2
Rural economics	3
Physical training	2

Electives	*Periods a week*
Field crop management	3
Engines and tractors	5
Breeds of livestock	3
Horse production	3
Sheep production	3
Farm poultry practice	3
Fruit packing	3
Farm masonry	3
Farm shop practice	3
Radio for the farm	2

Second Year, Second Term

January 3, 1927, to February 26, 1927

Required	*Periods a week*
Animal breeding	3
Physical training	2
General farm marketing	3

Electives	*Periods a week*
Farm butchering, cutting and curing of meats	3
Advanced livestock judging	3
Advanced grain judging	3
Soil management	3
Farmstead equipment	2
Farm finance	3
Spraying	3
Pruning	3
Poultry production	3
Vegetable gardening	3
Incubation and brooding practice	3
Farm shop practice	3
General farm management	3
Breeds and breeding of dairy cattle	2
Milk production	3
Community organization	2
Farm woodwork	3

FIRST YEAR, SECOND TERM

January 3, 1927, to February 26, 1927

For those who enter for the first time at the beginning of the second term.

Required	*Periods a week*
Prevention and treatment of animal diseases	4
Farm dairying	3
or	
Farm horticulture	3
Judging maket grades and classes of livestock	3
Soil tillage	3
Forage crops	4
Physical training	2

Electives	*Periods a week*
Spraying	3
Farm woodwork	3
Farm shop practice	3
Dairy cattle judging	2
Farm machinery	3
*Farm poultry management	3

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 3, and ends February 26, 1927. 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.

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*A requirement which may be elected in this term. Must be taken later if it is not elected during this term.

OUTLINE OF THE COURSE

	Lecture periods	*Laboratory periods*
Creamery buttermaking	2	3
Ice-cream making	2	2
Cheese-making	2	2
Market milk	1	1
Dairy bacteriology	1	1
Judging 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, 1927.

THE AGRICULTURAL EXPERIMENT STATION

BOARD OF CONTROL

The Curators of the University of Missouri

ADVISORY COUNCIL

The Missouri State Board of Agriculture

OFFICERS OF THE STATION

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F. B. MUMFORD, M. S. ..... Director of the Experiment Station

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[2]L. J. STADLER, Ph. D.
R. T. KIRKPATRICK, B. S. in Agr.
B. M. KING, A. M.
[1]MISS CLARA FUHR

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H. D. HOOKER, Ph. D.
H. G. SWARTWOUT, A. M.
J. T. QUINN, A. M.
A. E. MURNEEK, Ph. D.

Poultry Husbandry:
H. L. KEMPSTER, B. S. in Agr.
EARL W. HENDERSON, A. M.

Rural Life:
[2]O. R. JOHNSON, A. M.
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E. L. MORGAN, A. M.
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H. H. KRUSEKOPF, A. M.
WM. A. ALBRECHT, Ph. D.
RICHARD BRADFIELD, Ph. D.

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Veterinary Science:

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O. S. Crisler, D. V. M.
A. J. Durant, A. M.
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Andrew Uren, D. V. M.

Others:

B. R. Price, Jr., Treasurer.
O. M. Barnett, Sec'y of University
Sam B. Shirky, A. M. Ass't to Dir.
A. A. Jeffrey, A. B. Agr. Editor
J. F. Barham, Photographer
Edw. E. Brown, Business Manager
Miss Jane Frodsham, Librarian

[1]In employ of the U. S. Department of Agriculture.
[2]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*

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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*

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Agricultural Engineering
A. J. MCADAMS, B. S. in Agr.

Animal Husbandry
J. W. BURCH, B. S. in Agr.
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S. F. RUSSELL, B. S. in Agr.

Dairy Husbandry
E. M. HARMON, B. S. in Agr.
*I. G. GIBSON, B. S. in Agr.
M. J. REGAN, B. S. in Agr.

Entomology

Farm Management
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Field Crops
C. E. CARTER, B. S. in Agr.
K. G. HARMAN, B. S. in Agr.
I. P. TROTTER, M. S.

Horticulture
ELMER A. BIERBAUM, B. S. in Agr.
E. M. PAGE, B. S. in Agr.

Poultry Husbandry
H. L. SHRADER, B. S. in Agr.
HAROLD CANFIELD, B. 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.

HOME ECONOMICS

Clothing
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LOIS MARTIN, B. S.

General Home Economics
MRS. EDITH G. VAN DEUSEN, Ph. B.
BINA SLAUGHTER, B. S. in Agr.

Health
MARY E. STEBBINS, R. N., P. H. N.

Nutrition
MARION E. DUNSHEE, Ph. B.

Home Management
*IDA FRA CLARK, B. S. in H. E.
JULIA M. ROCHEFORD.

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*JANE HINOTE
R. H. EMBERSON, B. S. in Ed.
SARA H. CHILES, B. S. in Agr.

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R. B. COGLON, B. S. in Agr. ..... Assistant Editor
B. J. CARL ..... Secretary, Agricultural Extension Service
J. R. JORDAN ..... Accountant

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4. *Negro Agent*

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W. H. COLMAN, B. S. in Agr.
JOHN H. COX, B. S. in Agr.
MORRIS EDWARD EWING, B. S. in Agr.
R. S. HEWLETT.
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H. T. NIELSON, B. S. in Agr.
E. L. PETER, B. S. in Agr.
C. R. THOMSON, B. S. in Agr.
P. M. VANDIVER, B. S. in Agr
MITCHELL D. WOOD, 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 accruing to this Service 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.

The Missouri College of Agriculture, through special arrangement with the U. S. Veterans' Bureau, gives field instruction to trainees of the Bureau during the period of preparation for complete rehabilitation. The Agricultural Extension Service is charged with the direct responsibility of carrying forward this phase of the teaching program of the College.

All lines of instruction are organized on a project basis. Extension instruction is based mainly 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 "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 manufactures.

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, commercial education, 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 five curricula, each embracing four semesters of work:

I. Banking, Finance, and Accounting.
II. Manufacture, Trade, and Transportation.
III. Commercial Education.
IV. Public Service.
V. 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.

The University High School, maintained by the School of Education of this University, affords an opportunity for practice teaching in commercial subjects to students in the curriculum in commercial education.

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 or III should complete, in addition to the above courses, general mathematics 1, or its equivalent. The same is true of general sociology 1, for curriculum IV or V, and preventive medicine 1, for curriculum V.

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 35.

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; manufacture, trade, and transportation; or commercial education.

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

Five 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 govern-

ment. 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 curricula I and III, the course in general sociology for curricula IV and V and the course in preventive medicine for curriculum V.

I. CURRICULUM IN BANKING, FINANCE, AND ACCOUNTING

General Subject	No. of Course	Special Title	Credit Hours
Economics and commerce	17f or w	Elementary accounting	3
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	Accounting and business policy.	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	115f or w	Commercial and industrial geography	3
Geography	116f or w	Geography of trade	3
		Elective	16
Total			60

II. CURRICULUM IN MANUFACTURE, TRADE AND TRANSPORTATION.

Economics and commerce	17f or w	Elementary accounting	3
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	Accounting and business policy.	2
Economics and commerce	128f	Statistics and business management	3
Economics and commerce	137f	Factory management and employment problems	3
Economics and commerce	138w	Mercantile organization and credits	2
Economics and commerce	140w	History of commerce	3
Economics and commerce	150w	Business law	3
Geography	115f or w	Commercial and industrial geography	3
Geography	116f or w	Geography of trade	3
Journalism	120f or w	Principles of advertising	3
		Elective	9
Total			60

III. CURRICULUM IN COMMERCIAL EDUCATION.

General Subject	No. of Course	Special Title	Credit Hours
Economics and commerce	17f or w	Elementary accounting	3
Economics and commerce	105f or w	Money, credit, and banking	5
Economics and commerce	117f or w	Advanced accounting	4
Economics and commerce	118f	Corporation finance	3
Economics and commerce	132w	Bank management	2
Economics and commerce	140w	History of commerce	3
Economics and commerce	150w	Business law	3
Geography	115f or w	Commercial and industrial geography	3
Geography	116f or w	Geography of trade	3
Mathematics	155f or w	Mathematics of business	3
Education	A102f or w	Education psychology	3
Education	D110f or w	Technique of high school teaching	3
Education	D150f or w	Practice teaching in commercial subjects	5
Journalism	120f or w	Principles of advertising	3
History	180f	Social forces in American history	3
		Elective	11
Total			60

Note—Students who complete Curriculum III should have a knowledge of stenography and typewriting.

IV. CURRICULUM IN PUBLIC SERVICE.

A. Administrative Service.

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	3
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	17
Total			**60**

B. FOREIGN 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	109f	International law	3
Political science	115w	Administration of American foreign relations	3
Political science	207w	International organization	2
History	106f or w	Contemporary Europe and Asia	3
History	108f 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	3
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	115f or w	Commercial and industrial geography	3
Geography	116f or w	Geography of trade	3
		Elective	16
Total			60

Note—Students who complete the Foreign Service division of Curriculum IV must have credit for fifteen semester hours in one foreign language or its equivalent.

V. CURRICULUM IN SOCIAL SERVICE.

Sociology	110f or w	Social pathology	3
Sociology	111w	Criminology	3
Sociology	113f	Constructive social policies	2
Rural Life	117f or w	Community organization	3
Sociology	119w	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 V 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 47 to 58.

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 149	
2.	Elementary school teachers	Mr. Phillips	Univ. El. Sch.
3.	Elementary school supervisors and principals	Mr. Phillips	Univ. El. Sch.
4.	High school principals	Mr. Eikenberry	105 Univ. H. S.
5.	School superintendents	Mr. Neale	120 Jesse
6.	Teachers of subnormal children	Mr. Saupe	408 Jesse
7.	High school teacher-training instructors	Mr. Coursault	102 Jesse
8.	Teachers of industrial art	Mr. Selvidge	111 Eng.
9.	Teachers and supervisors of art	Mr. Ankeney	409 Jesse
10.	Teachers and supervisors of music	Mr. Sleeper	201 Lathrop
11.	Teachers of physical training	Mr. Brewer Miss McKee	Rothwell Gym. Women's Gym.
12.	Teachers of vocational home economics	Miss Campbell	207 Home Ec.
13.	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 64 to 79 of the 1926 University catalog 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 64 and 70.

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]

Elementary School Principals and Supervisors: A total of 31 hours in education, including 3 hours of educational psychology, 3 hours of technique of teaching in the elementary school, 3 hours of educational statistics, 2 hours of mental measurement, 3 hours of history of education, 2 hours of school hygiene, 2 hours of elementary school curriculum, 3 hours of administration of public education in the United States, 3 hours of city school administration, 2 hours of administration of physical education, 2 hours of elementary school supervision and 3 hours of administration of educational tests.[1]

High School Principals: A total of 28 hours in education, including 3 hours of educational psychology, 3 hours of educational statistics, 3 hours of technique of teaching in high school, 2 hours of high school economy, 2 hours of mental measurement, 3 hours of history of education, 3 hours of administration of public education in the United States, 2 hours of administration of industrial education, 3 hours of high school administration, 2 hours of organization and administration of physical education, 2 hours of school hygiene.[1]

School Superintendents: A total of 33 hours in education, including 3 hours of educational psychology, 3 hours of educational

[1]See suggested curriculum.

statistics, 3 hours of history of education, 2 hours of school hygiene, 2 hours of mental measurement, 3 hours of administration of educational tests and measurements, 3 hours of administration of public education in the United States, 2 hours of elementary school curriculum, 2 hours of administration of industrial education, 3 hours of city school administration, 2 hours of organization and administration of physical education, 2 hours of elementary school supervision and 3 hours of high school administration.[1]

Teachers of Subnormal Children: A total of 38 hours in education, including 3 hours of educational psychology, 3 hours of history of education, 2 hours of school hygiene, 2 hours of mental measurement, 2 hours of teaching of industrial arts, 3 hours of elementary school organization and management, 3 hours of psychology of learning, 3 hours of handwork for primary grades, 3 hours as assistant in elementary school, 2 hours of elementary school music, 2 hours of plays and games, 3 hours of technique of teaching in the elementary school. For outline of other courses consult the adviser.

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]

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

[1]See suggested curriculum.

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.

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 142 and 148.

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 a 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 142. 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 143 and 144 must be taken.

High school teachers are required to have a major in one of the subjects of specialization listed below. Every student preparing for high school teaching is also strongly advised to have a minor. 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.

MAJORS AND MINORS FOR HIGH SCHOOL TEACHERS

	Minimum requirement for major	Minimum requirement for minor	Adviser	Room No.
Biology	24	15	Mr. Curtis	110 Lefevre
Botany	24	15	Mr. Robbins	100 Lefevre
Chemistry	24	15	Mr. Schlundt	110 New Chemistry
English	24	15	Mr. Belden	209 Jesse
			Mr. Fairchild	209 Jesse
French	24	15	Mr. Trombly	205 Jesse
Geography	24	15	Mr. Bratton	204 Geol.
German	24	15	Mr. Almstedt	309 Jesse
Social Studies	30[1]	20[2]	Mr. Viles	316 Jesse
Latin	24	15	Miss Cauthorn	211 Jesse
Mathematics	24	15	Mr. Westfall	208 Eng.
Physics	24	15	Mr. Stewart	104 Physics
Physiology and Hygiene	24	15	Mr. Greene	107 McAlester
Spanish	24	15	Mr. Warshaw	205 Jesse
Zoology	24	15	Mr. Curtis	110 Lefevre

[1]Includes American government 5 hours, general sociology 5 hours, general economics 5 hours.
[2]Includes American government 5 hours.

WHY A MINOR IS DESIRABLE FOR PROSPECTIVE HIGH SCHOOL TEACHERS

There are two practical reasons why a student preparing for high school teaching should choose a minor as well as a major. In the first place a student who is qualified to teach two subjects has more chances for getting a position than one who is limited to a single field. In the second place there are many high schools in the State where most of the teachers are required to teach two subjects. While the choice of a minor should be guided to some extent by the student's interests it is well to consider the combinations that most frequently occur in the programs of Missouri high school teachers. A tabulation of the two-subject combinations in the first class high schools outside of St. Louis, Kansas City and St. Joseph gave the following results:

Two-subject combination.	No. teachers in first class high schools teaching combinations.[1]
English and Latin	115
English and History	94
Mathematics and Latin	42
Mathematics and History	41
Mathematics and Agriculture	34
Mathematics and English	29
History and Latin	24
English and Household Arts	19
Mathematics and Science	18
Mathematics and Commercial Subjects	8
History and Household Arts	7
Spanish and French	4
Teacher-Training and History	4
English and Science	4
Mathematics and Manual Training	3
Latin and German	1
History and Agriculture	1
Eight other combinations	43
Total	491

[1]Supplied by Professor A. G. Capps of the School of Education, University of Missouri.

Graduate Work in Education

Graduate students in education should first of all decide on the particular line of school work which they wish to prepare for. They should then consult the faculty adviser in the field of their major interest and in consultation with him make out a complete program of studies for the desired degree. Some of the fields of specialization follow along with the names of the appropriate advisers in the School of Education faculty.

Graduate Specialty	Faculty Adviser	Room No.
School supervision	Mr. Phillips	Elem. School
High school methods	Mr. Watkins	Univ. High School
High school administration	Mr. Eikenberry	105 Univ. High School
	Mr. Elliff	104 Jesse
History and philosophy of Education	Mr. Coursault	102 Jesse
City, county and state school administration.	Mr. Capps	102 Jesse
	Mr. Neale	120 Jesse
Educational tests and measurements	Mr. Capps	104 Jesse
	Mr. Saupe	408 Jesse
Educational psychology	Mr. Saupe	408 Jesse
Teaching of English	Mr. Moffett	209 Jesse
Industrial Education	Mr. Selvidge	111 Eng.
Agricultural Education	Mr. Dickinson	124 Agriculture
Teaching and supervision of abnormal and defective children	Mr. Saupe	408 Jesse

For many lines of graduate work in Education advisers insist on students having during the first semester the following three courses if they have not been taken as under-graduate work:

Education C170 Educational Statistics (3)

Education C175f Administration of Educational Tests and Measurements (3)

Education C200f Methods of Educational Research (2)

General background courses recommended for all graduate students in Education who have not had the equivalent as under-graduate work are:

C180f Administration of public Education in U. S. (3)

A205f Psychology of Education (3)

B271f Philosophy of Education (3)

Special 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

First Semester		*Second Semester*	
[1]Educational Psychology, A102	3 hrs.	[1]Assistant in Elementary School, D151	2 hrs.
[1]Elementary School Organization and Management, D120	2 hrs.	[1]School Hygiene, D130	2 hrs.
Art	5 hrs.	[1]Handwork, G120 or 121	3 hrs.
[1]Elementary School Music Methods[2]	2 hrs.	Sociology	5 hrs.
Elective	4 hrs.	Elective	4 hrs.
	16 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
[1]History of Education, B125	3 hrs.	[1]Technique of Teaching in Elementary Schools, D121	3 hrs.
Administration of Educational Tests and Measurements, C175	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)	3-5 hrs.	Elective (Science and History)	6 hrs.
Elective	5-3 hrs.	Elective	3 hrs.
	16 hrs.		16 hrs.

[1]Required education courses.

[2]Students with no previous training in music should take 4 hours of elementary school music methods.

Suggested Curriculum for Elementary School Principals and Supervisors

Junior Year

First Semester		*Second Semester*	
[1]Educational Psychology, A102	3 hrs.	Assistant in Elementary School, D151	2 hrs.
[1]History of Education, B125	3 hrs.	[1]Mental Measurement, A157	2 hrs.
[1]Educational Statistics, C170	3 hrs.	[1]Technique of Teaching in the Elementary School, D121	3 hrs.
Sociology	5 hrs.	[1]School Hygiene, D130	2 hrs.
Elective	2 hrs.	Elective (Science)	7 hrs.
	16 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
[1]Elementary School Curriculum, D170	2 hrs.	Assistant in Elementary School, D151	2 hrs.
[1]Administration of Public Education in United States, C180	3 hrs.	[1]City School Administration, C185	3 hrs.
[1]Administration of Educational Tests and Measurements, C175	3 hrs.	[1]Administration of Physical Education	2 hrs.
Modern History	5 hrs.	[1]Elementary School Supervision, D171	2 hrs.
Elective	3 hrs.	Elective (English)	5 hrs.
		Elective	2 hrs.
	16 hrs.		16 hrs.

Suggested Curriculum for High School Principals

Junior Year

First Semester		*Second Semester*	
[1]Educational Psychology, A102	3 hrs.	[1]High School Economy, C150	2 hrs.
[1]Educational Statistics, C170	3 hrs.	[1]Mental Measurement, A157	2 hrs.
[1]Technique of High School Teaching, D110	3 hrs.	[1]History of Education, B125	3 hrs.
American Government	5 hrs.	Municipal Problems	2 hrs.
Elective	2 hrs.	Economics	5 hrs.
		Elective	2 hrs.
	16 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
High School Curriculum, C220	2 hrs.	[1]High School Administration, CC160	3 hrs.
[1]Administration of Public Education in United States, C180	3 hrs.	[1]Administration of Physical Education, 120w	2 hrs.
[1]Administration of Industrial Education, G145	2 hrs.	[1]School Hygiene, D130	2 hrs.
Sociology	5 hrs.	Elective	9 hrs.
Elective	4 hrs.		
	16 hrs.		16 hrs.

[1]Required education courses.

Suggested Curriculum for School Superintendents

Junior Year

First Semester		*Second Semester*	
[1]Educational Psychology, A102	3 hrs.	[1]Mental Measurement, A157	2 hrs.
[1]Educational Statistics, C170	3 hrs.	[1]Administration of Educational Tests and Measurements, C175	3 hrs.
[1]History of Education, B125	3 hrs.	Municipal Problems	2 hrs.
[1]School Hygiene, D130	2 hrs.	Economics	5 hrs.
American Government	5 hrs.	Elective	4 hrs.
	16 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
[1]Administration of Public Education in the United States, C-180	3 hrs.	[1]City School Administration, C-185	3 hrs.
[1]Elementary School Curriculum, D170	2 hrs.	[1]Administration of Physical Education, 120	2 hrs.
[1]Administration of Industrial Education, G145	2 hrs.	[1]Elementary School Supervision, D171	2 hrs.
Sociology	5 hrs.	[1]High School Administration, C160	3 hrs.
Elective	4 hrs.	Public Revenues	3 hrs.
		Elective	3 hrs.
	16 hrs.		16 hrs.

Suggested Curriculum for Teachers of Industrial Arts

Junior Year

First Semester		*Second Semester*	
Woodwork, 10f	2 hrs.	Shop Work for Junior High School, 1	2 hrs.
Tools and Materials, 5f	2 hrs.	Pattern Making	2 hrs.
Mechanical Drawing	3 hrs.	Introduction to Art	5 hrs.
[1]Educational Psychology, A102.	3 hrs.	[1]Teaching of Industrial Arts, G130	2 hrs.
[1]History of Education, B125	3 hrs.	[1]Technique of High School Teaching, D110	3 hrs.
Elective	2 hrs.	Elective	2 hrs.
	15 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
Metal Work	2 hrs.	[1]High School Economy, C150	2 hrs.
[1]Administration of Industrial Education, G145	2 hrs.	Machine Work, 4w	2 hrs.
[1]Practice Teaching, D150	5 hrs.	[1]Educational and Vocational Guidance, C221	2 hrs.
[1]School Hygiene, D130	2 hrs.	Elective	10 hrs.
Elective	5 hrs.		
	16 hrs.		16 hrs.

[1]Required education courses.

SUGGESTED CURRICULUM FOR TEACHERS AND SUPERVISORS OF ART

Junior Year

First Semester		*Second Semester*	
[1]Educational Psychology, A102.	3 hrs.	[1]Technique of High School Teaching, D110	3 hrs.
Industrial Arts — Elementary Artcraft, 50f	3 hrs.	[1]Teaching of Art, H101w	2 hrs.
Advanced Representation, 150w	5 hrs.	General Sociology, 1w	5 hrs.
History of Architecture, 104f	3 hrs.	Painting, 106w	6 hrs.
Elective	2 hrs.		
	16 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
[1]Practice Teaching, D150	5 hrs.	Advanced Design, 155w	5 hrs.
[1]Elementary School Organization and Management, D120f or High School Economy C150	2 hrs.	History of Renaissance Painting, 112w	3 hrs.
History of Renaissance Painting, 111f	3 hrs.	[1]School Hygiene, D130	2 hrs.
Pictorial Composition, 105f	5 hrs.	[1]History of Education, B125	3 hrs.
Elective	1 hr.	Elective	3 hrs.
	16 hrs.		16 hrs.

[1]Required education 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—Women

Freshman Year

First Semester		*Second Semester*	
Problems in Citizenship	5 hrs.	Problems in Citizenship	5 hrs.
Language	5 hrs.	Language or Elective	5 hrs.
Zoology	5 hrs.	Folk Dancing 25f	2 hrs.
Gymnastics and Athletics (41f).	1 hr.	Gymnastics and Athletics (42w)..	1 hr.
		Elective	3 hrs.
	16 hrs.		16 hrs.

Sophomore Year

First Semester		*Second Semester*	
Chemistry	5 hrs.	Chemistry or Bacteriology	3 hrs.
Advanced Folk Dancing	2 hrs.	Sociology	5 hrs.
Playgrounds, 51f	2 hrs.	Plays and Games (54w)	2 hrs.
Anatomy	3 hrs.	Preventive Medicine	2 hrs.
Gymnastics and Athletics (43f).	1 hr.	Gymnastics and Athletics (44w).	1 hr.
Elective	3 hrs.	Elective	3 hrs.
	16 hrs.		16 hrs.

Junior Year

First Semester		*Second Semester*	
Kinesiology, 111f	3 hrs.	Physiology	5 hrs.
[1]Educational Psychology, A102	3 hrs.	[1]Teaching of Physical Education H119w	2 hrs.
Major Sports Technique (29f-1).	2 hrs.	[1]History of Education, B125	3 hrs.
History and Principles of Physical Education, 52f	3 hrs.	Major Sports Technique (29w-2).	2 hrs.
Gymnastics and Athletics (115f)	1 hr.	Gymnastics and Athletics (116w)	1 hr.
Elective	4 hrs.	Elective	3 hrs.
	16 hrs.		16 hrs.

Senior Year

First Semester		*Second Semester*	
[1]Technique of High School Teaching, D110	3 hrs.	[1]Organization and Administration of Physical Education, 120w..	3 hrs.
[1]Practice Teaching, D150	3 hrs.	Technique of Interpretative Dancing, 128w	2 hrs.
Physical Examinations, 101f	3 hrs.	[1]Practice Teaching, D150w	3 hrs.
[1]High School Economy of Elementary School Organization and Management	2 hrs.	Gymnastics and Athletics (118w)	2 hrs.
Gymnastics and Athletics (117f)	2 hrs.	Elective	6 hrs.
Elective	3 hrs.		
	16 hrs.		16 hrs.

[1]Required 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 181.

Junior

	Hours		Hours
[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	Public Speaking	2
Orchestral Inst., 179f	2	Orchestral Inst., 180w	2
Band or Orchestra, 73f, or Chorus, 71f	1	Practice Teaching, D150	2
Elective	2	Band or Orchestra, 74w, or Chorus, 72w	1
		Elective	2
	16		16

Senior

	Hours		Hours
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 Analysis, 114w	2
Musical Form, 111f or Musical Analysis, 113f	2	Instrumentation, 118w	2
Elective	2	Elective	1
Band or Orchestra, 73f or Chorus, 71f	1	Band or Orchestra, 74w or Chorus, 72w	1
	16		16

[1]Students 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.

[2]Students 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.

Freshman[1]

Fall term		*Winter term*	
"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" or	3 hrs.	H. Ec. 2 "Foods and Nutrition" or	3 hrs.
H. Ec. 50 "Textiles and Clothing."		H. Ec. 51 "Textiles and Clothing."	
H. Ec. 10 "Household Problems" or	2 hrs.	H. Ec. 20 "Home Nursing and Health or	2 hrs.
H. Ec. 15 "Elementary Design."		H. Ec. 16 "Elementary Design."	
	15 hrs.		15 hrs.

Sophomore[1]

Fall term		*Winter term.*	
Chemistry 15, organic chemistry	3 hrs.	Ed. A 102, educational psychology	3 hrs.
Botany 3, general bacteriology	5 hrs.	Physiology 1, elementary physiology	5 hrs.
H. Ec. 1 Foods and Nutrition or	3 hrs.	H. Ec. 2 Foods and Nutrition or	3 hrs.
H. Ec. 50 Textiles and Clothing.		H. Ec. 51 Textiles and Clothing	
H. Ec. 10 Household Problems or	2 hrs.	H. Ec. 20 Home Nursing and Health or	2 hrs.
H. Ec. 15 Elementary Design.		H. Ec. 16 Elementary Design.	
Electives	3 hrs.	Electives	3 hrs.
	16 hrs.		16 hrs.

[1]For the first two years the students may register in the College of Arts and Science or the College of Agriculture.

Junior

Fall term		*Winter term*	
Ed. B 125, History of Education	3 hrs.	Ed. D 110 Technique of Teaching in High School	3 hrs.
H. Ec. 120 Foods and Nutrition	3 hrs.	Ed. F. 175 Organization and Administration of Vocational Home Economics	2 hrs.
H. Ec. 150 Clothing Problems	3 hrs.	H. Ec. 121 Foods and Nutrition.	3 hrs.
H. Ec. 145 Dress Design	2 hrs.	H. Ec. 151 Clothing Problems	3 hrs.
H. Ec. 101 Home Sanitation	3 hrs.	H. Ec. 110 Home Furnishing	3 hrs.
Elective	2 hrs.	Electives	2 hrs.
	16 hrs.		16 hrs.

Senior

Fall term		*Winter term*	
Ed. F. 110 Teaching of Vocational Home Economic	2 hrs.	Ed. C 150 School Economy	2 hrs.
H. Ec. 121 Dietetics	3 hrs.	[1]Ed. D. 160 Practice Teaching Voca. Home Economics	5 hrs.
[1]H. Ec. 115 Home Management	3 hrs.	[1]H. Ec. 160 Home Care and Training of the Child	2 hrs.
Sociology 1, elementary sociology	5 hrs.	Economics 1, general economics or Political Science 1, American Government	5 hrs.
Electives	3 hrs.	Electives	2 hrs.
	16 hrs.		16 hrs.

[1]May be taken either semester.

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 concerte 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.

The collection of surveying instruments includes instruments 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 set of Edison cells and one of chloride cells are available for experiments on storage batteries.

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 33.)

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 156 credit hours, including the required 6 hours 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 126 hours' credit, including the required 6 hours of military science and physical education, as shown in the tables on page 166.

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.

The following curricula are presented to show the possibilities of such combination of courses:

Combined Curricula for the Degree of Bachelor of Arts and the Professional Engineering Degrees

First Year

Same in all Curricula

Subject	Department and Course No.	Semester First	Second
Trigonometry and algebra	Math. 2f	5	
Analytical geometry	Math. 4w		5
Problems in citizenship	Citizenship, 1f, 2w	2	2
English composition and rhetoric	English, 1f, 2w	3	3
General inorganic chemistry	Chemistry, 1f	5	
Botany or zoology	Biol. sci		5
Military science and physical education	M. S	1½	1½
		16½	16½

Second Year

Same in all Curricula

Calculus	Math. 5f, 106w	5	5
General physics	Phys. 3f, 4w	5	5
Modern languages	French, German, etc	5	5
Military science and physical education	M. S	1½	1½
		16½	16½

Third Year

Same in all Curricula

Mechanics of engineering	Mech. 100f, 101w	4	4
Drawing, I, II	M. E. 1f, 2w	3	2
Elementary surveying	C. E. 2w		3
Materials of construction	C. E. 32f	3	
Patternmaking, forge and machine work	M. E. 25f, 30w	2	2
Differential equations	Math. 120f, 125w	3	3
Elective			1
		15	15

Bachelor of Arts and Civil Engineering

Fourth Year

General economics	Econ. 1f	5	
Accounting	Econ. 17w		3
Electrical machinery	E. E. 101f, 102w	4	4
Heat machinery A	M. E. 131w		3
Route surveys	C. E. 111f	4	
Graphic statics	C. E. 120w		2
Roads and pavements	C. E. 151f	2	
Electives			3
		15	15

Fifth Year

Subject	Department and Course No.	Semester First	Semester Second
Structural design	C. E. 122w		3
Stresses	C. E. 121f	3	
Masonry structures	C. E. 125f	3	
Business law	Econ. 150w		3
Hydraulics	C. E. 140f	3	
Higher surveying	C. E. 104f	4	
Sanitary problems	C. E. 152w		2
Electives		2	7
		15	15

Sixth Year

Water power	C. E. 141w		3
Business relations	C. E. 112f	3	
Economics of railway operation	C. E. 113w		3
Bridge design	C. E. 222f	2	
Concrete structures	C. E. 226w		3
Machine design A	M. E. 101w		3
Electives		10	3
		15	15

Note—The twenty-six hours elective must be chosen from Arts and Science courses and of these at least eight hours from advanced work in physics.

Bachelor of Arts and Electrical Engineering

Fourth Year

Electrical machinery	E. E. 101f, 102w	4	4
Heat machinery A	M. E. 131f	3	
Machine design	M. E. 101w		3
Graphic statics	C. E. 120w		2
Hydraulics	C. E. 140w		3
General economics	Econ. 1w	5	
Electives		3	3
		15	15

Fifth Year

Electrical machinery B	E. E. 110f, 111w	5	5
Heat machinery B	M. E. 132f	4	
Telephony	E. E. 134w		3
Electrical measurements	Phys. 104f		4
Electives		6	3
		15	15

Sixth Year

Subject	Department and Course No.	Semester First	Semester Second
Electrical machinery C	E. E. 210f	3	
Electrical machine design	E. E. 220f		3
High voltage transmission	E. E. 242w		3
Electrical power distribution	E. E. 230f	3	
Technical elective		3 or 0	0 or 3
Business law	Econ. 150w	3	
Thesis	E. E. 299w		4
Electives		3 or 6	5 or 2
		15	15

Note—The twenty-five hours elective must be chosen from Arts and Science courses and of these at least four hours from advanced work in physics.

Bachelor of Arts and Mechanical Engineering

Fourth Year

Electrical machinery	E. E. 101f, 102w	4	4
Graphic statics	C. E. 120w		2
Heat machinery A	M. E. 131w		3
Production shop, factory production	M. E. 140f, 142w	2	2
General economics	Econ. 1f	5	
Accounting	Econ. 17w		3
Electives		4	1
		15	15

Fifth Year

Technical composition	English 103w		2
Machine design A and B	M. E. 101f, 103w	3	4
Heat machinery B	M. E. 132f, 133w	4	3
Mechanical laboratory	M. E. 121f, 122w	2	2
Hydraulics	C. E. 140f	3	
Electives		3	4
		15	15

Sixth Year

Business law	Econ. 150w		3
Management engineering	M. E. 150f	3	
Prime mover design	M. E. 104f, 105w	3	3
Applied thermodynamics	M. E. 231w		3
Electives		9	6
		15	15

Note—Of the twenty-eight hours electives, twenty-seven must be chosen from Arts and Science courses and of these at least eight hours from advanced work in physics.

A curriculum similar to the above may be easily worked out for the combined degree of Bachelor of Arts and Chemical Engineering.

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 thoro training in general engineering subjects, and in theoretical and applied chemistry. Instruction in chemistry continues thruout 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, hydraulic, structural, municipal, and highway engineering. It is the aim to give a broad general 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.

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, 1926-1927

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	Semester 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	C. E. 243f	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	Semester 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	Semester Second
Business law	Econ. 150f		
or		3	
Contracts	Law 100f		
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	
Elective		5	7
		15	15

Electrical Engineering

Fourth Year

Electrical machinery B	E. E. 110f, 111w	5	5
Telephony	E. E. 134w		3
Heat machinery B	M. E. 132f	4	
[1]Electrical measurements	Phys. 104w		4
Technical composition	Eng. 103w		2
Elective		5	
		14	14

[1]Students 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	Semester 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:

[1]Vol. 1, No. 1, *Acetylene for Lighting Country Homes*, by J. D. Bowles, research assistant, 1909-10.

[1]Vol. 1, No. 2, *Water Supply for Country Homes*, by K. A. McVey, research assistant, 1909-10.

[1]Vol. 1, No. 3, *Sanitation and Sewage Disposal for Country Homes*, by W. C. Davidson.

[1]Vol. 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.

[1]Vol. 2, No. 3, *Tests of Road Materials of Missouri*, by W. S. Williams and Warren Roberts.

[1]Vol. 3, No. 1, *The Use of Metal Conductors to Protect Buildings from Lightning*, by E. W. Kellogg.

[1]Vol. 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.

[1]Vol. 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.

[1]Vol. 4, No. 3, *Artesian Waters of Missouri*, by A. W. McCoy, research assistant, 1912-13.

[1]Out of print

[1]Vol. 4, No. 4, *Friction Tests of Lubricating Greases and Oils*, by A. L. Wescott.

[1]No. 14, *A Study of the Effects of Heat on Missouri Granites*, by W. A. Tarr and L. M. Neuman, research assistant.

[1]No. 15, *A Preliminary Study Relating to the Water Resources of Missouri*, by T. J. Rodhouse.

[1]No. 16, *The Economics of Electric Cooking*, by P. W. Gumaer.

[1]No. 17, *Earth Roads and the Oiling of Roads*, by H. A. LaRue.

[1]No. 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.

[1]No. 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.

The following studies are in progress:

Insulating value of paints and varnishes.
Surface iron losses in rotating electrical machines.
Survey of road-making materials of Missouri.
Coal testing.
Energy required to shear steel at high temperatures.
Investigation of lubricating oils.
Commercial uses of sunflower 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.

[1]Out 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 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, and in Violin, leading to the degree of Bachelor of Fine Arts (B. F. A.) in Music.

b. 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.

c. 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.

d. 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.

e. Preparatory work in Piano, Voice or in Violin.

f. Opportunities for students in other colleges of the University to take the work in Music or in 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 33.

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.

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, pages 46 to 63.

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.

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 225 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 students' 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 be regularly admitted to the School of Fine Arts.
2. The work of the senior year must be done in residence at the University.
3. He must have completed a total of 126 hours of University work, including 6 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, or violin

Theoretical and Historical Music	36 hours
Applied Music	38 hours
Academic Subjects	40 hours
Electives (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
Electives (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 182.

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 182 to 184.

Suggested Curriculum in Piano

Freshman

	Hours		*Hours*
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	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Sophomore

	Hours		Hours
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 Education	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Junior

	Hours		Hours
Counterpoint, 109f	3	Counterpoint, 110w	3
Musical Form, 111f, or Musical Analysis, 113f	2	Musical Form, 112w, or 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
	16		16

Senior

	Hours		Hours
Musical Electives	4	Musical Electives	4
Selected from following: Composition, 115f, 2 hours; Orchestral Instruments, 179f, 2 hrs.; History of Music, 152f, 2 hrs.; Polyphonic Forms, 121f, 2 hrs.		Selected from following: Composition, 116w, 2 hrs.; Orchestral Instruments, 180w, 2 hrs.; History of Music, 156w, 2 hrs.; Polyphonic Forms, 122w, 2 hrs.; 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
	15		15

[1]Sociology, 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

	Hours		*Hours*
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
Voice, 86f and w	2	Voice, 87f and w	2
[1]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 Education	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Sophomore

	Hours		*Hours*
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	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Junior

	Hours		*Hours*
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

	Hours		Hours
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	[1]Electives	3
		Aesthetics (Philosophy) 117w	3
	16		15

[1]Sociology, Literature, History, General Psychology, Music Systems (Psychology 12f), or Philosophy, are suggested as suitable electives for the senior year.

[2]Students in voice lacking entrance requirements in piano will study piano throughout their four-year course, offering 14 hours in all. In no case will this relieve them of other regular requirements for the degree.

Suggested Curriculum in Violin

Freshman

	Hours		Hours
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	3	Violin, 91f 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	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Sophomore

	Hours		Hours
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	4	Violin, 93f 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 Education	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Junior

	Hours		Hours
Counterpoint, 109f	3	Counterpoint, 110w	3
Musical Form, 111f, or Musical Analysis, 113f	2	Musical Form, 112w, or Musical Analysis, 114w	2
Violin, 190f and w	5	Violin, 191f 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
	16		16

Senior

	Hours		Hours
Musical Electives	4	Musical Electives	4
Selected from the following: Piano, Composition, 115f, 2 hrs.; Orchestral Instruments, 179f, 2 hrs.; History of Music, 153f, 2 hrs.; Polyphonic Forms, 121f, 2 hrs.		Selected from the following: Piano, Composition, 116w, 2 hrs.; Orchestral Instruments, 180w, 2 hrs.; History of Music, 156w, 2 hrs.; Polyphonic Forms, 122w, 2 hrs.; Instrumentation, 118w, 2 hrs.	
Violin, 192f and w	5	Violin, 193f and w	5
Violin Teaching, 142f and w	1	Violin Teaching, 143f and w	1
Orchestra, 73f	1	Orchestra, 74w	1
[1]Electives	5	Aesthetics (Philosophy) 117w	3
		[1]Electives	2
	16		16

[1]Sociology, Literature, History, General Psychology, Music Systems (Psychology 12f), or Philosophy, are suggested as suitable electives for the junior and senior years.

Suggested Curriculum of Course 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, or Violin.

Junior

	Hours		Hours
Counterpoint, 109f	3	Counterpoint, 110w	3
Musical Form, 111f	2	Musical Form, 112w	2
[1]Piano or Violin	3	[1]Piano or Violin	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
[1]Electives	2	Instrumentation, 118w	2
	16		15

Senior

	Hours		Hours
Polyphonic Forms, 121f	2	Polyphonic Forms, 122w	2
Composition, 115f	2	Composition, 116w	2
Orchestration, 219f	2	Orchestration, 220w	2
[1]Piano or Violin	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
	16		15

[1]Candidates for the degree in Theory must play both the Piano and Violin to a moderate degree. The choice of instruments in the Junior and Senior years will be made in accordance with the students' needs.

[2]Sociology, 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

Freshman

	Hours		Hours
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
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 Education	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

Sophomore

	Hours		Hours
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	2	Piano, 97f and w, or Violin	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 Education	½ or 1½	Military or Physical Education	½ or 1½
	16½ or 17½		16½ or 17½

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 155.

Suggested Curricula for the Department of Art

Fundamental Course

Freshman

	Hours		Hours
English	3	English	3
Citizenship	2	Citizenship	2
Introduction to Art, 2f	5	Design, 10w or Representation, 4w	5
Geology, 1f; Zoology, 1f; or Physics, 1f	5	Art Craft III, 101w	2
Choice of:		Choice of:	
[1]Shades and Shadows, 6f; Masterpieces (History of Art), 113, or Classical Mythology (Classical Archeology), 2f	1	[1]Perspective, 7w; Masterpieces (History of Art) 113w, or Classical Archeology), 4w.	1
Military or Physical Education	½ or 1½	Elective	3
		Military or Physical Education.	½ or 1½
	16½ or 17½		16½ or 17½

Sophomore

	Hours		Hours
French, 1f	5	French, 2w	5
Design or Representation, 10f or 4f	5	Advanced Representation, 150w.	5
Psychological Principles of Art, 100f	3	Introduction to History, 1w	5
General Mathematics, 1f, or [1]Architectural Drawing, 5f	3	Elective	1
Military or Physical Education	½ or 1½	Military or Physical Education.	½ or 1½
	16½ or 17½		16½ or 17½

Specialized Courses

Drawing and Painting; Illustration and Commercial Design; Decorative Design

Junior

	Hours		Hours
Advanced Design, 155f	5	Pictorial Composition, 105w	2 or 3
Architecture, 104f	3	Painting, 106w	6
Choice of:		Choice of:	
Elementary Anatomy, 107f; Structural Design, 140f; or The News (Journalism), 103f.	3	English Literature; Music; Dramatic Interpretation, or Classical Literature	2 or 3
Life I, 120f	5	Life II, 124w	5
	16		16

Senior

	Hours		Hours
History of Modern Painting and Crafts, 180f	3	Aesthetics (Philosophy) 117w	3
Advanced Pictorial Composition, 160f	6	Advanced Decorative Composition, 170w	6
Advanced Painting, 165f	5	Special Problems, 175w	5
Elective	2	Elective	2
	16		16

APPLIED AND STRUCTURAL DESIGN

(Interior Decoration, State Design, Costume Design, Hand Crafts)

Junior

	Hours		Hours
Advanced Design, 155f	5	Interior Decoration or Applied Design, 111w or 141w	3
Architecture, 104f	3	Life II, 124w (Modeling)	2 or 3
Structural Design, 140f	3	Historic Ornament and Style, 142w, or Art Craft IV, 102w	2
Life I, 120f (Drawing)	2	Choice of:	
Elementary Landscape Gardening, 6f	3	English Literature, Music, Dramatic Interpretation, or Classical Literature	2 or 3
		Painting, 106w	6
	16		16

Senior

	Hours		Hours
History of Modern Painting and Crafts, 180f	3	Aesthetics (Philosophy) 117w	3
Historic Projects, 145f; or [1]Architectural Sources, 116f	6	Decorative Composition, 170w	6
Technical Craft, 146f; or [1]Planning of Domestic and Civic Buildings, 110f	5	Special Problems, 175w; or [1]Architectural Design, 117w	5
Elective	2	Elective	2
	16		16

[1]For 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

	Hours		Hours
Ancient History, 124f	3	The Renaissance (History), 155w	2
Life I, 122f	5	Elective in Modern Language	5
History of Greek Art, 106f	3	Painting, 106w	6
Architecture, 104f	3	History of Greek Art, 107w	3
Elective	2		
	16		16

Senior

	Hours		Hours
History of Modern Painting and Crafts, 180f	3	Aesthetics, (Philosophy) 117w	3
Pictorial Composition, 105f	5	Choice of: English or Classical Literature, Music, Dramatic Interpretation	3
Structural Design, 140f	3		
History of Italian Renaissance Painting, 111f	3	Art Elective (practice or history or both)	5
Elective	2	Social Science Elective	5
	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 153.

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, art, history and theory of music, 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 formerly not admitted.

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 64.

REGISTRATION: While the details of registration are subject to frequent change, a few general directions may be useful for 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.

The *New Regulations*, which are to go into effect after the June Commencement, 1926, are designed to permit a greater elasticity in the student's program. They offer the opportunity, for instance,

for students majoring in subject matter to minor in Education and the reverse, besides allowing a large minor to those who feel the need of being fairly proficient to teach one other subject besides that of the major.

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 plan the work for the entire year or four summers and make a rough draft of the same at the time. He will then secure the course cards for the given semester or summer session and return to the Graduate Office to complete his registration.

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 reach of Columbia by motor to register for graduate seminars, 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 respective department, and passed a final examination evincing a mastery of the fundamental principles of the major subject.

2. Acceptance of Candidates.

After the requirement in regard to admission to the Graduate School has been duly met, a student wishing to become a candidate for this degree must fill out, in consultation with his major and minor advisers, a blank form, provided for the purpose, and must present it to the Dean of the Graduate Faculty not later than one month after his or her registration, as indicated in the Graduate School Calendar.

In making application for candidacy, the student must indicate the subject of the dissertation, when one is required by the particular department, 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 of the Graduate Faculty, for final action. He may, however, defer sub-

mitting 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. COURSE OF STUDY.

The candidate must choose a major subject, according to the department, to which he must devote the greater part of his time during the year, and also such minor subject or subjects as may be approved. A majority of all work (at least twelve hours under the Old Regulations or sixteen under the New Regulations) must be selected from courses strictly graduate in character, numbered 200 and above in the Graduate Announcement. The candidate should consult the Dean of the Graduate Faculty in case of courses numbered above 100 which are not listed in the Graduate Announcement. Courses numbered below 100 do not receive credit toward graduate degrees. Courses transferred through advanced standing must receive the approval of the major adviser.

4. DISSERTATION.

The dissertation 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 requirement for the dissertation and the Dean of the Graduate Faculty for information regarding the form in which the dissertation must be submitted

5. THE TRANSITION FROM THE OLD REGULATIONS TO THE NEW REGULATIONS.

By virtue of the action of the Graduate Faculty on September 30 and October 6, 1925, the number of hours required for the master's degree was increased from twenty-four to thirty-two, and the several departments were allowed to make the dissertation optional, with the approval of the Graduate Committee. The Graduate Faculty also determined that all candidates who come up for the degree of Master of Arts before the June Commencement, 1926, shall be held to the present requirement as to the dissertation, and that those who come up after that date shall be subject to the *New Regulations*. To illustrate, graduate students who, in previous sessions, have carried the full program of studies each term will receive credit under the *New Regulations* for the work they have completed, as if they had been registered for sixteen hours during regular semesters or for eight hours in the summer session. Students who carried less than the required amount will receive credit on the new scale in due proportion. In the case of departments where the dissertation will not be required in the future, students will be required to substitute

the equivalent of the dissertation in course work within the total of thirty-two hours, as designated by the particular department.

The Dean of the Graduate Faculty was empowered to make any necessary adjustments with reference to the New Regulations.

6. THE OLD REGULATIONS IN FORCE UNTIL THE JUNE COMMENCEMENT, 1926.

Under these regulations, the student is required to present an acceptable dissertation, to complete twenty-four credit hours of work, at least twelve of which must be in courses numbered 200 and above and not more than twelve of which may be selected from courses numbered 100 to 199, and to pass a final examination. The student is permitted to register for as many as sixteen credit hours in courses numbered below 200. In no case, however, is this arrangement permitted to reduce the minimum of twelve hours required in courses numbered above 200 or the prescribed period of residence.

7. THE NEW REGULATIONS IN FORCE AFTER THE JUNE COMMENCEMENT, 1926.

Under these regulations, the student is required to present an acceptable dissertation, unless the department in which he or she is majoring has made the dissertation optional, with the approval of the Graduate Committee. In regard to this matter, the student should consult the chairman of the department. The student must complete thirty-two credit hours of work (sixteen hours per semester), at least sixteen of which must be in courses numbered 200 and above and not more than sixteen of which may be selected from courses numbered 100 to 199, if the courses are listed in the Graduate Announcement. The student should consult the Dean of the Graduate Faculty in the case of courses not so listed.

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 with 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.

In addition, the student must pass a final examination.

8. Advanced Standing for the Master's Degree.

As has been mentioned above, 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.

Beginning with the second semester of the year 1925-26, *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, making due allowance for the maximum number of hours permitted in the Graduate School. Thereafter, advanced standing for excess undergraduate work will be permitted *only* under these conditions. Students who graduated with excess undergraduate credits before 1920 will *not* receive credit for the same hereafter. Students who graduated from 1920 to and including the first semester, 1925-26, 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, it is 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.

9. Final Examination.

A final examination evincing a mastery of the fundamental principles of the student's major subject, is required.

10. Recommendation for the Degree.

With the approval of the professors concerned, such candidates as have fulfilled 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 evidence 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 result 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 dissertation proper.

(c) *Examinations.*—A committee, consisting of the professor of the candidate's major subject and the professors 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, the 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 six 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.

Nine 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 278-280.

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. 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 64 to 79.

FEES: For fees see pages 46 to 63.

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 admitted 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 35.

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 upperclassmen 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 occupies a large brick building on the quadrangle of the main campus of the University.

Library: The law library contains more than 26,000 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
Rollins Scholarship
William Mack Prize

See announcement of scholarships and prizes under general information, pages 64 to 79.

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 1926-1927 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 35 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 86 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.

PROPOSED CURRICULUM, 1926-1927

First Year

Fall Term		Winter Term	
Subjects	*Hours*	*Subjects*	*Hours*
[1]Contracts	3	Contracts	3
Torts	3	Torts	3
Property I	3	Property I	3
Common Law Pleading	3	Criminal Law	3
Legal Ethics	3	Agency	3
Total	15	Total	15

[1]All first year courses are required.

Junior Year

Subjects	*Hours*	*Subjects*	*Hours*
[1]Evidence	3	[1]Evidence	3
[1]Code Pleading	2	[1]Code Pleading	2
[1]Equity	2	[1]Equity	2
Property II	2	Property II	2
Wills	3	Sales	3
Bills and Notes	3	Insurance	3
Total	15	Total	15

Senior Year

Subjects	*Hours*	*Subjects*	*Hours*
Constitutional Law	3	Constitutional Law	2
[1]Practice	2	[1]Practice	3
Corporations	2	Corporations	2
Trusts	3	Quasi-Contracts	3
Conflicts	3	Mortgages	3
Carriers	3	Jurisprudence	2
Total	16	Total	15

Courses in the Junior and Senior years marked (1) are required; the others are elective.

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 miscroscopes 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 miscoscope 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 labora-

tory, 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 8,333 bound volumes, and a large number of pamphlets. The principal medical works of reference are included and 100 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 pages 58 and 60.

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 31. 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 COURSE 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. He must have been regularly admitted to the School of Medicine.
2. He must have completed the work of the second year of the medical curriculum in residence in this School.
3. He must have completed satisfactorily: (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: 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 undergraduate requirements of the College of Arts and Science of the University of Missouri.
4. He must have passed the Junior test in proficiency in English as required in the College of Arts and Science.
5. He must have completed the required curriculum in the School of Medicine, or its equivalent.
6. He must have completed 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.

All correspondence regarding admission should be addressed to The Registrar, University of Missouri, Columbia, Missouri.

CURRICULUM

First Year

Hours exclusive of examination periods.

First Semester:	*Total Clock Hours*	*Credit Hours*
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

First Semester:	*Total Clock Hours*	*Credit Hours*
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, 1925-26

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 Chemistry			Anat.		
Wednesday	Phys. Chem.	Anatomy			Neuro-Anatomy		
Thursday	Mat. Med.	Physiological Chemistry					
Friday	Anatomy				Neuro-Anatomy		
Saturday	Physiological Chemistry						

SCHEDULE OF HOURS FOR THE SECOND YEAR CLASS, 1925-26

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
BLANCHE WARD, R. N.....Night Supervisor
BERTHA LOVE, 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. A very modern and complete X-ray equipment has 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

MANCE TAYLOR, R. N.....Principal and Professor of Nursing
LOUISE HILLIGASS, R. N.....Assistant Professor of Nursing
HELEN R. RAYMOND, R. N.....Instructor in Nursing
LOUISE ROBBINS, 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 both 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 of Missouri, Parker Memorial 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 anaylytical 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 workroom 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 FEE: A registration fee of $10.00 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.

R. O. T. C. DEPOSIT: Students taking the advanced R. O. T. C. course will be required to deposit $5.00 at the beginning of their course, as security for the uniform issued them. This deposit will be refunded upon the completion of one year's work.

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. Those students receiving commutation of uniform are required to make a deposit of $5.00 on registering, receiving a refund at graduation. 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.

MASTERS' 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 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 190 and 191. 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.

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, and VII 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, and the College of Arts and Science, except that a 14-hour maximum limit is allowed in 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 purpose 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. For the Infantry of the Seventh Corps Area, in which Missouri is located, the camp is held at Fort Snelling, Minnesota. The Field Artillery camp is held at Camp Knox, Kentucky. 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 uniform adopted by the University authorities is of an excellent gray material, a coat with a roll collar and bellows pockets,

breeches, spiral puttees, and cap. It is made to measure and presents a splendid appearance.

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

750 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 heavy 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.
Ten Browning automatic rifles.
Two 37mm. guns and carts and service ammunition.
Two 3-inch trench mortars for guns.
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 materiel and one complete battery of French 75 m. m. guns; one gun, with accessories and caisson for the following types: 155 m. m. rifle (G. P. F.) French; 155 m. m. Howitzer, French; 75 m. m. field gun, British Model, 1917; 75 m. m. field gun, American Model 1916; 75 m. m. field gun, French Model 1897; 4.7-inch rifle, American, Model 1904; Browning machine guns, with machine gun trailer and anti-aircraft mount; Browning automatic rifles; Colt's automatic pistols, caliber .45; Battery reel carts and store wagons.

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 dise cars (Harley-Davidson).

Fire Control Equipment: Ten battery commander's telescopes, model 1917; four American aiming circles; 8 French aiming circles; 5 trench periscopes; 30 field glasses, type EE, and other instructional equipment.

Engineer Equipment: Plane tables and sketching outfits; alidades, compasses, etc.

Signal Equipment: Semaphore flags, telephones, projectors, 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 1-KW radio station. It is included in the Army radio net.

Animals: Sixty horses are used in the classes of Equitation, BC 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 unify and co-ordinate the several phases of extension work already being done by the University and to increase, as rapidly as possible, the amount and variety of such work. With this in view a director of the Extension Division has been appointed. 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, 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
6 hour course (48 assignments)	24.00

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.

Under a recent regulation of the graduate faculty, 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 our 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.

The progressive 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.

Under previous regulations of the Graduate Faculty, students who have been in attendance at the University of Missouri for one summer session can, with the approval of the dean of the Graduate School, take a maximum of six hours' work by correspondence for graduate credit. This provision continues until June 10, 1926, after which altogether a maximum of eight hours may be taken by correspondence before and after residence has been established.

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 Charles H. Williams, Director of University Extension.

EXTENSION CLASS SERVICE

Extension Center Courses

Work was offered by the lecture method of extension centers during 1925-26, 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 better to serve the needs of the state, and especially the needs of the teachers of Missouri, the Extension Division of the University has recently 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 or its equivalent.
   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

During the past year the University has inaugurated the Department of Public Information which 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 Extension Division has a large collection of plays and recitations suitable for high school and grade school use. These are loaned to schools or to community organizations throughout the state of Missouri free except for postal charges.

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, Law Building, Columbia, Missouri.

VISUAL EDUCATION SERVICE

Nearly one hundred and fifty sets of lantern slides, containing from twenty to one hundred and sixty slides each, upon subjects suitable for use in high schools, can be furnished to superintendents or principals free, except for transportation. It is necessary for schools making use of these collections to possess a stereopticon. The Visual Education Service is also able to furnish to schools desiring them, films upon about three hundred subjects free of cost, except for a small inspection fee and transportation. A rental fee is charged for a few special films. Charts upon agricultural subjects are also available.

For information concerning films, slides, or charts, write to Visual Education Service, 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 1925-26 was: Resolved, *That the amendment to the United States Constitution enabling Congress to regulate child labor should be ratified by the several states.*

For the year 1926 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 the fees, entrance requirements, requirements for graduation, fellowship, scholarship 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.

GROWTH OF THE SUMMER SESSION: No department of the University has made a more rapid growth. The enrollment of the Summer Session in 1925 was 1650, more than 400 of these being graduate students. 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 1926 will open on Tuesday, June 8. 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 the last of February. 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 238.
Agricultural Education, page 239.
Agricultural Engineering, page 239.
Anatomy and Histology, page 240.
Animal Husbandry, page 240.
Art, Theory and Practice of, page 242.
Art, Applied, page 244.
Art, History of, page 249.
Astronomy, page 244.
Bible College, page 245.
Botany, page 246.
Chemistry, page 247.
Citizenship, page 248.
Classical Archaeology, page 249.
Clinical Medicine and Surgery, page 250.
Dairy Husbandry, page 250.
Economics and Commerce, page 252.
Education, page 254.
Engineering, page 259.
  Curricula in, pages 161 to 163.
  Agricultural, page 239.
  Chemical, page 247.
  Civil, page 259.
  Electrical, page 261.
  Mechanical, page 263.
English, page 265.
Entomology, page 267.
Field Crops, page 268.
Geology and Geography, page 269.
Germanic Languages, page 271
Greek, page 271.
History, page 272.
Home Economics, page 273.
Horticulture, page 275.
Journalism, page 278.
Latin, page 280.
Law, page 281.
Mathematics, page 284.
Medical Bacteriology and Preventive Medicine, page 285.
Meterology, page 285.
Military Science and Tactics, page 285.
Music, page 287.
Pathology, page 291.
Philosophy, page 291.
Physical Education, page 292.
Physics, page 295.
Physiology and Pharmacology, page 296.
Political Science and Public Law, page 297.
Poultry Husbandry, page 298.
Psychology, page 299.
Romance Languages, page 299
Rural Life, page 301.
Sociology, page 304.
Soils, page 306.
Veterinary Science, page 307.
Zoology, page 308.

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; not given in the year 1926-27. (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; not given in the year 1926-27. (4-6) MR. HOOKER.

206w. DAIRY CHEMISTRY. Theories of milk secretion; the chemistry of milk constitutents, their properties and physiological significance; the chemical processes involved in the manufacture of dairy products; Offered in alternate years; given in the year 1926-27. (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; given in the year 1926-27. (4-6) MR. BRADFIELD.

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. (3-6) MR. HOGAN; MR. HOOKER; MR. BRADFIELD; MR. BRODY.

AGRICULTURAL EDUCATION

See *Methods in Agriculture*, page 256.

AGRICULTURAL ENGINEERING

2f and w. FARM WOODWORK AND CONCRETE. Testing materials for use in concrete. Practice in building concrete floors, posts, tile, and blocks. Framing, rafter cutting, and general construction of buildings and farm equipment. (2) MR. WOOLEY.

10f, w. FARM SHOP PRACTICE. 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, overhaulion, 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 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.

210f 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 106 to 130. See also
Agricultural Chemistry, page 238.
Agricultural Education, page 239.
Agricultural Engineering, page 239.
Agricultural Journalism, page 280.
Animal Husbandry, page 240.
Dairy Husbandry, page 250.
Entomology, page 267.
Field Crops, page 268.
Home Economics, page 273.
Horticulture, page 275.
Poultry Husbandry, page 298.
Rural Life, page 301.
Soils, page 306.
Veterinary Science, page 307.

ANATOMY AND HISTOLOGY

102f. HUMAN DISSECTION. A study of the gross structure of the human body, dissection progressing in the following order: Extremities, thorax, abdomen. (8) MR. ALLEN, MR. BAKER.

103w. HUMAN DISSECTION. A continuation of course 102f; dissection of the abdomen (cont.,) head and neck. (4)

104f. HISTOLOGY. The microscopic structure of the human body is undertaken from the embryological viewpoint. (5) MR. CHARLTON; MR. COLLINGS; MR. NEEDLES.

105w. NEUROLOGY. The gross and microscopic structure of the central nervous system and the sense organs are studied. (3) MR. CHARLTON; MR. COLLINGS; MR. NEEDLES.

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. CHARLTON.

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. COLLINGS; MR. LANDERS.

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. ALLEN; 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, 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.

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. The major portion of the work is done by the method of 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. Prerequisite, organic chemistry, course 15. The laws of animal nutrition; an adaptation of the facts of physiological chemistry to the subject of feeding domestic animals. (3) MR. HOGAN.

101w. ANIMAL BREEDING. Prerequisite, general zoology, course 1. A treatment of the principles and practices involved in the improvement of the domestic animals. The course includes a discussion of the subjects of reproduction, variation, heredity, selection, line breeding, in-breeding, cross-breeding, grading, and other subjects correlated with the breeding and improvement of farm animals. (3) MR. TROWBRIDGE.

102f. ADVANCED LIVE STOCK JUDGING. Elective. Prerequisite, course 3, live stock judging. A continuation of the work given in course 3 by the method of comparative judging. This course includes excursions to live stock shows and noted breeding farms. (3) MR. WEAVER.

103w. BEEF PRODUCTION. Elective. Prerequisites, courses 1 and 100. A discussion of practical methods of beef production, including a consideration of successful practices in feeding for market, fitting for show, and general care and management of beef cattle. (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. Approved systems of swine management, including a discussion of foodstuffs, with special reference to their adaptability to pork production; the feeding of hogs for farm and market; the feeding and management of the commercial and pure-bred breeding herd. (3) MR. WEAVER.

106f. HORSE PRODUCTION. Elective. Prerequisites, courses 1 and 100. Statistical study of horse and mule industry. Advance of the breeds and market types; horse pedigree record associations and stallion laws. The breeding, growing, and management of breeding and market horses of all classes. (2) MR. CHITTENDEN.

107w. STOCK FARM MANAGEMENT. Elective. For juniors and seniors only. Successful methods of operating farms devoted chiefly to live stock production. A study of the best systems applied to Missouri conditions. (2) MR. TROWBRIDGE.

109f and 110w. SPECIAL PROBLEMS. Primarily for advanced undergraduates; topics may be assigned or may be chosen subject to approval. MR. TROWBRIDGE and other members of the Department.

120f. ANIMAL BREEDING INVESTIGATIONS. Prerequisites 101w and Veterinary Science 1f. A study of the more important contributions in the anatomy and physiology of reproduction in animals, and a consideration of investiga-

tions dealing with problems in heredity fundamental to the improvement of farm animals. (1-3 hours.) MR. TROWBRIDGE and MR. MCKENZIE.

200f and 201w. SEMINAR. Elective. Special investigation bearing on selected lines of animal husbandry. The preparation and presentation of papers for discussion by the class. Once a week. MR. TROWBRIDGE.

202w. 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.

204w. LIVE STOCK FEEDING INVESTIGATIONS. Prerequisite, any one of the following courses: 103w, 104f, 105w, 106f. A study of the more important investigations in feeding cattle, hogs, sheep and horses. Designed for the students specializing in some phase of Animal Husbandry. 2 hours.

205f, 206w. RESEARCH IN ANIMAL HUSBANDRY. Advanced studies of special phases of animal production. Recommended to students who desire more thorough training in the production of cattle, horses, sheep or swine, or who may wish to make a more careful study of the fundamental principles of animal husbandry. MR. TROWBRIDGE; MR. WEAVER.

208f and 209w. Research in Animal Breeding.

Advanced studies of reproduction, inheritance and development in the domestic animals. MR. MUMFORD.

210f, 211w. RESEARCH IN ANIMAL NUTRITION. Fundamental studies of nutritional problems. MR. HOGAN.

213f-214w. Research in the Physiology of Reproduction.

Problems in the anatomy and physiology of the genital systems of domestic animals will be investigated. 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.

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. ARCHITECTURE. 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.

105f and w. PICTORIAL COMPOSITION. Prerequisites, courses 4 and 10. Pictorial expression through representation and design; hence, a fundamental course in painting, illustration, and advertising. (3-5) MR. ANKENEY; MR. HANSEN.

106w. 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. ANKENEY; MR. GENTRY.

107f and 108w. TONE. An advanced painting course. (2-5) MR. ANKENEY.

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.

114f. HISTORY OF ARCHITECTURE I. An historical analysis of the architecture of Egypt, Mesopotamia, Greece, Rome, and Europe to the 12th Century. A more intensive study of the historical developments in architecture than 104. (3) MR. BILL.

115w. HISTORY OF ARCHITECTURE II. Gothic, Renaissance, and Modern Architecture. Continuation of course 114 to and including present day architecture. (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. ANKENEY; MR. GENTRY.

124f and w. LIFE II. Continuation of Life I carried out in modeling. (2-5) MR. ANKENEY; MR. GENTRY.

127f and w. ADVANCED LIFE I. (2-5) MR. ANKENEY.

129f and w. ADVANCED LIFE II. (2-5) MR. ANKENEY.

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. ANKENEY; MISS DOBBS; MISS SPENCER.

142w. HISTORIC ORNAMENT AND STYLE. Drawing and modeling details of some period. (2) MR. BILL; MR. ANKENEY.

145f. HISTORIC PROJECTS. Projects in applied and structural design to conform to some historic period. (6) MR. ANKENEY; MR. BILL; MISS SPENCER.

146f. TECHNICAL CRAFT. Advanced technique in chosen craft. (5) Not offered in 1926-27.

150f and w. ADVANCED REPRESENTATION. (5) MR. GENTRY.

155f and w. ADVANCED DESIGN. (5) MR. ANKENEY; MR. HANSEN.

160f. ADVANCED PICTORIAL COMPOSITION. Drawing, painting, and modeling dominated by pictorial ideas. (2-6) MR. ANKENEY; MR. GENTRY.

165f. ADVANCED PAINTING. Tonal Painting in life, portrait, landscape or draped model. (5) MR. ANKENEY; MR. GENTRY.

170w. ADVANCED DECORATIVE COMPOSITION. Original projects. (2-6) MR. ANKENEY; MR. BILL; MR. GENTRY.

175w. SPECIAL PROBLEMS. Original work in student's chosen field (5) MR. ANKENEY; MR. BILL; MR. GENTRY.

180f. HISTORY OF MODERN PAINTING AND CRAFT. Achievements, developments, and problems of modern art. (3) MR. ANKENEY.

202f and w. PROBLEMS OF DESIGN. Prerequisite, courses 10 and 155, and possibly 104, 106, or 111. (2-5) MR. ANKENEY; MR. BILL.

206f and w. PROBLEMS OF FORM. Prerequisite, courses 4 and 10 and 150, and possibly 122. (2-5) MR. ANKENEY.

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.

250f and w. SEMINARY. (Credit hours to be arranged.) MR. ANKENEY.

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. ARTCRAFT 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. ARTCRAFT III. Prerequisite, Artcraft 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 and s. HANDWORK FOR PRIMARY GRADES. Description on page 229.

G 121w and s. HANDWORK FOR INTERMEDIATE GRADES. Description on page 229.

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) 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. (2) 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, courses may be arranged in Celestial Mechanics, the Theory of Orbit Determination, or the Theory of Observational Errors.

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 archaeological 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. (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.

116. HEBREW LANGUAGE. Grammatical principles of the language; acquisition of a vocabulary; translation of Gen. 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.

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. (Credit in School of Education only.) (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. (Credit in the School of Education only.) (2) MR. TOWNER.

190f and w. 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. (Credit in the School of Journalism only.) (2) MR. TOWNER.

191f and w. RELIGIOUS JOURNALISM II. Laboratory in the writing of religious articles and news stories. (Credit in the School of Journalism only.) (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 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.

103w. 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.

104f. HISTOLOGICAL METHODS. Training in microscopical technique. (3) MR. ROBBINS; 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 and 112w. SPECIAL PROBLEMS. Special problems in the various phases of botany. Credit to be arranged.

200f and w. SEMINARY. Special subjects in botany, including departmental research, are discussed. A reading knowledge of French and German is essential. (1) MR. ROBBINS; MR. MANEVAL; MR. RICKETT.

201f and w. ADVANCED PLANT PHYSIOLOGY. Lectures and laboratory work on problems in plant physiology related to plant production. Course 100w or equivalent, prerequisite. (2-5) MR. ROBBINS.

200f and w. SEMINARY. Special subjects in botany, including departmental will be assigned to some special problems for investigation. A reading knowledge of French and German is essential. Credit to be arranged. MR. ROBBINS; MR. MANEVAL; MR. RICKETT.

CHEMISTRY

Course 11, Greek, Derivation of Scientific terms in Chemistry, is recommended to students of Chemistry.

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. Upperclassmen electing 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. A continuation of course 1. Courses 1 and 2 are prerequisite to all courses in chemistry. (3) MISS DOVER; MR. SCHLUNDT.

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. GADDUM 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. QUANTITATIVE ORGANIC ANALYSIS. Must be preceded or accompanied by course 121. Quantitative analysis of commercial organic products. (3) MR. CALVERT.

125w. QUANTITATIVE ORGANIC ANALYSIS. Must be preceded or accompanied by course 121. Quantitative analysis of commercial organic products. (3) MR. CALVERT.

130w. PHYSICAL CHEMISTRY. Prerequisites, college course in physics, three hours of quantitative analysis, three hours of organic chemistry. (3) MR. GADDUM.

131f. PHYSICAL CHEMISTRY. Prerequisites, 110, 121, college course in physics, and preceded or accompanied by Mathematics 106. (5) MR. GADDUM.

133w. ELECTRO-CHEMISTRY. Prerequisite, same as 131. Generally offered alternate years. Given in 1926-27. (5) MR. GADDUM.

135w. RADIOACTIVITY. Prerequisites, undergraduate courses in physics and chemistry. Generally offered alternate years. Will be given in 1927-28. (3) 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) MR. ————————.

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. (3) MR. CALVERT.

212w. ADVANCED ORGANIC CHEMISTRY. Lectures on selected topics, supplemented by readings and reports. (3) MR. CALVERT.

225w. QUALITATIVE ORGANIC CHEMISTRY. (3) 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. GADDUM.

233w. Advanced Physical Chemistry Lectures on selected topics. Prerequisites, same as for course 232f. Credit to be arranged. MR. GADDUM.

260f and 261w. SEMINARY. 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, 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, frames 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.

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, 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 buttermaking. (3) Mr. Ragsdale; Mr. Elting.

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.

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. Moseley.

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 buttermaking, ice-cream manufacture and cheesemaking. (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. Moseley.

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. TURNER.

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.

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.

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.

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; MR. ZIMMERMAN.

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. (3) MR. ZIMMERMAN.

105f and w. MONEY, CREDIT AND BANKING. The relation of the production of precious metals and the banking business to the supply of money and the prices of commodities. (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 organized 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. The development of business organizations, the financing of such enterprises, their relations to the control of industry, the prices of commodities, and the distribution of wealth. (3) MR. WATKINS.

121f. ACCOUNTING AND BUSINESS POLICY. Prerequisite, course 117. An examination of the functions of accounting in relation to business enterprise. (2) MR. SCOTT.

122w. INVESTMENTS. Prerequisite, course 118. A study of the various forms of investments. (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, either course 117 or consent of the instructor. 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 an intensive study of the Negotiable Instruments Law. (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 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) 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.

230f. ADVANCED MONETARY THEORY. A discussion of modern monetary and credit theories combined with a statistical study of recent currency experiments in Central Europe. (3) MR. ROGERS.

235w. ADVANCED ACCOUNTING THEORY. A study of the functions of accounts; their development; their place in the current business regime, 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 150 to 157.

(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. Pyle; Mr. Purdom.

A150f and w. The Psychology of Learning. Prerequisite, an approved course in general psychology, and course A102 or its equivalent. The science of education based upon a knowledge of the child and the laws of learning. Lectures f only. (3) Laboratory each term. (Credit to be arranged.) Mr. Pyle.

A155w. Psychological Tests. A laboratory course in mental and physical tests, the psychology of individual differences, and the economy and technique of learning. (3) Mr. Pyle.

A157w. Mental Measurements. Principles of mental testing and practice in the giving and interpretation of the more commonly used group and individual intelligence tests. For superintendents, principals, and students who are preparing for psycho-clinical work in the social or educational field. (2) Mr. Saupe.

A160f. Abnormal and Defective Children. Subnormal and supernormal children from the standpoint of genetic psychology. Examination of the causes of these deviations, tests for their determination, and a study of their proper treatment. (2) Mr. Saupe.

A170f and A171w. Current Problems. Current problems in education from the point of view of psychology. Informal discussions and reports of periodical literature in educational psychology. (1) Mr. Pyle.

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.

A210f and w. Seminary in Educational Psychology. Prerequisite, considerable training in both education and psychology. For thesis work. (Credit to be arranged.) Mr. Pyle; Mr. Saupe; Mr. Purdom.

A215f and w. Research in Educational Psychology. Prerequisite, considerable training in both general and educational psychology, including training in psychological method. Original investigation of problems in any field of educational psychology. (Credit to be arranged.) Mr. Pyle; Mr. Saupe; Mr. Purdom.

(B) *THE HISTORY AND PHILOSOPHY OF EDUCATION*

B125f. History of Education. To give a better understanding and appreciation of the present educational situation through a study of its development. (3) Mr. Coursault.

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, B281w, and B282s. Seminary in the History and Philosophy of Education. Thesis work of 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.

C160w. 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.

C170f and s. EDUCATIONAL STATISTICS. Statistical methods for teachers, supervisors, superintendents and beginning graduate students. (3) MR. CAPPS.

C175f 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.

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; MR. CAPPS.

C185w. CITY SCHOOL ADMINISTRATION. For principals, supervisors and superintendents. Deals with the chief problems of town and city school administration. (3) MR. NEALE.

C200f and s. 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.

C212w. SCHOOL SURVEYS. For students having considerable training and experience in education. (2) MR. SAUPE.

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, w and s. 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. 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.

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.

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.

D171w. Elementary School Supervision. A study of the modern technique of improving the work of the classroom teacher in the elementary schools. (2) Mr. Phillips.

D225f and D226w. 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. Methods of Teaching Vocational Agriculture. This course deals with the methods of teaching vocational agriculture in secondary schools. (3) Mr. Dickinson.

E107f, w and s. The Project 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 and planning and supervision are discussed in a manner applicable to actual conditions. (2) MR. DICKINSON.

E115f and w. MANAGEMENT OF VOCATIONAL AGRICULTURE IN SECONDARY SCHOOLS. 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. DICKINSON.

E117f and w. 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, etc. Motion-picture machines and stereopticons are studied. Laboratory work in construction and use of visual aids. (2) MR. DICKINSON.

E120w and s. 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.

PRACTICE TEACHING OF VOCATIONAL AGRICULTURE. Described under School Supervision as Education D155f. MR. DICKINSON.

E210f and w. SPECIAL PROBLEMS IN VOCATIONAL AGRICULTURE. Discussion and presentation of papers on assigned topics having to do with agricultural education. Open to students specializing in vocational agriculture. (1) (2) (3) MR. DICKINSON.

E236f, w and s. 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.

F115f and w. TEACHING OF APPLIED ART. A course designed to prepare students of home economics to teach applied art. (2) MISS WELCH.

F120f and w. TEACHING OF APPLIED SCIENCE. A course designed to prepare students of home economics to teach applied science. (2) MISS KLINGNER.

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 D225f and D226w.

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. Benchwork 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.

G110f. 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.

G112f 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.

G145f. 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, 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) Miss Stewart.

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 161 to 163.
For courses in *Agricultural Engineering*, see page 239.
For courses in *Chemical Engineering*, see under *Chemistry*, page 247.

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; Mr. Hughes.

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, 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. Prerequisites, 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. Hydrology; stream measurement, weirs, current meters; storage reservoirs and dams; water-wheels; the problem of a water-power development. (3) MR. RODHOUSE.

142w. WATER SUPPLY. 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. 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 CE140. 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. SPRAGEN; 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. SPRAGEN; 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. (5) MR. WEINBACH; MR. SPRAGEN; 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.

133f. ILLUMINATION. Prerequisites, courses 101 and 102. Characteristics of commercial types of electric lamps and their application to interior and exterior lighting. (2) MR. SPRAGEN.

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; induction 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) MR. SPRAGEN.

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, expotential 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. 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. DRAWING II. Prerequisite, course 1. Descriptive geometry. (2) MR. NEWTON; MR. HUGHES.

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. HUGHES.

101f and w. MACHINE DESIGN A. Prerequisites, engineering drawing 1 and 2, materials of construction and integral calculus. 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 B, 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 to 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. Problems 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, w, and s. Composition and Rhetoric. Detailed study and practice in construction and the kinds of composition. (3) Mr. Rankin; Mr. Moffett; Miss Brashear; Mr. Dike; Mr. Fogg; Miss Funk; Mr. Glore; Miss Kaucher; Miss Lewis; Mr. Storlie; Mr. Wainger; Mr. Clapp; Mr. Ross.

2f, w, and s. Composition and Rhetoric. A continuation of course 1. (3) Mr. Rankin; Mr. Moffett; Miss Brashear; Mr. Dike; Mr. Fogg; Miss Funk; Mr. Glore; Miss Kaucher; Miss Lewis; Mr. Storlie; Mr. Wainger; Mr. Clapp; Mr. Ross.

Courses 1 and 2 are required work for freshmen.

3w and 4f and s. English Life and Literature. A reading and lecture course upon phases of English life and the progress of English literature. (3; 2 for upperclassmen) Mr. Belden; Mr. Wainger.

5f and 6w. Masterpieces. Critical study of selected masterpieces of English literature. (2 or 3) Those who elect the course for three hours' credit will do extra work under the direction of the instructor. Mr. Fairchild.

Courses 3, 4, 5 and 6 constitute an introduction to the study of English literature, open in whole or in part 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. Course 3 or 4 is required and courses 5 and 6 are recommended for admission to other courses in English literature.

50f and w. Narration. Study and practice in writing the short story and related forms of imaginative composition. Prerequisite, course 3, 4, 5 or 6. (3) Mr. Ramsay; Miss Brashear; Mr. Storlie.

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; Miss Brashear; Miss Kaucher.

75f, w, and s. 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. 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. Rhynsburger.

Sophomore standing is a prerequisite to course 75; and 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.

101w. ADVANCED COMPOSITION. Informal course in composition, open to a limited number of upperclassmen. (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.

104f. THE BOOK REVIEW AND CRITICAL ESSAY. Study of theories and practice in writing reviews and critical essays. (3) MR. RANKIN.

105f and s. 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 questions; 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.

113s. VERSIFICATION. The principles of English verse; the function and values of verse in poetry. (2½) MR. NEFF.

119f and 120w and s. 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 2½ or 3) MR. RAMSAY; MR. BELDEN.

125w and s. CHAUCER AND HIS TIME. A careful study of some of the *Canterbury Tales* and rapid reading of other parts of his work, together with a consideration of the social background of Chaucer's England; introduction to Middle English. (3; 2 in the Summer Session) MR. RANKIN; MR. MOFFETT.

135f and 136w. SHAKESPEARE. *Hamlet, Macbeth, Henry V, The Tempest.* (3) MR. FAIRCHILD.

145f. MILTON. Life, works, and times. (3) MR. FAIRCHILD.

150w. THE ENGLISH EPIC. The progress of the epic type in English literature, with special study of the great English epics. (3) MR. RAMSAY.

156f. JOHNSON AND HIS TIME. Philosophy, criticism, and social ideas as reflected in English literature from 1730 to 1780. (3) MR. BELDEN.

161f. THE RISE OF PROSE FICTION. The development of the novel down to the opening of the nineteenth century. (3) MR. FAIRCHILD.

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.

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.

190w. RECENT AND CURRENT LITERATURE. A study of representative writers and literary movements in England and America during the last fifty years. (3) MR. RAMSAY.

195f. THE MODERN DRAMA. The development of English and American drama during the last thirty years, with a survey of some foreign authors who have influenced its course. (3) MR. RAMSAY.

223w. MIDDLE ENGLISH. English literature from the Norman Conquest to Chaucer, with emphasis on the cycles of romance; study of Middle English dialects. (3) MR. RANKIN.

230f. SPENSER. Native and foreign elements in the non-dramatic English literature of the Renaissance, with Spenser as the central figure. (3) MR. BELDEN.

235w. SHAKESPEAREAN CRITICISM. History of early editions and criticism; current problems. (3) Mr. Fairchild.

255s. SWIFT AND HIS TIME. A study of the life and works of Swift in relation to the political, religious, intellectual and literary conditions of the reign of Queen Anne. (2½) MR. BELDEN.

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) MR. RAMSAY.

290s. RECENT AND CURRENT LITERATURE. Selected problems. (2½) MR. NEFF.

215f, w, and s. RESEARCH. Candidates for advanced degrees will meet with instructors for consultation upon their individual problems. (1, 2, 3, or 4) MR. BELDEN; MR. FAIRCHILD; MR. RAMSAY; MR. RANKIN; MR. MOFFETT; MR. NEFF.

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. ECONOMIC IMPORTANCE OF FARM BIRDS IN THE CONTROL OF INSECTS. 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 of 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, 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, 201w. RESEARCH. Open to those who have had sufficient zoological and entomological training to fit them for original research. MR. HASEMAN; MR. SULLIVAN.

203f, 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, the quality of seed, and the merits of various types of seed associations. (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. (3-5) MR. STADLER.

201f, 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. (2) MR. STADLER.

204f, 205w. RESEARCH. Original research in problems in the production, management and improvement of field crops. MR. ETHERIDGE; MR. STADLER; MR. HELM.

206f, 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.

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. WILKERSON.

2f and w. PHYSICAL GEOLOGY. Like 1, but omits the historical part. (3) MR. WILKERSON.

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 15 or 50. Offered in the summer term. (4-6)

106f and 107w. MINERALOGY. Prerequisite, course 15. (3) 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.

125w. ROCKS AND ROCK MINERALS. Prerequisite, course 15. (3) MR. MATHIAS.

130f. OPTICAL MINERALOGY. Prerequisite, course 107, inorganic chemistry and general physics. (5) MR. WILKERSON.

135w. PETROGRAPHY. Prerequisite, course 130. (3-5) MR. WILKERSON.

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.

207w. ADVANCED MINERALOGY. Prerequisite, course 107. Offered in 1925-26 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, 121 and 125. (3) MR. BRANSON.

224f. STRATIGRAPHY. Prerequisite, courses 105 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. This course endeavors (1) to impress upon the student the fact that man's activities are in several ways, related to the physical environment, and (2) to acquaint the student with such major relationships. (3) MR. BRATTON; MR. ADAMS.

110f. THE GEOGRAPHY OF NORTH AMERICA. Prerequisite, course 6. A regional study of the continent. (3) MR. ADAMS.

111w. THE GEOGRAPHY OF SOUTH AMERICA. Prerequisite, course 6. A regional study of the continent. Offered in 1926-27 and alternate years. (3) MR. ADAMS.

112w. THE GEOGRAPHY OF EUROPE. Prerequisite, course 6. A regional study of the continent. Offered in 1925-26 and alternate years. (3) MR. BRATTON.

113f. THE GEOGRAPHY OF ASIA. Prerequisite, course 6. A regional study of the continent. Offered in 1926-27 and alternate years. (3) MR. BRATTON.

114f. THE GEOGRAPHY OF CARIBBEAN AMERICA. Prerequisite course 6. Offered in 1925-26 and alternate years. (3) MR. BRATTON.

115f and w. INDUSTRIAL GEOGRAPHY. Prerequisite, course 6 or fifty hours of college credit. A study of the distribution and production of the world's principal commercial products in relation to the natural environment. (3) MR. BRATTON; MR. ADAMS.

116f and w. GEOGRAPHY OF TRADE. Prerequisite, course 115. A study of (1) various ways by which commodities are moved, (2) the important trade routes of the world, and (3) the relationships of these ways and routes to world commodities. (3) MR. ADAMS.

118w. THE GEOGRAPHY OF AFRICA. Prerequisite, course 6. A regional study of the continent. Offered in 1925-26 and alternate years. (3) MR. ADAMS.

119w. CONSERVATION OF NATURAL RESOURCES IN THE UNITED STATES. Prerequisite, 50 hours of college credit. Offered in 1926-27 and alternate years. (3) MR. BRATTON.

145f and w. PRO-SEMINAR. For senior students in geography preparing to do graduate work. (1-2) MR. BRATTON; MR. ADAMS.

212w. HISTORICAL GEOGRAPHY OF THE UNITED STATES. Offered in 1925-26 and alternate years. (3) MR. BRATTON.

213f. POLITICAL GEOGRAPHY. Offered in 1926-27 and alternate years. (3) MR. BRATTON.

214f. CARTOGRAPHY. A study of the principles of illustration applied to geography. Offered in 1925-26 and alternate years. (3) MR. BRATTON.

215f and w. SEMINAR. (1-3) MR. BRATTON; MR. ADAMS.

230f and w. RESEARCH. 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. Also, see page 245.

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. ————.

6f and w. EUROPE, 1750 TO 1870. The development of Nationalism and Democracy with special attention to economic and social forces. (5) MR. MULLETT.

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.

108f and w. AMERICAN HISTORY TO 1816. The establishment and development of the English colonies and the founding of an independent nationality. (3) MR. VILES.

109f and w. AMERICAN HISTORY, 1816 TO 1876. The development of American democracy and the division and reunion of the nation. (3) MR. STEPHENS.

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. MULLETT.

118w. POLITICAL AND SOCIAL HISTORY OF ENGLAND. The modern period. (3) MR. MULLETT.

123f. ANCIENT HISTORY. The Orient and Egypt. (2) MR. WRENCH.

125w. ANCIENT HISTORY. The Greek Period. (2) MR. WRENCH.

126f. ANCIENT HISTORY. The Roman Period. (2) MR. WRENCH. (Not given in 1926-27.) 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. (2) MR. KERNER.

145f. THE EXPANSION OF EUROPE. The extension of European institutions and culture throughout the world in the modern period. (2) MR. MULLETT.

146w. THE BRITISH EMPIRE. A survey of its growth and organization. (2) MR. MULLETT.

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.

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.

195w. 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.

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.

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. PROBLEMS IN MISSOURI HISTORY. (2) (3) or (4) MR. VILES.

235w. PROBLEMS IN ORIENTAL HISTORY. (2) MR. WRENCH.

250f and w. SEMINARY IN HISTORICAL RESEARCH AND THESIS. (1) (2) (3) or (4) MR. VILES; MR. STEPHENS; MR. KERNER; MR. WRENCH: MRS. PRIDDY.

HOME ECONOMICS

See pages 117 to 121.

1f and w, 2f and w. FOODS 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 CARLEY.

15f and w, 16f and w. ELEMENTARY 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 TAYLOR; MISS HILLIGASS.

50f and w, 51f and w. TEXTILES AND CLOTHING. A study of the physical, microscopic and simple chemical tests of fibers and of the selection and construction of clothing. (3-3) yr. (Additional hours without credit are provided for those students who had no previous experience or whose previous training is inadequate.) MISS COLES; MISS BRIGGS.

101f and w. HOUSEHOLD SANITATION. Prerequisites, physiology and bacteriology or preventive medicine. A study of the problems involved in providing sanitary living conditions. (3) MISS CARLEY.

110f and w. HOME PLANNING AND FURNISHING. Prerequisite courses 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. (3) MISS HOWARD.

111f and w. PROBLEMS IN HOME PLANNING AND FURNISHING. Prerequisite, course 110. A study of the history of home furnishings—their origin, development, present mode of manufacture, and influence on modern interior decoration with their suitable applications to the problems. (Credit to be arranged) MISS HOWARD.

115f and w. HOUSEHOLD MANAGEMENT. This course provides opportunities for living in a self-sustaining practice home and in assuming the responsibilities involved in managing a home. (3) MISS CARLEY.

120f and w, 121f and w. FOODS AND NUTRITION. Prerequisites, organic chemistry, physiology, bacteriology, home economics 1 and 2. A study of the chemistry of food constituents and their occurrence in the different food materials; the digestibility of different food materials and combinations; the preservation and adulteration of foods. (3-3) yr. MISS WHIPPLE.

122f and w, 123w. DIETETICS. Prerequisite, course 121. A study of the food requirements of normals, considering the individual and his environment; the planning of dietaries with especial emphasis on infant feeding; and a study of diet in disease. (3-3) yr. MISS SHOLLEY.

124f and w. FIELD WORK IN DIETETICS. Prerequisite, course 123. Individual work, such as problems in child nutrition, institutional or clinical dietetics. (Credit according to amount of work done.) MISS SHOLLEY.

145f and w. DRESS DESIGN. Prerequisite, Home Economics 16. A study of the principles of design as applied to dress. Planned especially for students qualifying to teach home economics under the Vocational Act. (2) MISS HOWARD.

146f and w. ADVANCED DRESS DESIGN. Prerequisite, course 145. A continuation of the foregoing course, planned especially for students who wish to specialize in dress design. (3) MISS HOWARD.

150f and w, 151f and w. CLOTHING PROBLEMS. Prerequisite, course 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, courses 145 and 151. Special application of the principles of art, economics, and sociology to clothing;

original designs are carried out in clothing construction; research problems in textiles and subjects allied to the clothing industry. (3 or 5) Miss Briggs.

155f and w. Textiles. Prerequisite, course 151 and organic chemistry. Analysis of the physical and chemical characteristics of the textile fibers; tests for adulteration and durability; experimentation with dyes and decoration of materials, the study of textile design, the history of textile industry and studies in the economic and social aspects of the present problems in the textile and clothing industries. (2) Miss Coles.

160f and w. Home Care and Training of Children. Prerequisites, 121 and 151. A study of the physical and mental development of children of preschool age. (2) Miss Sholley.

170f and w. 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 Whipple.

202f and w. Metabolism. Prerequisite, course 121. A study of metabolism through urinalysis, calorimetry, and feeding experiments. (5) Miss Sholley.

205f and 206w. Research in Food Preparation. Prerequisite, courses 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 211w. Research in House Furnishing. Prerequisite, courses 110 and 111. (Credit to be arranged.) Miss Howard.

215f and 216w. Supervision of Household Management. A special course in household management for those planning to take charge of practice homes. Special problems investigated and laboratory work under supervision provided. (Credit to be arranged.) Miss Cline and Miss Carley.

221f and w. Problems in Nutrition. Prerequisite, course 123. An extensive study will be made of special problems of interest in nutrition. (Credit to be arranged.) Miss Sholley, Miss Whipple.

245f and 246w. Special Problems in Dress Design. Prerequisite, courses 145 and 146. (Credit to be arranged.) Miss Howard.

250f and 251w. Research in Clothing. Prerequisite, courses 152 and 155. A study of the problems involved in the hygiene and economics of the clothing supply. A reading knowledge of French is desirable. (Credit to be arranged.) Miss Coles.

HORTICULTURE

1f and w. 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; Mr. Quinn.

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. The student may register for the lecture course (2) or for both lectures and laboratory exercises. (3) MR. TALBERT.

101w. GENERAL POMOLOGY. Prerequisite, course 1. A continuation of course 100f. It deals especially with the subjects of pruning, fertilizing and spraying of orchards. (2-3) 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 the classification, nomenclature, and adaptation of fruit varieties 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 vegetable growing and discussions on seed growing, labor problems, truck farm management, co-operation, and methods of marketing for vegetable growers. Three lectures and one laboratory period. (3-4) MR. QUINN.

109f. COMMERCIAL FLORICULTURE. A study of the location, construction and arrangement of the different types of greenhouses with practical experience in floricultural 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. A study of the theory and principles of landscape design, together with tracings and original designs in home, school, church, cemetery, and railroad gardening. (3) MR. MAJOR.

113w. SPRAYING. Not offered in 1926-1927.

114f. COMMERCIAL POMOLOGY. The harvesting, grading, packing, storage, and marketing of fruit. Lectures, assigned reading, and laboratory exercises. (3) MR. MURNEEK.

115w and s. EVOLUTION OF CULTIVATED PLANTS. A study of the fundamental laws of Genetics, especially 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 will be assigned to students who have adequate preparation. Hours by appointment. MR. TALBERT; MR. HOOKER; MR. MAJOR; MR. MURNEEK; MR. SWARTWOUT; MR. QUINN.

119w. VEGETABLE FORCING. The location, construction, and management of greenhouses and forcing frames, 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. A course dealing with the planting, culture, and harvesting of small fruits and grapes. Two lectures and one laboratory period. (3) MR. SWARTWOUT.

200f, w and s. SPECIAL INVESTIGATIONS. Special problems involving original 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 or equivalent. A study of the physical and chemical properties of spray mixtures with reference to their composition, toxicity, compatability, deterioration, spreading, adhesion, etc. (3) MR. SWARTWOUT.

204w and s. BREEDING OF HORTICULTURAL PLANTS. Prerequisite, course 115w or equivalent. For graduates and advanced students. Study of literature and original investigations on breeding and selection of horticultural plants. Hours by appointment. MR. MURNEEK.

205f. FRUIT STORAGE INVESTIGATIONS. For graduates and advanced students. 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 forcing problems as soil sterilization, temperature and humidity, training, pruning, pollination, and the use of fertilizers under forcing conditions. (3) MR. QUINN.

207f. SYSTEMATIC OLERICULTURE. A systematic study of the classification and nomenclature of vegetables. Description of varieties, history, botanical characters and adaptation of varieties to different environmental conditions. (3) MR. QUINN.

208s and w. NUTRITION. A detailed study of the important nutrient elements, their absorption and utilization; of the manufacture and utilization of carbohydrates; and of fertilizer treatments with reference to horticultural plants. (3) MR. HOOKER.

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 its equivalent. A critical study of the fundamental principles of pruning and the physiological effects of pruning upon deciduous fruit trees. Laboratory, assigned reading, and problems. (3) MR. TALBERT.

215f and w. SEMINARY. A critical study of recent investigations in horticulture and of investigations in other fields as they relate to horticulture. (1) MR. HOOKER; MR. TALBERT.

217f. ADVANCED SYSTEMATIC POMOLOGY. Prerequisite, course 105 or equivalent. The taxonomy and history of foreign and domestic species of fruits with special reference to their horticultural value and to the development of contemporary types and varieties. (3) MR. SWARTWOUT.

218f. HARDINESS OF DECIDUOUS FRUIT PLANTS. Prerequisite, course 131 or equivalent. Lectures on the types of winter injury, the factors and treatments that increase hardiness for each, and the nature of hardiness. (3) MR. HOOKER.

220f. Root Stocks for Deciduous Fruit Trees and Vines. A detailed study of suitable stocks for apples, pears, and grapes. Investigations regarding the propagation of apples and pears upon their own roots, by means of whole root and crown grafts. A study of the value of the 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 morphological and histological structure of horticultural plants of economic importance. (Credit to be arranged) Mr. Murneek.

JOURNALISM

See announcement, pages 193 to 196.

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, w and s. 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, w and s. Reporting I. Follows course 102. Assignments on daily newspaper. (3) Mr. Martin; Mr. Sharp.

104f, w and s. Reporting II. Continuation of course 103. (3) Mr. Martin; Mr. Sharp.

105f, w and s. Reporting III. Continuation of course 104. (3) Mr. Martin; Mr. Sharp.

110f, w and s. 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, w and s. Copy Reading II. Practice in editing copy and writing headlines for daily newspaper. (3 or 4) Mr. Mann; Mr. Morelock.

112f, w and s. Copy Reading III. Continuation of course 111. (3) Mr. Mann; Mr. Morelock.

120f, w and s. 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.

121f, w and s. 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, w and s. 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.

123f, w and s. Selling of Advertising II. Continuation of course 122. (5) Mr. Johnston.

124f and w. The Advertising Layout. Designing advertisements with special consideration to layout, type, illustration, color, and lettering. Prerequisite, course 121. (3) Mr. Bohn.

125f. Advertising and Distribution. The mechanism and operation of markets, studied in relation to effect on distribution of advertising commodities and services. Prerequisite, 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. Prerequisite, 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 direct media, and a consideration of the physical make-up of each. Prerequisite, course 121. (2) MR. JOHNSTON.

140w. COMPARATIVE JOURNALISM. Study of foreign and American newspapers. (2) MR. WILLIAMS.

141f, w and s. THE EDITORIAL. Open only to seniors. Practice work in editorial writing for daily newspaper, and discussion of editorial problems. (3) MR. MANN.

142f and w. NEWSPAPER DIRECTION. Open only to seniors. Conduct of newspapers from the editorial point of view. (1) (2) or (3) MR. WILLIAMS.

143f and w. INTERNATIONAL NEWS COMMUNICATIONS. The use of cables and radio in carrying news between nations. (1) MR. SHARP.

144f and w. 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; specialization 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, w and s. FEATURE WRITING I. Prerequisite, course 103. Writing of special feature articles. (3) MISS LOCKWOOD.

161f, w and s. FEATURE WRITING II. Continuation of course 160. Writing of special articles for Sunday magazine sections and other periodicals. (3) MISS LOCKWOOD.

162f, w and s. 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; study of opportunities for specialists on the drama and literature; preparation of book section in the *Missourian Magazine*. Prerequisites, courses 103 and 110. (2) or (3) MISS LOCKWOOD.

163f, w and s. 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. No journalistic prerequisites. (3) MR. CASEY.

171w. AGRICULTURAL NEWS. For students who expect to be county agents, teachers, extension workers, farm managers, or contributors to farm journals. 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.

175f and w. PRINCIPLES OF TYPOGRAPHY. Consideration of type styles and sizes and the mechanical equipment of the newspaper plant. Prerequisite, course 120. (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. Use of reference books, selection and filing of clippings, photographs, matrices, photo-engravings, etc. No journalistic prerequisites. (1) MISS LOCKWOOD.

181s. THE SCHOOL NEWSPAPER AND ANNUAL. Primarily for high-school teachers in charge of student publications. Available news sources, construction of the news story, headlines and make-up, editorial problems. No journalistic prerequisites. (2½) MR. MANN.

182s. ADVERTISING PROMOTION IN SCHOOL PUBLICATIONS. Primarily for high-school teachers in charge of student publications. Writing and selling of advertising suitable for school publications, with special attention to problems of student solicitors. No journalistic prerequisites. (1) MR. JOHNSTON.

201f, w and s. RESEARCH IN JOURNALISM. Thesis course. (1 to 6) MR. WILLIAMS; MR. MARTIN; MR. MANN; MISS LOCKWOOD; MR. CASEY.

202s. SCHOOL PUBLICITY. For school superintendents and teachers. The effective presentation of school facts to teachers and the general public. No journalistic prerequisites. (2) MR. NEALE; MR. MANN.

203s. SPECIAL CORRESPONDENCE. Field trip, including writing of daily articles for newspapers. Details of trip available in May. (8) MR. MARTIN.

204f, w and s. 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, w and s. COPY-DESK METHODS. The handling of copy; advanced headline writing; principles of headline display. (3) MR. MANN.

206f, w and s. NEWS-DESK METHODS. The handling of assignments and futures; direction of reporters. (3) MR. MARTIN.

LATIN

10f. CICERO'S ORATIONS. Open to students entering with two entrance units. Selected orations and letters of Cicero; training in syntax and form of the Latin language. (5)

20s, f and w. VIRGIL'S AENEID. Prerequisite, three entrance units in Latin. Study of the subject matter, form, prosody, and syntax. (5)

30f. CICERO'S ESSAYS ON FRIENDSHIP AND OLD AGE. Prerequisite, course 10 or three entrance units in Latin. Careful review of forms and syntax. (5)

35w. SALLUST'S JUGURTHA. Prerequisite, course 10 or three entrance units in Latin. (3)

40w. OVID. SELECTED POEMS. Prerequisite, course 20 or course 30, or four entrance units in Latin. (2)

50f and w. LATIN PROSE COMPOSITION. First course. (1)

60w. LIVY: SELECTIONS FROM BOOKS XXI AND XXII. The war with Hannibal. (3) MISS JOHNSTON.

101w. LATIN PROSE COMPOSITION. Advanced course. Prerequisite, course 50. (1) MISS CAUTHORN.

103f and 104w. ROMAN PUBLIC AND PRIVATE LIFE. Not given in 1926-27. Prerequisite, courses 30, 170 and 180. Reading of Cicero's correspondence and Juvenal's satires. (3) MISS JOHNSTON.

106f and 108w. CATULLUS AND THE ELEGIAC POETS. Prerequisite, courses 30, 170, 180. Selected poems of Catullus, Tibullus, Propertius, and Ovid. (3) MR. MILLER.

109s. LATIN COMEDY. Prerequisite, courses 30, 170 and 180. Representative plays of Platus and Terence. (3) MISS JOHNSTON.

110f. TACITUS: ANNALS. Prerequisite, courses 170 and 180. (3) MISS JOHNSTON.

115f and 116w. RAPID READING. Prerequisite, courses 103 and 104, or equivalent. Readings from representative authors. (2) MISS CAUTHORN.

125w. LUCRETIUS. Not given in 1926-27. Prerequisites, courses 30, 170 and 180. (3) MISS JOHNSTON.

170f. HORACE: SATIRES AND EPISTLES. Prerequisite, course 20 and 30, or equivalent. (3) MISS CAUTHORN.

180w. HORACE: ODES AND EPODES. Prerequisite, course 170. (3) MISS CAUTHORN.

210w. 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 1926-27 will be a critical study of Catullus, with interpretation of selected poems, and papers and discussions by the members. (3) MR. MILLER.

220s. HORACE ARS POETICA. (3) MISS JOHNSTON.

230f and w. RESEARCH AND THESIS. (3) MR. MILLER.

LAW

Required Courses for the First Year

100f. CONTRACTS. Mutual assent; consideration; contracts under seal; beneficiaries of contracts. (3) MR. PARKS.

100w. CONTRACTS. Course 100f is a prerequisite. Assignment of contract; express conditions; conditions implied in law; illegality. (3) MR. PARKS.

101f. TORTS. Trespass, conversion, deceit. (3) MR. LANGMAID.

101w. TORTS. Course 101f is a prerequisite. Extra-hazardous occupation, interference with business and social relations, negligence and other topics. (3) MR. LANGMAID.

102f. PROPERTY I. *Personal Property and Introduction to the Law of Real Property.* Distinction between real and personal property; acquisition of rights; bailment; lien; pledge; gift; fixtures; tenure, estates, seisin, future and incorporeal interests, disseisin, joint ownership, uses and trusts. (3) MR. SIMONTON.

103w. PROPERTY I. *Conveyancing.* Mode of conveyance; boundaries; creation of easements; covenants for title; estoppel by deed; priority and record; accretion; possessory titles; prescription. (3) MR. SIMONTON.

104f. COMMON LAW PLEADING. The common law actions of trespass, case, trover, special and general assumpsit, debt, covenant and replevin; demurrers; pleas. (3) MR. MCBAINE.

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.

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. SEARS.

107f. LEGAL ETHICS. History of the legal profession; the lawyer's qualifications; admission and discipline of lawyers; ethical duties of the lawyer to the court, the public, clients, etc. Costigan's Cases on Legal Ethics. (3) MR. BARNETT.

Required Courses for the Junior Year

120f and w. EQUITY I. General nature of equity jurisdiction; specific performance of contracts; specific reparation of torts. (2) and (2) MR. LANGMAID.

121f and w. CODE PLEADING. Forms of civil actions. Parties to actions; the "real party in 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.

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. SEARS.

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.

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 and at will; surrender of leases; covenants in leases; nature, apportionment and suspension of rents; waste. (2) MR. SIMONTON.

124w. PROPERTY II. *Rights in Land.* 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. (2) MR. SIMONTON.

125f. WILLS AND ADMINISTRATION. Escheat; descent and distribution; making and operation of wills; probate and administration; executors and administrators. (3) MR. SEARS.

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. HEAD.

127f. BILLS AND NOTES. Formal requisites; negotiability; acceptance; endorsement; rights of holders; liabilities of parties; presentment, protest and notice; discharge. (3) MR. SIMONTON.

128w. 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. (3) MR. HEAD.

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.

152f and w. PRIVATE CORPORATIONS. The nature of a corporation; distinguished from partnership; disregard of the fiction; formation; powers; *de facto* corporations. (2) and (2) MR. PARKS.

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. ————

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.

155f. COMMON CARRIERS. *Public Utilities.* The carrier's undertaking; common carriers of goods; passengers and baggage; obligations of shipper and passenger; exceptional liability of common carrier; carrier's duty to serve, etc. Privately owned business subject to extraordinary obligations; undiscriminating services, provision of adequate facilities, reasonable charges, governmental regulation. (3) MR. HEAD.

[1]206f. POLITICAL SCIENCE AND PUBLIC LAW. (2) MR. BARCLAY.

156w. FUTURE INTERESTS. Conditions and future interests; executory devises, powers; rule against perpetuities; illegal conditions and restraints on alienation; priority of grantees; fraudulent conveyances; registration; conversion and election; joint ownership; courtesy and dower. (3) MR. PARKS. (Omitted 1926-27.)

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. LANGMAID.

158w. QUASI CONTRACTS. Nature of; benefits conferred by mistake, under partially performed contract, under compulsion, or voluntarily without contract. (3) MR. LANGMAID. (Omitted 1925-26.)

159w. MORTGAGES. Form of legal mortgage; title and lien theory; substance and element of mortgage; mortgagee and mortgagor; transfer; competition for the mortgage, priority, marshaling. (3) MR. PARKS.

160w. JURISPRUDENCE. A study of the nature, sources and development of law and of the legal orders. (2) MR. SIMONTON.

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[1]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

1f and w. General Mathematics. Prerequisite, one entrance unit in mathematics. (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)

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. (3)

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 course 2. (3)

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.

102w. MEDICAL BACTERIOLOGY. Prerequisite, botany, course 3. Subject studied includes relation of bacteria to disease; the fundamental principles of immunity, serum diagnosis, serum and vaccinetherapy. 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 207 to 209.
Anatomy and Histology, page 240.
Medical Bacteriology and Preventive Medicine, page 285.
Pathology, page 291.
Physiology and Pharmacology, page 296.

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 and 1w. INFANTRY. *First Semester.* Command and leadership; Infantry drill; military courtesy; rifle marksmanship; physical drill.

2f and 2w. INFANTRY. *Second Semester.* Command and leadership; map reading; squad combat principles; tactical problems; powers of weapons; hygiene and sanitation; physical drill.

3f and 3w. INFANTRY. *Third Semester.* Automatic rifle; musketry; scouting and patrolling; combat principles of the rifle section; command and leadership.

4f and 4w. INFANTRY. *Fourth Semester.* Infantry weapons; light mortar; machine gun; guard duty; military history; military policy and national defense; command and leadership.

Infantry, Advanced Course

105f and 105w. INFANTRY. *Fifth Semester.* Combat principles; military field engineering; military law; rules of land warfare; sketching and topography; infantry weapons; machine gun; command and leadership.

106f and 106w. INFANTRY. *Sixth Semester.* Infantry weapons; machine gun; command and leadership.

107f and 107w. INFANTRY. *Seventh Semester.* Infantry weapons; 37mm. and light mortar; military history and national defense; command and leadership; combat principles.

108f and 108w. INFANTRY. *Eighth Semester.* Administration; combat principles; command and leadership.

Field Artillery, Basic Course

1f and 1w. FIELD ARTILLERY. *First Semester. Fundamentals of Military Science.* Principles of organization, hygiene, military courtesy, and discipline; school of the soldier, squad, section, and battery dismounted; care and handling of the pistol, and pistol practice.

Field Artillery Drill Regulations. Gunnery; simple definitions; the elements of the trajectory; determination of firing data; exercises preliminary to firing; battery drill; the firing battery.

Physical Education. Practical equitation in horsemanship.

2f and 2w. FIELD ARTILLERY. *Second Semester. Field Artillery Drill Regulations.* Instruction of cannoneers; battery drill; the firing battery; ordnance and materiel.

Horsemanship. Hippology; common diseases of the horse; care of horses; management of stables.

Physical Education. Practical equitation and horsemanship.

3f and 3w. FIELD ARTILLERY. *Third Semester. Field Artillery; Motors and Motor Transportation.* Gas engines; theory; mechanical design; construction; driving; maintenance.

Mounted Instruction. The soldier mounted; driving and draft.

Physical Education. Practical equitation and horsemanship.

4f and 4w. FIELD ARTILLERY. *Fourth Semester. Topography.* Maps and map reading; mapping traverses; area sketches; road sketches; intersection; resection; panoramic sketching; orientation.

Reconnaissance. Scouting; carrying information; service of information; use of field artillery; special details.

Physical Education. Practical equitation and horsemanship.

Field Artillery, Advanced Course

105f and 105w. FIELD ARTILLERY. *Fifth Semester. Field Artillery Gunnery.* Dispersion and the application of its laws; range tables; atmospheric effects; corrections of the moment; action and effect of projectiles and fuses.

Field Artillery Firing. Firing instruction; preparation of fire; determination of firing data; conduct of fire; principles of fire; governing conduct of fire in open warfare and position warfare and the relative importance of each.

106f and 106w. FIELD ARTILLERY. *Sixth Semester. Communication and Engineering.* Means of communication; communication lines; artillery nets; field engineering, including types and construction of battery emplacements.

Organization and Tactics. Field artillery organization; operation; employment; information; ammunition supply; functions of the various calibers; minor tactics and map maneuvers.

Mounted Instruction. Practical equitation and horsemanship; the battery mounted (comes in both terms of the Junior year).

107f and 107w. FIELD ARTILLERY. *Seventh Semester. Military History and Policy of the United States.* A critical study of our military policy and a military survey of the most important campaigns.

Minor Tactics and Map Maneuvers. Combined tactics of the various arms; organization and tactics.

108f and 108w. FIELD ARTILLERY. *Eighth Semester.* Military law; history; authority; sources; procedure of courts-martial; rules of land warfare.

Administration and Army Paper Work. Administration of a battery, to include official correspondence, property papers, and records.

Mounted Instruction. Same as Junior Year.

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, MISS TULLER, MR. WHITMORE.

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, MRS. TELLO.

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.

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 the 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. QUARLES, 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 112w. 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, course 4. (2) MR. QUARLES.

113f and 114w. 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, course 115 and 116, Composition; course 118, Instrumentation; course 121 and 122, Polyphonic Forms. (2 to 5 hours) Not offered 1926-27.

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.

223f and 224w. ADVANCED FUGUE AND CHORAL COMPOSITION. The creation of works for soloists and chorus, with orchestral accompaniment. Prerequisite, course 219 and 220, Orchestration; 115 and 116, Composition; 121 and 122, Polyphonic Forms. (2 to 5 hours) Not offered in 1926-27.

225f and 226w. MUSICAL RESEARCH AND CRITICISM. Hours and credit to be arranged.

Courses in Teaching

H. ELEMENTARY SCHOOL MUSIC METHODS. See Education H129f and 130w. (2) MR. SLEEPER.

H. HIGH SCHOOL MUSIC METHODS. See Education H131f. (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.

Courses 140, 141, 142, 143, 144, 145, 146 and 147 are open only to Seniors in the School of Fine Arts.

PRACTICE TEACHING IN PUBLIC SCHOOL MUSIC. See Education D150 and w. (2) MR. SLEEPER.

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.

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. Affords valuable training in sight reading and for the development of the rhythmic sense. Open only to students in the school of Fine Arts. (1) MRS. TELLO.

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. Open only to Students in the School of Fine Arts. (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.

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.

82f and w and 83f and w. FRESHMAN PIANO. (3) Two half-hour 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; MRS. TELLO; MISS TULLER; ————————.

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 of 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; MRS. TELLO; MISS TULLER.

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; MISS ————————; MR. ————————.

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.

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.

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.

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.

203f and 204w. Research. Elective. Open to properly qualified students. A reading knowledge of German is required and one of French is recommended. 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.

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.

114w. Intellectual History of the Eighteenth Century. The development of political, economic, social, and religious ideas in England and on the Contitinent, from Locke to the close of the French Revolution. (3) Mr. Morrow. (Not given 1926-27.)

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.

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. (½) 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. (½) 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. (½) Members of Staff.

11f and 12w. RECREATIONAL ATHLETICS FOR WOMEN. This is a general course for recreation, health, and personal efficiency. Open to Juniors. (½) MEMBERS OF STAFF.

13f and 14w. RECREATIONAL ATHLETICS FOR WOMEN. This is a continuation of course 12w. Open to seniors. (½) 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 RASMUSSEN.

28w. ADVANCED INTERPRETATIVE DANCING. A continuation of course 27f. (1) MISS RASMUSSEN.

29f. 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 RASMUSSEN 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) MISSES RASMUSSEN AND ————

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 RASMUSSEN AND ———.

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 RASMUSSEN.

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 ————— —.

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 RASMUSSEN.

55w. ATHLETICS AND RECREATION FOR MEN. Group competition, mass athletics, leadership and organization of general recreation and athletics for schools and colleges. (2) MR. BREWER.

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.

102f. COACHING MAJOR ATHLETICS. (1) Organization, Theory and Practice of Coaching Football and Basketball. (2) MR. BOND; MR. BREWER.

111f. KINESIOLOGY. An analysis of joint and muscular mechanism of various movements involved in gymnastics and athletics in relation to the problem of bodily development and efficiency. Prerequisite, Anatomy. (3) MISS —————.

H119w. 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 ASSISTANTS.

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. BREWER; MR. SIMPSON.

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 RASMUSSEN.

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 College.

1f, w and s. 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).

The following two courses consist only of laboratory work.

104f. ELECTRICAL MEASUREMENTS. Prerequisites, courses 1 and 2, or 3 and 4, and calculus. (4) or (5).

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 and s. ELECTRICITY AND MAGNETISM. Prerequisites, courses 1 and 2, or 3 and 4, and calculus. An advanced course, partly mathematical. (3).

112f and s. 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, and calculus. (3).

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. Prerequisities same as for 104f. (1), (2), or (3).

108w. LIGHT. Advanced laboratory work. Prerequisites, courses 1 and 2, or 3 and 4. (1) or (2).

109f and w. ADVANCED WORK IN GENERAL PHYSICS. Largely laboratory work. Prerequisites, courses 3, 4, either 104 or 107, and 108. (1 to 4.)

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) MR. STEWART AND MR. REESE.

209f and 210w. SEMINARY. (1) MR. STEWART; MR. REESE.

211f and 212w. RESEARCH WORK. (1 to 5) MR. STEWART; MR. REESE.

Courses 201, 213, 214, 215 and 216 are courses in mathematical physics. For any of these, two years of physics and integral calculus are prerequisite.

201f and s. THERMODYNAMICS. (Not given 1926-27). (3) MR. REESE.

213f and s. INTRODUCTION TO THEORETICAL PHYSICS. (3) MR. REESE.

214f and s. CONDUCTION OF ELECTRICITY THRU GASES. (3) MR. STEWART.

215w. ELECTROMAGNETIC THEORY. (2) MR. STEWART.

216w. ATOMIC STRUCTURE AND SPECTRA. (Not given 1926-27.) (3) MR. REESE.

PHYSIOLOGY AND PHARMACOLOGY

Majors and minors may be elected from either the biophysical or the biochemical groups of courses in the Department of Physiology in combination with prerequisite and closely related courses. With a degree of individual choice the sequences suggested for a major or minor in the biophysical series are comparative anatomy, histology, embryology, neurology, physiological chemistry, physiology, and advanced physiology and for majors or minors in the biochemical group, inorganic chemistry, organic chemistry, physiology, physiological chemistry, and advanced physiological chemistry. Mr. Gulick is the adviser for the department.

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; Mr. Edmunds; Mr. Poor.

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; Mr. Siddle.

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; Mr. Edmunds.

105f. The Central Nervous System and Sense Organs. The reactions of the central nervous system and sense organs. (2) Mr. Ellis; Mr. Siddle; Mr. Poor.

106w. Metrology and Prescription Writing. Metrology, materia medica, pharmaceutics, prescription writing, and physiological assay of drugs and drug preparations. (2) Mr. Ahmann; Mr. Edmunds.

108w. Pharmacology. The physiological action of drugs on man and lower animals. (4) Mr. Greene; Mr. Siddle; Mr. Poor.

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. Gulick; 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.

221f. The Blood. A chemical, physiological and clinical study. Prerequisite 112w. (3) Mr. Gulick.

222w. Advanced Respiration. An advanced consideration of the normal and modified respiratory activities of man and animals. The laboratory work includes a short detailed investigation. (2-3) Mr. Ellis.

223f. Advanced Circulation. A detailed study of the blood vascular apparatus and its modification by drugs and by disease. The heart will be the theme for 1926-27. (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. Gulick.

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 course 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, 202. 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. MIDDLEBUSH; MR. SHORT.

5w. INTERNATIONAL RELATIONS. Lectures and readings on contemporary international relations. (3) (Not offered in 1925-26) MR. MIDDLEBUSH.

102f. THE GOVERNMENT OF GREAT BRITAIN AND THE BRITISH EMPIRE. The constitutional organization and practical working of the government of Great Britain and the self-governing dominions. (3) MR. MIDDLEBUSH.

103w. THE GOVERNMENTS OF CONTINENTAL EUROPE. The constitutional organization and practical working of the principal governments of continental Europe. (3) MR. MIDDLEBUSH.

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 story 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 ond conduct of foreign relations, with special reference to the diplomatic and consular services. (3) MR. SHORT.

201w. PRINCIPLES AND PROBLEMS OF PUBLIC ADMINISTRATION. Open to seniors who have had course 108w or 112f. 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. (3-4) MR. SHORT.

202f. 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) (Not offered in 1926-27.) MR. BARCLAY.

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) 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.

207w. 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. (2-3) MR. MIDDLEBUSH.

220f and 221w. SEMINARY. Opportunity is offered for research work in political science. Credit to be arranged. MR. BARCLAY; 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.

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. 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.

3w. TYPES AND BREEDS OF POULTRY. History, development and characteristics of the leading breeds of poultry. (2) 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.

2w. 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 in this University.) MR. MEYER.

3w. 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 and w. PLAY AND 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 by analyzing the concept of "intelligence." Prerequisite courses 1 and 2. (3) 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.

208f or w. EMPLOYMENT PSYCHOLOGY. (Industrial Psychology.) Not given in 1926-27.

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. (5 or 4) MR. MEYER.

210f and w. RESEARCH. Theoretical and experimental.

ROMANCE LANGUAGES

French

1f and w. ELEMENTARY COURSE. (5) MR. JESSE; MISS SPAULDING; MISS BANDY; MISS THOMPSON; MR. DORRANCE.

2f and w. INTERMEDIATE COURSE. (5) MR. JESSE; MR. SCHUTZ; MISS SPAULDING; MISS BANDY.

3f and w. ADVANCED COURSE. Three hours of the credit for this course may be counted as upperclass work toward a major in French. (5) MR. SCHUTZ; MISS SPAULDING; MISS THOMPSON.

101f. PHONETICS. The organs of speech, sound formation, oral and aural drill. (1) MR. JESSE.

103f and 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.

112w. FRENCH NOVEL TO 1900. Alternates with course 113. (3) MR. JESSE.

113w. CONTEMPORARY FRENCH NOVEL. Alternates with course 112. (3) MISS STEWART.

114f. 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.

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 and 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.

Spanish

(Prerequisites: for 130, 136, 137, 140, 141, 15 hours of Spanish; for 131, 132, course 130; for 133, instructor's consent; for 144, 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 Romance Languages. (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.

133w. SPANISH-AMERICAN LIFE AND LITERATURE. The work of the course is done in English. Alternates with course 134w, Spanish Life and Literature

(given 1927-8). Can not be counted for credit toward a major or minor in Romance Languages. (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.

140w. SPANISH ROMANTIC PERIOD. Alternates with course 139w, Modern Spanish Drama (given in 1927-8). (3) MR. WARSHAW.

141w. SPANISH-AMERICAN LITERATURE. (3) MR. BURNER.

144f. SPANISH DRAMA OF THE SIXTEENTH AND SEVENTEENTH CENTURIES. Alternates with course 142f, Cervantes (given 1927-8). (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. Courses in Vulgar Latin, Romance Philology, etc., will be found available under French.

(H135w. TEACHING OF SPANISH. (2) MR. WARSHAW.)

RURAL LIFE

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 COOPERATION. 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 cooperative marketing as illustrated by existing organizations of farmers. (3) MR. THOMSEN.

103f. THE PRESENT ECONOMIC ORDER INCLUDING COOPERATION. Prerequisite, either course 2 or consent of the instructor. A study of the present economic order including cooperation especially from the standpoint of coordinating 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; special attention to farm financial records, feed records, labor records, production records, and methods of determining live stock and crop production costs. (3) MR. FRAME.

107w. FARM FINANCE. Prerequisites, 2f or w. 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; with a consideration of loan agencies including the Federal Farm Loan Bank, the Intermediate Credit Bank, financing co-operative societies, and co-operative insurance. (3) MR. GROMER.

110f and w. FARM ORGANIZATION. Prerequisites, open to Juniors or those who have had the production courses in Animal Husbandry and at least 10 hours beginning work in soils and farm crops. A study of the factors determining the success of a farming program; the principles to be considered in determining type of farming to be followed and those which guide us in choosing a farm and organizing a farm business for maximum efficiency. (3) 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. Prerequisite, course 105f. Practical uses to which cost accounting results can be put in the management of farms. Also a study of the methods of procedure as they affect cost accounting results. (2) MR. FRAME.

113f and w. FARM ADMINISTRATION. Prerequisite, 110. The application of the general principles studied in 110 to special farms. (2) MR. JOHNSON.

115f and w. 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, cooperation, the rural school, the rural church, rural health and sanitation, the rural home, the social center. (3) MR. MORGAN.

116w. LAND UTILIZATION. Prerequisites, 2f or 2 and 110. 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.

117f. 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 MCCLENAHAN.

119f and 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 MCCLENAHAN.

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.

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., Rural Boys' and Girls' 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 MCCLENAHAN.

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.

125f. AGRICULTURAL STATISTICS. This course includes a study of the col lection, 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. THOMSEN.

127f. AGRICULTURAL PRICES. Prerequisites, courses 2 and 125. A study of the general and special factors which affect the prices of farm products. Individual products will be taken up in detail. Student contest in selling for highest prices. (2) MR. THOMSEN.

190f and w. 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 2 and 117. 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.

193w. RURAL TAXATION. Prerequisite, either course 2f or 2w or consent of instructor. A study of taxation with reference to the farmer. (2) MR. GROMER.

195w. CURRENT ECONOMIC PROBLEMS OF AGRICULTURE. Prerequisite, 2f or w. 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 and w. SEMINARY. Selected literature and investigation of farm economic and social problems. Credit to be arranged. MR. JOHNSON, MR. MORGAN; MR. GROMER; MR. THOMSEN; MISS MCCLENAHAN; MR. FRAME; MRS. BASKETT.

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 MCCLENAHAN.

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 MCCLENAHAN.

234w. FARMER'S MOVEMENTS. A critical study of the principal farmer's 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. A 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 and w. FIELD WORK. Practice work open to students taking courses 117, 119, 121, 123, or 219. (1-3) MR. MORGAN; MISS MCCLENAHAN.

240f and w. RESEARCH IN RURAL SOCIAL PROBLEMS. Thesis required. (2-6) MR. MORGAN; MISS MCCLENAHAN; MRS. BASKETT.

242f and w. RESEARCH IN RURAL ECONOMICS. Preparation of thesis on some problem pertaining to farm finance, rural taxation, present economic order including co-operation or the history and geography of agriculture. (Credit to be arranged.) MR. GROMER.

244f and w. RESEARCH IN AGRICULTURAL STATISTICS, PRICES AND MARKETING OF FARM PRODUCTS. Thesis required. (2-6) MR. THOMSEN.

246f and w. RESEARCH IN COST ACCOUNTING AND FARM MANAGEMENT. Thesis required. (2-6) MR. JOHNSON; MR. FRAME.

248f and 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.

1f and w. 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. ESSMAN.

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, undirected 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. KUHLMAN.

115f and w. RURAL SOCIOLOGY. (See Rural Life.)

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 Life.)

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 MCCLENAHAN.

121w. GROUP AND CLUB WORK. (See Rural Life.)

123f. VISITING TEACHER WORK. (See Rural Life.)

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 Life.)

219w. ADVANCED SOCIAL CASE WORK. (See Rural Life.)

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, Rosseau, Condorcet, and the sociological systems of Comte, Spencer, Shaeffle, Lilienfeldt, Gumplowicz, 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 McClenahan.

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's Movements. (See Rural Life.)

235f. Historical and Comparative Rural Life. (See Rural Life.)

239f and w. Field Work. (See Rural Life.)

240f and w. Seminary. Research work upon special problems in sociology and philanthropy. (2-4) Mr. Ellwood; Mr. Kuhlman; Mr. Morgan; Miss McClenahan.

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. Four lectures and recitations and one laboratory or field period. (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. (Given in 1926-27.) 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. (Not given in 1926-27.) (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. (2) MR. MILLER; MR. ALBRECHT; MR. BRADFIELD.

205f and 206w. SOIL RESEARCH. Special investigations in soils. MR. MILLER; MR. ALBRECHT; MR. KRUSEKOPF; MR. BRADFIELD.

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 1925-26—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 1925-26—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

Juniors and 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.

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) MISS ISELY.

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 reference 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.

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 to 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, 1925

AT COLUMBIA

June 3, 1925

DEGREES

COLLEGE OF ARTS AND SCIENCE

Degree of Bachelor of Arts (A. B.)

Eaton Adams
Jeannette Alderton
Helen Margaret Ambrose
Helen Louise Anderson
Jewel Eileen Antle
Garland Clyde Arvin
Aleen Deem Atkinson
Iwao Awoki
Mildred Edith Aylor
Ruth Beryl Baker
Laurene Bamber
Mabel Ruth Bandy
Charles Merlin Barnes, Jr.
Frederick Ashley Benson, Jr.
Henry Clifton Blackmon
Arthur Doerr Bond
Greydon Gill Boyd
Pauline Jane Brannock
Daniel Leon Brenner
George Plattenburg Brown
Jeanne Evelyn Brown
Marie C. Brown, B. S. in Ed.
Zella Vivian Brown, B. S. in Ed.
Mary Evaline Buffum
Anthony Abe Buford
Alice Nicholson Buzard
Roy Orla Campbell
Louise Elliott Carr
Sara Frances Carter
Leslie Cline Case
Chin-jen Chen, B. J.
Claud Clarence Clapp
Vera Orr Clark
Daniel Bernard Coleman
Albert Richard Lee Compton
Clara Helena Crane
Wiley William Crawford
Richard Lee Crouch
Alvah Glenn Crowe
Charles Blevins Davis
Mary Deal
Elizabeth Elliott
Lynn Moore Ewing
Robert Lewis Fisher
Elinor Montgomery Fowler
Clara Theresa Franken
Sophie A. Frankle
Paul Merrill Fuller
Paul Garrison
Mary Alice Gibbons
Wesley Fay Gillman
Essie Goodwin
Carolyn Susan Gray
John Milton Grimes, Jr.
Elsa Grueneberg
Alice Zarilda Hafer
Harriett Virginia Hale
Mildred Mitchell Hale
Thelma Marie Hartman
Mary Elizabeth Haselwood
William Hunter Haw
Elizabeth Maud Hawkins
Harlan Davis Hibbard
Jane Franklin Hickman
Alma Lee Hocker, B. S. in Ed.
Maxie Louise Horner

Joseph Eugene Houston
Melvin Perdue Howe
Jack Huddleston
Horace William Hughes
John Ralph Jackson
Lorine Naylor Jacobs
Craig Byron Johnson
Walter David Keller
Mona Josephine Kelley
William Thornton Kemper, Jr.
Oliver Perry Kensinger
John Kiefner
Barnett Neff Kinkade
Emily M. Schill Kinkade
Kennish C. Kinkade
Fred Louis Kneibert
Ada Lee Kreisman
Mary Lewers Latshaw
Dorothy Leathem
Charles Harold Leslie
Clara Leibovich Lewis
Georgia Alice Lock
Elizabeth Longan
Emma M. Luthin
Marion MacIntosh
Margaret Madorie
Charles Eugene Mannschott, Jr.
Lucille Frances Marechal
Lucy May Marquis
Terry A. Mathers
Ruth Anne Meyer
Milton Herman Meyerhardt
Henry William Michels, Jr.
Henry Anatol Monat
Lucy Hunt Moore
Mildred Morgenthaler
Lucy S. Mullinax
Mary Loretta McFarland, B. S. in Ed.
Ruth Marie McGinness
Julia Clare McGovern
Emmett B. McNatt
Louise James Needels
Derwood Ocal Neher
Eloise Norman
Arthur R. Ocker
Dan Gordon Odell
Florence Mershon Parker, B. S. in Ed.
William Miller Peck
Isabelle Pettefer
Louis Erwin Pinney
Margaret Elizabeth Powers
Otto Jack Printz
Katherine Quisenberry
Virginia Eleanor Reid
Buel Ridenhour
Donald Ford Robertson
George Harve Rose
Woodburn Overstreet Ross
Walter Allwein Ruch
Guy Salyer
John Martin Schattyn, Jr.
Laura Grace Seibel
Baxter Wright Shelton
William Lawrence Shumate
Mildred Amelia Smallfeldt
Robert Adolph Smallfeldt
Ruth Bernice Squires
Rose Varner Stallings
Floyd Edward Stayton
Floyd George Summers
Joseph E. Thornton, Jr.
Merry Tydings
Charles Moorman Van Dyne
E. Paul Vaughan
Zella von Gremp
Cho Heng Wan
Robert Delanson Watt
Frederick Vorace Wells
Frank Hall Wheat
John Wilbur Whitsett
Chester Deward Whorton
Charles Theodore Wiggins, Jr.
Donald E. Williams
Charles Edward Wilson
Frank Blakemore Wilson
Lucile Wright
Phoebe Louise Wright

College of Agriculture

Degree of Bachelor of Science in Agriculture (B. S. in Agr.)

Norvell Christian Allen
Raymond H. Audsley
Henry Earl Barnes
Harley Bebout
Roy Nelson Bermond
Ralph Beatty Boyle
Sam Eugene Chenoweth
Sara Hudspeth Chiles
Emmett Lee Clark
Herman Harold Crawford
Lloyde Benjamin Creekmore
Stanley Bradford Crockett

Carl Russell Dixon
Thomas H. Etter, Jr.
Joseph Harrison Farmer
Donald Burrows Faurot
Charles Gates Fox
Urban Koenig Franken
Albert Harold Garton
Guy Roland Graham
Russell Frank Harbert
Glenn Shaner Hensley
Warren Dearborn House
William M. Howat
Roscoe Cecil Jordan
Noel Dean Kirby
Arnold William Klemme
Rutherford J. Laughlin
Cyrus Charles Lippman
Carl A. W. Loest
Jennings Harold Long
Richard Vincent Lott
Robert Lewis Macy
Congrieve Stauber Maddox
Clarence B. Makin
Robert E. Lee Marshall
Ruth Mayo
Clifford Rezner Meeker
John Alvin Miller
Evelyn D. Muhleman
Robert Roy Nichols
William Reynolds Paden
Aubrey Orlan Pittenger
Frederick Sparks Price
Herbert William Reuszer
John Whitcomb Riley
Paul Clare Rodgers
Mary Elizabeth Rodhouse
William Edwin Roland
Francis Garland Russell
Chester Sanders
Edwin Basye Shannon
William Chester Shotwell
Josie May Slaughter
Paul Varian Slusher
Thad Snyder
William Wood Stark
Edgar William Stewart
Samuel Ralph Thompson
Gerald Barclay Thorne
Marian Alice Wade
Richard Eugene Waters
Robert Lee Waters
John Sam Williamson
Frank W. Wright

School of Education

Degree of Bachelor of Science in Education (B. S. in Ed.)

Dorothy Maud Alexander
Laura Frances Allen
Jewel Eileen Antle
Katherine Lucile Antoine
Nancy Nel Bayne
Helen De Wilton Bedford
Rosemary Belcher
Madeline Virginia Bergmann
Carolyn Marie Boone
Alma Mary Briegleb
Margaret Constance Browne
Mary Cordelia Bruns
Lois Marian Chamberlin
Pauline Chilton
Catherine Elizabeth Clarahan
Laura Catherine Clark
Carrie Velma Cobb
Ethel Irene Cobb
Frances Margaret Cogdal
Anna Kraemer Crotchett
James Walter Cunningham
Elizabeth Curtiss
Sylvia Lee Davis
Mary Morrow Derby
Fred Bruner Dixon
Sarah Elizabeth Drumm
Robert Guido Dudley
Shirley Dunavant
Helen Ruth Evans
Lucile Elizabeth Fair
Helen Blanch Foristell
Emma Brucher Frye
Edna Maude Gentry
Wilhelmina Goshorn
Mary Virginia Graves
Jessie Virginia Gum
Bertha Haas
Ruth Harrison
Mary Ann Hatton, A. B.
Helen Geraldine Hawkins, A. B.
Helen Breeden Hedrick
Corinne I. Heim
Lena Rebecca Hillix
Esther Mary Hudelson

Helen Hughes
Lettie Gray Hull
Roxanna Lucille Humphrey
Mossie Merle Humphreys
Lorine Naylor Jacobs
Maurine Jeans
Ruth Phillips Johnson, A. B.
Sybil Johnson
Beatrice Carolyn Kehr
Bertha Louise Kehr
Magdalen Knox
Goldie Leibovich
Alice Badger Lewis
Oneta Liter
Margaret Manley
Leta Fay Marquis
Margaret Frances Mayes
Katherine Louise Mayfield, A. B.
Cleo Elizabeth Mercier
Arthur Tillman Merritt, A. B.
Freda Lizetta Miller
Walter H. Miller
Corene Mitzel
Mildred Morgan
Vada Josephine Morris
Robert Chittick Mortland, A. B.
Mary Margaret McCarty
Mary Ann McDonald
Mary Alyse McHarg
Rose McMaster
Margaret A. Neary
Fanny Pannill Nowlin
Aleen Ethelyn Orr
Lillian Ethelyn Orr
Audrey Joe Painton
Ada Alice Parrish
Estelle Gibson Paul
Dorothy Jean Pauls
Mary Jane Peyton
Aubrey Orlan Pittenger
Martha Mayfield Powell
Mary Prada
Alfred Shih-Tse Pu
Eula Ratekin
Lavinia Bouchelle Records
Ava Fisher Redman
Hallie Vernale Redman
Thelma Redman
Margaret R. Redmond
Ruth Myrtle Robinson
Mary Frances Rowland
Bessie Ellen Samuel
Ruth C. Sanner
Alma Ione Shipley
Hester Marcia Swan
Virginia Strother Talbot
Mabel Estelle Tandy
Thalia Jane Tarrant
Betty Eunice Taylor
John Foster Taylor
Virginia Taylor
Marjorie Thomas
Virginia Marguerite Tiffin
Bernice Kathryn Turner
Thomas Everett Vaughan
Aline Wardlow
Olivia Virginia Waters
Magdalen Wayland
Verdie Allene Weldy
Mary Elizabeth Welles
Minnie Wells
Elizabeth Farmer White
Irene Wofford
Marian Vera Zorn

School of Law

Degree of Bachelor of Laws (LL. B.)

Donald Van Agee
Elmer William Ahmann
Carl F. Becker
Virginia Jane Wilson Booth
Elmer Theodore Carl
Richmond Cash Coburn, A. B.
Allan M. Fisher
Robert Cecil Frith
J. Grant Frye
Joseph Lester Gutting, A. B.
Robert Lorenzo Howard, A. B., A. M.
Julian Dean James, A. B.
William Kent Jameson
Russell Theron Keyes
Edward Clel Lynch
Oliver Otto Marksbury, A. B.
(*as of the class of 1919*)
Esslie Russell Morrison, A. B.
Robert Allen McPheeters, A. B.
Abe Nemzoff
Lee-Carl Overstreet
Alvin F. Schulz
William Lawrence Shumate
Frederick Vorace Wells
Earl Wilkins

College of Engineering

1. *Degree of Bachelor of Science in Engineering (B. S. in Eng.)*

Newton Holliday Anderson
Henry Gerhart Berghorn
Alaga Harrison Boyd
John Anderson Buchanan
Maurice M. Burley
Loren Thomas Byars
Joseph Leo Cissell
Edward Gates English
Raymond Kuhm Fietsam
William Edward Galligan
Daniel Wenzell Gifford
Clarence Emmett Gillam
John Sanford Glazebrook
Carl Christopher Greim
Abner Gwinn
Loyd Max Hardaway
Guy P. Harl
William Edgar Helmkamp
William Eugene Hoeflin
Joseph Daniel P. Hoffman
Louis J. Houck
Oren Andrew Howard
John O. Johnson
Robert Ebsworth Johnson
Vernon L. Johnson, Jr.
Hiram J. Kinkade
Harvey T. Lawrence
Edgar Harbaugh Logan
Victor Herbert Lyon
Floyd Earl Mathers
Leonard Elledge Mayes
Roy A. Middleton
Carl D. Muench
William Robert McMillan
Thomas Bernard John Nienhaus
James Vivian Oliver
Robert Courtney Poage
Frederick George Rombach
Andrew William Roth
Uel Lee Smith
Henry Philip Strieder
Stephen Fairfield Thornton
Edwin Frederick Trunk
L. Vernon Uhrig
Robert Adams Willis
Arthur Frank Wirtel
Horace Walter Wood, Jr.
Paul J. Zilles

2. *Degree of Chemical Engineering (Ch. E.)*

Alexander Smellie Finlayson, B. S. in Eng.

3. *Degree of Civil Engineering (C. E.)*

Moss Monroe Edwards, B. S. in Eng.
Harvey T. Lawrence, B. S. in Eng.
Horace Walter Wood, Jr., B. S. in Eng.

4. *Degree of Electrical Engineering (E. E.)*

Joseph Peter Foltz, B. S. in Eng.
Andrew Courtney Norwine, B. S. in Eng, A. B.

School of Journalism

Degree of Bachelor of Journalism (B. J.)

Alice Winifred Amery
Donald Corbet Anderson
Orland Kay Armstrong
Helen Averitt
Mary Allison Banks
Leslie Melrose Beals
Margaret Boggs
Irvin Dougherty Borders
Gladys Louise Brand
Glenn Marsden Brill
Dorothy Lee Brown
Marie C. Brown, B. S. in Ed.
Claude E. Carmichael
Thomas Ming-heng Chao, A. B.
Charles Curtis Clayton
Hazel Cloughley

Virginia Lee Cole
Doris Eldridge Crump
Willard Dickinson Cunningham
Helen Dahnke
Gladys-Mai Davidson
Bernice Denny
Blanche Louise Dickbrader
Mary Virginia Doerschuk
LaVerne Jerome Dunbar
Margaret Elizabeth Edwards
Thora Marie Eigenmann
Frances Evelyn England
Harry Ferguson
Ernest Gus Fischer
Dorothy Belle Flanagan
Howard Abraham Froman
Arthur Bertram Geeson
Ernest Stephen Hearon
Alma Lee Hocker, B. S. in Ed.
Ruth Lucene Hunt
Burdette Theron Johns
Donald Hugh Jones
Ruby Prunella Jones, A. B.
James Robert Kearney, Jr.
Nathan Ladinsky
Mary Virginia Livesay
William L. Mapel
Oliver Thornton Maxwell
Berta Mary Mohr
Manuel Marcelino Mortola
Anita R. Mueller
Mary Katherine McCarthy
Dudley Edward McFadden
James Albert McPhail, Jr.
Pearle Josephine Nelson
Ruth Mary Packard, A. B.
Herbert James Pate
Helen Gertrude Penn, B. S.
Cecil J. Perkins
Wallace Pflueger
Leon SinClair Pickens, A. B.
James William Price
James Burt Quigley
Frances Ragland
Virginia Neville Renoe
Frederick Gose Sappington
Joseph Stanley Simpich
Gertrude Stein
Laura Moss Stephens
Mary Isabelle Stepp
William Card Stone
Eugene Thomas Stout
Harold Verdelle Streeter
Ralph Wilson Taylor
Herman John Theilmann (*in Agricultural Journalism*), B. S. in Agr.
Bruce Henderson Todd
Exie Tomlinson
Norman Hurst Trenholme
Jesus Zafra Valenzuela
Neil Canaday Vanzant
Clay S. Wagner
Hermon Duncan Wall
Thelma Martha Whaley
James Wilbur Wilson
Susan Iola Woodfill, A. B.
Guy Edmond Yeldell

School of Business and Public Administration

1. *Degree of Bachelor of Science in Business Administration (B. S. in Bus. Admin.)*

Sterling Jackson Alexander
Eugene David Ashbrook
Glenwood Spencer Baker
Garland Broadhead Conley, A. B.
Robert Hugh Cowan
Otto Alise Crawford
Charles Floyd Crouch
Lemuel Wyman Dillman
Lloyd Lacy Duncan
Vernon M. Fay
Mildred Emily Haas
Allen Hills
Clyde B. Hood
Benjamin H. Howard
Ray Comstock Hudgins
James Glenn Jordan
J. Ralph Julien
Kennish C. Kinkade
George Elston Leach
Lionel Clifford Milligan
Cecil Paul Moss
George Henry Mueller
George Henry Mulligan, Jr.
Irwin Calvin McGee
Harold Niedorp
Ben Eaton Slusher
Norton Bailey Smith
John Stahl
Frank Sheridan Woodruff

2. *Degree of Bachelor of Science in Public Administration (B. S. in Pub. Admin.)*

Marguerite Marie de Vries
Eckka Almieda Gordon
Frances Mae Meador
Catherine Morgan
Elizabeth Northcutt, B. S. in Ed.

SCHOOL OF MEDICINE

1. *Graduate Nurse (G. N.)*

Ruth Amanda Chambers (*as of the class of 1924*)
Adelaide Frances Freese (*as of the class of 1924*)
Bertha L. Henderson (*as of the class of 1923*)
Oma Kilby (*as of the class of 1923*)
Gladys Dorothy Krahn (*as of the class of 1923*)
Helen Nahm (*as of the class of 1924*)
Harriet Belle Simpson (*as of the class of 1923*)
Ora Vaughn (*as of the class of 1924*)

2. *Bachelor of Science in Medicine (B. S. in Med.)*

Clyde Leslie Bozarth, A. B.
Bernard Maupin Foster, A. B.
Giles Edward Horrocks, A. B., B. J.
William Martin Marbut
Everett Roy Quinn
Jack Rowlett, A B.
Eleanora Louise Schmidt, A. B., A. M.

GRADUATE SCHOOL

1. *Degree of Master of Arts (A. M.)*

Valdon Cates Ashby, B. S. in Agr., *University of Kentucky*
John Kinkaid Bear, A. B., *Drury College*
Arthur Henry Bothe, A. B., *Central Wesleyan College*
Zella Vivian Brown, B. S. in Ed., A. B.
Leslie Cline Case, A. B.
Eleanor Lea Childers, B. S. in Ed.
John Selip Chu, A. B.
Riley Jenkins Clinton, A. B., B. S. in Ed.
Roscoe V. Cramer, B. S. in Ed., *Central Missouri State Teachers College*
Eva Mae Davis, B. S. in Ed.
LaVerne Decker, A. B.
William DeYoung, B. S. in Agr., *Michigan Agricultural College*
Anna Elizabeth Donnelly, B. S. in Ed.
Nettie Alice Doolittle, B. S. in Ed.
Erwin C. Elting, B. S. in Agr.
Louis Allen Eubank, B. S. in Ed., *Central Missouri State Teachers College*
Benjamin Harrison Frame, B. S. in Agr.
Carl Clough Gentry, A. B.
Donald Glassman, A. B.
Kenneth Llewellyn Gordon, A. B., *Colorado College*
Helen Graham, B. S. in Ed., *Central Missouri State Teachers College*
Mary Guthrie, B. S. in Ed., *Central Missouri State Teachers College*
William Jackson Hamilton, A. B., *Westminster College*
Waverly Paul Hays, B. S. in Agr.
Mary Webster Housman, A. B.
Robert Lloyd Housman, B. J.
Emma Fisher Hyde, A. B., *Missouri Valley College*
Dora Louvenia Ingrum, A. B., B. S. in Ed.
Bess B. Isenhouer, B. S. in Ed., *Central Missouri State Teachers College*
Christie Frances Jeffries, B. S. in Ed., *Central Missouri State Teachers College*
Gladys May Johnson, A. B.
Ida Judith Johnson, A. B.
William Waters Johnston, B. S. in Agr., *Oregon Agricultural College*
Irvin K. Juergensmeyer, A. B., *Central Wesleyan College*
I. Allen Keyte, B. S. in Ed.
Mou Lee, B. S. in Eng.
Florentine Rhodo Leweke, B. S. in Ed., *Central Missouri State Teachers College*
Susan Dorothy Limerick, A. B.
Elizabeth Wilson Lindsay, A. B., B. S. in Ed.

Gerald Caton Maddox, B. S. in Ed.
Arthur K. Miller, A. B.
Emmett Tyner Miller, A. B., B. S. in Ed.
Ensley E. Morris, B. S. in Ed., *Central Missouri State Teachers College*
Ralph Alan McCanse, A. B.
Thomas Mason Nelson, A. B.
Edwin Newton, A. B.
Eulah Mae Pearce, A. B., B. S. in Ed., *Northwest Missouri State Teachers College*
Aubrey Orlan Pittenger, B. S. in Agr., B. S. in Ed.
Elmer Beverly Powell, B. S. in Agr.
Vernon John Puryear, A. B., *Baylor University*
Elda Eliza Robins, B. S. in Ed., *Southwest Missouri State Teachers College*
Ernest John Roseman, B. S. in Ed., *Southeast Missouri State Teachers College*
Sara Serene Saper, B. J.
Jesse Ray Scarborough, B. S. in Ed., *Southwest Missouri State Teachers College*
Samuel Farrel Scism, B. S. in Agr.
William Erwin Sewell, B. S. in Agr., *Alabama Polytechnic Institute*
Aurelia Spalding, A. B., *Mt. Holyoke College;* B. J., *University of Missouri*
Clyde Milton Stephens, B. S. in Ed., *Southeast Missouri State Teachers College*
Joseph Charlworth Stephens, B. S. in Agr.
Elizabeth Martin Stockton, B. S. in Ed.
Theodore William Svoboda, A. B.
Alexander Gates Thomas, B. S., *Austin College;* B. Lit., *University of Texas*
Fred Wagner Urban, A. B.
Max Wellington Van Horn, B. S., *Iowa Wesleyan College*
David Freeman Votaw, B. S. in Ed., *Southwest Missouri State Teachers College*
Clarence Walter Weber, B. S. in Agr., *University of Wisconsin*
Roy E. Wessendorf, A. B., *Central Wesleyan College*
Albert R. White, B. S. in Ed., *Central Missouri State Teachers College*
Leonard N. Wright, A. B., *Westminster College*
Yu Charles Ling Wu, A. B., *University of Wisconsin*
Tasuke Yamagata, A. B.
Sadie Gertrude Young, B. S. in Ed.

2. *Degree of Doctor of Philosophy (Ph. D.)*

Carl G. Deuber

B. S. in Agr., University of Missouri
A. M., Washington University
Dissertation: *Factors Affecting Chlorosis in Plants*

Nollie B. Guerrant,

A. B., Westminster College
M. S., North Dakota State College
Dissertation: *The Adequacy of Synthetic Rations for Growth of Chicks*

Frederick Francis McKenzie,

B. S. in Agr., University of British Columbia
A. M., University of Missouri
Dissertation: *Correlations of External Signs and Vaginal Changes with the Ovarian Cycle in Swine*

Carl Terence Philblad

A. B., B. M., Bethany College
A. M., University of Missouri
Dissertation: *Possible Applications of Mental Tests to Social Theory and Practice*

The Honorary Degree of Doctor of Laws (LL. D.)

George Bannerman Dealey

Sir Esme Howard

School of Medicine

Two-Year Certificates

George Mirrous Edmonds
Fred Louis Kneibert
Charles Harold Leslie
William Martin Marbut
Milton Herman Meyerhardt
Herbert McKibban Parker, A. B., A. M., *(as of the class of 1924)*
Otto Jack Printz
Everett Roy Quinn
Levi Madison Rigney
John Wilbur Whitsett
William Beasley Wilcoxen

School of Education

1. *Certificate to Teach for Two Years*

Louis Elliott Carr
Nelle Marie Cottingham
Agnes Helen Cuthbertson
Beulah Irene Ellis
Elsa Grueneberg
Opal L. Hill
Geneva Sophia Hulen
Edna Marie Johnson
Kathrine W. Lamon
Edith Louisa LeHew
Ruth Anne Meyer
Ruth A. Morgan
Gladys Guinevere Pemberton
Eunice Ratekin
Nancy Suerena Reading
Ruth Bernice Squires
Gussie Koenocke Traw
Martha Louise White

2. *Life Certificate to Teach*

Dorothy M. Alexander
Laura Frances Allen
Jewel Antle
Katherine Lucile Antoine
Alberta Baker, B. S.
Laurene Bamber
Velma Vertile Barnes, B. S.
Nancy Nel Bayne
Rosemary Belcher
Madeline Virginia Bergmann
Carolyn Marie Boone
Alma Mary Briegleb
Margaret Constance Browne
Mary Cordelia Bruns
Lois Marian Chamberlain
Pauline Chilton
Catherine Elizabeth Clarahan
Laura G. Clark
Carrie Velma Cobb
Ethel Irene Cobb
Frances Margaret Cogdal
Anna K. Crotchett
James Walter Cunningham
Elizabeth Curtiss
Sylvia Lee Davis
Mary Morrow Derby
Fred Bruner Dixon
Sarah Elizabeth Drumm
Robert Guido Dudley
Shirley Dunavant
Helen Ruth Evans
Lucile Elizabeth Fair
Helen Blanch Foristell
Edna Maude Gentry
Wilhelmina Goshorn
Mary Virginia Graves
Jessie Virginia Gum
Bertha Haas
Corneil Hall
Ruth Harrison
Thelma M. Hartman
Marry Ann Hatton, A. B.
Elizabeth Hawkins
Helen Geraldine Hawkins, A. B.
Helen Breeden Hedrick
Lena Rebecca Hillix
Esther Mary Hudleson
Helen Hughes

Lettie Gray Hull
Lynn Ellis Hummel
Mossie Humphreys
Lolita Hungate
Lorine Naylor Jacobs
Maurine Jeans
Mrs. Ruth P. Johnson, A. B.
Sybil Johnson
Beatrice Carolyn Kehr
Bertha L. Kehr
Goldie Leibovich
Alice Badger Lewis
Oneta Liter
Mary Margaret McCarty
Marry Ann McDonald
Ruth Marie McGinness
Mary Alyse McHarg
Rose McMaster
Margaret Manley
Leta Fay Marquis
Robert E. Lee Marshall
Margaret F. Mayes
Katherine Louise Mayfield, A. B.
Cleo Elizabeth Mercier
Freda Lizetta Miller
Walter H. Miller
Corene Mitzel
Mildred Morgan
Vada Morris
Robert C. Northland, A. B.
Margaret A. Neary
Eloise Norman
Fanny Pannill Nowlin
Aleen Orr
Lillian Ethelyn Orr
Audrey Joe Painton
Ada Alice Parrish
Dorothy Jean Pauls
Mary Jane Peyton
Martha Mayfield Powell
Mary Prada
Gladys Ellen Pratt
Eula Ratekin
Ava Fisher Redman
Hallie Vernale Redman
Thelma Redman
Margaret E. Redmond
Ruth Myrtle Robinson
Julia Virginia Rose
Mary Frances Rowland
Bessie Ellen Samuel
Ruth C. Sanner
Alma Ione Shipley
Hester Marcia Swan
Virginia S. Talbot
Thalia Jane Tarrant
Betty Eunice Taylor
John Foster Taylor
Virginia Taylor
Marjorie Thomas
Virginia Marguerite Tiffin
Bernice Kathryn Turner
Thomas Everet Vaughan
Olivia Virginia Waters
Magdalen Wayland
Verdie Allene Weldy
Mary Elizabeth Welles
Minnie Wells
Elizabeth Farmer White
Katherine May Witherspoon
Irene Wofford
Marian Vera Zorn

August 1, 1925

DEGREES

College of Arts and Science

Degree of Bachelor of Arts (A. B.)

Harold Chester Ackert
Mary Elizabeth Bagby
Willard Francis Bailey
Dan Dysart Baker
Jennie Lillian Baker
George Newton Barry
Grace Matilda Berry
Eric Francis Irving Bloy
Virginia Boswell
Elwyn Bernadine Bridgens
Edward Arnold Burkhardt, Jr.
Benjamin Poe Chambers
Joseph Marsh Clark
Mildred Clark
Mary Bernadine Connaway
Owen William Donald Craig
Martha Crews
Marie Dale
Blanche Elkins
James Virgil Evans

Robert Crump Fields
Mildred Ford
J. Grant Frye, LL. B.
Ruth Jones
Joseph Palmer Leggett, Jr.
William Edward Moling
Troy Ray Myers
Powell Bassett McHaney
Harvey Thomas Phillips
Elsie Rowland Procter
Maurine Proctor
Margaret Ruth Roy
Frieda Bertha Margarette Ruck
Willis Vaughn Shepard
Dorothy Elizabeth Stevinson
Charles Waldo Stewart
Mary Stewart
John Paul Taylor
Catherine Jean Thompson
Margaret Elizabeth Thompson
Gustavus Tuckerman, Jr.
Myrtle Louise Wolff, B. S. in Ed.
Fred William Wulfmeyer
Lois Carolyn Wyatt

College of Agriculture

Degree of Bachelor of Science in Agriculture (B. S. in Agr.)

Chauncey Noble Benson
Warren A. Johnson
Loren Truman Lewis
Edgar Jennings Lile
Ellis H. McCallister
Robert Shannon McClelland
Lyman George Neel
Charles J. Riemer
Ray Carlisle Rubottom
Cleo H. Stratton
Martin Stevens Stauber

Bachelor of Science in Home Economics (B. S. in Home Ec.)

Frances Alford
Dorothy Eagle Muhleman

School of Education

Degree of Bachelor of Science in Education (B. S. in Ed.)

Ola Lee Barnett
Stella Mae Beardsley
Crystal Davidson Benson
Mary Ross Blickensderfer
Mabel Clair Boucher
Lavonia Ferguson Campbell
Lucy Elizabeth Chadwick
H. Darden Chambliss, Jr.
Rhoda Juanita Conrad
Gertrude Minnick Cope
Lida Mildred Creamer
Fay Lorene Dance
Nancy Lee Dedman, A. B.
Mary Elizabeth Dick
Albert Ralston Dilts
Elizabeth Fay Dixon
Ruth Dolan
Julia Ann Bess Fisher
Raymond Loren Garnett
Renee Frances Gaston
Mary Margaret Thompson Groves
Corneil Hall
Lela M. Harrah
Helen Nancy Huling
Lolita Hungate
Hildred Ileene Jarvis
Elizabeth Louise Journey
Amelia Keller
Bertha Sue Larkin
Ruth Lea Linthacum
John S. McCollum
Melvin Lawrence McCoy
Nina Olive McCracken
Charles Henry McIntosh
Mary Gertrude Netherland
Katherine Cecilia O'Brien
Esther Augusta Oetting
Nadine Pace
Iva M. Parrott
Grace Eugene Petty
Gladys Ellen Pratt
Charles Edward Robinson, A. B., A. M.
Julia Virginia Rose
Katherine Semple

Agnes Josephine Smith
Mary Hope Smith
Jennie May Snider
Leo Stadtherr
Ermile Forcada Stone
Mollie A. Thomasson
Mary Alice Westcott, A. B.
Dorothy Leam Wilson
Ma Wren Wilson

School of Journalism

Degree of Bachelor of Journalism (B. J.)

Harold Gordon Christman, (*in Agricultural Journalism*), B. S. in Agr.
Robert Antolin Hereford
Don Lynn Hogan
Nathan C. Maron
Louise Ruth Rodekopf
Clarence Herschel Schooley
Zachary W. Taylor
Modelle Elsea White, A. B.

School of Engineering

Degree of Bachelor of Science in Engineering (B. S. in Eng.)

Seth Howard Hinkley
Oran Frederick Meyersieck
William H. Oliver
James Thomas Orton
Clarence P. Reedy

School of Business and Public Administration

Degree of Bachelor of Science in Business Administration (B. S. in Bus. Admin.)

Albert Gallatin Blakey, Jr.
Judson Stephen Corbin
Robert Herman Golyn
Carol E. Miller
Paul Gilbert Shaw
Chester Allen Stevenson

Degree of Bachelor of Science in Public Administration (B. S. in Pub. Admin.)

Agnes McKelvey Barrett

Graduate School

1. *Degree of Master of Arts (A. M.)*

John Quincy Adams, A. B. Geology and Geography
Alby Gerald Anderson, B. S. in Agr. Horticulture
Ralph B. Appleby, A. B., *Drury College* Chemistry
Orland Kay Armstrong, B. S. in Ed., *Drury College;* B. J., *University of Missouri* Journalism
Charles Arnold, A. B., B. S. in Jour. English
Vern Tillman Bickel, A. B. Chemistry
Sylvester Morris Boucher, B. S. in Ed., *Northeast Missouri State Teachers College* Education
Lillian Casebolt, B. S. in Ed. French
Jessie Alice Cline, B. S. in Ed., A. B. Home Economics
Buell Bruce Cramer, A. B., B. S. in Ed., *Central Missouri State Teachers College* Education
George Washington Earle, B. S. in Ed., Education

James Chester Harmon, A. B., *Central Wesleyan College;* B. S. in Ed., *University of Missouri*
Education

Jesse Elmo Hunter, B. S. in Agr.
Agricultural Chemistry

John Hunziker, B. S. in Ed., *Central Missouri State Teachers College*
History

Catherine Louis Indorf, A. B.
Zoology

Egbert Jennings, B. S. in Ed.
Education

Elmer Thomas Jones, B. S. in Agr.
Entomology

Florence Knepper, B. S. in Ed.
Education

Lycia O. Martin, B. S. in Ed.
Education

Edna Rosina Polster, A. B., *Central Wesleyan College*
English

Eda Beulah Stauterman, B. S. in Ed.
Education

John Lee Vincent, B. S. in Ed.
Education

Frederick Vorace Wells, A. B., LL. B.
Political Science and Public Law

Eula Sims Williams, B. S. in Ed., *Central Missouri State Teachers College*
Education

Paul Albert Wobus, B. D., *Yale University*
Rural Sociology

Emile Bryant Woods, A. B.
Physiological Chemistry

2. *Degree of Doctor of Philosophy (Ph. D.)*

Ouida Davis Abbott,
B. S. in Agr., University of Missouri, 1921
A. M., University of Missouri, 1922
Major Subject: Plant Physiology
Minor Subject: Horticulture
Subject of Dissertation: *The Fermentation of Pentoses by Yeasts and the Chemical Composition of Plant Gums*

Emmett Lee Schott
B. S. in Ed., University of Missouri, 1922
A. M., University of Missouri, 1923
Major Subject: Educational Psychology
Minor Subject: General Psychology
Subject of Dissertation: *A Study of Superior Ability in High School Seniors*

SCHOOL OF EDUCATION

1. *Certificate to Teach for Two Years*

Helen M. Aston
Helen Lucile Barnes
Ritchey Brinton
Nettie Lorene Clemens
Edna Irene Cole
Donald Harry Davidson
Robert Lewis Fisher
Mary Noe Fountain
Wesley Fay Gillman
George H. Harrah
Mamie Nicter Helmreich
Mary Katherine Horine
Maxie Louise Horner
Margaret Kirkpatrick
Zilpha Ludell Lewis
Margaret Cameron Miller
Rose Varner Stallings
Letha Strickler
Doris Olive Tilley

2. *Life Certificate to Teach*

Ola Lee Barnett
Stella Mae Beardsley
Helen DeWilton Bedford
Crystal Davidson Benson
Lavonia Ferguson Campbell
Lucy Elizabeth Chadwick
H. Darden Chambliss, Jr.
Gertrude Minnick Cope
Lida Mildred Creamer
Fay Lorene Dance
Nancy Lee Dedman
Mary Elizabeth Dick
Albert Ralston Dilts
Elizabeth Fay Dixon
Ruth Dolan
Renee Frances Gaston
Mary Margaret Thompson Groves
Corneil Hall
Lela M. Harrah
Corinne I. Heim
Helen Nancy Huling
Lolita Hungate
Hildred Ileene Jarvis
Elizabeth Louise Journey
Irma Grace Kesterson
Bertha Sue Larkin
Ruth Lea Linthacum
Lucy Clinton Moore
Lucy S. Mullinax
John S. McCollum
Melvin Lawrence McCoy
Nina Olive McCracken
Charles Henry McIntosh
Mary Gertrude Netherland
Esther Augusta Oetting
Nadine Pace
Iva M. Parrott
Grace Eugene Petty
Gladys Ellen Pratt
Charles Edward Robinson
Julia Virginia Rose
Agnes Josephine Smith
Mary Hope Smith
Gretchen Stolle
Ermile Forcade Stone
Ruth Sumner
Pauline Weaver
Mary Alice Westcott
Dorothy Leam Wilson
Ma Wren Wilson

School of Mines and Metallurgy
(at Rolla)

June 6, 1925

DEGREES

Bachelor of Science in Mine Engineering

Marion Lee Atkinson
Donald Robert Baker
Ralph A. Blount
Jamison Eberlee Couch
Kenneth Alfred Ellison
Lorenz Adolph Fisher
William Godwin
Eugene James Gorman
Karl Frederick Hasselmann
Albert Louis Heitmann
Oscar William Johnson
Thomas Blake Kent
Cyrus West Magalis
Charles Lytton Martin
Phillip Francis Martyn
Raymond Fitzgerald Orr
Charles Adelbert Runge
Herbert Oscar Schramm
Claude Nathan Valerius
Paul Edgar Whitesell
Martin Florian Zogg

Bachelor of Science in Metallurgy

Albert Edward Buck
Rogers Owen Day
Thomas Evan Eagan
Joseph Nathan Harris
Horace Wilford Hodges
Irvin George Knoebel
Fred Palmore Matlack

Bachelor of Science in Civil Engineering

Leo Landreth Burnet
William Hewitt Bush
Frank Otto Fink
John Wilson Fleming
George Duggins Gaines
William Fred Hauck
Homer Henry Heidtman
Charles Curran Irving
George Brown Letts
Paul Krugar Meng
Waring Mikll
James Lingan Pasley
Stuart Murray Rathbone
Lawrence Halley Sanderson
Wyatt Ellis Simpson
Ronald Davies Ward
James Arne Westgard

Bachelor of Science in General Science

Fred C. Schneeberger
Isaac Lockerbie Thomson

Bachelor of Science in Mechanical Engineering

Alfred Arthur Boyle
James Nelson Foster
James Everette Stogsdill
Frank Noble Strong

Bachelor of Science in Electrical Engineering

Orman John Horrom
Leo Edwin Shire
Thomas Moffett Thompson
Leonard Oliver Williams
Otho Melvin Wilson

Bachelor of Science in Chemical Engineering

Hugh Rogers Berry
Bertie Lee Browning
Guy Clement Cunningham
Carl James Heim
Joseph Owen Hunt
Charles Herbert Lindsly
Louis Andrew Oberly
Fred Adam Weirich

Master of Science

Keith Oxley Alexander, A. B., *Drake University*
Milton Emerson Countryman, Ch. E., *Renssalaer*
Adolph Harmon Kuechler, B. Cer. E.' *Ohio State University*
Foster Cary Nix, B. S., *University of Alabama*

Engineer of Mines

Kurt Herman deCousser, B. S., M. S.
Edwin Lawrence Miller, Jr., B. S.
Carl E. Millikan, B. S.
Garrett A. Muilenburg, B. A., M. S., *State University of Iowa*
Albert Booth Needham, B. S.
Frederick Pine Shayes, B. S.

Chemical Engineer

Albert Charles Laun, B. S.

Metallurgical Engineer

William McKinley Kahlbaum, B. S.
James Walter Scott, B. S., M. S. M., M. S., *University of Nevada*

Civil Engineer

John Ludwig Gustav Lehman, B. S.

Honorary Degree of Doctor of Science

Henry Andrew Buehler, B. S., University of Wisconsin

SUMMARY, ENROLLMENT BY DIVISIONS

JUNE 1, 1925, TO JUNE 1, 1926

		Men	Women	Total Men	Total Women	Total
College of Agriculture	Four-Year Curricula	336	45	413	50	463
	Two-Year Winter Course	77	5			
College of Arts and Science				1,377	891	2,268
School of Business and Public Administration				151	35	186
School of Education	Columbia	127	717	229	945	1,174
	Summer Session for Teachers (Rolla)	102	228			
College of Engineering				437	1	438
School of Fine Arts				41	94	135
Graduate School				385	269	654
School of Journalism				165	102	267
School of Law				114	2	116
School of Medicine				75	3	78
School of Mines and Metallurgy (at Rolla) Collegiate				382	20	402

		Men	Women	Total	
Total Net Collegiate Enrollment	Columbia	3,115	2,080	5,195	5,812
	Rolla	452	165	617	
Total Net Non-Collegiate Enrollment	Columbia	77	5	82	218
	Rolla	53	83	136	
Total Net Enrollment (Resident)	Columbia	3,192	2,084	5,276	6,029
	Rolla	505	248	753	
Extension Division, Columbia (Non-resident) June 1, 1924, to June 1, 1925					1,915
Rolla Extension (Non-resident), September, 1925, to June, 1926					83

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