CATALOGUE

OF THE

OFFICERS, STUDIES, AND STUDENTS

OF THE

STATE UNIVERSITY,

LEXINGTON, KENTUCKY.

FOR THE

SESSION ENDING JUNE 3, 1909.

1909
TRANSYLVANIA PRINTING CO.
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UNIVERSITY CALENDAR.

1909.

Summer Schools open	June 7th to Aug. 21st.
Examinations for Entrance	Sept. 2nd, 3rd, 4th.
Examinations to remove conditions	Sept. 2nd, 3rd, 4th.
Registration	Sept. 2nd to 8th.
First Term begins	Thursday, Sept. 9th.
Thanksgiving	Thursday, Nov. 25th.
Board of Trustees meet	Tuesday, Dec. 14th.
Christmas Holidays begin	Friday, Dec. 24th.

1910.

Second Term begins	Tuesday, Jan. 4th.
Second Term of the Academy begins	Monday, Jan. 31st.
Washington's Birthday	Tuesday, Feb. 22nd.
Union Society Contest	Tuesday, Feb. 22nd.
Third Term begins	Monday, March 21st.
Patterson Society Contest	Saturday, March 26th.
Final Examinations begin	Monday, May 23rd.
Board of Trustees meet	Tuesday, May 31st.
Class Day	Wednesday, June 1st.
Alumni Banquet	Wednesday, June 1st.
Commencement	Thursday, June 2nd.

SCHEDULE OF ENTRANCE EXAMINATIONS
1909

	Thursday Sept. 2.	Friday Sept. 3.	Saturday Sept. 4.
Algebra		11- 1 P. M.	9-11 A. M.
Astronomy	9-10 A. M.		8- 9 A. M.
Botany	10-11 A. M.		10-11 A. M.
Chemistry	11- 1 P. M.		9-11 A. M.
Civics		8- 9 A. M.	
Drawing		9-10 A. M.	
English	11- 1 P. M.		11- 1 P. M.
French	11- 1 P. M.		11- 1 P. M.
Geometry (Plane)	3- 5 P. M.	9-11 A. M.	
Geometry (Solid)		3- 5 P. M.	3- 5 P. M.
German		3- 5 P. M.	3- 5 P. M.
Greek	8- 9 A. M.	8- 9 A. M.	
History	9-11 A. M.		8- 9 A. M.
History (American)		9-10 A. M.	9-10 A. M.
Latin		3- 5 P. M.	3- 5 P. M.
Manual Training		3- 5 P. M.	3- 5 P. M.
Physical Geography		3- 5 P. M.	3- 5 P. M.
Physics		9-11 A. M.	9-11 A. M.
Physiology		9-10 A. M.	9-10 A. M.
Trigonometry	9-11 A. M.		11- 1 P. M.
Zoology		3- 5 P. M.	

THE STATE UNIVERSITY.

HISTORY.

AGRICULTURAL and Mechanical colleges in the United States owe their origin to an act of Congress entitled "An Act Donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts," approved July 2, 1862. The amount of land donated was 30,000 acres for each Representative in the National Congress. Under this allotment Kentucky received 330,000 acres. Several years elapsed before the Commonwealth established an Agricultural and Mechanical College, under this act. When established it was not placed upon an independent basis, but was made one of the colleges of Kentucky University, now Transylvania University, to which institution the annual interest of the proceeds of the Congressional land-grant was to be given for the purpose of carrying on its operations. The land-scrip had meanwhile been sold for fifty cents per acre, and the amount received—$165,000—invested in six per cent Kentucky State bonds, of which the State became custodian in trust for the College.

The connection with Kentucky University continued till 1878, when the act of 1865, making it one of the Colleges of said University, was repealed; and a commission was appointed to recommend to the Legislature of 1879-80 a plan of organization for an institution, including an Agricultural and Mechanical college, such as the necessities of the Commonwealth required.

The city of Lexington offered to the Commission (which was also authorized to recommend to the General Assembly the place which, all things considered, offered the best and greatest inducements for the future and permanent location of the College) the City Park, containing fifty-two acres of land within the limits of the city, and thirty thousand dollars of city bonds for the erection of buildings. This offer the county of Fayette supplemented by twenty thousand dollars in county bonds, to be used either for the erection of buildings or for the purchase of land. The offers of

Lexington and the county of Fayette were accepted by the General Assembly.

By the act of incorporation and the amendments thereto, constituting the charter of the Agricultural and Mechanical College of Kentucky, liberal provision is made for educating, free of tuition, the energetic young men and women of the Commonwealth whose means are limited. An act of the General Assembly of the Commonwealth of Kentucky approved March 16th., 1908, changed the style and title of the institution from Agricultural and Mechanical College to that of State University, Lexington, Kentucky. The University, with the additional departments which shall, from time to time, be opened as the means placed at the disposal of the Trustees allow, will, it is hoped, in the not distant future do a great work in advancing the educational interests of Kentucky. Being entirely undenominational in its character, it appeals with confidence to the people of all creeds and of no creed, and will endeavor, in strict conformity with the requirements of its organic law, to afford equal advantages to all, exclusive privileges to none. The liberality of the Commonwealth, in supplementing the inadequate annual income arising from the proceeds of the land-scrip invested in State bonds, has enabled the Trustees to begin and carry on, upon a scale commensurate with the wants of our people, the operations of the institution whose management and oversight have been committed to them by the General Assembly of Kentucky.

SCOPE OF STUDIES.

In the act of Congress making provision for the class of institutions to which The State University belongs, it is declared "that their leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." To the three departments of agriculture, the mechanic arts, and military science, contemplated in the act as indispensable, an Experiment Station has been added by the United States, and liberal provision has been made for instruction in all branches of science and in the classics, so that this institution is

far more than an agricultural and mechanical college, embracing as it does, not merely the three original departments, but eighteen others.

DEPARTMENT OF EDUCATION.

In 1893 the college authorities, in response to a demand for advanced instruction for teachers, organized a full collegiate course leading to the degree of Bachelor of Pedagogy. In 1906 two full collegiate courses, each with Education as a major, were substituted for the course established in 1893. One leads to the degree of Bachelor of Arts in Education and the other to Bachelor of Science in Education.

KENTUCKY EXPERIMENT STATION.

The Agricultural Experiment Station of the State University was established by the Executive Committee of the Board of Trustees in September, 1885, when the Department was organized and a Director appointed. In 1886, the Station was recognized and named by the General Assembly of Kentucky. In 1887 it became the beneficiary of the first annual appropriation of $15,000, under the Hatch Act providing for the establishment of Agricultural Experiment Stations for the States and Territories. In 1906 "for the more complete endowment" of Agricultural Experiment Stations, an act of Congress, known as the Adams Act, appropriated to each State and Territory $5,000 for the year ending June 30, 1906, and the same sum with an increase of $2,000 per annum for five years, after which the maximum of $15,000 shall continue without change.

The work of the Station is directed to two objects: 1. To a constant succession of experiments made by specialists, in order to learn which applications of science will insure the best returns from the farm, the garden, the orchard, the vineyard, the stockyard, and the dairy. 2. To the publication of bulletins announcing such results of the experiments as are found to be valuable to the people of Kentucky who seek profit from any one of those prime sources of wealth—the soil, the flock, and the herd.

The results of experiments have been published in nineteen annual reports and one hundred and forty bulletins, and general appreciation of their utility is shown in the fact that, while no

bulletin is sent except upon application for it, the mailing list of the Station contains about thirteen thousand five hundred names, and is ever increasing.

With an ample endowment, a large and commodious building planned for the purpose, adequate apparatus, a good experimental farm conveniently situated, and a staff of twenty-one scientists engaged in seven divisions of research and in correspondence with other stations, the Kentucky Experiment Station is not only an important adjunct to the University in the education of students for the leading industrial pursuits, but, directly or indirectly, through the continual diffusion of knowledge for the benefit of so large a proportion of our population, it is extremely useful to the Commonwealth.

LOCATION.

The State University is located in the former City Park, in the southern part of the city of Lexington and near the Cincinnati Southern Railway. The site is elevated and commands a good view of much of the city and of the surrounding country.

Lexington, now a growing city of forty thousand inhabitants, is in the heart of the far-famed Blue Grass region, a region distinguished for fertility and healthfulness, wealth and beauty. Numerous schools and churches, an intelligent and refined population, well paved streets, handsome buildings, extensive waterworks, and an unsurpassed system of street electric railways make Lexington attractive as a seat of learning and place of residence, while the splendid stock farms scattered over the large body of fertile country around it afford advantages hardly equaled elsewhere for the student who desires to become familiar with the best breeds of horses, cattle, sheep, and swine in America. Moreover, with railroads diverging in seven directions, Lexington is the railroad center in Kentucky, and in direct connection with Louisville, Cincinnati, Maysville, Huntington, and Chattanooga, and with more than seventy counties of the Commonwealth. And when to the electric railways now in operation to Georgetown, Paris, Versailles, and Frankfort, those projected to Winchester, Richmond, and Nicholasville shall be added, the hourly trains of these roads will enable students residing near them to attend the University conveniently from their homes.

GROUNDS.

The campus of the University consists of fifty--two acres of land, located within the corporate limits of Lexington. The South Limestone electric car line extends along the western border of the campus, affording opportunity to reach in a few minutes any part of the city. The campus is laid out in walks, drives and lawns, and is planted with a choice variety of native and exotic trees and shrubs, to which additions are constantly being made. Two and a half acres forming the northeast portion of the campus, inclosed and provided with grand-stands are devoted to the field sports of the students.

About three-quarters of a mile south of the campus, on the Nicholasville pike, is the Experiment Station Farm, consisting of two hundred and forty-three acres. Here the field experiments of the Station are conducted, and students have opportunities to witness tests of varieties of field crops, dairy tests, fertilizer tests, fruit-spraying tests; in short, all the scientific experimentation of a thoroughly organized Station. The front of the farm is pasture and orchard. The rear portion is divided off into two hundred one-tenth acre plots, for convenience in making crop tests.

BUILDINGS.

Administration Building.—This is a structure of stone and brick, 140x68 feet. It contains the offices of the President, the Registrar, the Business Agent, and the local offices of the United States Weather Bureau of the Department of Agriculture, as well as the chapel, in which each day the students and the Faculty meet for worship, and in which are held public gatherings and such other meetings as bring together the entire student body. The remaining space in this building is occupied by recitation rooms.

Chemical Building.—This structure is well planned for the object for which it was built. It is seventy feet in length and fifty feet in width, with a tower projection in front, and an octagonal projection 18x18 on the north side. The building is two stories high, upon a basement eleven feet from floor to ceiling.

Mechanical Hall.—This building is of native limestone and brick. It is designed to take care of the work in the College

of Mechanical and Electrical Engineering. Shops, laboratories, recitation rooms, lecture rooms, drawing rooms and apparatus are provided for giving comprehensive training in the science of dynamic engineering.

SCIENCE HALL.—This building, erected for the departments of natural science, is three stories in height, 96x97 feet in size, of pressed brick and trimmed with Bowling Green stone. The first and second stories are occupied with offices, laboratories and lecture rooms, the latter being equipped with opera chairs, projection lanterns and other suitable furnishings. The third floor is used for the offices and museum of the State Geological Survey.

GYMNASIUM.—This structure of pressed brick and Bedford stone, 100x157 feet, with the central part three stories high, the right wing one and the left two, stands north of the Administration Building.

The first floor of the central portion contains the Armory, lockers for women, and the offices of the Commandant and the Physical Director for men. The second floor is occupied by the Y. M. C. A. Hall, the Trustees' room, a literary society hall for women, and the offices of the Physical Director for women. The third floor is divided into two literary society halls for men and the Alumni Hall. All these rooms are commodious and well adapted to their purpose. The right wing, which is 48x95 feet, is used as a drill room during bad weather. In the basement of the left wing there are baths, lockers for men, wash stands, closets, and a swimming pool. The second floor, the gymnasium proper, is equipped with the best apparatus that could be procured.

EDUCATION BUILDING.—This building was erected for the use of the Departments of Education and Domestic Science. The construction is of pressed brick and Bedford stone, and the design follows the most approved style of modern school architecture. The building contains ten class-rooms, a study-room for young women, and one for young men, a department library-room, two offices and a very large room for the literary-society of the Department of Education.

LIBRARY.—This building is due to the munificence of that prince of benefactors, Andrew Carnegie. It is located on the court between the Administration Building and the President's House, is

fifty-six feet square, two stories high, including the tall basement of range-ashlar, is built of pressed brick, trimmed with terra cotta.

Agricultural Hall.—This building, for the erection of which provision was made by the Board of Trustees at their meeting in December, 1906, was completed and occupied in the early summer of 1908. Designed to be a wing of the larger structure which it is expected the College of Agriculture will eventually require, it is three stories in height, 45x100 feet in size, and constructed of pressed brick and Bedford stone.

The basement contains large rooms arranged for farm machinery, general farm mechanics, potting and propagating, and for the heating plant. On the first floor are the office of the Dean, the general and advanced plant laboratories, and a lecture room. On the second floor are the offices for the Professor of Animal Husbandry and the Professor of Agronomy, three class-rooms, and an attractive reading room. The third floor affords space for an Agricultural Museum, a commodious assembly room for the Grange and other agricultural society meetings and exhibitions, and a photographic laboratory with dark rooms, both for student use and department work. A modern iron-frame laboratory greenhouse for the study of living plants and for experiments is attached to the rear.

Civil Engineering and Physics Building.—This building was planned for the technical work of the College of Civil Engineering and for the Department of Physics. It is a three-story brick structure 79x127 feet, trimmed with cut stone and occupies the highest point on the University campus. It has floor space of about 40,000 square feet and contains offices, lecture-rooms and laboratories to meet the growing needs of the departments for which it was planned. It will be completed before mid-summer.

Mining Building.—A large and commodious laboratory for Mining Engineering has been recently provided and is now in use.

Observatory.—An observatory for the use of an eight-inch telescope with the necessary appliances for making it available, is among the recent additions to the educational equipment of the University.

DORMITORIES.—The two large brick dormitories on the campus afford lodgings for the students who wish to lessen their expense of living.

Other buildings on the campus are a brick dwelling for the President, a cottage occupied by the Commandant, and a greenhouse for the care and propagation of ornamental plants.

EXPERIMENT STATION BUILDING.—This handsome structure is located on South Limestone Street, one-fourth of a mile from the campus, and was completed in the winter of 1904. The building is of two stories and a basement, constructed of pressed brick with oolitic limestone trimmings. The foundation is of Kentucky gray limestone faced with broken ashlar oolitic limestone, the balustrade of terra cotta. A large portico, with columns extending from the first floor line to the pediment on a level with the cornice, forms an attractive feature of the building. The cornice is massive, with large brackets.

The general design of the building, which is 114x60 feet, is colonial, adhering mainly to classic proportion and combinations.

FARM BUILDINGS.—On the farm is a brick dwelling occupied by the Director of the Station, and the usual buildings for the care of tools, the protection of stock, and the like.

PATTERSON HALL.—This building, the residence of the women students of the University, is a large and handsome three-story brick structure of a hundred and fifty feet front, built on a fine site of about three acres fronting two hundred and ten feet on South Limestone street, on which is a line of the City Electric Railway. Within a quarter of a mile of the University on the south, a half mile of the Court House, principal hotels and the Postoffice on the north, and distant not more than ten minutes by electric railway from the principal churches of the city, Patterson Hall is, for all purposes, admirably located. The building is heated by steam, lighted by electricity and supplied with hydrant and cistern water. It has a front veranda of 14x68 feet, wide halls, a wardrobe in every bed room, and thirteen bath-rooms. With walks, drives and numerous old forest trees, the spacious front lawn, one of the most beautiful in Lexington, is an inviting place for exercise. Ample provision has also been made for exercise in the rear lawn, on which are tennis courts and croquet grounds.

DEVELOPMENT.

The growth of the University from year to year is shown as follows:

1862. To establish and endow a college, chiefly for instruction in agriculture and the mechanic arts, an act of Congress apportioned to each State, for each of its Senators and Representatives in Congress, 30,000 acres of the public land.

1865. The General Assembly of Kentucky having accepted the State's portion under the conditions prescribed, established the Agricultural and Mechanical College, making it one of the colleges of Kentucky University, then recently united with Transylvania University and located at Lexington, citizens of Lexington and its vicinity donating $110,000 to the Curators of the University to buy a site for the College. The General Assembly authorized the Commissioners of the Sinking Fund to sell the 330,000 acres apportioned to Kentucky, but the State realized for its land only $165,000, in consequence of the mismanagement of the Commissioners' agent.

1866. The College opened with a President, four Professors and a Commandant.

1878. Dissatisfied with the management of the College by the Curators, who were engaged in a long factional strife, the General Assembly severed the connection with the University, and appointed a committee to re-locate the College, to provide for its continuance in operation until re-located, and to prepare "a plan for a first-class University." Kentucky University claimed and retained the former site of the College, and the sole property of the latter after the severance was an income of $9,900 derived from the land-grant.

1880. The City of Lexington offered the City Park of fifty-two acres as a new site for the College, and also $30,000 in bonds, and the County of Fayette offered $20,000 besides. The General Assembly ratified the selection of the site made by a majority of the commission, and located the College permanently in Lexington.

1880. To provide teachers for the common schools of the State and for other schools, the General Assembly added to the College a Normal Department, which should admit, besides other students, one from each representative district every year free of tuition.

1880. Further to endow the College and to enable it to purchase apparatus, machinery, implements, and a library; to maintain the Normal Department, and to defray other necessary expenses, the General Assembly imposed a tax of one-half cent on each hundred dollars of the assessed value of all property in the State liable to taxation for State revenue and belonging to its white inhabitants.

1880. The Classical and Normal Departments, and the Academy were added.

1882. The College Building, the First Dormitory, and the President's House were completed.

1885. The Commandant's House was reconstructed.

1887. To enlarge by experiments and to diffuse the knowledge of agriculture, an act of Congress established, under the direction of the Agricultural and Mechanical College in each State, an Agricultural Experiment Station, appropriating for its support $15,000 per annum.

1887. The Department of Civil Engineering was established, an experimental farm of forty-eight acres purchased, and the College Greenhouse built.

1889. The Experiment Station Building was completed.

1890. The Second Dormitory was completed.

1890. For "the more complete endowment" of Agricultural and Mechanical Colleges, an act of Congress appropriated to each State $15,000 for the year ending June 30, 1890, and the same sum with an increase of $1,000 per annum for ten years, after which the maximum of $25,000 should continue without change. Of the amount thus annually appropriated the University receives 85 per cent. and "The Kentucky Normal and Industrial Institute" for colored people at Frankfort 15 per cent.

1891. The Department of Mechanical Engineering was established.

1891. The Department of Anatomy and Physiology was established.

1892. The Mechanical Building and Workshops were completed.

1894. Greenhouses for the Experiment Station were built.

1894. The Department of Physics was established.

1895. The Annex to the Mechanical Building and the Insectarium for the Station were built.

1897. The Department of Electrical Engineering was established. Additions were made to the Greenhouses and Insectarium.

1898. The Building for Natural Science was completed.

1898. Sixty-four and a half acres were added to the Experimental Farm, making one hundred and thirteen acres.

1900. Sixty thousand dollars were appropriated by the General Assembly for a Collegiate Home for Young Women, for a Gymnasium and Drill Room, and a hall for the Y. M. C. A.

1901. Ninety acres were added to the Experimental Farm, making two hundred and three acres. The Gymnasium, the Drill Room, the Halls for the Societies and the Y. M. C. A. were completed

1901. The Department of Mining Engineering was added.

1902. The Department of Physical Education was added.

1902. Thirty thousand dollars additional were appropriated by the General Assembly for the Young Women's College Home, making $60,000 in all.

1904. Patterson Hall, the Young Women's University Home, was completed.

1904. Fifteen thousand dollars per annum were appropriated by the General Assembly to defray the expenses of the College.

1905. The New Experiment Station was completed.

1906. The Department of Domestic Economy was added.

1907. The building for the Department of Education was erected. The Carnegie Library Building and the Agricultural Hall were begun. The Academic (preparatory) Course was extended to three years. Forty acres were added to the Experimental Farm, making two hundred and forty-three acres. The Mining Laboratory and the Observatory were erected.

1908. Name changed from Agricultural and Mechanical College to State University. The College of Law was established. Two hundred thousand dollars were appropriated by the General Assembly for buildings and twenty thousand dollars for additional annual income. The Library and the Agricultural Hall were completed. The building for the College of Civil Engineering and the Department of Physics was begun.

Increase of Property.—The property of the University is estimated to be worth $900,000 more than it was in 1880.

Increase of Courses.—Before 1880 the University offered a single course of study leading to a degree; it now offers seven.

Increase of Teachers.—Before 1880 the University had six Professors; it now has twenty-seven professors and forty-three assistants.

Increase of Students.—The number in 1898-99 was 480, the largest till then in the history of the University; in 1903-1904 it was 732; in 1907-1908 it was 1,064.

Increase of Graduates.—No fact more distinctly marks the growth of the University than the increase in the number of its graduates. More students have been graduated during the last three years than were graduated during the first thirty.

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TERM EXPIRES JANUARY, 1912.

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Charles B. Nichols.
Claude B. Terrell.

David C. Frazee,
Secretary of the Board and of the Executive Committee.

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*Died February 18, 1909.

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(In order of appointment)

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ARTHUR McQUISTON MILLER, A. M.,
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609 South Limestone Street.

MERRY LEWIS PENCE, M. S.,
Professor of Physics,
108 Merino Street.

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*Died September 28, 1908.

ALEXANDER ST. CLAIR MACKENZIE, M. A., F. R. S. L.,
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WILLIAM SNYDER WEBB, M. S.,
Assistant Professor of Physics,
Greendale.

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MISS SUE DOBYNS McCANN, M. S.,
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124 Hagerman Court.

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158 East Maxwell Street.

KNOX JAMISON, A. B.,
Assistant in the Academy,
390 South Upper Street.

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*On leave of absence.

JOHN LESLIE PURDOM, A. B.,
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City Y. M. C. A. Building.

ALFRED GAY McGREGOR, A. B.,
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341 Aylesford Place.

ALFRED HOLLEY GILBERT, B. S.,
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609 South Limestone Street.

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124 Hagerman Court.

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Assistant in Mining Engineering and Metallurgy,
423 Woodland Avenue.

HARRY ESSEX, A. B.,
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609 South Limestone Street.

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WILLIAM DURRETT NICHOLS, B. S. IN AGR.,
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605 South Limestone Street.

JOSEPH DICKER,
Assistant in Blacksmith Shop and Foundry,
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JOHN BORN DICKER,
Assistant in Machine Shop,
174 Virginia Avenue.

LEO LOGAN LEWIS, B. M. E.,
Assistant in Wood Shop,
270 South Limestone Street.

CHARLES EDGAR SCHOENE, B. M. E.,
Assistant in Mechanical Engineering,
353 South Mill Street.

GEORGE McINTYRE HOWARD,
Assistant in Experimental Laboratory,
381 South Mill Street.

ARZA LYTLE WILHOIT, B. M. E.,
Assistant in Steam Laboratory,
312 South Upper Street.

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Assistant in Military Science and Tactics,
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177 North Broadway.

HOWARD HARDESTY DOWNING, B. C. E.,
Fellow Assistant in Civil Engineering, Mathematics, and Physical Education,
127 North Hanover Avenue.

GEORGE FRANCIS BROWNING,
Student Assistant in Mechanical Engineering and Mathematics.

GEORGE B. WILKEN,
Student Assistant in Farm Mechanics.

GEORGE THOMAS SCOTT,
Student Assistant in Horticulture and Botany.

KENNETH ODIN CAYCE,
Student Assistant in Agronomy and Animal Husbandry.

ERBIE LEE HARRISON,
Student Assistant in the Academy.

RICHARD ALEXANDER EDWARDS,
Student Assistant in Free-hand Drawing.

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OTHER OFFICERS:

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227 East High Street.

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660 South Limestone Street.

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Matron of Patterson Hall,
Patterson Hall.

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609 South Limestone Street.

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*Deceased.
**On leave of absence.

JAMES OSCAR LABACH, M. S.,
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Assistant Entomologist and Botanist,
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Assistant, Animal Husbandry Division,
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Assistant Chemist, Fertilizer Division,
152 East High Street.

JOHN WILLIAM NUTTER,
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ELMER FRANCIS WORTHINGTON,
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Assistant Observer,
464 Rose Street.

ADMISSION.

All applicants for admission to the University or to the Academy should bring satisfactory testimonials of good moral character.

A student may be admitted to the University in one of four ways:

(a) By examination.

(b) By certificate from an accredited school.

(c) By transfer of credits from some other college or University.

(d) As a special student.

ADMISSION BY EXAMINATION.

Examinations for admission will be held at the University on September 2, 3, 4, 1909.

All persons who wish to enter the University for the Fall Term's work, except those whose entrance credits have been accepted by the Committee on Entrance, must take these examinations. They should present themselves at the office of the Committee on Entrance at 8:30 A. M. of Thursday, September second. They will then receive directions concerning the places at which the examinations will be held. For the hours of examinations, see schedule.

ADMISSION FROM ACCREDITED SCHOOLS, COLLEGES OR OTHER UNIVERSITIES.

Persons who desire to enter the University by credits instead of by examination must have these credits certified to by the proper official of the school in which they were secured. Blank forms for such certificates will be furnished by the Registrar of the University on application. These certificates should be sent as soon as possible (by June 15 from accredited schools), to the Committee on Entrance. This committee will then notify the student that his credits are approved or that he must take entrance examinations in subjects for which his credits are not satisfactory.

ADMISSION AS A SPECIAL STUDENT.

A graduate of another University or College may enter the University to pursue any special work. Persons of maturity who for one reason or another have been out of school to such an extent that they are unable now to offer the fifteen units required for entrance to the Freshman class may be admitted as special students under the following conditions:

(a) They must be at least twenty-two years of age.

(b) They must show good reason for not taking a regular course.

(c) They must demonstrate their ability to do the work which they propose to undertake.

Students who have failed in their work, in either regular or special courses, will not be admitted as special students.

Young, immature persons will not be admitted as special students. County appointees are required by the terms of appointment to do full work in a regular course of study and cannot, therefore, be admitted as special students.

REQUIREMENTS FOR ADMISSION TO THE FRESHMAN CLASS.

Fifteen units, each requiring the pursuit of a subject for five hours a week for one school year of not less than thirty-four weeks, are required for admission to the Freshman Class in any College of the University.

Ten of these units must be as follows:

Algebra	1½
Geometry (Plane)	1
Geometry (Solid)	½
History	1
Language (English)	3
Language (One Ancient or Modern)	2
Physics	1

The remaining five units may be selected at will from the following subjects:

Astronomy	½
Botany	½
Chemistry	1

Civics	½
Drawing	½
History	1
History (American)	½
Language (Ancient or Modern)	3
Manual Training	½
Physical Geography	½
Physiology	½
Trigonometry	½
Zoology	½

Candidates for the degree of Bachelor of Arts must present five credits in Foreign Language, three of which must be in Latin.

No subject offered as an entrance requirement can be counted again in the total credits required for the completion of a college course.

DEFINITION OF UNITS IN THE SEVERAL SUBJECTS.

MATHEMATICS

The units in Mathematics are as follows:

Algebra—One and one-half units. The work in Algebra to be acceptable must cover a full year in some good elementary text, such as Slaught and Lennes, Stone-Millis, Collins, Wentworth, Wells or Milne; and a full half-year in some more advanced text, such as Wentworth's Higher, Fisher and Schwatt's Higher, Well's Advanced, Hawke's Advanced, Milne's Advanced or Fine's College. *Preference should be given to the newer books which contain work on graphs.* The student must show a good knowledge of factoring, common divisors and multiples, fractions, involution embracing the binominal theorem for positive integral exponents, radicals, imaginary quantities, equations of the first and second degree involving one or more unknown quantities, equations solved like quadratics, simple indeterminate equations, and equations involving radicals, ratio and proportion, arithmetical and geometrical progressions. The student is expected to be able to state and explain the reason for every step in his work. The solution of problems by means of equations should be the chief aim in studying Algebra.

GEOMETRY (PLANE)—One Unit. The work in Plane Geometry to be acceptable must cover a full year in such a text as Beman and Smith, Wentworth, Milne, or Durell.

It is recommended that part of the year be spent upon the applications of Alegbra to Geometry and of Geometry to Algebra. The student should be able to apply the principles of Geometry to practical problems, to construct diagrams quickly and accurately. In proving a theorem or in solving a problem he should be able to prove every statement made by going back step by step till he reaches primary definitions and axioms.

GEOMETRY (SOLID)—One-half unit. The work in Solid Geometry to be acceptable must cover a full half-year. It is recommended that text-book work be accompanied by work of a semi-laboratory character, including the making of models of pasteboard or clay and experimental verification of the theorem by measuring, weighing, ect. Such laboratory methods will prove interesting and very helpful to the student.

PLANE TRIGONOMETRY—One-half unit. The work in Plane Trigonometry to be acceptable must cover at least a full half-year in such a text as Crockett, Murray or Wentworth. The student must be familiar with and be able to use all the principal formulas, to find natural and logarithmic functions of angles of any magnitude, to construct triangles and other figures accurately and quickly. The daily use of inexpensive drawing instruments is recommended for students taking Geometry and Trigonometry.

Neatness should be required in all mathematical work.

HISTORY.

HISTORY (REQUIRED)—One unit. The work in history to be acceptable must cover one full year's work in the High School, during which the pupil should have practice in making reports on assigned topics. General History, based on Myers, will be accepted until September, 1911; but the University strongly advises the prompt adoption of one or more of the following courses instead of General History:

Ancient History (to 800 A. D.) as presented in such texts as West's Ancient World, Myers' Revised Ancient History, or Goodspeed's History of the Ancient World.

English History, as given by Cheyney's Short History of England, Walker's Essentials, or Wrong's British Nation.

Mediaeval and Modern History, equivalent to West's Modern History, which emphasizes the nineteenth century.

HISTORY AND CIVICS (ELECTIVE)—Two units. American History and Civil Government (Civics)—one-half unit each—should be pursued in the last year of the High School, each serving to illustrate the other. In Civil Government the pupil should know the relations and functions of the county, city, state and national governments.

In addition to this unit, the candidate may offer one elective unit from the required courses described above.

ENGLISH.

The three units that must be offered in English are these:

Advanced Grammar. First Year. One unit.

Rhetoric and Composition. Second Year. One unit.

Reading and Practice. Third Year. One-half unit. For 1909 and 1910 the books prescribed are these: Shakespeare's The Merchant of Venice and Macbeth; Addison's Sir Roger de Coverley papers; Irving's Life of Goldsmith; Coleridge's Ancient Mariner; Scott's Ivanhoe and Lady of the Lake; Tennyson's Gareth and Lynette, Lancelot and Elaine, the Passing of Arthur; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

Study and Practice. Third Year. One-half unit. Preparation includes the thorough study of each of the works named below; a knowledge of the subject matter, form and structure. In addition, the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English history to which the prescribed works belong. For 1909-10 the books set for this part of the work are these: Shakespeare's Julius Caesar; Milton's Lycidas, Comus, L'Allegro and Il Penseroso; Burke's Speech on Conciliation with the Colonies; Macaulay's Essays on Addison and Life of Johnson.

Unless pupils have had daily or weekly exercises in Composition and Theme-writing throughout the three or four years of

their High School curriculum, their work in Grammar, Rhetoric, and Literature will not be accepted as equal to three units in English.

LANGUAGES.

LATIN. Persons who expect to be candidates for the degree of Bachelor of Arts must offer at entrance three units of Latin as follows:

Latin A. Grammar and Composition. One unit.Moore's Grammar, or its equivalent, with a daily exercise in inflection and in translation from and into Latin on the blackboard; easy Latin readings.

Latin B. Nepos and Caesar. One unit. Twelve Lives of Nepos and four books of Caesar, or Second Year Latin; Daniell's New Latin Composition.

Latin C. One unit. Four books of Virgil or twenty-five hundred lines of Ovid, with scanning; seven orations of Cicero.

Latin A and B may be offered as the two units of a foreign language required to enter courses in the University other than those leading to the degree of Bachelor of Arts.

GREEK. To offer two units in Greek applicant must have completed:

Greek A. One unit. White's Beginner's Greek Book (or its equivalent), involving quantity, accentuation, declensions, genders, conjugations, syntax and idioms.

Greek B. One unit. Four books of Xenophon's Anabasis; six books of the Iliad, and Gleason's exercises in Greek prose composition.

GERMAN. In order that a two-years' course in German should be accepted for two units it should comprise:

Grammar and Translation. One unit. A thorough drill in and an elementary knowledge of the gender of nouns and declension of nouns and adjectives; the demonstrative, relative and interrogative pronouns; the normal, inverted and transposed order; the ability to write German script legibly and readily under dictation; to translate with comparative ease elementary German into English, and *vice versa;* familiarity with the strong and weak conjugations of the commonest verbs.

Composition and Reading. One unit. Advanced German Grammar; composition; the reading of about two hundred pages of German prose of medium difficulty; the reading of some of the easier German lyrics.

FRENCH. A two years' course in French, equivalent to the two years' course in German just outlined, will be accepted in lieu of the latter.

NATURAL SCIENCES.

CHEMISTRY. One unit. To be accepted, Chemistry must have been studied for one school year, and should have rendered the student familiar with the following topics in non-metallic chemistry: Properties of the principal acid-forming elements and their compounds; simple problems on relations by weight; relations between gas volumes and the weights of chemically related solids; acids, bases and salts, valence; series of oxy-acids and their salts; oxidation and reduction; acid anhydrides; hydrated and poly-acids.

PHYSICS. One unit. The work in Physics to be acceptable must cover a full year in a text book not lower than Gage's Elements. The text book used must contain many problems illustrative of the principles of the text, and the student must be able to handle these problems well. It is recommended that the student shall also have done forty or more experiments of a quantitative character.

In Science new facts are being discovered almost daily. Text-books on these subjects should be up-to-date. To be accepted as possessing one-half unit value, each of the following elective subjects must have been pursued for at least one-half of the school year.

ASTRONOMY.—In Astronomy the student should have learned the elementary facts regarding the earth and other members of the solar system as to their sizes, distances and motions around the sun, how the moon causes our tides, what causes the change of seasons, methods of reckoning time, the causes of eclipses, etc. The laboratory methods of studying this subject suggested by Todd's Astronomy and Laboratory Manual of Astronomy by Mary E. Byrd are strongly recommended.

BOTANY. Should involve a knowledge of the Structure and Elementary Physiology of the Seed Plants as presented in Bergen's Elements, chapters one to twenty-two inclusive; Bailey's Elementary Text-book of Botany, chapters one to twenty-four inclusive, and twenty-six to thirty inclusive, or their equivalent. The laboratory method of instruction, as suggested by these works, should be emphasized. It is not required or expected that the student should have studied the minute anatomy of these plants farther than it can be done with the simple magnifier, although it is highly desirable that the teacher should have a compound microscope available for purposes of demonstration to the class, of cell structure, stomata, etc., etc. It is important that a student should have some acquaintance with the principles of classification, and desirable, though not indispensable, that he should have some knowledge of the determination of species.

PHYSICAL GEOGRAPHY.—In the study of Physical Geography the student should have acquired an elementary knowledge of relief forms of the continents and islands, continental drainage, ocean currents, winds, causes of storms, moisture of the air, hail, snow, relations between plants and animals and the range of each, range of human habitations, and the influence of physical geography on man and on the industries of a country. Acceptable texts on this subject are by Dryer, Brigham and Gilbert, Davis, and Tarr.

PHYSIOLOGY.—One-half unit. The preparation in this subject should include instruction in anatomy, physiology, histology and hygiene. The amount expected is indicated by that given in Martin's The Human Body, Briefer Course; Overton's Advanced Physiology, Blaisdell's Practical Physiology, or any text-book of similar scope. This would include something of the bones, organs of circulation, digestion, respiration and excretion; the nervous system and special senses; and a study of the essential facts of digestion, absorption, secretion, excretion, circulation, respiration, etc.

The text-book work should be illustrated by models, charts, drawings with chalk and specimens. A note-book with drawing and explanations should be required.

ZOOLOGY. Should be such as would render the student familiar with the salient characteristics of each of the animal sub-kingdoms.

This can only be accomplished by a laboratory study of at least one type animal under each sub-kingdom.

MANUAL TRAINING AND DRAWING.

Manual Training. One-half unit. The student should be familiar with the usual shop processes and methods of work, and the properties of the materials ordinarily used in constructions. Not less than one hundred hours should be devoted to such exercises in woodwork as are given in Goss's Bench Work in Wood and Golden's Wood Turning.

Drawing. One-half unit. The student should be able to show ability to sketch freehand geometrical figures such as circles, spirals, polygons, pyramids and cylinders; also common objects such as chairs, tables, animals, bones and flowers. He should also be able to copy by enlarging or reducing its dimensions the picture of any ordinary object.

ENTRANCE CREDIT CARDS.

Graduates of accredited schools who desire to enter the University without examination, must present from their Superintendent or Principal "Entrance Credit Cards," setting forth the number of units each is prepared to offer. These cards will be furnished to heads of schools on application. In no instance will a pupil be admitted to the University in any subject without examination unless specifically vouched for in this way. A list of those to whom such cards have been issued, with the course of study in the University each proposes to pursue, should be in the hands of the Chairman of the Accredited Schools Committee not later than June 15 of each year.

If a student is not able to offer all of the fifteen units required for entrance, he will be required to make up his deficiency in the University Academy or under a tutor. He will be allowed to take Freshman studies which do not interfere with his preparatory work, but he will not be registered as a Freshman until he has made up all of his deficiencies.

ADVANCED STANDING.

After being admitted to the University, a student may secure advanced standing:

(a) By examination on each subject for which he desires credit.

(b) By transfer, from a college or university, of credits satisfactory to the Professors concerned.

No student will under any circumstances be accredited beyond the Junior year.

ACCREDITED SCHOOLS.

Schools, whether public or private, may be accredited in whole or in part. To be fully accredited, a school must present to the Committee on Accredited Schools satisfactory evidence that it is able to meet the entrance requirements of the University as stated on pages twenty-six to thirty-three inclusive. This will require that four years of competent high school instruction shall be given.

A school giving thorough but less extensive preparation may be accredited in special subjects.

Printed forms will, on application, be sent to the heads of schools who may desire to have their schools placed in the accredited list. These forms must be filled out and, with an announcement of the course or courses of study given in the school, be sent to the Committee on Accredited Schools at the University.

The list of accredited schools (in process of revision as this catalogue goes to press) will be mailed on application.

The Board of Trustees of the University has authorized the President to make an annual award of a free scholarship to the pupil in each fully accredited school, who has completed, with the highest grade, the full course in that school. This scholarship entitles the recipient to free tuition. If, in addition, the holder of the scholarship obtains a county appointment, he is entitled to a room in one of the dormitories and to his traveling expenses.

REGISTRATION.

Registration of New Students.—New students seeking admission to the University for the Fall Term's work must present themselves to the Committee on Entrance between 8 A. M., Thursday, September 2, and 10 A. M. Monday, September 6. Students whose entrance credits have not been accepted should present themselves as soon as possible after 8 A. M. September 2. (See schedule of entrance examinations, page VI.) From the Committee on Entrance the student will receive a card certifying the extent of his or her entrance credits to the President of the University.

From the President he will receive two cards, one addressed to the Business Agent regarding fees, and the other addressed to the Dean of the College which the student desires to enter. The Dean, after satisfying himself as to the proper work for the student, and that he has paid his fees, will issue to him a card containing the names of the courses which he is to pursue. This card must be presented to each professor concerned. He will assign the student to the class and section in which he is to recite, endorse his card and place his name on the roll of the class. The card must then be returned to the Dean, who files it for future reference. No student will be assigned to any duty till he has settled his fees.

Registration of Old Students.—Students who entered the University during the session of 1908-9 with less than fifteen entrance credits are regarded (in registration) as new students and must therefore comply with all of the requirements in the preceding paragraph. Other students of the University must comply with all of the requirements in the preceding paragraph except those relating to the Committee on Entrance. Students who have any conditions must remove them between 8 A. M. September 2 and 5 P. M. September 4.

Examinations will not be held between 5 P. M. September 4 and 8 A. M. September 11, except by special arrangements, previously made, with the professors concerned.

Delayed Registration.—Students will not be permitted to delay their registration for trivial reasons or through neglect. Every stu-

dent, new or old, must have completed his registration, including the payment of his fees and the returning to his Dean of his classification card, by 5 P. M. of Wednesday, September 8. Any student who fails to comply with this requirement will be charged two dollars for delayed registration.

BEGINNING OF CLASS WORK.

Lectures, class and laboratory work begin on Thursday, September 9, and absence of students from these exercises will be recorded against them.

CHANGE OF CLASSIFICATION.

Students are free to matriculate in any college of the University, but they are not allowed to change from one college to another until they have completed and passed a satisfactory examination on each subject pursued in the college in which they were matriculated during the preceding year; and no such change is permitted during a current year.

RULES OF CLASSIFICATION.

I. No student shall be considered as belonging to a given class unless a majority of his studies are in that class or in a higher class.

II. A student may be permitted by his Dean to register for studies not more than one year in advance of his classification.

EXAMINATIONS AND REPORTS.

Written examinations are held in all classes at the close of the first and third terms of the session (See University Calendar, page V.) At the close of the second term written examinations are held on subjects which are completed at that time. Reports are sent to the parent or guardian of each student in January and June to indicate as nearly as possible the quantity and the quality of the work done by the student. Special reports are sent on request at any time.

RELIGIOUS WORSHIP.

As morals and religion should form a part of every young person's education, the students of the University are encouraged to attend divine service at least once each Sunday. Clergymen from several of the religious denominations of the city conduct some of the chapel services each week, and other religious exercises are conducted by the Y. M. C. A. and the Y. W. C. A. of the University. Nearly all of the religious denominations are represented in the Faculty.

Every church in the city is glad to welcome University students to all of its social and religious meetings. If parents will write to the ministers of their respective denominations in the city, or to any member of the University Faculty, they may be certain of enlisting their interest in the moral and religious life of their sons and daughters.

SANITARY ARRANGEMENTS.

The sanitary arrangements of the University are excellent. Its buildings occupy one of the highest positions in or around Lexington. A large reservoir, a few miles from the city, furnishes an abundant supply of pure water at all seasons of the year. The natural drainage of the University grounds and its system of sewerage are all that can be desired. Serious illness among the students is extremely rare. The University physician gives all needed attention to the health of the students and excellent service can be had when needed in either of two large, well-equipped hospitals in the city. The University has a furnished room in the Good Samaritan Hospital, which is within five minutes' walk of the University grounds.

DORMITORIES AND BOARD.

Dormitories for Men. Young men may reside in the dormitories on the University Campus or in private houses approved by the Faculty. The dormitories afford lodgings for about two hundred students who wish to lessen their expenses in this way. County appointees are supplied with rooms first (the assignments being made by lot), then other students in order of application. The occupants of the rooms are required to keep them in order. The janitors attend to the halls and the removal of refuse and are re-

quired to scour the halls and the rooms once in two weeks. The Commandant (detailed from the U. S. Army) or his assistant inspects each room daily. At the present time the Commandant's assistant occupies a room in one of the dormitories. If a student is sick, the fact is reported to the medical officer. In this way the danger from contagious diseases is reduced to the minimum. The medical officer inspects each room once in two weeks as to its cleanliness and general hygienic character. Table board in clubs (of which there are several) costs about $2.00 per week. In private families it costs from $3.00 to $4.00 per week.

DORMITORY FOR WOMEN. Patterson Hall, the Young Women's University Home (for description see page 8) is under the immediate direction and management of an experienced and competent matron, appointed by the Board of Supervision. The act of the General Assembly of Kentucky, appropriating money for the purchase of the grounds and the erection thereon of this building, provides:

"The Board of Trustees shall appoint three prudent, discreet, intelligent women; members in good standing of one of the religious organizations recognized by the laws of the United States, who shall constitute a board of supervision or control to manage and superintend, under the direction of the Board of Trustees, the dormitory for young women."

The Hall contains sixty-eight commodious and well furnished rooms, affording accommodation for one hundred and twenty-four persons, for whom excellent board and lodging are furnished at three dollars ($3) per week, the occupants furnishing their own napkins, towels, and bedding, except mattresses and pillows, and paying for their own laundry.

Built durably of stone, brick, wood and iron, and practically fireproof; with adequate provision for safety, heat, light, ventilation, bathing and exercise, this Hall offers all the comforts and conveniences of a well-appointed home.

County appointees are first supplied with rooms, and these, by act of the Legislature, are assigned by lot.

Probably no educational institution in the South affords a more attractive home for young women. Those who are favored with a county appointment, the mode for obtaining which is set forth elsewhere in this catalogue, will find that residence at the State

University is brought within the means of any young woman who earnestly desires to fit herself for a life of usefulness.

THE MONITRESS.

The young women who attend the University have assigned for their exclusive use a large and well appointed study-room in the Administration Building. Here, while they are not engaged in the class-rooms or in the chapel, they are under the constant and strict supervision of the Monitress, Mrs. Blackburn, who has long been connected with the University, and is well qualified for her duties.

ASSOCIATIONS.

Y. M. C. A.

This body occupies a spacious room in the Gymnasium. The room, which is well lighted and heated, and provided with suitable furniture, offers to the members a place both attractive and convenient in which to spend their leisure time in religious service, in Bible or secular reading, or in playing harmless games.

The association has about fifty members. In addition to its religious work, including weekly meetings, lectures and Bible Study work, it controls the tennis courts on the University campus and offers an interesting social life to its members. In order to promote most efficiently this varied and important work, an advisory committee of ten members co-operates with the association in its efforts to be influential in the moral and religious life of the University. On this committee the local ministry is represented by one member, the City Y. M. C. A. by one, the faculty by five, and the student body by three, all of whom are elected by the association.

Y. W. C. A.

This organization is an important feature of life in Patterson Hall. The association has two attractive rooms, one for religious meetings, the other a reading room open to all young women residing in Patterson Hall. The latter has been nicely furnished by the University and is well supplied with the leading magazines of the day.

The association has about thirty-five members who take part in the Sunday evening services and also in the Bible classes which meet one evening in each week.

THE UNION LITERARY SOCIETY.

This, the oldest of the literary associations connected with The State University, was formed in 1872 by the consolidation of the Yost Club and the Ashland Institute, and operates under a charter from the Legislature. It occupies a commodious and well-furnished

hall in the Gymnasium and is supplied with a library due in part to an appropriation from the State. Besides the weekly meetings devoted to declamations, essays, and debates, the Society holds on the 22nd of February an annual contest in oratory, and awards to the successful competitor a gold medal provided by the alumni.

THE PATTERSON LITERARY SOCIETY.

This society, formed in 1887, and at the suggestion of Gov. Knott named in honor of the President of the University, was chartered in 1888. It is provided with a handsome room and a good library. The annual oratorical contest is held on the 26th of March, the birthday of the President, who presents the first prize, a gold medal. The second prize, also a gold medal, is the gift of Mr. George W. Crum, of Louisville.

THE PHILOSOPHIAN AND NEVILLE SOCIETIES.

These societies, instituted, the former in 1882, the latter in 1905, by young women of the University, for literary improvement and social pleasure, offer, besides the usual weekly meetings, public entertainments consisting of declamations, essays, criticisms, and addresses.

THE ENGINEERING SOCIETY.

This body, composed of matriculates in the Colleges of Engineering, meets on the third Friday of each month. The exercises consist of a paper read by a member on some pertinent topic, followed by a general discussion. During the year the Society is occasionally favored with lectures by experienced engineers not connected with the University.

THE AGRICULTURAL SOCIETY.

This organization is composed of the students of the College of Agriculture and holds weekly meetings in the Agricultural Building, at which meetings topics of agricultural interest are discussed through the medium of addresses, papers, debates, etc.

ASHLAND GRANGE 1655.

The local branch of the National Grange Organization was established with its headquarters with the Department of Agricul-

ture in January, 1907. It includes in its membership many of the prominent farmers of Fayette and adjoining counties and a large number of the members of the faculty of the University and Experiment Station, as well as many students of the College of Agriculture. Since the erection of the new Agricultural Building it has held its meetings monthly or semi-monthly in an attractive assembly room upon the third floor of that building. While the grange is a fraternal organization, holding its special meetings behind closed doors, many of its sessions are open to the public, and during its existence here its meetings have been provided with many highly interesting programs through the co-operation of prominent men in agriculture from our own locality and elsewhere.

ATHLETICS.

Opportunity for physical exercise and legitimate outdoor sport is afforded by the spacious Athletic Field and Parade Ground. The management of athletics by the students is vested in an Athletic Association formed by the union of the Foot-ball, the Base-ball, and Track-athletic Societies. The officers of these three sub-organizations constitute the managing board of the Athletic Association. The control of athletics by the Faculty is secured through their Committee on Athletics, acting under a set of regulations adopted by the Faculty and approved by the Trustees.

COLLEGE EXPENSES.

The necessary expenses of a student while at the University need not exceed the following estimates. As a rule the less pocket money allowed by parents or guardians the better it is for the pupil. When supplies of pocket money are kept short, the opportunity for contracting vicious habits is correspondingly diminished. Students should not be allowed by their parents to create any debts. All money intended for the use of the student should be deposited with the Business Agent.

For a county appointee, occupying a room in the dormitory, the necessary expenses are as follows:

Tuition free	$00.00
Matriculation free	00.00
Gymnasium free	00.00

Room rent free	00.00
Furniture and janitor	5.00
Washing, about	10.00
Uniform	16.00
Books, about	10.00
Total	$41.00

Board in clubs, $2.00 per week; in families, $3 to $4. For students not county appointees the necessary expenses are:

Tuition in the Schools of Civil, Electrical, Mechanical and Mining Engineering	$40.00
Tuition in the College of Law	30.00
Tuition in the College of Arts and Science and in the College of Agriculture	25.00
Tuition in the Academy	20.00
Matriculation fee	5.00
Gymnasium fee	5.00
For each laboratory, fee	5.00
Washing, about	10.00
Room and furniture	20.00
Uniform	16.00
Books, about	10.00

Board in clubs, about $2.00 per week; in families, $3 to $4. All students make a deposit of $10 to cover damage done to the property of the University. This is refunded at the close of the year, less the amount assessed against the depositor.

Board and lodging are provided in Patterson Hall for young women at $3 per week. The occupants furnish their own napkins, towels and bedding, except mattresses and pillows, and pay their own laundry bills.

DIPLOMA.

A fee of $5 is charged for each diploma issued by the University, except in the College of Law, in which it is $10.00.

FREE TUITION, BENEFICIARIES.

Each county in the State is made the unit of appointment and is entitled to select and to send to the State University one or more

properly prepared students, free of charge for tuition fees, as follows:

Each county is entitled to make one appointment each year for 4,500 white pupils or less within the common school age, based upon the last official census preceding said appointment, and for each 3,000 white pupils over 4,500, is entitled to make one additional appointment.

County appointments exempt appointees from payment of tuition fees and provide traveling expenses to those matriculated in the Academy and in any regular course of study which leads to a degree in the University, but are not valid for the College of Law or other professional courses. Appointments are all valid for the term of years necessary to complete the course of study in which the appointee matriculates. This includes the course in the Academy. If an appointee leaves the University before the expiration of his appointment, his County Superintendent may appoint another person for his unexpired time.

Beneficiaries are appointed on competitive examination. A Board of Examiners is appointed for this purpose by the County Superintendent of common schools. The results of examination are reported to the Superintendent, who from the data thus furnished selects the appointee. Examinations are made upon subjects transmitted to the County Superintendent by the Faculty of the University.

Appointments are made by the County Superintendent between the first day of June and the first day of August of each year. Blanks for these appointments are furnished by the University. Appointments when made should be immediately certified to the President of the University.

Each appointee is required to pass an entrance examination at the University on the subjects comprising all that is embraced in Arithmetic, English Grammar, Geography, and United States History in the common school course.

All persons are eligible between the ages of fourteen and twenty-four who have completed the common school course—preference being given to young men or women whose means are limited, to aid whom this provision is especially intended.

Any person not an appointee may enter the University on payment of fees, but no one except an appointee receives traveling expenses or is exempt from the payment of fees.

MANUAL LABOR.

The work necessary for carrying on the agricultural and horticultural operations of the University is done by the students, and is paid for at rates varying from six to ten cents per hour. Its design is two-fold: to put in practice the instruction received in the class--room, and to assist students who are in need of money. The experience of this University is that of Agricultural Colleges generally—that student labor is not remunerative to the University.

The University assumes no obligation to furnish students an opportunity to labor for compensation.

Students are paid monthly for the service rendered, and apply the money as they see proper.

No student, however, should come to this University expecting to maintain himself exclusively by compensated labor. At least seventy-five dollars per annum, exclusive of his earnings while here, should be at the command of every student who wishes to avail himself of the advantages of the system of compensated labor.

REGULATIONS.

PUBLIC EXERCISES.

All exercises assigned for commencement or any other public occasion must be submitted to the President for approval at least one week before the time for the performance; and, if any student shall deliver an address, or part of an address, which has not been approved by the President, his diploma and his degree, if any has been awarded, may be withheld.

TRAVELING EXPENSES OF STUDENTS.

By the terms of the recent legislation upon the State University a county appointee is entitled to have his traveling expenses from his home to the University and return paid by the University on the following conditions:

1st. He must be appointed according to law, a copy of which is in the hands of each County Superintendent of Schools.

2nd. He must travel from home to the University by the shortest, least expensive, and most expeditious route, and take receipts for all necessary expenses of travel, depositing the same, upon arrival, with the President of the University.

3rd. He must present himself for matriculation at the beginning of the fall term of the University year.

4th. He must bring a certificate of good moral character, signed by two or more well-known and responsible citizens of his county.

5th. He must pass creditably the entrance examination required for admission.

6th. He must remain a student of the University for ten consecutive months, or one University year.

7th. He must maintain during the University year a good moral character, and such class standing as shall enable him to pass all final examinations.

8th. He must, if required to do so, sign a declaration at the end of the University year, that he has not knowingly violated any of the regulations involving his moral character as a stu-

dent, nor been a party, directly or indirectly, to the injury of property on the University grounds or in the University buildings.

If at the end of the University year the foregoing conditions have been complied with, the President of the University shall certify the fact to the Treasurer of the University, who, upon said certificates as vouchers, shall pay to the appointee the amount shown by the receipts aforesaid and in addition thereto the sum for discharging the necessary expenses to be incurred in returning home.

ENLISTMENT OF CADETS.

No cadet of the State University is allowed to enlist in the State Guards.

DEGREES.

The State University confers the degrees of:
Bachelor of Arts (A. B.)
Bachelor of Arts in Education (A. B. Educ.)
Bachelor of Science (B. S.)
Bachelor of Science in Agriculture (B. S. Agr.)
Bachelor of Science in Education (B. S. Educ.)
Bachelor of Laws (LL. B.)
Bachelor of Civil Engineering (B. C. E.)
Bachelor of Mechanical Engineering (B. M. E.)
Bachelor of Mining Engineering (B. E. M.)
Master of Arts (A. M.)
Master of Arts in Education (A. M. Educ.)
Master of Science (M. S.)
Master of Science in Agriculture (M. S. Agr.)
Master of Science in Education (M. S. Educ.)
Civil Engineer (C. E.)
Mechanical Engineer (M. E.)
Electrical Engineer (E. E.)
Mining Engineer (M. E.)
Doctor of Philosophy (Ph. D.)

CONDITIONS OF GRADUATION.

To attain the Bachelor's degree the applicant must have been a resident student of the University at least one session, and he must have passed the required examinations in every course of study leading to the desired degree.

SECOND DEGREES.

The Master's degree may be conferred upon a candidate who has attained the corresponding Bachelor's degree. Those who lack the corresponding Bachelor's degree, but possess some other baccalaureate degree, must perform at least one year's resident work in undergraduate studies prescribed for them by the Committee on Degrees before they shall be considered candidates in full standing.

RESIDENT WORK.

The provisions for attaining the Master's degree by candidates in residence, are, first: that for at least one entire session the candidate must have given all his time to advanced studies in this University; second, that the advanced work shall consist of a major study selected by the candidate and one or two minor studies assigned by the Committee on Degrees; third, that the candidate shall pass satisfactory written examinations in both major and minor studies; fourth, that under no circumstances shall he be permitted to perform both major and minor work under the same instructor; fifth, that at least ten days before the close of the session, the candidate must have completed his studies in a satisfactory manner, presenting an acceptable thesis on his major course of study, or some part thereof.

NON-RESIDENT WORK.

The provisions for attaining the Master's degree by candidates *in absentia* are: first, that for at least three years the candidate must have been engaged in advanced work, the aggregate of which is the full equivalent of that required in resident work for the same degree; second, that the candidate shall pass satisfactory written examinations in each of the studies pursued by

him; third, that under no circumstances shall he be permitted to perform his major and minor work under the same instructor; fourth, that at least thirty days before the close of the session, the candidate must have completed his studies in a satisfactory manner, presenting an acceptable thesis on his major course of study or some part thereof.

The degrees Civil Engineer, Mechanical Engineer, Electrical Engineer, Mining Engineer will be conferred on graduates of this University who, after spending three years in professional work, present a satisfactory thesis, the subject of which must be approved by the Committee on Degrees at least seven months before the degree is conferred.

If the applicant for an advanced degree be an alumnus of another institution of learning, he must satisfy the Committee on Degrees that he has completed a course of study for his first degree equivalent to that prescribed in this University for the same degree; and he must matriculate and study in residence under the direction of the Faculty at least one session.

The degree of Doctor of Philosophy may be conferred upon persons holding the Master's degree of this University or University of equal rank after not less than two years of further graduate study in residence.

SUMMER SCHOOL—SEVENTH SESSION.

COURSES.

Courses, both academic and professional, are offered to undergraduates in agriculture, arts, engineering, law, and science; for teachers; for students who wish to remove conditions from their work in the University; for students who wish to prepare for the entrance examinations in September; and for special students, such as lawyers and practicing engineers and miners.

DURATION OF THE SESSION.

The session opens June 7 and closes August 21, but the work in no one department continues during the entire session. For dates and full information concerning the various courses offered

see Summer School bulletin, which will be sent by the Registrar on application.

Full academic credit is given in each of the courses offered.

TERMS OF ADMISSION.

No examination is required for admission. Students are freely admitted to courses for which they are qualified, but credit toward a degree will be given only to students who satisfy the entrance requirements to the University.

ORGANIZATION.

The University embraces—
- The College of Arts and Science,
- The College of Agriculture,
- The College of Civil Engineering,
- The College of Mechanical and Electrical Engineering,
- The College of Mining Engineering,
- The College of Law.

The College of Arts and Science embraces—
- Courses having as major subjects
  Anatomy and Physiology, Botany, Chemistry, Domestic Science, English, Entomology and Zoology, Geology, German, Greek and Latin, Physics.
- Two Courses for the Training of Teachers.
- A Course in Industrial Chemistry.

The College of Agriculture embraces—
- Courses having as major subjects
  Agronomy, Animal Husbandry, Agricultural Chemistry, Economic Botany, Economic Entomology, Horticulture.
- A Two Years' Course in Agriculture.

The College of Civil Engineering embraces—
- Courses in Surveying and Geodesy, Municipal, Sanitary, Railway, Bridge, Architectural, and Rural Engineering.

The College of Mechanical and Electrical Engineering embraces—
- Courses in Mechanical, Electrical, Steam, Gas, Telephone, Chemical, and Machine Design Engineering.

The College of Mining Engineering embraces—
- Courses in Mining, Mine Surveying, Metallurgy, Ore Dressing.
- A Short Course for Practical Miners.

The College of Law embraces—
- A Three Years' Course.

COLLEGE OF ARTS AND SCIENCE.

The College of Arts and Science, organized in 1908 by uniting the Classical, Scientific, and Education Schools, now consists of thirteen departments, in each of which a student may elect to pursue a major subject.

These are the Departments of Anatomy and Physiology, Botany, Chemistry, Domestic Science, Education, English and Logic, Entomology and Zoology, Geology, Latin and Greek, History, Political Economy and Metaphysics, Mathematics and Astronomy, Modern Languages, Physics.

The College offers undergraduate courses leading to the degrees of A. B. and B. S., and graduate courses leading to the degrees of M. A., M. S., and Ph. D.

To receive an undergraduate degree the student must be able to offer a minimum of 69 credit hours, inclusive of those required in Military Science, Physical Training and Domestic Science. Men are required to offer three credits in Military Science and two in Physical Training, and women are required to offer two and one-tenth credits in Domestic Science and two in Physical Training.

The term "credit hour", or briefly a "credit", as used in this College, is defined as the satisfactory completion of a study, involving lectures or recitations for one hour per week for one year, or laboratory work for two hours per week for the same period.

Military Science and Physical Training are classed as laboratory work.

In estimating the credit value of a subject pursued for less than a year, the number of hours per week it is given is to be multiplied by .4 for the first term and by .3 for each of the other two terms.

Persons excused from Military Science or Physical Training, for disability or any other cause, must offer an equivalent number of credits in some other subject.

A student must take a sufficient amount of work to secure at least 17 credits each year during his Freshman and Sophomore years, and 14 during each of his Junior and Eenior years, and he will not be allowed for the same time during his Freshman and

Sophomore years more than 21½ credits per year, and during his Junior and Senior years more than 18 credits.

The degree of A. B. will be conferred only on students who at graduation have completed, in addition to other requirements, a minimum of five years of Latin—three units of preparatory and two units (6 credits) of university Latin.

The branches taught in this College are grouped into thirteen courses, designated, as a rule, by a major subject. Deviations from this grouping must receive the sanction of the Dean of the College and the head of the department under whom the student elects to take his major subject.

FACULTY AND ASSISTANTS

JAMES KENNEDY PATTERSON, PH. D., LL. D., President,
Professor of History, Political Economy and Metaphysics.

ARTHUR McQUISTON MILLER, A. M., Dean,
Professor of Geology, Zoology and Entomology.

JOHN HENRY NEVILLE, A. M., LL. D.,
Professor of Greek and Latin.

JAMES GARRARD WHITE, A. M.,
Professor of Mathematics and Astronomy.

JOSEPH WILLIAM PRYOR, M. D.,
Professor of Anatomy and Physiology.

CLARENCE WENTWORTH MATHEWS, B. S.,
Professor of Botany, Horticulture, and Agriculture.

MERRY LEWIS PENCE, M. S.,
Professor of Physics.

ALEXANDER ST. CLAIR MACKENZIE, A. M., F. R. S. L.,
Professor of English and Logic.

ALFRED CHARLES ZEMBROD, A. M.,
Professor of French and German.

FRANKLIN ELLIOTT TUTTLE, A. M., Ph. D.,
Professor of Chemistry.

THEODORE TOLMAN JONES, A. M.,
Acting Professor of Greek and Latin.

JAMES THOMAS COTTON NOE, A. M.,
Acting Professor of Education.

RALPH NELSON MAXON, Ph. D.,
Professor of Inorganic Chemistry.

COLUMBUS RUDOLPH MELCHER, A. M., LL. B.,
Associate Professor of French and German.

MRS. ROBERT LEE STOUT,
Physical Director and Dean of Women.

W. WALTER H. MUSTAINE, B. S.,
Physical Director of Men.

JOSEPH MORTON DAVIS, A. M.,
Assistant Professor of Mathematics.

WILLIAM SNYDER WEBB, M. S.,
Assistant Professor of Physics.

MISS ELIZABETH SHELBY KINKEAD,
Lecturer on English Literature.

MISS ISABELLA WEST MARSHALL, A. B.,
Instructor in Domestic Science.

MISS SUE DOBYNS McCANN, M. S.,
Instructor in Entomology and Assistant in Zoology.

*FREDERICK WILLIAM MILLER, A. B., B. Ped.,
Assistant Professor of English.

JAMES EDWARD TUTHILL, Ph. D.,
Assistant Professor of History and Political Economy.

PHILIP WORTHINGTON CORBUSIER, First Lieut., U. S. A.,
Commandant and Professor of Military Science and Tactics.

MISS MARTHA RIPPERDAN WHITE, M. S.,
Assistant in Mathematics.

ALFRED HOLLY GILBERT, B. S.,
Assistant Professor of Botany.

EZRA L. GILLIS, A. B.,
Assistant in Education.

HARRY ESSEX, A. B.,
Assistant in Chemistry.

ELIJAH LATHAM REES, C. E.,
Assistant in Mathematics.

RALPH MORRIS, A. B.,
Substitute for Assistant Professor Miller.

LLOYD CADIE DANIELS, B. S., Ph. D.,
Assistant in Chemistry.

JAMES RUSSELL JENNESS, B. S.,
Assistant in Physics.

HOWARD HARDESTY DOWNING, B. C. E.,
Fellow Assistant in Civil Engineering, Mathematics, and Physical Education.

GEORGE FRANCIS BROWNING,
Student Assistant in Mechanical Engineering and Mathematics.

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*On leave of absence.

I. DEPARTMENT OF ANATOMY AND PHYSIOLOGY.

Dr. Pryor.

The Department of Anatomy and Physiology occupies one-half of the second floor of the Natural Science Building. The space assigned to this department includes a large lecture and general recitation room, an office and a laboratory.

The lecture room is provided with a Thompson Reflectoscope and Stereopticon with a microscopic attachment. Arrangements are made to darken the room for the use of the lantern. This method of giving illustrated lectures is extensively used. A large number of lantern slides have been purchased or made. These include all kinds of anatomical, physiological, histological and pathological subjects, and they have been selected in order to show not only human anatomy, but sufficient comparative anatomy to illustrate the development and evolution of the organ or system.

The lecture and general recitation room is perhaps the best equipped room for its purpose to be found in any institution of the South. It is well lighted and ventilated, is provided with the best opera chairs with arm rests, affording every convenience and facility for student and lecturer.

The office contains the nucleus of a library. It is the purpose of the head of this department to provide students with the latest and best books on Anatomy, Physiology, Hygiene, Histology, and Bacteriology.

The laboratory is provided with a Bausch and Lomb incubator, microscopes, microtomes, paraffin bath, etc. Tables are provided for individual students. Each table is equipped with the apparatus necessary for experimental work in Physiology. Students also have access to and use the kymograph, artificial circulation scheme, (Porter's), capillary electrometer, artificial eye (Kuhne's), heart-holder, ergograph, rheochord, plethysmograph, tambour, signal magnet, etc. etc.

The department is supplied with all kinds of models, such as an Auzoux papier-mache manikin, Auzoux's models of the eye in full and in section, models of the ear, larnyx, side of the face, hand, etc.; skeletons in full and in section; complete disarticulated skeletons for the individual use of students; a spaced skull; a Thoma-

Zeiss Hæmacytometer; a Dudgeon's and a Marey's Sphygmograph; charts of all kinds, microscopes, etc. Microscopic slides are exhibited showing the process of karyokinesis.

The method instruction is by lectures, demonstrations and recitations. Drawings are made on the blackboard in chalk by the instructor, and the student is required to copy them. They include drawings of the heart and of the great blood-vessels in colors; sections of the eye showing the connection of the cornea and sclerotic coat at the origin of the ciliary muscle, one turn of the cochlea giving the organ of Corti in full; the membranous labyrinth; a cross section of the spinal cord; a scheme illustrating the system of neurones, central and peripheral, both motor and sensory.

The student is required to take notes from lectures, to copy and preserve them for study and reference. The note books are inspected at intervals, correct spelling and neatness in preparing them being insisted on.

COURSES.

PRIMARILY FOR UNDERGRADUATES.

I. GENERAL PHYSIOLOGY. Lectures, demonstrations and recitations. M. W. F. at 10:30. Winter and Spring Terms or Fall Term. One and eight-tenths credits.

II. HUMAN OSTEOLOGY. Winter and Spring Terms. Tu. Th. 9. One and two-tenths credit.

III. ADVANCED PHYSIOLOGY. Throughout the year. Tu. Th. 11:30. Two credits.

IV. LABORATORY PHYSIOLOGY. Fall Term. M. Tu. W. Th. F. 1:30. Two credits.

COURSE PREPARATORY TO THE STUDY OF MEDICINE.

This course, leading to the degree of A. B., with Anatomy and Physiology as the major study, is arranged to suit students who intend to enter upon a profession, and especially those who are to devote themselves to the study of medicine.

A liberal education in the Arts and Sciences is of incalculable advantage to one intending to pursue the study of Medicine.

It is a difficult matter to teach modern medicine to one who has not had some of these preliminaries.

A thorough training in Chemistry and Physics; a reading knowledge of German and French; a working knowledge of the Microscope, and the process of imbedding, sectioning and staining; a solid foundation in Anatomy and Physiology will not only give advanced standing in the medical school, but will lay a truly scientific foundation, upon which a substantial superstructure may be erected.

THE LABORATORY COURSE IN PHYSIOLOGY.

Is required of Seniors during the first term in the afternoon from 1:30 to 3:30. The work begins with the central nervous system. The first exercise begins with the study of the normal frog; its posture when at rest; its movements when in water and on solids; compensatory movements, etc. A careful dissection of the frog's brain and drawings of it are made. Then follow experiments upon decerebrized frogs. Perfect cleanliness and aseptic surgical methods are observed as nearly as possible. Reflex action and inhibition of reflexes are studied with the pithed frog. The crayfish and earth-worm are also used in the study of the central nervous system.

MUSCLE.

The student must familiarize himself with the electrical apparatus necessary for the work that follows; nerve muscle preparations are made, the different kinds of stimuli are studied, graphic records are made with the kymograph, showing certain phenomena of muscular contraction, among them a single muscular contraction or twitch; the effect of load; repeated stimulation; summation of stimuli, etc.

HAEMODYNAMICS.

The artificial scheme used, which illustrates the mechanics of the circulation in the higher vertebrates, demonstrates arterial and venous pressure, and this is measured with mercury manometer. The scheme also shows the conversion of an intermittent stream into a continuous flow. Incompetence and stenosis of the mitral and aortic valves are demonstrated, and with the thistle tube and kymograph pulse-tracings are made that compare favorably with those made with the sphymograph by members of the class. Abnormal cases are often included.

NORMAL HAEMATOLOGY.

Clinical examinations of the blood are made including the enumeration of the blood corpuscles with the Thoma-Zeiss haemacytometer; the estimation of haemoglobin, with Fleischel's hemometer; the staining and fixing of blood corpuscles; the reaction and specific gravity of blood, etc.

THE SPECIAL SENSES.

The anatomy, gross and minute, of the eye and ear and the physiology of these organs, are treated as fully as the time permits. During the year students dissect such mammals (dog, cat, and rabbit) as may be used to illustrate the lectures preceding and accompanying the practical work. Especial attention is given to the gross anatomy of the viscera, thoracic, abdominal and pelvic.

To a prospective student of medicine the advantages of this course can hardly be estimated. The additional training in Botany, physics, Zoology, Osteology, Chemistry, Physiological Chemistry, and in experimental and laboratory work in Physiology, places him far in advance of those who have not pursued these studies.

Text-books: Martin's *Human Body;* Stewart's *Manual; Syllabus of the Professor's Lectures;* Gray's *Anatomy.*

Books of Reference: Cunningham's *Anatomy,* Morris' *Anatomy,* Gerrish's *Anatomy,* Howell's *Physiology,* Shaefer's *Physiology,* Hall's *Physiology,* American *Text-book,* Loeb's *Physiology of the Brain.*

SCHEDULE OF STUDIES FOR THE DEGREE OF B. A. (MAJOR ANATOMY AND PHYSIOLOGY.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories
Freshman	1	English I 3	Mathematics I 5	German I 3 History I 2 W. F.	Latin I 5	Drawing I 2 (by appt.)
	2	English II 3	Mathematics II 5 German I 1 Sat.	German I 2 History I 2 W. F.	Latin I 3	Drawing I 2 (by appt.)
	3	English III 3	Mathematics III 5 German I 1 Sat.	German I 2 History I 2 W. F.	Latin I 3	Credits 18.2
Sophomore	1	Latin II 3	German II 3	French I 2	Physiology I 3	Zoology I 3 (by appt.)
	2	Latin II 3	German II 3 Physiology II 2	French I 3	Chemistry I 4	Chemical Lab. I 2
	3	Latin II 3	German II 3 Physiology II 2	French I 3	Chemistry I 3 Botany I 1 T.	Chemical Lab. I 3 Botany Lab. I 3 (by appt) Credits 17.
Junior	1	Zoology IV 2	French II 3	Physics III 3	German III 2 M.W. Astronomy VIII 2	Chemistry Lab. VI 3 Physics Lab. V 2
	2	Chemistry V 2	French II 2	French 1 3	German III 2 M.W. Astronomy VIII 2	Chemistry Lab. VI 4 (by appt.) Physics Lab. V 3
	3	Chemistry V 2	French II 3	French 1 3	Germ. III 3 M.W.F. Astronomy VIII 2	Chemistry Lab. VI 3 Physics Lab. V 3 (by appt.) Credits 17.3
Senior	1	German IV 3 French III 2		English XI, XIX 3 Economics V 2	Physiology III 2 Geology I 2 M.W.	Physiology Lab. IV 5 M. T. W. Th. F.
	2	German IV 2 French III 3		English XI, XIX 3 Economics V 2	Physiology III 2 Geology I 2 M.W.	Credits 16.
	3	German IV 3 French III 2		English XI, XIX 3 Economics V 2	Physiology III 2 Geology I 2 M.W.	Total Credits 68.3

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR ANATOMY AND PHYSIOLOGY.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories
Freshman	1	English I 3	Mathematics I 5	Germ. I 3 M.T.Th. History I 2 W. F.		Drawing I 2 (by appt.)
	2	English II 3	Mathematics II 5 German I 1 Sat.	German I 2 History I 2 W. F.	Chemistry I 4	Drawing I 2 (by appt.) Chemistry Lab. I 2
	3	English III 3	Mathematics III 5 German I 1 Sat.	German I 2 History I 2 W. F.	Chemistry I 3	Chemistry Lab. I 3
Sophomore	1	Mathematics IV 5	German II 3	French I 2	Physiology I 3	Chemistry Lab. VI 3 Zool. Lab. I 3 (by appt.)
	2	Chemistry V 2	German II 3 Physiology II 2	French I 3	Physiology I 3	Chem. Lab. VI. 4 (appt.)
	3	Chemistry V 2	German II 3 Physiology II 2	French I 3	Botany I 1 T.	Chem. Lab. VI 3 (appt.) Bot. Lab. I 3 (by appt.)
Junior	1	Zoology IV 2 Entomology I 3	French II 3	Physics III 3	German III 2 M.W. Astronomy VIII 2	Physics Lab. V 2
	2	Entomology I 3	French II 2	Physics III 2	German III 2 M.W. Astronomy VIII 2	Physics Lab. V 3
	3	Entomology II 3	French II 3	Physics III 2	German III 3 Astronomy VIII 2	Physics Lab. V 3
Senior	1	German IV 3		English XI, XIX 3 Economics V 2	Physiology III 2 Geology I 2 M.W.	Physiology Lab. IV 5
	2	German IV 3		English XI, XIX 3 Economics V 2	Physiology III 2 Geology I 2 M.W.	Credits 14.4
	3	German IV 3		English XI, XIX 3 Economics V 2	Physiology III 2 Geology I 2 M.W.	Total Credits 65.7

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

II. DEPARTMENT OF BOTANY.

Professor Mathews and Assistant Professor Gilbert.

The department occupies commodious and well lighted rooms upon the first floor of the new Agricultural Building.

The lecture room in the front part of the building is occupied jointly with classes in horticulture, and is equipped with opera chairs, an electric lantern both for ordinary and micro-projection, charts, and other illustrative material.

The laboratories are liberally supplied with the best types of simple and compound microscopes, microtomes, ovens for paraffin imbedding, apparatus for plant physiology, etc.

The department herbarium contains a fairly complete representation of the flora of the state with many exchanges from other states and countries. The nucleus of the present collection was due mainly to the effort of the late Dr. Robert Peter, who traveled widely through the state making collections about sixty years ago, and made exchanges with many of the noted botanists of that period, so that the collection possesses considerable historic interest.

A laboratory greenhouse, 24x50 feet in size, has been erected upon the rear of the botanical laboratories, and is designed in part to furnish material for the regular classes, and particularly to afford facilities for use of advanced students in Plant Physiology, etc. The older greenhouses near the Administration Building will still continue to furnish additional material for the general uses of botanical classes.

A student entering upon the study of Botany may begin the subject with either Course I or Course II at the option of the Dean of his course, but in order to secure a comprehensive view of the science he should continue the subject for at least two terms and preferably three. A special course in Botany (VI), which is more fully self-contained than any other offered, has, however, been provided for the students of the classical course.

ELEMENTARY BOTANY.

I. Spring Term. Freshman or later. Lectures T. 11:30. Laboratory M. W. F. 1:30. Four Hours.

This course consists of a study of the elements of structural

botany and plant physiology, with determination of a number of species of the flowering plants.

During the course participation in one or more trips to neighboring points of botanical interest will be required. Expense 75c to $1.00 each.

Text-books: Bergen and Davis' *Principles of Botany* and *Laboratory Manual.*

Reference Books: Gray's *Manual of Botany* and Bailey's *Lessons with Plants.*

GENERAL BOTANY.

II. Fall Term. Sophomore. Lectures T. Th. 11:30. Laboratory M. T. Th. or by appointment, 1:30. Five Hours.

Winter Term. Lectures T. Th. 11:30. Laboratory by appointment. Five Hours.

The work of the course comprises a general survey of the morphology and physiology of plants, and is designed to give the student who goes no further with the subject a comprehensive view of the entire vegetable kingdom, while for the student who will continue his botanical study it is intended to afford a substantial basis for more exhaustive special studies. While it is accompanied with lectures and recitations, the laboratory method is the form of instruction principally used, and from the very beginning of his work the pupil is directed to the study of plants themselves, using the text-book as an aid to correct his mistakes and to enlarge his field of view.

Text-books: Bergen and Davis' *Principles of Botany* and *Laboratory Manual.*

Reference Works: Campbell's *Evolution of Plants,* Campbell's *Text-book of Botany.* Strasburger's *Text-book of Botany.*

SYSTEMATIC BOTANY.

III. Spring Term. Sophomore. Lectures T. Th. 11:30. Laboratory by appointment. Four Hours.

This course involves practice in the description and identification of the ferns and flowering plants, with special reference to those groups which are of economic importance. As in Course I, one or more field excursions may be required.

Reference Books: Bergen and Davis' *Principles of Botany;*

Gray's *Manual of Botany;* Gray's *Field, Forest and Garden Botany;* Britton and Brown's *Illustrated Flora.*

PLANT HISTOLOGY.

IV. Fall Term. Junior. Lecture and Laboratory M. W. F. 9 to 11:30. Three Hours.

The student is given instruction and training in collodion, paraffin, and other methods of preparing vegetable tissues for microscopic study; accompanied and followed by a study of the slides so prepared.

Text-book: Chamberlain's *Methods in Plant Histology.*

PLANT PHYSIOLOGY AND PLANT PATHOLOGY.

V. Spring Term. Lectures and laboratory work. M. W. F. 9 to 11:30. Three Hours.

This course is designed to present the main facts and principles of plant physiology and in pathology to take up briefly, by the aid of collected specimens and greenhouse material, a study of some of the more common diseases of plants, particularly those of economic importance.

THE PLANT KINGDOM.

VI. Junior or Senior. Lectures T. Th. 11:30. Laboratory 1 or 2 periods by appointment. Three or Four Hours.

A general course arranged primarily for classical students comprising a discussion of the fundamental facts and relations of plant life, such as, the great groups of plants; evolution of plant life; relation of plant life to coal supply; fundamentals of plant physiology; aquatic vegetation; plant distribution through natural causes and the agency of man; inter-relations of plant and animal life; bacteria and fungi; plant life and disease; tree life and forestry; plant life and agriculture.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR BOTANY.)

		8-9 First Hour	Second Hour 9-10	Third Hour 10:30-11:30	Fourth Hour 11:30-12:30	Afternoon 1:30-3:30
Freshman	1	English I 3	Mathematics I 5	German I 3 History I 2	Physiology I 3	Drawing 2 (by appt.)
	2	English II 3	Mathematics II 5 German I 1 (Sat.)	German I 2 History I 2	Chemistry I 4	Drawing 2 (by appt.) Chemistry Lab 2
	3	English III 3	Mathematics III 5 German I 1 (Sat.)	German I 2 History I 2	Chemistry I 3 Botany I lec. 1	Chemistry Lab. 3 Botany 3
Sophomore	1	Mathematics IV 5	German II 3	Physics III 3	Botany II lec. 2	Botany II 3 Zoology I 3 (by appt.)
	2	Mathematics IV 5	German II 3	Physics III 2	Botany II lec. 2	Botany II 3 Zoology II 3
	3	Mathematics IV 5		Physics III 2	Botany III lec. 2	Botany III 2 Zoology III 3
Junior	1	Zoology IV 2	Sociology IV 2 Botany IV 3	Botany IV 3	Geology I 2 M. W. Astronomy VIII 2	Chemistry II 3
	2	Entomology I 3 Entomology I 3	Sociology IV 2	Elective	Geology I 2 M. W. Astronomy VIII 2	Botany
	3	Entomology II 3	Sociology IV 2 Botany V 3	Elective Botany V 3	Geology I 2 M. W. Astronomy VIII 2	Elective
Senior	1		History 3	English XI 2 English XIX 1	Elective	Zoology VII 2 Thesis Entomology IV (by appt)
	2		History 3 Greenhouse Management 2	English XI 2 English XIX 1	Elective	Zoology VII 2 Thesis Entomology V (by appt.)
	3		History 3	English XI 2 English XIX 1	Hort. V I lec. Thesis	Hort. V 1 (by appt.) Thesis Entomology V (by appt.)

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

III. THE DEPARTMENT OF CHEMISTRY.

Professor Tuttle, Professor Maxson, Dr. Daniels, and Mr. Essex.

The Department of Chemistry offers courses of study in
General Inorganic Chemistry,
Qualitative Analysis,
Quantitative Analysis,
Organic Chemistry,
Physical Chemistry.
Industrial Chemistry.

GENERAL INORGANIC CHEMISTRY. The work in General Chemistry extends through the second and third terms and must be taken by all students who intend to continue work in the department. Instruction is given by lectures, recitations and laboratory work. In the laboratory the student becomes familiar with apparatus and the methods of work and gains an intimate knowledge of the chemistry of the non-metals and metals which is a necessary preliminary to the study of qualitative analysis. During the third term the student manufactures and purifies simple inorganic compounds.

QUALITATIVE ANALYSIS. This subject is studied in the laboratory during the first term, the amount of time devoted to this work depending on the course of study pursued by the student. The student first becomes familiar with the reactions involved in the detection of the elements and then employs the knowledge so gained in the analysis of solids and of substances in solution.

QUANTITATIVE ANALYSIS. The preliminary work in Quantitative Analysis includes the gravimetric analysis of simple substances of known composition and such work in volumetric analysis as shall enable the student to become familiar with the use of "normal" solutions and acquire facility in the calculation of results. Subsequent work embraces the analysis of ores, iron and steel, alloys, coal and coke, water, silicates, flue gases, paint, fertilizers, and a variety of other commercial products.

All work is accompanied by lecture and recitation exercises where particular attention is given to the chemistry of the processes used.

ORGANIC CHEMISTRY. The more advanced work in the chemistry of the Carbon Compounds is preceded by a brief general survey of the whole subject. The laboratory course begins with the second term and, with the ultimate analysis of organic compounds, extends through the third term of the Junior year. The laboratory course of study in the preparation and purification of typical organic compounds is therefore arranged to accompany and supplement the class-room instruction.

PHYSICAL CHEMISTRY. This subject is studied by means of lectures and recitations, followed by laboratory exercises designed to acquaint the student with the execution of physico-chemical measurements.

INDUSTRIAL CHEMISTRY. The chemistry of industrial and manufacturing processes is studied throughout the Senior year, at a time when the student is best equipped for the purpose. As preliminary courses, advanced Quantitative Analysis, Organic and Inorganic Preparations are of the greatest value. To keep in touch with modern practices, current periodical literature is carefully studied and manufacturing establishments visited.

BUILDING AND EQUIPMENT. The building formerly occupied by the Experiment Station is now devoted entirely to Chemistry and is to be supplemented in the immediate future by a new building for which $25,000 has been appropriated.

The equipment includes such apparatus and chemicals as to enable the student to carry on work advantageously. There is a very complete and modern outfit for the analysis of flue gases, apparatus for the determination of molecular weights, platinum ware, apparatus of approved design for the analysis of water and an excellent equipment for the study of the compounds of carbon.

A very important adjunct to the equipment is the Department Library of about five hundred volumes. The very complete library of the Experiment Station is available at all times for consultation.

GENERAL DESCRIPTION OF THE COURSES OF STUDY OFFERED BY THE DEPARTMENT OF CHEMISTRY.

GENERAL INORGANIC CHEMISTRY.

I. Lectures, laboratory work and class-room exercises.

QUALITATIVE ANALYSIS.

II. Laboratory work accompanied by recitation periods. Must be preceded by Course I, or its equivalent.

INORGANIC PREPARATIONS.

III. A practical laboratory course devoted to the preparation of inorganic compounds from the crude material.

INORGANIC CHEMISTRY.

IV. A more advanced course in inorganic chemistry, primarily for the students in the Course in Chemistry.

ORGANIC CHEMISTRY.

V. An elementary course following Remsen's Introduction to the Study of the Compounds of Carbon.

QUANTITATIVE ANALYSIS.

VI. A laboratory course accompanied by lectures and class-room exercises. Gravimetric and volumetric methods of analysis are studied in detail during the last two terms of the Sophomore and the first term of the Junior year.

AGRICULTURAL ANALYSIS.

VII. This course in quantitative analysis is arranged for students in the Course of Agriculture. The elements of quantitative analysis are studied with special reference to the constituents of soils, fertilizers and agricultural products. Prerequisite, Courses I and II.

ORGANIC CHEMISTRY.

VIII. A more advanced course of lectures and class-room exercises extending through the Junior year.

THEORETICAL CHEMISTRY.

IX. Lectures and recitations on the modern theories of physical chemistry.

ORGANIC PREPARATIONS AND ANALYSIS.

X. A laboratory course in the preparation and analysis of typical organic compounds. Must be preceded by at least one term of Course VIII.

GAS ANALYSIS.

XI. A laboratory course in the analysis of illuminating, natural and flue gases, using the methods and apparatus of Hempel, Orsat and others.

ADVANCED QUANTITATIVE ANALYSIS.

XII. A laboratory course in the analysis of ores, alloys, slags, rocks, iron and steel. The chemistry of the methods employed is studied in detail.

WATER ANALYSIS.

XIII. In this course waters are examined to determine their suitableness for domestic and other purposes.

INDUSTRIAL CHEMISTRY.

XIV. In this course the chemistry of manufacturing processes is studied in detail, and when possible, manufacturing establishments in the vicinity are visited.

ELECTROCHEMISTRY.

XV. Lectures and recitations on the theory and practical application of electricity to chemical industrial processes.

PHYSICAL CHEMISTRY.

XVI. Laboratory studies in physico-chemical measurements.

SEMINARY.

XVII. A weekly exercise for Seniors in the Course in Chemistry devoted to a study of current periodical literature and conferences.

THESIS.

XVIII. Laboratory work and collateral reading, with presentation of results in thesis form.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR CHEMISTRY.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories
Freshman	1	English I 3	Mathematics I 5	History I 2 German I 3		Drawing I 2
	2	English II 3	Mathematics III 5 German I 1	German I 2 History I 2	Chemistry I 4	Chemistry I 2 Drawing I 2
	3	English III 3	Mathematics III 5 German I 1	German I 2 History I 2	Chemistry I 3	Chemistry I 3
Sophomore	1	Mathematics IV 5	German II 3 Chemistry IV 2	Physics III 3	Physiology 3	Physics V 2 Chem. II 4 M. W. F. S.
	2	Chemistry V 2	German II 3 Chemistry VI 1 Th.	Physics III 2	Mathematics IV 5	Physics V 2 Chemistry VI 3
	3	Chemistry V 2	German II 3 Chemistry VI 1 Th.	Physics III 2	Mathematics IV 5	Physics V 3 Chemistry VI 3
Junior	1	Chemistry VIII 3 Chemistry VI 1 Th.	Chemistry IX 2	Economics V 2	French I 3 Botany II 2	Chemistry VI 3 Botany II 3 (by appt.)
	2	Chemistry VIII 3	Chemistry IX 2	Economics V 2	French I 3	Chemistry X 3 Mineralogy III 2
	3	Chemistry VIII 2	Chemistry IX 2	Economics V 2	French I 3	Chemistry X 5 Mineralogy III 2
Senior	1	Chemistry XIV 2	Sociology IV 2 Chem. XVII 1 F.	English XI, XIX 3	Geology I 2 M. W. Astronomy VIII 2	Zoology I 3 Chemistry XII 4
	3	Chemistry XIV 2	Sociology IV 2 Chem. XVII 1 F.	English XI, XIX 3	Geology I 2 M. W. Astronomy VIII 2	Chemistry XVIII 5
	3	Chemistry XIV 2	Sociology IV 2 Chem. XVII 1 F.	English XI, XIX 3	Geology I 2 M. W. Astronomy VIII 2	Chemistry XVIII 5

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

COURSE IN INDUSTRIAL CHEMISTRY.

The Course in Industrial Chemistry, leading to the degree of Bachelor of Science in Industrial Chemistry, is adapted to the preparation of the student for a life work in chemistry. It not only provides a foundation for the study of medicine or some other post-graduate course of study which in turn enables the one so trained to cope successfully with one or more of the intricate scientific or industrial problems of the day, but immediately at the termination of the four years' course, the services of the graduate are in demand at a remunerative salary in the various technical and educational institutions of the country.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. IN INDUSTRIAL CHEMISTRY.

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories		
Freshman	1	English I 3	Mathematics I 5	German I 3	Botany II 2	Botany II 3 Drawing I 2		7.2
	2	English II 3	Mathematics III 5 German I 1	German I 2	Chemistry I 4	Chemistry I 2 Drawing I 2		5.7
	3	English III 3	Mathematics III 5 German I 1	German I 2	Chemistry I 3	Chemistry I 3 Chemistry III 2	18.6	5.7
Sophomore	1	Mathematics IV 5	German II 3 Chemistry IV 2	Physics III 3		Chemistry II 4 Physics V 2		7.6
	2	Chemistry V 2	German II 3 Chemistry VI 1 Th.	Physics III 2	Mathematics IV 5	Chemistry VI 4 Physics V 2		5.7
	4	Chemistry V 2	German II 3 Chemistry VI 1 Th.	Physics III 2	Mathematics IV 5	Chemistry VI 3 Physics V 3	19.0	5.7
Junior	1	Chemistry VIII 3 Chemistry VI 1 Th.	Chemistry IX 2	Economics V 2 Hist. I (lect.) 1 W.	Germ. III 2 M. W. Hist. I (rec.) 1 F.	Chemistry VI 6		7.2
	2	Chemistry VIII 3	Chemistry IX 2	Economics V 2 Hist. I (lect.) 1 W.	Germ. III 2 M. W. Hist. I (rec.) 1 F.	Chemistry X 5 Mineralogy III 2		5.4
	3	Chemistry VIII 2 Chemistry XI 2	Chemistry IX 2	Economics V 2 Hist. I (lect.) 1 W.	Germ. III 2 M. W. Hist. I (rec.) 1 F.	Chemistry X 5 Mineralogy III 2	18.3	5.7
Senior	1	Chemistry XIV 2 Chemistry XV 3	Chem. XVII 1 F.	English XI, XIX 3	Geology I 2 M. W. Chemistry XIII 2	Chemistry XII 5		7.2
	2	Chemistry XIV 2	Chem. XVII 1 F. Metallurgy 2	English XI, XIX 3	Geology I 2 M. W.	Chemistry XVIII 5 Assaying 2		5.4
	3	Chemistry XIV 2	Metallurgy 2 Chem. XVII 1 F.	English XI, XIX 3	Geology I 2 M. W.	Chemistry XVIII 4 Chemistry XVI 2	17.4	4.8

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

IV. DEPARTMENT OF DOMESTIC SCIENCE.

Miss Marshall.

Courses of instruction given in this department are planned to meet the needs of two classes of students, namely, those who specialize in other departments, and those who desire to obtain a more thorough knowledge of the subject by taking all of the courses offered.

The intimate connection which exists between a comprehensive study of foods and the Science of Chemistry makes it necessary to include in the course in Domestic Science a considerable portion of the Chemistry which is offered to students taking the course in Chemistry.

Owing to the change which has taken place during the last years in the social and economical conditions of this country, which has as its main result the taking away of woman from the home and placing her in the business world, the school-room, etc., it has seemed expedient to offset this condition by introducing into school, college and university courses a course which shall pertain especially to household management. It has been established as a fact that mechanical progress has been less utilized in the household to save hard labor by human hands than in any other line of work.

It is the business of the woman to correct this condition; she cannot do it without intelligent training, and in offering the following course we do so in order to train women in correct, economical and labor-saving methods of household management. This course is both thorough and practical and will be of value to women desiring to teach or practice the principles of Domestic Science.

EQUIPMENT.

The department occupies the third floor of the Education Building. The quarters consist of a large, well-lighted and well-ventilated laboratory for practical cookery, which is supplied with all the necessary equipment for modern individual work, and a lecture room fitted up with folding lecture-room chairs and an ample supply of food samples for illustrating lectures. A commodious

store-room, adjacent to the lecture room, is arranged to meet the needs of the department.

BRANCHES OF STUDY.

The general order of succession in studies which pertain strictly to Domestic Science is:

I. Practical Cookery.
II. Advanced Cookery and Cooking for Convalescents.
III. Food Production and Manufacture.
IV. Dietetics.
V. Chemistry in Nutrition.

PRACTICAL COOKERY.

I. Three laboratory periods per week, required of all women who are candidates for degrees of A. B. and B. S.

The instruction given familiarizes students with facts concerning cookery and impresses these facts by practical work in cookery.

Class and laboratory work consists in the study of:

a. Animal Foods, including meat, fish, extracts, jellies, milk, cheese, eggs, etc.

b. Vegetable Foods, including bread and cereals.

c. Leavening Agents, including baking powder, yeast, etc., etc.

In addition a certain time is set apart for a theoretical discussion of cleaning and its cost and practical demonstration as related to sanitation in the household.

Text: 1. Manual—compiled by the Instructor. 2. Cost of Cleanness—Ellen Richards.

ADVANCED COOKERY AND COOKING FOR CONVALESCENTS.

II. A continuation of the above course. Attention is given to the serving of food and to the preparation of more elaborate dishes.

Cooking for convalescents is given in order to acquaint the students with special methods of diet cookery.

Text: Cook Book for Nurses—Hill.

FOOD PRODUCTION AND MANUFACTURE.

III. Lectures in this course describe the preparation of various staple foods, from their raw state to the condition in which they reach the household, together with a discussion as to their nutritive value and cost.

Among the subjects considered are: Cereals, Fruits, Vegetables, Sugars, Meats, Tea, Coffee, Dairy Products, etc.

Text: Human Foods—Snyder.

DIETETICS.

IV. This course consists of a theoretical arrangement of the relation of diet to health; the influence of age, sex and occupation upon the diet. Material for a meal is weighed out by the students and furnished to the class in Practical Cookery to be prepared.

Text: Government Bulletins.

CHEMISTRY IN NUTRITION.

V. This course deals mainly with the functions of the proteids, fats, carbohydrates, and salts in nutrition. It includes a critical study of the methods and results of recent investigations in food chemistry and human nutrition.

Text: Thompson's dietetics.

A uniform cap and apron is required of all students in the laboratory courses in Domestic Science.

SCHEDULE OF STUDIES LEADING TO THE DEGREE OF B. S., (MAJOR DOMESTIC SCIENCE.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories	Credits
Freshman	1	English I 3	Mathematics I 5	German I 3		Domestic Science I 3 Drawing 3 (by appt.)	6.8
	2	English II 3	Mathematics II 5 German I 1	German I 2	Chemistry I 4	Domestic Science I 3 Chemistry I Lab. 2	6.0
	3	English III 3	Mathematics III 5 German I 1	German I 2	Chemistry I 3	Chemistry I Lab. 3	5.1 17.9
Sophomore	1	Mathematics IV 5	French I 1 German II 3	Physics III 3 French I 2	Physiology I 3	Chemistry II 4	8.4
	2	Chemistry V 2	Chemistry VI 1 Th. German II 3	Physics III 2 French I 3		Chemistry VI Lab. 4	4.5
	3	Chemistry V 2	Chemistry VI 1 Th. German II 3	Physics III 2 French I 3		Domestic Science II 2 Chemistry VI Lab. 3	4.8 17.7
Junior	1	Zoology IV 2 Chemistry VIII 3	French II 3	Economics V 2	Botany II 2 Geology I 2	Botany II Lab. 3 (appt.)	6.8
	2	Zoology IV 2 Chemistry VIII 3	French II 2	Economics V 2 Domestic Sci. III 2	Botany II 2 Geology I 2	Chemistry X 5 Botany II Lab. 3 (appt.)	6.9
	3	Chemistry VIII 2	French II 3	Economics V 2 Domestic Sci. III 2	Geology I 2	Chemistry X 5	4.8 18.5
Senior	1		History III 3 Domestic Sci. V 2	English XI, XIX 3	Sociology IV 2	Domes. Sci. VI Thesis 5	6.0
	2	Domestic Sci. IV 2	History III 3 Domestic Sci. V 2	English XI, XIX 3	Sociology IV 2	Domes. Sci. VI Thesis 5	5.1
	3		History III 3 Domestic Sci. V 2	English XI, XIX 3	Sociology IV 2	Domes. Sci. VI Thesis 5	5,1 16.2

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

V. DEPARTMENT OF EDUCATION

Professor Noe and Assistant Professor Gillis.

The General Assembly of the State of Kentucky, by an act approved March 16th, 1908, established in the State University a Department of Education with collegiate rank, leading to the usual degrees in pedagogy as maintained in other similar institutions, with the provision that the degrees of Bachelor of Arts in Education and Bachelor of Science in Education may be conferred, which, with the approval of the State Superintendent of Public Instruction, will entitle the holder to teach in any of the common schools and high schools of the Commonwealth without further examination during life or good behavior.

The same act further provided that the Board of Trustees of the State University shall have power and authority, subject to the approval of the State Superintendent of Public Instruction, to confer, under its corporate seal, upon students of said Department of Education, the following certificates:

1. An elementary certificate upon the completion of one year's work, which shall entitle the holder thereof to teach in any public school of this State for a period of two years from date thereof, without further examination.

2. An intermediate certificate upon the completion of two years' work, which shall entitle the holder thereof to teach in any public school of this State for a period of four years from date thereof, without further examination.

3. An advanced certificate upon the completion of three years' work, which shall entitle the holder thereof to teach in any public school of this State for a period of three years from date thereof, without further examination; and, if at the end of three years, a teacher holding an advanced certificate shall present, to the Board of Trustees which granted the same, satisfactory evidence of successful teaching during said period, and of good moral character, then the advanced certificate may be extended for life or good behavior by said Board, subject, however, to the approval of the State Superintendent of Public Instruction, and it shall be endorsed by the said Board, and the holder thereof shall be entitled to teach in any public school of this State during good behavior, without further examination.

EQUIPMENT AND FACILITIES.

The building known as the "Department of Education" is one of the handsomest and best appointed buildings on the campus. It contains seven recitation or lecture rooms, a department library room, a ladies' waiting room, the Dean's office, a large beautifully furnished society hall, toilet rooms, etc. The library contains about one thousand well selected books, the larger number of them dealing with the subjects of education and teaching. The leading magazines come to the reading room every month, and students are encouraged to keep abreast of the times both in educational thought and general progress,—political, social, and industrial. The department is also equipped with encyclopedias, dictionaries, maps, globes, and charts.

The courses of study outlined below are intended to prepare students for a high grade of teaching in graded schools, high schools, colleges, and universities. More than that, no more attractive course of study is offered in the University to one who wishes to engage in business or to enter upon any professional career.

COURSES IN EDUCATION.

EDUCATION.

I. An introductory course in the history and psychology of education is given in the Freshman year. The class meets twice a week for recitations and lectures. This course aims to acquaint the student with the broad fundamentals of psychology and education.

PSYCHOLOGY.

II. Three hours a week throughout the Sophomore year is devoted to the study of psychology. The work is based on James, but the department library is supplied with the best works published on this subject, and the student is required to make reports from time to time concerning the views of other authors.

PRINCIPLES OF EDUCATION.

III. This course alternates with the three-hours' course in Psychology. The text used is Horne's *Psychological Principles of Education.* The text-book is supplemented by lectures and recitations.

ADOLESCENCE.

IV. During the third term of the Sophomore year the subject of Adolescence will be studied twice a week. Lectures on the physical, mental, moral, and social growth of the child and youth, as related to the various problems of primary and secondary education, such as interest, study, ideals, discipline, etc., will be given twice a week.

HISTORY OF EDUCATION.

V. A complete survey of the history of education is made with Monroe's exhaustive work as a text.

EDUCATIONAL CLASSICS.

VI. The Junior class meets three times a week for the study of the history of education and twice a week for the study of educational classics, which is parallel and supplementary to the history.

LITERATURE IN ENGLISH.

VII. This course embraces the literary study of three or four world masterpieces in translation. We believe this is a subject generally neglected in courses for teachers, but one which is of the highest importance as a cultural course, and therefore of supreme importance to teachers.

HISTORY OF PHILOSOPHY.

VIII. Rogers' text-book on the history of philosophy will be used in this course, which will run through the first two terms of the Senior year. Special attention will be paid to the relations of philosophical movements to the movements of history, ancient, mediaeval, and modern. The course alternates with senior history.

AESTHETICS.

IX. A brief course in aesthetics is given during the spring term of the Senior year. Attention is given to the history of art, and to landscape gardening, school architecture, school-room decoration, etc.

COMPARATIVE DIDACTICS.

X. A course in comparative didactics will be given in the Senior year to students who have taken the history of education, educational classics, the principles of education. The work in this course

will consist in lectures and reports on investigations of educational systems, methods, tribal education, ethnology, anthropology, etc. The aim—cultural, rather than practical—is to give the student an insight into the evolution of education, and thereby broaden his mind and enlarge his sympathies.

SEMINARY.

XI. The Sophomores and Juniors meet once a week during the second and third terms for the discussion of problems of educational interest. Papers on subjects assigned early in the fall term are read, and a lively interest is taken in the discussions that follow. All the teachers of the department meet with the students on these occasions.

RESEARCH.

XII. The Seniors do research work along several lines of educational work during the second term, preparatory to the preparation of a thesis. The aim is to give the student some experience in the handling of original sources.

THESIS.

XIII. This course is a continuation of Course XII, but is limited to the subject which the candidate has chosen for his thesis. The work is done under the direction of the Dean in charge.

SCHEDULE OF STUDIES FOR THE DEGREE OF A. B. (MAJOR EDUCATION.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Afternoon	Credits
Freshman	1	Education I 2 English I 3	Mathematics I 5	German I 3	Latin I 5	History I 2	8.0
	5	Education I 2 English I 3	German I 1 S. Mathematics III 5	German I 2	Latin I 3	History I 2	5.4
	3	Education I 2 English I 3	German I 1 S. Mathematics III 5	German I 2	Botany I 1 Latin I 3	History I 2 Botany I 3	6.6 20.0
Sophomore	1	Latin II 3	Education II 3 Education III 2 French I 1 S.	Physics III 3 French I 2	Physiology I 3	English IV 5	8.8
	2	Latin II 3	Education II 3 Education III 2	Physics III 3 French I 3	Chemistry I 4	Education XI 1 Chemistry I Lab. 2	6.3
	3	Latin II 3	Education II 3 Education III 2	Physics III 3 French I 3	Chemistry I 3	Education XI 1 Chemistry I Lab. 2	6.0 21.1
Junior	1	Entomology I 3 Zoology IV 2	French II 3 English V 2	Education V 3 Education VI 2	Astronomy VIII 2 Geology I 2		7.6
	2	Education VII 3 Zoology IV 2	French II 3 English VI 3	Education V 3 Education VI 2	Astronomy VIII 2 Geology I 2	Education XI 1	6.3
	3	Education VII 3	French II 3 English VII 2	Education V 3 Education VI 2	Astronomy VIII 2 Geology I 2	Education XI 1	5.4 19.3
Senior	1	Education VII 5	Geology IV 2 Education VIII 2	English XI 2 English XIX 1	Education X 3 Sociology IV 2		6.8
	2		Geology IV 2 Education VIII 2	Metaphysics 2 English XIX 1	Education X 3 Sociology IV 2	Education XII 1	3.9
	3		Geology IV 2 Education VIII 2	Ethics 2 English XIX 1	Education X 3 Sociology IV 2	Education XIII 3	4.5 15.2

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR EDUCATION.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Afternoon	Credits
Freshman	1	Education I 2 English I 3	Mathematics I 5	German I 3 Physiology I 3		History I 2 Drawing I 2	8.0
	2	Education I 2 English I 3	Mathematics III 5	German I 2 Physiology I 3		History I 2 Drawing I 2	5.7
	3	Education I 2 English I 3	Mathematics III 5	German I 2		History I 2	4.2
							17.9
Sophomore	1	Mathematics IV 5	Education II 3 French I 1 Sat. Education III 2	Physics III 3 French I 2	Botany II 2	Botany II 3	8.4
	2	Mathematics IV 5	Education II 3 Education III 2	Physics III 2 French I 3	Chemistry I 4	Education XI 1 Chemistry I Lab. 2	6.6
	3	Mathematics IV 5	Education II 3 Education IV 2	Physics III 2 French I 3	Chemistry I 3	Education XI 1 Chemistry I Lab. 2	6.3
							21.3
Junior	1	Entomology I 3 Zoology IV 2	French II 3 English V 2	Education V 3 Education VI 2	Astronomy VIII 2 Geology I 2		7.6
	2	Education VII 3 Zoology IV 2	French II 2 English VI 3	Education V 3 Education VI 2	Astronomy VIII 2 Geology I 2	Education XI 1	6.0
	3	Education VII 3	French II 3 English VII 2	Education V 3 Education VI 2	Astronomy VIII 2 Geology I 2	Education XI 1	5.4
							19 0
Senior	1	Education VII 5	Geology IV 2 M. W. Education VIII 2	English XI 2 English XIX 1	Education X 3 Sociology IV 2		6.8
	2		Geology IV 2 M. W. Education VIII 2	Metaphysics 2 English XIX 1	Education X 3 Sociology IV 2	Education XII 1	3.9
	3		Geology IV 2 M. W. Education IX 2	Ethics 2 English XIX 1	Education X 3 Sociology IV 2	Education XIII 3	4.5
							15.2

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

VI. DEPARTMENT OF ENGLISH AND LOGIC.

Professor Mackenzie and Assistants.

PRIMARILY FOR UNDERGRADUATES.

I. Rhetoric and English Composition. First Term. Three hours per week. M. W. F. In five sections at hours to suit the convenience of all Freshmen.

Ia. English Composition—prose and metrical. Throughout the year. M. W. F. Optional for those who seek training in the short story, in the technique of prosody, and in general expression.

II. Literary History of America. Second Term. Three hours per week. M. W. F. Required of all Freshmen who are candidates for any baccalaureate degree.

IIa. Literary History of Kentucky. Throughout the year. T. Th. Optional. Prose during the first semester, poetry during the second. Intensive and interpretative.

III. Modern English Drama. Third Term. M. W. F. Freshman requirement for all undergraduates. Collateral reading during the three terms.

IIIa. Public Speaking and Dramatic Reading. Throughout the year. T. Th. Optional for those who seek training in declamation and elocution in general. As far as possible, this class will cooperate with the Literary Societies of the University.

IV. The Romantic Movement. Daily for first term. Required of all Arts Sophomores. Abundant collateral reading.

IVa. The Bible in English Poetry. T. Th. The aim is not theological, but esthetic and cultural. Required of English major students during third term; open to all undergraduates who have taken Courses I, II, III, or their equivalent.

V. Medieval Literature. First Term. M. W. F. Required of all Juniors pursuing liberal arts and science. In alternate years literary history of Europe from the ninth to the twelfth century, and from the thirteenth to the fifteenth.

Va. English and Scots Ballads T. Th. Open to all Junior undergraduates and to graduates.

Vb. JOURNALISM. T. Th. Throughout the year. Occasional lectures will be delivered by capable journalists, and practical work performed by all students. Open to Junior and Senior undergraduates and to all alumni.

Text-books: Dana's *Art of Newspaper Making;* Luce's *Writing for the Press.*

VI. GENERAL LITERATOLOGY. Second Term. M. W. F. Mainly for Junior A. B. and B. S. undergraduates. A purely inductive study of literary phenomena.

Text-book: Mackenzie's *Evolution of Literature.*

VIa. THE GENESIS OF PROSE. Second Term. M. W. F. As a branch of anthropology written prose is traced from the oral myth of the hunting tribes, and the laws of prose rhythm are tentatively outlined. (1910-11.)

VII. ENGLISH LANGUAGE. Third Term. M. W. F. Mainly for Junior undergraduates. The obscure Pictish question, especially the misunderstood Kymric and Gadelic factors, will receive such attention as may elucidate the pre-Norman growth of the Kelto-Saxon dialects.

VIIa. MIDDLE ENGLISH. Throughout the year. M. W. F. Open to all Juniors and Seniors as well as to University graduates.

VIIb. MODERN ENGLISH. Throughout the year. M. W. F. Includes the study of Advanced Historical Grammar. Tarde's laws of imitation; modern differentiation as witnessed in America and the motherland. Open to all Juniors and Seniors as well as graduates.

VIII. ANGLO-SAXON GRAMMAR. Throughout the year. M. W. Required of Juniors whose major study is English.

IX. ANGLO-SAXON READING. Throughout the year. T. Th. Required of all Seniors whose major study is English. Open only to students who have taken Course VIII.

X. LOGIC. Throughout the year. T. Th. Mainly for Senior engineers. The aim is to make students alert to the fallacies of the workshop and the world.

XI. LOGIC. First Term. M. F. Required of all Seniors who are candidates for degrees in Agriculture, Arts, and Science. This is not a duplication of Course X.

XII. COMPARATIVE PHILOLOGY. Second and Third Terms. M. W. Required of all major English undergraduates. The elements of semeiology, etc.

XIII. COMPARATIVE PHILOLOGY. Throughout the year. T. Th. Elementary Sanskrit or Hebrew. VI being prerequisite. Open to Seniors and to graduates.

XIV. THESIS. Throughout the year. Two hours per week. Required of all major English undergraduates.

PRIMARILY FOR GRADUATES.

Provided that the consent of the English Department has been obtained, graduate students may, with a view to research work, suggest plans for study of the language or literature of a restricted period. The following suggestions are offered:

XV. ENGLISH PHILOLOGY. Two hours per week throughout the year. A comparative study of English, Scots, Manx, Irish, and American dialects of the eighteenth or the nineteenth century. Alien elements such as tribal influence in America. For candidates who elect English as a minor study.

XVI. COMPARATIVE LITERATURE. An alternative for Course XV. An intensive study of the prose or poetry of a given century, distinct from undergraduate work. Each course involves oral and written examinations.

XVII. ENGLISH PHILOLOGY SEMINAR. Three hours per week throughout the year. Exercises in the higher criticism. Required of all candidates for the Master's degree, in the event that they elect English as the major study. Anglo-Saxon and Gothic are prerequisite.

XVIII. ENGLISH LITERATURE SEMINAR. This is an alternative for Course XVII. An intensive study of a given period. Either course involves examinations and the preparation of a satisfactory thesis. Both courses presuppose a reading knowledge of French and German or any modern substitutes such as Norse and Gaelic.

SCHEDULE OF STUDIES FOR THE DEGREE OF A. B. (MAJOR ENGLISH.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Afternoon	Credits
Freshman	1	English I 3	Mathematics I 5	German I 3 or Greek I 3	Latin I 5	History I 2	7.2
	2	English II 3	Mathematics III 5 German I 1 or Greek I 1 S.	German I 2 or Greek I 2 Physiology I 3	Latin I 3	History I 2	5,7
	3	English III 3	Mathematics III 5 German I 1 or Greek I 1 S.	German I 2 or Greek I 2 Physiology I 3	Latin I 3	History I 2	5,7 18.6
Sophomore	1	Latin II 3	French I 1 S German II 3 or Greek II 3	French I 2 Physics III 3	English IV 5		6.8
	3	Latin II 3	German II 3 or Greek II 3	French I 3 Physics III 2	Chemistry I 4	Chemistry I 2	5.1
	3	Latin II 3	German II 3 or Greek II 3	French I 3 Physics III 2	Botany VI 2	Botany VI 1	4.2 16.1
Junior	1	Zoology IV 2	English V 2 French II 3	English VIII 2 Latin III 3	German III 2 Sociology IV 2		6.4
	2	Zoology IV 2	English VI 3 French II 2	English VIII 2 Latin III 3	German III 2 Sociology IV 2		4:8
	3	English IVa 2	English VII 2 French II 3	English VIII 2 Latin III 3	German III 2 Sociology IV 2		4.8 16.0
Senior	1	English IX 2 French III 2	History III 3	English XI, XIX 3 Economics V 2	Geology I 2 M. W.	English XIV 2(Thesis)	6.4
	2	English IX 2 French III 3	History III 3	Meta 2, Eng. XIX 1 Economics V 2	English XII 2 Geology I 2	English XIV 2(Thesis)	5.7
	3	English IX 2 French III 2	History III 3	Ethics 2, Eng. XIX 1 Economics V 2	English XII 2 Geology I 2	English XIV 2(Thesis)	5.4 17.5

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

VII. DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

ENTOMOLOGY.

EQUIPMENT AND FACILITIES.

The general laboratory and lecture room of the Entomological Department is located on the first floor of the Natural Science Building.

The equipment of the department includes tables, dissecting and compound microscopes, breeding cages, aquaria, collecting apparatus, charts and lantern slides to illustrate economic entomology; histological preparations,, besides an excellent collection of noxious and beneficial insects, a large general collection and life-history collections, all of which will be freely used for illustrative purposes.

There is also a library, which contains the best standard entomological literature. The work embraces lectures, recitations, field excursions and laboratory work. Short excursions will be substituted for laboratory periods from time to time and all-day excursions will be planned for students in all courses in this department.

BRANCHES OF STUDY.

The general order of succession in the entomological studies is as follows:

I. General Entomology and Elementary Morphology of Insects.
II. Elementary Systematic Entomology and Entomotaxy.
III. Economic Entomology.
IV. Advanced Entomology (Life Histories).
V. Insect Histology.
VI. Advanced Systematic Entomology.

I. ELEMENTARY MORPHOLOGY OF INSECTS, GENERAL ENTOMOLOGY.

First and Second Terms. Three hours per week, M. W. F. This course should follow Zoology.

Elementary Morphology of insects is a laboratory course designed to present to the student the essentials of insect anatomy.

General Entomology is a parallel course comprising a study of the characteristics of the orders, sub-orders and important families of insects. One all-day field excursion required in the Fall Term.

Laboratory Guide: Comstock and Kellogg's *Elements of Insect Anatomy.*

Text-book: Comstock's *Manual for the Study of Insects.*

II. ELEMENTARY SYSTEMATIC ENTOMOLOGY, ENTOMOTAXY.

Third Term. Three hours per week. A laboratory and field course designed to give the student practice in the classification of insects and in the methods of collecting and preparing specimens for the cabinet. Two all-day field excursions required.

III. ECONOMIC ENTOMOLOGY.

First Term. Three hours per week, M. W. F. The purpose of this course is to familiarize the student with the habits and life histories of the more important noxious insects and with the methods of combating them.

IV. ENTOMOLOGY (LIFE HISTORIES).

First Term. Three hours per week. An advanced course offering an opportunity for breeding and determining the life histories of insects. One all-day field excursion required.

V. INSECT HISTOLOGY.

Second and Third Terms. Two hours per week, W. F., Second Term, and three hours per week, Third Term. A study of the histological structure of the arthropods.

VI. ADVANCED SYSTEMATIC ENTOMOLOGY.

Second Term. Three hours per week, M. W. F. This course is open only to those who have taken Entomology I and II. An advanced course in which practice is given in the identification of species.

ZOOLOGY.

EQUIPMENT AND FACILITIES.

The Department of Zoology occupies two rooms on the first floor of the Natural Science Building. These rooms are provided

with tables and a special set of apparatus, including compound microscopes, for each student. There is in addition a complete general equipment for all lines of zoological investigation, such as zoological charts for the study of systematic zoology, microtomes and paraffin ovens for work in microscopy, an incubator for work in embryology, a selection of type skeletons (some of which have been mounted by students) for illustrating osteology, alcoholic specimens of both marine and inland forms of animals to illustrate general zoology with duplicates for class dissection, and finally a library of standard zoological literature, including the leading periodicals devoted to the interests of biological science. Abundant opportunity for collecting fresh zoological material, as well as for studying living animals in their native habitats is afforded by the "Excursions."

BRANCHES OF STUDY.

The general order of succession in the zoological studies is as follows:

I. Invertebrate Zoology.
II. Vertebrate Zoology.
III. Embryology.
IV. Text-book Zoology.
V. Osteology.
VI. Comparative Anatomy.
VII. Systematic Zoology and Ecology.

I. INVERTEBRATE ZOOLOGY.

First Term. Three laboratory periods per week, M. T. Th., or days by appointment.

The student studies the form and structure of typical representatives of each of the invertebrate sub-kingdoms and is given lectures on the systematic position, habits and development.

Laboratory Text-book: Pratt's *Invertebrate Zoology*. A copy of this book is furnished to each student as a part of the laboratory equipment. One all-day field excursion required.

II. VERTEBRATE ZOOLOGY.

Second Term. Three laboratory periods per week, M. T. Th., or days by appointment.

This is a course on Vertebrate Anatomy similar to I on Invertebrates.

Text-books: Pratt's *Vertebrate Zoology* and Jordan's *Manual of the Vertebrates of the Eastern United States.* Both books furnished to students as part of the laboratory equipment.

III. EMBRYOLOGY.

Third Term. Three laboratory periods per week, M. T. Th., or days by appointment.

This course consists of lectures on the general facts and principles of embryology, accompanied by practical work on the embryonic development of such vertebrates as the frog and chick.

Text-books: Balfour's *Elements of Embryology* and Holmes's *Biology of the Frog.*

IV. ZOOLOGY (TEXT AND LECTURES).

First and Second Terms. Two hours per week, T. Th.

The topics discussed in this course are: The Interrelation of Plants and Animals; Struggle for Existence; Coloration of Animals; Social Life of Animals; Protoplasm; Origin of Life; Physiological Division of Labor; Animal Physiology; Principles of Embryology; Past History of Animals; Doctrine of Evolution. The Second Term is devoted to elementary systematic Zoology.

Text-book: Arthur Thompson's *Animal Life.*

V. OSTEOLOGY.

First and Second Terms. Two hours per week. This course consists of a comparative study of the vertebrate skeleton, chiefly that of the Mammalia. At the close of the course the student is given the option of mounting a disarticulated skeleton or standing an examination.

Text-book: Flower's *Osteology of the Mammalia.*

VI. COMPARATIVE ANATOMY.

Third Term. Two hours per week, T. Th. This course should follow I and II. It consists of a comparative study of the structure of groups of animals.

VII. SYSTEMATIC ZOOLOGY AND ECOLOGY.

First and Second Terms. Two laboratory periods per week. This course is open only to students who take I and II. It consists of laboratory and field work devoted to the identification of species, the study of their habits, and relation of animals to their environment. Two all-day field excursions required.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR ENTOMOLOGY AND ZOOLOGY.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories	Credits
Freshman	1	English I 3	Mathematics I 5	History I 2 German I 3		Drawing I 2 (by appt.)	6.
	3	English II 3	Mathematics III 5 German I 1 Sat.	History I 2 German I 2	Chemistry I 4	Drawing I 2 (by appt.) Chemistry I Lab. 2	6.3
	3	English III 3	Mathematics III 5 German I 1 Sat.	History I 2 German I 2	Chemistry I 3	Bot. I Lab. 3 (by appt.) Chemistry I Lab. 3	6.6 18.9
Sophomore	1	Mathematics IV 5	German II 3 French I 1 Sat.	Physiology 3 French I 2	Geology I 2 Botany II Lect. 2	Bot. II Lab. 3 (by appt.) Zool. I Lab. 3 (by appt.)	9.6
	2	Mathematics IV 5	German II 3	French I 3	Geology I 2	Zool. II Lab. 3 M. T.	4.8
	3	Mathematics IV 5	German II 3	French I 3	Geology I 2	Zool. III Lab. 3 M. T.	4.8 19.2
Junior	1	Zoology IV 2 Entomology I 3	French II 3 Zoology V 2	Physiology III 3	German III 2 M.W.	Physics V 2	6.8
	2	Zoology IV 2 Entomology I 3	French II 2 Zoology V 2	Physiology III 2	German III 2 M.W.	Physics V 2	4.5
	3	Entomology II 3	French II 3 Zoology VI 2	Physiology III 2	German III 3	Physics V 3	4.8 16.1
Senior	1	Geology II 3	Sociology IV 2 Entomology III 3	English XI 2 English XIX 1	Entomology IV 3 Astronomy VIII 2		6.4
	2	Geology II 3	Sociology IV 2 Entomology V 2	Metaphysics 2 English XIX 1	Entomology VI 3 Astronomy VIII 2	Zoology VII 2 W. F.	5.1
	3		Sociology IV 2 Entomology V 3	English XIX 1 Ethics, 2	Astronomy VIII 2	Zoology VII 2	3.6 15.1

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

VIII. DEPARTMENT OF GEOLOGY

Professor Miller and Miss McCann.

EQUIPMENT AND FACILITIES.

The department occupies one-half of the second floor of the Natural Science Building.

The Geological Laboratory is fitted up with tables and chairs, and contains the study collection which consists of representative specimens of fossils and minerals.

The Mineralogical Laboratory is arranged in its furnishings with special reference to its use as a mineral-testing laboratory.

The Geological Lecture Room, furnished with folding lecture-room seats, lantern-stand, sliding blackboard, wall-screen and means for quickly darkening the room, is admirably adapted to recitation and lecture uses.

The collections in Mineralogy and Paleontology are arranged and classified with special reference to their use in class instruction.

The Museum, occupying the entire third floor of the building, now contains the State Geological Survey collection, a valuable addition to the instruction facilities of this department.

As additional equipment may be mentioned the department library of geological literature, consisting of reports, both State and National, maps, charts, models, lantern slides, photographic views, and a rock-slicing machine.

The department is also fortunate as regards the geological location of the University. Situated in the very heart of the Blue Grass Region, near the base of the geological series of the State, it affords logically the best starting-point for the student of Kentucky geology who would gain a clear comprehension of how the rock foundations of his State have been laid.

BRANCHES OF STUDY.

The general order in the geological studies is as follows:

I. Elementary Geology.
II. Paleontology.
III. Mineralogy.
IV. Laboratory Physical Geography.
V. Advanced Geology.
VI. Economic Geology.

I. ELEMENTARY GEOLOGY.

Throughout the Year. Two hours per week, M. W. Major geology students take this subject during the Sophomore year. Others may take it as late as the Senior year. Required of all students who are candidates for the degrees of A. B. and B. S., except those for whom VI is prescribed.

The attempt is made here to acquaint the student with the general facts and principles which are involved in Dynamical, Structural, Physiographical and Historical Geology. Two excursions, occupying one day each, are required.

Text-book: Norton's *Elements of Geology.*

II. PALEONTOLOGY.

First and Second Terms. Three hours per week. (Monday, Wednesday and Friday.) This course should accompany or follow the beginning work in Zoology.

Lectures on the nature and zoological position of different fossil groups of animals are given, and the student is expected to verify descriptions of fossils by an examination of the specimens themselves and to so learn their peculiarities that he can identify many species and genera at sight.

Special attention is paid to fossils which are important in Kentucky stratigraphy. The collections of the department are well suited for this purpose. The instruction is almost entirely by lecture and laboratory work.

III. MINERALOGY.

Second and Third Terms. Two laboratory periods per week (Wednesday and Friday).

The object of the study is to render the student familiar with the compositions and physical characters of those common minerals likely to be met with both in the course of every-day observation and in geological pursuits. The course involves both laboratory and text-book work.

Text and Laboratory Guide: Crosby's *Tables for Determination of Common Minerals.*

IV. LABORATORY PHYSICAL GEOGRAPHY.

Throughout the year. Two hours per week, one credit. (Tuesday and Thursday). The student is given a series of exercises

which involve the interpretation of physiographic structures as revealed in maps, photographs and models; the making of clay and sand models; the construction of weather maps; the practical use of the barometer, compass, clinometer and other instruments required by modern laboratory and field methods in Physical Geography. Two excursions in the Fall and two in the Spring Term required.

V. ADVANCED GEOLOGY.

Throughout the year. Two hours per week. (Tuesday and Thursday.)

The same topics are treated here as in (I), but more thoroughly, as it is fitting such should be treated after the student has had courses (II) and (III) as well as work in other departments which better fit him for an understanding of the deeper problems of geology. Two excursions in the Fall and two in the Spring Term required.

Text-book: Scott's *Introduction to Geology.*

VI. ECONOMIC GEOLOGY.

Second and Third Terms. Two hours per week (Tuesday and Thursday). As the name indicates, it is the industrial side of geology that is here presented. Historical geology is studied here briefly and in outline. Fossils are considered important only in so far as they serve to determine stratigraphic position of rocks and deposits. Structural Geology becomes relatively important and Mineralogy and Lithology occupy leading places. Some of the topics of economic importance treated are: Common Rocks and Vein-forming Minerals; Origin of Ore Deposits; Mining Terms and Methods; Coal; Petroleum; Natural Gas and Asphaltums; Building Stones; Clay and Cement; Geological Fertilizers; Relation of Geology to Agriculture; Relation of Geology to Engineering.

Text-book: Ries's *Economic Geology,* supplemented by lectures.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR GEOLOGY.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Laboratories	Credits
Freshman	1	English I 3	Mathematics I 5	History I 2 W. F. Germ. I 3 M.T.Th.		Drawing I 2 (by appt.)	6.
	2	English II 3	Mathematics III 5 German I 1 Sat.	History I 2 W. F. German I 2	Chemistry I 4 M. T. W. Th.	Drawing I 2 (by appt.) Chemistry I Lab. 2	6.3
	3	English III 3	Mathematics III 5 German I 1 Sat.	History I 2 W. F. German I 2	Chemistry I 3 Botany I Lect. 1 T.	Bot. I Lab. 3 (by appt.) Chemistry I Lab. 3	6.9 19.2
Sophomore	1	Mathematics IV 5	German II 3 French I 1 Sat.	French I 2	Sociology IV 2 Geology I 2 M.W.	Zool. I Lab. 3 (by appt.)	7.2
	2	Mathematics IV 5	German II 3	French I 3	Sociology IV 2 Geology I 2 M.W.	Geol. (Min.) III 2 W. F.	5.1
	3	Mathematics IV 5	German II 3	French I 3	Sociology IV 2 Geology I 2 M.W.	Geol. (Min.) III 2 W. F.	5.1 17.4
Junior	1	Zoology IV 2 Geology II 3	French II 3 Zoology V 2	Physics III 3	Astronomy VIII 2 German III 2 M.W.	Physics V 2	7.6
	2	Geology II 3	French II 2 Zoology V 2 M. W.	Physics III 2 Physiology I 3	Astronomy VIII 2 German III 2 M.W.	Physics V 2	5.4
	3		French II 3 Zoology VI 2	Physics III 2 Physiology I 3	Astronomy VIII 2 German III 3	Physics V 3	5.4 18.4
Senior	1	French III 2	Geology IV 2 M.W.	Geology V 2 English XI, XIX 3		Geology (Thesis) 5	5.6
	2	French III 3	Geology IV 2	Geology V 2 Meta 2, Eng. XIX 1	Geology VI 2	Geology (Thesis) 5	5.1
	3	French III 2	Geology IV 2	Geology V 2 Ethics 2, Eng.XIX 1	Geology VI 2	Geology (Thesis) 5	4.8 15.5

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

IX. DEPARTMENT OF LATIN AND GREEK.

Acting Professor Jones.

The following introduction on the value of classical learning was prepared by the late Prof. John H. Neville, and is repeated from the 1908 catalogue:

The curriculum leading to the classical degree of A. B. includes English, Latin, Greek or French and German, History, Political Economy, Metaphysics, Mathematics, and some Physical Science. The grouping of these studies is designed to meet the needs of those students whose tastes and aptitudes incline them to literature rather than to science; who seek not knowledge alone but culture* as well; and who, moreover, desire a course of studies suited to those who are to prepare themselves for a profession, and to become teachers, preachers, physicians, lawyers, journalists, writers or scholars, or, it may be, legislators or authors.

To this brief statement of the objects kept in view in making up this group of studies it is due to this department, and not meant to be invidious, to add, that statistics published annually by the U. S. Commissioner of Education show that, even in this country where scientific and the so-called practical studies are so strongly and so justly recommended and encouraged, that even here the classical group is from three to six times more popular than any other; while the English, the French, and the Germans, who in letters, arts, and arms rank highest in the scale of nations, devote far more attention to these studies than we.

The Professors of this department offer courses of study equal to those of the best land-grant colleges, courses as long and as varied as the grade of their students and other limitations allow. In offering them they announce that their method of instruction, so far as it is distinctive, rests on the assumption that ability to write a language well is the infallible test of a real knowledge of it. Unusual attention is therefore given to Greek and Latin composition, the first session being devoted almost entirely to the writing

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*Culture implies knowledge, but it is much more. A man of liberal culture is he whose mind has been trained to express thought, by tongue or pen, on many subjects, and in words of clearness, force and beauty.

of exercises. This leads directly to an accurate knowledge of the forms and meanings of words, of the rules of syntax, and of the idioms. Every student of the classes in grammar is required daily to translate on the blackboard an exercise from Greek or Latin into English, and another from English into Greek or Latin, and then to write out declensions and conjugations, with careful attention to the length of syllables, and to accentuation. His work is then rapidly corrected by the teacher, who in making his corrections supplements the lesson of the text-book with instruction on the order of the words, on synonyms, on the derivation of English words suggested by the words of the exercise, and on other pertinent matters. This process involves great labor for the student and drudgery for the teacher, but it leads to a mastery of the grammar and to much more.

The second session is spent mostly in reading the easy Latin of Viri Romæ, nepos, and Cæsar, or the easy Greek of the Reader and Xenophon, considerable attention being still directed to the writing of exercises. The student is encouraged in the habit of first reading the sentences in the Greek or Latin order of the words, and of then translating them in the English order and idiom. The translations are partly oral, partly written.

During the remainder of the courses the bright and diligent student proceeds from the easier authors to the more difficult, enlarging his vocabulary, extending and sharpening his knowledge of forms, syntax, and idioms, incidentally directing his attention to metres, geography, history, mythology, and antiquities, and perpetually and supremely to the effort to find the best English expression for the Greek or Latin thought; for, while more than a third, and that too unspeakably the most difficult third, of our own magnificent language is derived from Greek and Latin, and while the study of these tongues is therefore intensely practical to those who speak English, and indispensable to all who would thoroughly acquire it, yet it is in the intellectual training to be had from the proper translation of the Greek and Latin authors that the advocates of classical learning find their amplest justification and defense, their most cogent plea. The ceaseless quest for the clearness, precision, force, and beauty of the best English, in order to find an equivalent for the best Greek or Latin, calls into play every faculty of the mind, and gives to classical studies an educational value which, we insist, no substitute can equal.

The Germans are admitted to be the leading educators of the world. In the nine years' curriculum of their 468 gymnasia, which are their best secondary schools (corresponding to our colleges, but conferring no degrees and with fewer studies far better taught), they assign to the study of Greek and of Latin a higher educational value than to any other study.* In the 227 Prussian gymnasia, for example, Latin, by the time devoted to it, is valued at 62, Greek at 36, and Mathematics, the next highest study, at 34. In the other parts of Germany the difference is greater still. In the Saxon gymnasia, Latin is valued at 72, Greek at 41, Mathematics at 33. Similarly, in the great public schools of England, including Oxford and Cambridge (with a higher estimate of Mathematics, however), as well as in the Lycees, the leading secondary schools of France, the utility of the study of the Latin language as a medium of intellectual training and culture is everywhere recognized as supreme. And the results have justified the estimate. A system of education by which a host of great men, from Bacon to Gladstone, have been fitted for their splendid careers, is assuredly not a bad one, and in that system Greek and Latin have always held the first place.

While no wise man will seek to disparage or unduly to exalt any branch of knowledge, it is not invidious to say that though the vast expansion of science during the wonderful nineteenth century has contributed enormously to the comfort and glory of man, yet an immense majority in the civilized nations will continue to feel more interest in man and his doings than in matter and its properties, more in literature than in science, and more in the applications of science than in its principles and processes.

Greek, the marvelous tongue of the most intellectual of all the races; the tongue that has contributed thousands of words to our own; the tongue that enshrines the noble literature, which has been the model of supreme excellence for twenty centuries; Greek, in

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*"The classical literature is, and will continue to be, the source of all our culture. It must remain, therefore, not only indispensable, but by far the most important study in our higher schools."—Frederic Gedike. And yet the German language owes little to Greek and Latin, while the English owes to them nearly half of its words. The inference of course is that the study of Greek and Latin is far more useful to an American or an Englishman than it can be to a German, for the German derives culture from the study and the American or Englishman both culture and a knowledge of his language.

the crowded curricula of American schools, especially of co-educational schools, will, for ordinary students, naturally give place to the easier and more practical French and German. The more gifted or ambitious, who seek high scholarship and a more liberal culture, will learn Greek, and of course French and German. Nay, when a student of high spirit finds that he must know eight languages to read the notes to so common a work as Macaulay's History or Buckle's, he will be ashamed to skip any, and he will not be satisfied till he can read them all, including those in Greek.

It is timely to mention that after long and earnest debate, the proposition to substitute French and German for Greek in the course for A. B. at Oxford and Cambridge has lately been voted down by a great majority. A needless wrangle, easy to settle once for all by giving a higher degree to those who learn all these languages and a lower to those who omit Greek or French or German.

In the eighteenth century the supreme writers of English prose were Burke and Gibbon; in the nineteenth, De Quincey and Macaulay. All of them were distinguished classical scholars, and they used more words of Latin than of Saxon origin. But whether a writer should use more words of either class than of the others, depends on his subject and his readers: a Saxon-English *Paradise Lost,* and a Latin-English *Pilgrim's Progress* would have been alike impossible.

LATIN I.—FRESHMAN.

Virgil's Aeneid (Books I-VI); Livy (Book XXII); Johnston's Private Life of the Romans.

The object of this course is two-fold: first, to give a general introduction to the literature of the Augustan Age; second, to give the student a thorough drill in forms and construction so that all members of the class may be brought to something like the same standard of proficiency in their knowledge of Latin. Special attention will be given to scanning, also to mythological and historical references. The examination at the end of the year will include Johnston's Private Life of the Romans.

LATIN II.—SOPHOMORE.

Cicero (De Senectute, Selections from Letters); Horace (Odes, Books I-III).

This course is a continuation of Latin I. It is intended to give the student a broader knowledge of the literature of the first

century B. C. Lectures will be given on the life of Cicero, the life of Horace, the political changes which took place during this time, etc. Required reading will be assigned from Boissier's "Cicero and His Friends," and Sellar's Horace.

LATIN III.—JUNIOR.

Terence (Phormio); Pliny's Letters (selections); Tacitus (Annals—Books I and II).

This course is intended to give the student a wider view of Latin Literature. The authors read belong to the periods preceding and following the Augustan Age. These writers will be read for the light they shed on the public and private life of the times as well as with reference to their literary worth. Lectures will be given on such subjects as the Roman theatre, the history of the drama at Rome, important events during the time of Pliny and Tacitus. A considerable amount of supplementary reading will be assigned from such books as Pellison's "Life in Pliny's Time."

LATIN IV.—SENIOR.

Juvenal (selections); Catullus and the Elegiac Poets.

The object of this course is the same as that of the preceding—a more intimate acquaintance with the language, literature and life of the Romans. The reading of the text in the class-room will be accompanied by full explanatory comment. Special attention will be given to the style and metres of the authors. Lectures will be given on the authors themselves, comparing them with other great writers, ancient and modern. Some standard work on the history of Latin Literature will be the required supplementary reading of this course.

GREEK.

Professor ————————

GREEK I.—FRESHMAN.

I. HOMER. The Iliad, Books I-VI. Lectures on the Homeric Question, Life in the Homeric Age, Mycenaean Antiquities, and other topics germane to the subject matter.

2. PLATO. The Apology and Crito, selections from the Phædo. This course will be accompanied by lectures on the relations of Plato to Socrates, the position of Socrates as a moral teacher, his

methods of investigation, and the debt to him and Plato of all modern philosophical enquirers.

3. Exercises in Prose Composition once a week throughout the year.

GREEK II.—SOPHOMORE.

1. HERODOTUS. Books VIII, IX. This course will include a rapid review of Greek history from the Ionic Revolt to the end of the Persian Wars. Lectures on the Ionic dialect, Herodotus, method of treating history and the bearing of recent archaeological discovery on his credibility.

2. DEMOSTHENES. Philippics IV, VI, IX. This course will include a rapid review of Greek history from the accession of Philip to the battle of Chaeronea, lectures on the history of Greek oratory. Demosthenes' career as a statesman and his position as an orator will be carefully studied.

GREEK III.—JUNIOR.

1. THUCYDIDES. Book II. The course will include a discussion of the causes which led to the Peloponnesian War, the reading of numerous selections in translation, lectures on Thycydides' style and on the causes of his pre-eminence as a historian.

2. GREEK TRAGEDY. Sophocles, the Antigone; Aeschylus, the Prometheus Bound. Lectures on the origin and development of Tragedy, Aristotle's defiintion of Tragedy, Scenic Antiquities.

GREEK IV.—SENIOR.

1. TRAGEDY. Euriprides, the Medea; Sophocles, the Trachiniae. In this course the individualities of style and genius of the three tragedians will be discussed, their positions as play-wrights in the light of both ancient and modern criticism.

2. COMEDY. Aristophanes, the Clouds and Frogs. Lectures on the origin and development of Comedy, the Comic Fragments, Old and New Comedy. This course will include a comprehensive review of Greek Literature based on Jebb's Primer of Greek Literature.

SCHEDULE OF STUDIES FOR THE DEGREE OF A. B. (MAJOR LATIN AND GREEK.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Afternoon	Credits
Freshman	1	English I 3	Mathematics I 5	Ger. I 3 or Grk. I 3	Latin I 5	History I 2	7.2
	2	English II 3	Mathematics III 5	Ger. I 3 or Grk. I 3 Physiology I 3	Latin I 3	History I 2	5.7
	3	English III 3	Mathematics III 5	Ger. I 3 or Grk. I 3 Physiology I 3	Latin I 3	History I 2	5.7 18.6
Sophomore	1	Latin II 3 Zoology IV 2	German II 3 or Greek II 3	French I 3 Physics III 3	English IV 5		7.6
	2	Latin II 3 Zoology IV 2	German II 3 or Greek II 3	French I 3 Physics III 2	Chemistry I 4	Chemistry I 2	5.7
	3	Latin II 3	German II 3 or Greek II 3	French I 3 Physics III 2	Botany VI 2	Botany VI 1	4.2 17.5
Junior	1	Mathematics IV 5	French II 3 or Greek III 3 English V 2	Latin III 3	Geology I 2 Sociology IV 2		6.8
	2	Education VII 3	French II 2 or Greek III 2 English VI 3	Latin III 3	Geology I 2 Sociology IV 2		4.5
	3	Education VII 3	French II 3 or Greek III 3 English VII 2	Latin III 3	Geology I 2 Sociology IV 2		4.5 15.8
Senior	1	Latin IV 2 French III 2 or Greek IV 2	History III 3	English XI, XIX 3 Economics V 2	Astronomy VIII 2		5.6
	2	Latin IV 2 French III 3 or Greek IV 3	History III 3	Meta 2, Eng. XIX 1 Economics V 2	English XII 2 Astronomy VIII 2		5.1
	3	Latin IV 2 French III 2 or Greek IV 2	History III 3	Ethics 2, Eng. XIX 1 Economics V 2	English XII 2 Astronomy VIII 2		4.8 15.5

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

X. DEPARTMENT OF HISTORY, POLITICAL ECONOMY AND METAPHYSICS.

President Patterson and Assistant Professor Tuthill.

HISTORY AND THE POLITICAL SCIENCES.

The course of instruction in these subjects includes an outline of Ancient, Medieval and Modern History, Sociology, Economics and Government. Attention is given to the various forms of government, their characteristic features and points of difference; to the progress of civilization, the origin and development of parliamentary government, the rights and duties of citizenship.

The following courses are now offered:

I. HISTORY. Ancient History, two hours per week throughout the year. Open to Freshmen, and recommended to all who would lay a foundation for the study of European history. An introduction to the life and institutions of the ancient world.

Text, lectures, and frequent quizzes.

II. HISTORY. Medieval History, three hours per week throughout the year. More intensive than Course I, comprehending the history of western Europe from the later Roman Empire to the discovery of America.

Text, lectures, topics, readings, and weekly quizzes.

III. HISTORY. English and American History, three hours per week throughout the year. Open to Seniors and to other persons of sufficient preparation.

IV. SOCIOLOGY. Two hours per week. Charities and Corrections, two terms. A course dealing with problems of poverty, crime, insanity, and social degeneration. Text, American Charities, Warner. Continued the third term as Social Psychology. A study of the social mind and its reaction on the individual mind, as manifested in custom, fashion, public opinion, and in other forms. Text, Social Psychology, Ross.

V. ECONOMICS. Introduction to Economics, two hours per week throughout the year. Not open to Freshmen. Text, Bullock's Introduction, revision of 1908.

VI. GOVERNMENT. Two hours per week. An elective course for Juniors, Seniors and professional students. Designed to elucidate the principles of local and central government; to present the main features of the leading European governments; and to analyze the constitutions of Kentucky and the United States.

VII. METAPHYSICS. A comparative study of the Hamiltonian and other systems, ancient and modern. Collateral lectures embrace the fundamental principles of Psychology according to Wundt, James, and others. The synthetic philosophy of Spencer is not neglected.

VIII. ETHICS. Guided largely by Kant and Caird, the course embraces psychological prolegomena, theories of the moral standard, and the moral life. Conduct, individual and ethnic, is viewed from a purely rational standpoint with a view to upbuild character.

Text-book: Mackenzie's *Manual of Ethics.*

XI. DEPARTMENT OF MATHEMATICS AND ASTRONOMY.

Professor White, Assistant Professor Davis, Miss White, Mr. Rees, Mr. Downing.

PLANE TRIGONOMETRY.

I. This course is given five times per week during the Fall Term. It is required of all students.

In this course the student should become familiar with, and be able to use, the principal formulas expressing the relations of the various trigonometric functions to each other. He should be able to find natural and logarithmic functions of angles of any magnitude, to compute the parts of any plain triangle, and to learn practical applications of the subject to Surveying.

SPHERICAL TRIGONOMETRY.

II. This course is given three times per week during the Winter Term. It is required of Civil Sngineering students and is open to all others.

After gaining a working knowledge of the formulas, students are required to apply them to many practical problems in navigation, geodesy and astronomy.

COLLEGE ALGEBRA.

III. This course is given five times per week during the Winter and Spring Terms and is required of all students.

A thorough and comprehensive knowledge of algebra is of vital importance to students who pursue courses in higher Mathematics, whether pure or applied, and in such sciences as Physics and Chemistry. Special care is therefore taken to see that students have a thorough training in this subject. Fine's College Algebra will be the text-book for the session 1909-10. Two hours per week during the Fall Term will be devoted to Theory of Equations and the solution of The General Cubic and Biquadratic Equations, as presented in Fine's College Algebra, by all students who take Analytical Geometry.

ANALYTICAL GEOMETRY.

IV. This course is given three times per week during the Fall

Term and five times per week during the Winter and Spring Terms. It is required of Engineers and is open to all students. The Fall Term's work is designed to acquaint the student with analytical methods of investigation and is limited to the straight line and the circle. During the Winter Term second degree curves are studied and the Spring Term is given to the study of "higher plane curves", the plane, the right line in space and surfaces of the second degree.

CALCULUS.

V. Five times per week for engineers and three times per week for other students during an entire year. Required of engineers and open to all others. Engineers begin the subject in January of their Sophomore year, but other students are advised to begin in January of their Junior year. During the Winter Term the principles of the differential calculus are developed. The Spring Term is given to the study of numerous applications of the derivative, such as tangents, normals, maxima and minima, etc., and to the simpler forms for integration.

The Fall Term is given to the study of more complicated forms of integration and the usual applications of the principles of Integral Calculus to the determination of volumes and surfaces, rectification of curves, centers of gravity, and moments of inertia.

Text-book: Granville's *Differential and Integral Calculus.*

THEORY OF EQUATIONS AND DETERMINANTS.

VI. This course is given chiefly by lectures based on the treatment of these subjects in Fine's College Algebra and Burnside and Panton's Theory of Equations. The course includes special work in Advanced Algebra and is designed for students who wish to specialize in Mathematics. It is given three times per week during the entire year.

ADVANCED CALCULUS AND DIFFERENTIAL EQUATIONS.

VII. This course is given two times per week during the entire year and is open to students who have had Courses I to VI inclusive.

GENERAL ASTRONOMY.

VIII. This course is given two times per week during the entire year and is open to all students.

A general view of the subject will be given by text-book and lectures and frequent use of an 18-inch celestial globe.

Class-room work will be supplemented by the identification of the principal constellations and by the use of the 8-inch refracting telescope in the observatory.

XII. DEPARTMENT OF MODERN LANGUAGES.

Professor Zembrod and Associate Professor Melcher.

The Department of Modern Languages offers a fours years' course in the German Language and Literature; a three years' course in the French Language and Literature; a course of one year each in the Spanish and Italian Languages.

The Department Library has been considerably increased in the last two years, and new books are constantly added.

The following are the courses offered:

GERMAN.

I. FRESHMAN. Bierwierth's *Elements of German;* Storm's *Immensee;* Hillern's *Hoeher als die Kirche;* Hatfield's *German Lyrics;* Howe's *German Prose Composition.*

II. SOPHOMORE. Eichendorff's *Aus dem Leben eines Taugenichts;* Hatfield's *German Lyrics* or equivalent; Heine's *Harzreise Buch der Lieder;* Meyerfoerster's *Karl Heinrich;* Schiller's *Wilhelm Tell, Lyrics;* German Prose Composition.

III. JUNIOR. Lessing's *Minna von Barnhelm; Emilia Galotti;* Schiller's *Der Neffe als Onkel, Maria Stuart;* Goethe's *Egmont; Poems; Goetz von Berlichingen.*

IV. SENIOR. Goethe's *Faust, Part I;* Lessing's *Nathan der Weise;* History of German Literature in the 18th and 19th Centuries.

FRENCH.

I. SOPHOMORE. Fraser and Squair's *French Grammar;* Elementary French Reader; Verne's *Michel Strogoff.*

II. JUNIOR. Fraser and Squair's *French Grammar;* Bowen's *French Lyrics;* French Prose 19th Century; Selections from Gautier; Lamartine; Hugo; Collateral Reading.

III. SENIOR. Fraser and Squair's *French Grammar;* French Classical Literature of the 17th Century; Selections from Corneille, Racine, Moliere; Collateral Reading; History of French Literature.

I. SPANISH.

Edgren's *Elements of Spanish Grammar;* Traub's *The Spanish Verb;* Bransby's *A Spanish Reader.*

I. ITALIAN.

Grandgent's *Italian Grammar;* Bowen's *Italian Reader.*

SCHEDULE OF STUDIES FOR THE DEGREE OF A. B. (MAJOR MODERN LANGUAGES.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Afternoon	Credits
Freshman	1	English I 3	Mathematics I 5	History I 2 W. F. Germ. I 3 M.T.Th.	Latin I 5		7.2
	2	English II 3	Mathematics III 5 German I 1 Sat.	History I 2 W. F. German I 2	Latin I 3		4.8
	5	English III 3	Mathematics III 5 German I 1 Sat.	History I 2 W. F. German I 2	Latin I 3 Botany I 1 T.	Botany I 3 (by appt.)	6.0 18.0
Sophomore	1	Latin II 3	German II 3 French I 1 Sat.	Physics III 3 French I 2	Physiology I 3	English IV 5	8.
	2	Latin II 3	German II 3	Physics III 2 French I 3	Chemistry I 4 M. T. W. Th.	Chemistry I Lab. 2 T.Th.	5.1
	2	Latin II 3	German II 3	Physics III 2 French I 3	Chemistry I 3	Chemistry I Lab. 3	5.1 18.2
Junior	1	Zoology IV 2	French II 3 Spanish I 2	English VIII 2 Latin III 3	German III 2 M.W. Sociology IV 2		6.4
	2	Zoology IV 2	French II 2 Spanish I 2	English VIII 2 Latin III 3	German III 2 M.W. Sociology IV 2		4.5
	3		French II 3 Spanish I 2	English VIII 2 Latin III 3	German III 3 Sociology IV 2		4.5 15.4
Senior	1	French III 2 German IV 3	History III 3	Economics V 2 Eng. XI 2, XIX 1	Astronomy VIII 2 Geology I 2 M. W.	Thesis 2	7.6
	2	French III 3 German IV 2	History III 3	Economics V 2 Meta 2, Eng. XIX 1	Astronomy VIII 2 Geology I 2 M. W.	Thesis 2	5.7
	3	French III 2 German IV 3	History III 3	Economics V 2 Ethics 2, Eng.XIX 1	Astronomy VIII 2 Geology I 2 M. W.	Thesis 2	5.7 19,0

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

XIII. DEPARTMENT OF PHYSICS

Professor Pence, Assistant Professor Webb, Mr. Jenness.

EQUIPMENT.

The Department of Physics will, before September 1, occupy the southern half of the large, three-story, brick building planned and constructed especially to meet the needs of this department and of the technical work of the College of Civil Engineering.

The department is amply provided with well-equipped offices, reading rooms, recitation rooms and laboratories for general work, and also for special work in photometry, photography, optics, heat and electricity.

The lecture room will seat about 180 students and is provided with numerous appliances for a complete course of experimental lectures.

Transparent and opaque projections, projections to show double refraction, diffraction, interference, polarization and specteum analysis are provided for. A fine heliostat provides the lecture table with a stationary beam of sunlight eight inches in diameter. Instruments for experimentation with sunlight can be placed on stone shelves which project from the windows of rooms used for recitation and lectures and the study of optics.

The basement, which is chiefly above ground, is well lighted and has excellent working rooms with concrete floors, among which are a large precision room, the battery room, and a workshop in which in addition to the principal switchboard, dynamos and motors, are lathes and tools for making and repairing apparatus.

From the main switchboard there extends to all laboratories and other workrooms two circuits for direct and alternating currents.

The building has a private telephone system and a hoist for apparatus.

The greater portion of the apparatus for the various lines of work of the department is new and additional apparatus is being added each year.

COURSES.

GENERAL PHYSICS.

I. Text-book and recitations, two hours per week during the

First Term and three hours per week during the Second and Third Terms. For all students in engineering.

PHYSICAL MEASUREMENTS.

II. Six hours per week during the First Term and four hours per week during the Second and Third Terms. Measurements in the mechanics of solids, liquids, and gases, and in heat, sound, light, electricity, and magnetism. For students in Civil and Mining Engineering.

GENERAL PHYSICS.

III. Same as Physics No. I; three hours per week during the First term and two hours per week during the Second and Third Terms. For all students except those in engineering.

PHYSICAL MEASUREMENTS.

IV. Five hours per week, one hour daily, during the First Term. Measurements in the mechanics of solids, liquids, and gases, and in heat. For students in Mechanical Engineering.

PHYSICAL MEASUREMENTS.

V. Same as Physics No. II. Four hours per week during the First Term and six hours per week during the Second and Third Terms. For students in the College of Arts and Science and the College of Agriculture.

ADVANCED PHYSICS.

VI. First Term, three hours per week. Lectures, text-book, and recitations on mechanics, sound, and light. For all students in engineering and for students who take Physics as a major. Elective for others.

Prerequisites: Physics I or III, and II.

ADVANCED PHYSICS.

VII. Second and Third Terms, three hours per week. Lectures, text-book, and recitations on heat, electricity, and magnetism. For all students in engineering and for others who take Physics VI.

ADVANCED PHYSICAL MEASUREMENTS.

VIII. Four hours per week throughout the year. Measurements to accompany Physics VI and VII. For students in Civil Engineering and for students who take Physics as a major.

THESIS.

IX. For students whose major is Physics.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S., (MAJOR PHYSICS.)

		First Hour	Second Hour	Third Hour	Fourth Hour	Afternoon	Credits
Freshman	1	English I 3 History I 1 Th.	Mathematics I 5	Germ. I 3 M. T. Th. History Lec. 1 W.	Botany II Lec. 2	Botany II Lab. 3 Drawing I 2 (by appt.)	8.0
	2	English II 3 History I 1 Th.	German I 1 S. Mathematics III 5	German I 2 History Lec. 1 W.	Chemis. I 2 M. W. Chemistry I 2	Drawing I 2 (by appt.)	5.7
	3	English III 3 History I 1 Th.	Mathematics III 5	Germ. I 3 M. T. Th. History I Lec. 1 W.	Chemistry I 3		4.8 18.5
Sophomore	1	Mathematics IV 5	German II 3	Physics III 3	Physiology I 3	Physics V 2 Botany II Lab. 3	7.6
	2	Mathematics IV 5	German II 3	Prysics III 2 Mathematics V 3		Physics V 2 Chemistry VI Lab. 4	5.7
	3	Mathematics IV 5	German II 3	Physics III 2 Mathematics V 3		Physics V 3 Chemistry VI Lab. 3	5.7 19.0
Junior	1	Zoology IV 2	Physics VI 3 Chemistry IX 2	Mathematics V 5	German III 2 M.W. Astronomy VIII 2	Physics VIII 3	7.6
	2	Zoology IV 2	Physics VII 3 Chemistry IX 2		German III 2 M.W. Astronomy VIII 2	Physics VII 3	4.2
	3		Physics VII 3 Chemistry IX 2		German III 2 M.W. Astronomy VIII 2	Physics VII 3	3.6 15.4
Senior	1		Sociology IV 2 History III 3	English XI 2 M. F. English XIX 1 W.	Geology I 2 M. W.	Physics IX 5	6.0
	2		Sociology IV 2 History III 3	Metaphysics 2 M.F. English XIX 1 W.	Geology I 2 M. W.	Physics IX 5	4.5
	3		Sociology IV 2 History III 3	Ethics 2 M. F. English XIX 1 W.	Geology I 2 M. W.	Physics IX 5	4.5 15.0

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

THE COLLEGE OF AGRICULTURE.

FACULTY AND ASSISTANTS.

JAMES KENNEDY PATTERSON, Ph. D., LL. D.,
President.

CLARENCE WENTWORTH MATHEWS, B. S., Dean,
Professor of Horticulture and Botany.

JOHN JULIAN HOOPER, M. S. A.,
Professor of Animal Husbandry and Agriculture.

GEORGE ROBERTS, B. Ped., M. S.,
Chemist of Ky. Ag. Experiment Station. Acting Professor of Soil Physics.

ARTHUR McQUISTON MILLER, A. M.,
Professor of Geology and Zoology.

FRANKLIN ELLIOTT TUTTLE, Ph. D.,
Professor of Chemistry.

JAMES GARRARD WHITE, A. M.,
Professor of Mathematics and Astronomy.

JOSEPH WILLIAM PRYOR, M. D.,
Professor of Anatomy and Physiology.

MERRY LEWIS PENCE, M. S.,
Professor of Physics.

ALEXANDER ST. CLAIR MACKENZIE, M. A., F. R. S. L.,
Professor of English and Logic.

ALFRED CHARLES ZEMBROD, A. M.,
Professor of French and German.

WALTER ELLSWORTH ROWE, C. E.,
Professor of Civil Engineering.

PHILIP W. CORBUSIER,
First Lieutenant, U. S. A., Commandant.

MISS ELIZABETH SHELBY KINKEAD,
Lecturer on English Literature.

ALFRED HOLLEY GILBERT, B. S.,
Asistant Professor Botany and Horticulture.

MISS SUE DOBYNS McCANN, M. S.,
Instructor in Entomology.

WILLIAM DURRETT NICHOLLS, B. S. Agr.,
Instructor in Dairy Husbandry.

GEORGE B. WILKEN,
Instructor in Farm Mechanics.

GEORGE THOMAS SCOTT,
Student Assistant in Horticulture and Botany.

KENNETH ODIN CAYCE,
Student Assistant in Agriculture.

MISS LUCY KELLER HUTCHCRAFT, A. B.,
Secretary to the Dean.

THE COLLEGE OF AGRICULTURE.

Through an enactment of the Legislature of Kentucky, the Department of Agriculture of this institution became in 1908 The College of Agriculture, and during the same year it entered the new Agricultural Building.

The fundamental purpose of the College of Agriculture is to give instruction of both a scientific and practical character in the very diverse subjects which are most concerned in the varied lines of industry comprised within the scope of the general term "agriculture."

In order to meet the varied needs of young men desiring such an education, the college has arranged three distinct courses in agriculture, involving different grades of work and requirements of admission, and different periods of residence at the College. These include a regular four-years' course of full collegiate rank, leading to a University degree; a two-years' course for young men who from lack of time and opportunity for a high-school education are unable to take a four years' course; and lastly, the short winter course of ten weeks, for young and mature men directly from the farm, designed to apply in its teachings the results of scientfic investigation and the ripest farm experience to the practical business of farming.

BUILDINGS AND EQUIPMENT.

The Agricultural Building, which was erected in 1907-08, is located upon the southwest corner of the University campus and is a structure 45x100 feet in size, three stories in height above a roomy basement, and is designed as a wing of a much larger structure which the growing interest in agricultural education will probably necessitate in the near future.

The construction is of the most thorough and substantial character, the materials being native limestone for the foundation, with Maysville pressed brick and Bedford stone for the superstructure, the whole being covered with a roof of red tiles. The basement contains large rooms for farm mechanics, farm machinery, a potting and propagating room, together with space for the heating plant. Upon the first floor is the office of the

Dean, adjoining which is a private laboratory, and nearby are the Horticultural lecture room, and general and advanced Botanical laboratories. Upon the second floor are the office of the professor of Agronomy and professor of Animal Husbandry, a lecture room for Animal Husbandry, and laboratories for Soil Physics and Agronomy. A feature of special interest upon this floor is a beautiful room provided with fireplace and attractive mission furniture, which serves as a reading-room and a meeting place for the student organizations. A large number of the best agricultural and other periodicals are kept here on file at the service of the students of the College.

Upon the third floor a commodious room is provided for the meetings of the Grange and other farmers' organizations or college assemblies. This floor also contains an advanced laboratory, the agricultural museum, and a photographic laboratory, with dark rooms both for students' and instructors' use. This laboratory has a superior equipment for giving instruction to advanced students, and for the preparation of lantern slides and enlargements for the use of the various departments, and for the illustration of theses and other studies prosecuted in the College of Agriculture.

The lecture rooms in the building are provided with opera chairs, electric projection lanterns, and other appliances for illustrative and demonstrative purposes.

The laboratories for Agronomy and Horticulture are large and abundantly lighted and suitably equipped with gas, water, and electric current for carrying on the work of the department. The botanical laboratories are provided with individual tables, with the most approved forms of microscopes, microtomes, ovens and sterilizing apparatus, balances, charts, etc., in accordance with their several requirements.

All the rooms are exceptionally well lighted with large windows, and by night with both gas and electric lamps. Every room is also provided with ventilating shafts for ensuring a constant change of air during class exercises.

Adjoining the building upon the rear there has been erected a laboratory greenhouse, 24x50 feet in size, for the use of classes in Botany, Horticulture and other studies involving experimental work with living plants. The main greenhouses upon another

portion of the University grounds also provide abundant material for the use of classes in botany.

For botanical instruction there is also an extensive herbarium which contains a nearly complete representation of the flora of Kentucky, together with a large number of foreign exchanges. This is due primarily to the efforts of the late Dr. Robert Peter who made an extensive collection of Kentucky plants about sixty years ago, and also exchanged specimens with the prominent botanists of that day, thus forming the nucleus of the present collection, which therefore possesses considerable historic value. The herbarium is constantly growing by means of collections and exchanges.

A small frame building upon another part of the grounds is well equipped with facilities for instruction in farm dairying.

Among the additional facilities for agricultural instruction, there is installed in the basement of the new building a growing collection of the best farm implements and machinery, most of which has been loaned or donated by the manufacturers.

In many features of the college instruction, the extensive equipment of the Experiment Station farm, a few minutes' walk from the college campus, incidentally affords unusual opportunity for supplementary and illustrative instruction. A large herd of Jersey cattle, housed in a commodious and well-equipped dairy barn; extensive and varied plots of field, forage and garden crops, with numerous other experiment studies in progress all the time, afford stimulating and interesting subjects for inquiry throughout a student's course.

The extensive live stock and other agricultural interests of the unrivalled Blue Grass country immediately surrounding Lexington may fairly be considered a vastly enlarged field of laboratory inquiry for all students of agriculture. Frequent visits are made to the various farms in this vicinity, and their owners and managers have manifested a most cordial hospitality, and a willing co-operation in promoting the cause of agricultural education in Kentucky.

THE FOUR YEARS' COURSE.

The regular course in the College of Agriculture requires four years and is of the same rank as that of other college courses. It leads to the degree of Bachelor of Science in Agriculture.

The requirements for admission and the rates for tuition and other fees are identical with those of the candidate for the degree of B. S. in the College of Arts and Science, as are also the conditions for securing the minimum of sixty-nine credits (inclusive of those in Military Science and Physical Education) required for graduation.

The course is designed for those who desire to take a thorough college training, combining liberal culture with specialization in those branches of study directly related to agricultural pursuits. It is arranged primarily to meet the needs of the young man who is familiar with the common operations usually shared in by one who has been reared upon the farm. Such men constitute a large percentage of those who matriculate in Agriculture, and the time of classes, therefore, is not consumed in training undergraduates in the commoner manual operations of farm life.

The young man from the city, who expects to engage in agricultural pursuits, is therefore advised to supplement his college course as fully as possible by practical experience upon one or more well managed farms. This can often be advantageously done during the summer vacations.

It should not be understood, however, that the practical operations of the farm are ignored. On the contrary, great care and considerable time are devoted to giving instruction in many highly important operations, which involve special knowledge or a high degree of skill. Thus the student is taught to take levels, test the draft of implements and vehicles, take apart and reassemble farm machines and engines; perform the operations of grafting, pruning, spraying, and hybridizing; test milk, to make high class butter; and is given practice in judging a variety of animals.

Provision is made for the selection by the student of a major subject for the latter part of his course, thus permitting him, within certain limits, a choice of studies during the Junior and Senior years. Even in these years, however, a considerable number of subjects are required of all.

While including a certain minimum of each of the following named subjects during these four years, he may take in his later years advanced lines of instruction in one or two of them, to the exclusion in part of the remaining subjects.

At present the student may select his major study in Agronomy, Animal Husbandry, Horticulture, Economic Entomology, Economic

Botany, or Agricultural Chemistry. As these branches of instruction are further subdivided, and others are added to the curriculum in later years, the range of selection will doubtless be increased.

To secure the degree of the College of Agriculture, a student must be able to offer a minimum of 69 credit hours, inclusive of those required in Military Science and Physical Training, in agreement with the requirements of the College of Arts and Science.

The term "credit hour," or briefly a "credit," as used in this College, is defined as the satisfactory completion of a study involving lectures or recitations for one hour per week for one year, or laboratory work for two hours per week for the same period.

Military Science and Physical Training are classed as laboratory work.

Persons excused from Military Science or Physical Training, for disability or any other cause, must offer an equivalent number of credits in some other subjects.

A student must take a sufficient amount of work each year to secure at least 14 credits, and he will not be allowed for the same time more than 18 credits, exclusive of those in Military Science or Physical Training.

COLLEGE OF AGRICULTURE. SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. IN AGRICULTURE.

		FIRST HOUR, 8-9 A. M.	SECOND HOUR. 9-10 A. M.	THIRD HOUR. 10:30-11:30	FOURTH HOUR. 11:30-12:30	FIFTH AND SIXTH HOURS. 1:30-3:30
FRESHMAN	1	English I 3	Math. I 5	Germ. I 3 (M-T. Th.) Hist. I 2 (W. F.)	Physiol. I 3	Drawing I 2 (days by appt.)
	2	English II 3	Math. III 5	Germ. I 2 Hist. I 2 (W. F.)	Chem. I 4. (M. T. W. Th.)	Drawing I 2 (days by appt.) Chem. I Lab. 2
	3	English III 3	Math. III 5	Germ. I 2 Hist. I 2 (W. F.)	Chem. I 3 Botany I lec. 1 (T)	Botany I 3 (days by appt.) Chem. I Lab. 3
SOPHOMORE	1	Zoology IV 2 Soil Physics 3		Physics III 3	Geol. I 2 (M. W.) Botany II lec. 2	Zool. I Lab. 3 (by appt.) Botany II Lab. 3 (by appt.)
	2	Zoology IV 2 Cereals 3	Plant Culture 2	Physics III 2	Geol. I 2 (M. W.) Botany II lec. 2	Plant Cul I (by appt.) Zool. II 3 (M. T. Th. Botany II 3 (by appt.) Cereals I (M.)
	3	Fruit Culture 2	Forage Crops 2	Physics III 2	Geol. I 2 (M. W.) Botany III 2 lec.	Zool. III 3 Botany Lab. III 2 Surveying 2 Fruit Cul. 1
JUNIOR	1	Study of Breeds 3 Entomology I 2	Hort. III 2 Botany IV 3	Botany IV 3	Farm. Equip. 3 Sociol. IV 2	Study of Breeds (Sat.) Farm Equip. 1 (W.) Hort. III 1 (by appt.)
	2	Study of Breeds 2 Entomology III 3	Anim. Nutrition 3		Vet. Science 3 Sociol. IV 2	
	3	Live Stock 3 Entomology III 2	Dairying 2 Botany V 3	Agronomy V 2 Botany V 3 Hort. IV 2	Agronomy IV 3 Sociol IV 2. Expt. Sta. Lit. 3 (by appoint.)	Dairying 3 (W. Th. F.) Bot. VI. lab. 1 or 2 (by appt) Hort. IV Lab. 1 (by appt.)
SENIOR	1	Prin. of Breeding 2	Sociol. IV 2	Econom. V 2 Eng. X 2 (M. F.) Eng. XIX 1 (W.)	Adv. Dairying 2	Prin. of Breeding I (Th.) Agri. Chemistry (by appt.) Entomology IV 3 (by appt.)
	2		Sociol. IV 2 Hort. VI 2	Econom. V 2 Eng. XI 2 (M. F.) Eng. XIX 1 (W.)	Elective	Thesis Entomology V 2 (by appt)
	3		Road Const. 2 Sociol. IV 2 Hort. VI 2	Econom. V 2 Eng. XI 2 (M. F.) Eng. XIX 1 (W.)	Rural Arch 2 Hort. V 1 Lec. (F.)	Thesis Entomology V 3 (by appt.) Hort. V 1 (by appt.)

As previously stated, certain of the subjects placed in the preceding schedule are elective and these are arranged at the beginning of the year by conference with the Dean and with the professor under whom the student takes his major study.

A graduate of the College of Agriculture may become a candidate for the degree of Master of Science in Agriculture by a year of post-graduate study in residence or by three years of study while non-resident. For this purpose he may select any one of the major subjects of his undergraduate course as his major study, and will be assigned one or more minors from collateral courses by the Faculty.

GENERAL OUTLINE OF COURSES.

In addition to the distinctly agricultural subjects which are briefly described below, the student in Agriculture takes a large proportion of his work, particularly in his earlier years, in the subjects included under the College of Arts and Science, many of which are common to several of the colleges of the University.

AGRONOMY

Professor Hooper and Acting Professor Roberts.

SOILS.

I. Fall term required of Sophomores. Lectures M. W. 8. Laboratory F. 8. Three hours per week.

An elementary course covering the nature, origin, function and waste of soils, with special reference to their management in crop production; the chemical, mineral, and physical properties of soil; the influence of air and moisture upon soils; and the objects and methods of tillage.

The principles and practice of farm drainage are considered at some length, and in a less degree, the subject of irrigation.

Text and Reference Books: King's *Physics of Agriculture;* Snyder's *Soils and Fertilizers.*

ADVANCED SOILS.

II. Elective for Juniors or Seniors. Lectures and Collateral reading by appointment. Two hours. Laboratory by appointment. Two hours.

A course covering the physical properties and mechanical analysis of soil; retention and movement of soil moisture.

FARM CROPS, CEREALS.

III. Winter Term. Sophomore. Lectures M. W. 8. Laboratory M. 1:30. Four hours.

A comprehensive study is made of the cereals, with reference to varieties, fertilization, culture, harvesting, uses and marketing. During the laboratory periods considerable attention is given to the judging of corn, and others of the more prominent species.

Text-book: Hunt's *The Cereals in America.*

FARM CROPS.

IV. Spring Term. Junior. Lectures 11:30. Three Hours.

An advanced course covering investigations upon the best methods of crop production, including the study of experimental results with those important Kentucky crops not discussed in Course III.

FARM CROPS, GRASSES AND FORAGE CROPS.

V. Spring Term. Sophomore. Lectures T. Th. 9. Two hours.

In this course the various grasses best adapted to Kentucky conditions are considered with reference to their habit of growth, methods and cost of seeding, effect upon the soil, adaptability to different sections of the State, feeding value, etc. The grass plots upon the Experiment Station farm are among the most complete in this country, and afford valuable illustrative material for this course.

Text-books: Hunt's *Forage Crops;* Voorhees' *Forage Crops.*

FARM EQUIPMENT AND MANAGEMENT.

VI. Fall Term. Junior. Lectures M. W. F. 11:30. Laboratory W. 1:30. Four Hours.

Lectures and practical exercises on the selection and equipment of the farm, the arrangement and plans of farm buildings, and the study of sources of power; of farm engines; farm machinery; water supply, etc.

Text-book: *"Farm Machinery"* by Davidson & Chase.

ANIMAL HUSBANDRY.

Professor Hooper and Instructor Nicholls.

STUDY OF BREEDS AND LIVE-STOCK JUDGING.

I. Fall Term. Junior. Lectures M. W. F. 8. Laboratory Sat. A. M. Four Hours. Winter Term T. Th. 8. Two Hours

In beginning this course the student is made familiar with the various market types of horses, cattle, sheep, and swine. Different points of excellence of the perfect animal are considered. Following this each breed of live stock is discussed with reference to its origin, history, and development, introduction to America and adaptability to Kentucky conditions. Live stock representing the different market and breed types are brought before the class, and this work is supplemented by the use of lantern slides in connection with lectures. Visits are frequently made to the famous stock farms near Lexington, and in December the class visits the International Live-Stock Exposition at Chicago. During the course occasional demonstrations are provided for the purpose of studying the different cuts of meat.

Text-books: Craig's *Judging Live Stock;* Plumb's *Breeds of Farm Animals.*

PRINCIPLES OF BREEDING.

II. Fall Term. Senior. Lectures T. Th. 8. Laboratory Th. 1:30. Three Hours.

The course embraces the study of the principles of breeding, including selection, heredity, atavism, variation, with a presentation of the methods of breeding, in-and-in breeding, cross-breeding, etc., and a historical study of their results. The latter part of the term is devoted to the study of pedigrees of the best individuals in the more popular breeds of horse, cattle, sheep, and swine. The student tabulates the results by means of the registry books of the various breeders' associations.

Reference Works: Davenport's *Breeds and Breeding,* and numerous registry books.

VETERINARY SCIENCE, AND HORSE-SHOEING.

III. Winter Term. Lectures M. W. F. 11:30 Three Hours.

A general course in which the student is made acquainted with the fundamental principles of animal anatomy and physiology, followed by a discussion of the causes, treatment, and methods of preventing the common diseases of horses, cattle, sheep and swine, including also a discussion of veterinary obstetrics. This course is concluded by a discussion of the proper method of shoeing horses, and the treatment of the different ailments of horses' feet. Some time is spent at a local farrier's shop in the study of the proper manner of trimming and shoeing different shaped feet and the use of pads, leather soles, etc.

Text-book: Reynold's *Veterinary Studies.*

ANIMAL NUTRITION.

IV. Winter Term. Junior. Lectures M. W. F. 9. Three Hours.

A comprehensive study is made of the various food-stuffs offered in the local and general markets of the country, and the students are given training in compounding rations for the different animals of the farm. Valuable observations are made in this subject on the farms visited by the students, and the varied experiments in progress on the Experiment Station farm also afford facilities for illustrative purposes.

Text-book: Henry's *Feeds and Feeding* and Smith's *Profitable Feeding.*

LIVE STOCK MANAGEMENT.

V. Spring Term. Juniors. M. W. F. 8. Three Hours.

This course includes a discussion of the proper methods of housing, feeding, and management of the different types of farm animals, the relation of crop rotation and management to the care and profitable handling of live stock, and the different methods of managing animals for specific purposes.

DAIRYING.

VI. Spring Term. Junior. Lectures T. Th. 9. Laboratory W. Th. F. 1:30. Five Hours.

A study of the production, composition and testing of milk, cream separation, pasteurizing and marketing. This is followed

by the study of cream ripening and the manufacture of butter and cheese. A study is made of butter and cheese factory construction. The class-room work is supplemented by practical work in the Dairy laboratory.

Text-books: Van Norman's *Lessons in Dairying.* McKay and Larsen's *Principles of Butter Making.*

ADVANCED DAIRYING.

VII. Fall Term. Senior. Lectures T. Th. 11:30.

The course provides for senior students who desire to specialize along dairy lines. The course consists of lectures, supplemented by collateral reading in Experiment Station and other literature, together with practical laboratory work suggested by the student's readings and his personal interests.

EXPERIMENT STATION LITERATURE.

VIII. Spring Term. Junior. Three Hours by appointment.

This course consists of a study of the results of experiments at the various Agricultural Experiment Stations in the country, as published in their bulletins, relating to the feeding and management of the various classes of domestic animals. Students will be given individual assignments of subjects of this character for the study of results of Station investigations, and will present these reports from time to time to the assembled class for discussion and criticism.

RURAL ARCHITECTURE.

IX. Spring Term. Senior. T. Th. 11:30. Two Hours.

The course includes a discussion of the arrangement, location, construction, and equipment of farm buildings, particularly of stock barns, silos and other structures concerned in the feeding and management of live stock. The numerous fine barns in the vicinity of Lexington afford excellent illustrative material for this work.

HORTICULTURE.

Professor Mathews and Assistant Professor Gilbert.

PRINCIPLES OF PLANT CULTURE.

I. Winter Term. Sophomore. Lectures T. Th. 9. Laboratory by Appointment. Three Hours.

A review of the fundamental activities of plant life with special reference to the growth of farm and garden crops—the plant as influenced by normal and abnormal temperatures; by its supply of water, light, food, etc.; and the effect of parasites, soil conditions, etc. A further study is made of such practical details as propagation, seed selection, transplanting and pruning.

Text and Reference books: Golf's *Plant Culture;* Bailey's *Lessons with Plants;* Bailey's *Nursery Book;* Percival's *Agricultural Botany.*

PRINCIPLES OF FRUIT GROWING.

II. Spring Term. Sophomore. Lectures T. Th. 8. Laboratory one hour by appointment. Two or Three Hours.

A study of the principles and practice of home and commercial fruit-growing. It includes a consideration of the principles involved in location, climatic conditions, orchard plans, planting and management, harvesting, transportation, marketing, cold storage, etc.

Lectures. Text-books: Bailey's *Principle of Fruit Growing;* Goff's *Lessons in Fruit Growing;* Waugh's *Fruit Harvesting, Storing and Marketing;* together with numerous other reference books.

GENERAL POMOLOGY.

III. Fall Term. Junior. Lectures T. Th. 9. Two Hours. Laboratory elective. Hours by appointment. One or two hours.

A study of the origin, history, characteristics, adaptation to Kentucky conditions, and management of orchard and garden fruits. Further consideration is given to harvesting, marketing, cold storage, etc.

Judging and scoring of apples, pears, nuts, and other available fruits.

OLERICULTURE OR VEGETABLE GARDENING.

IV. Spring Term. Lectures T. Th. 10:30. Laboratory by appointment. 1:30. Three or four hours.

A study of the principles of vegetable-growing for home and market, considered with reference to culture in the field, and forcing under glass.

Lectures. Text-books: Bailey's *Principles of Vegetable Gardening;* Green's *Vegetable Gardening.* Numerous books and pamphlets for reference.

THE HOME GROUNDS.

V. Spring Term. Senior. Lectures F. 11:30. Laboratory and field trips. 1:30 by Appointment. Two Hours.

A discussion, largely illustrated by lantern slides, of the arrangement, planting and care of ornamental trees, shrubs and other flowering plants for the adornment of the grounds about the home.

GREENHOUSE CONSTRUCTION AND MANAGEMENT.

VI. Winter and Spring Terms. Junior or Senior. Lecture and Laboratory hours by appointment. Two Hours.

WEATHER FORECASTING.

The Observer of the United States Weather Bureau located at the State University, Mr. G. Harold Noyes, annually gives a number of lectures by appointment to the classes in Agronomy and Horticulture upon the principles underlying weather forecasting, and its utility to the farmer and fruit or truck grower.

ELEMENTARY PHOTOGRAPHY.

Spring Term. Senior. Lecture and Laboratory hours by appointment. Two Hours.

Designed to give a brief survey of the principles involved in photography, and some practice in the manipulation of the camera and other photographic accessories, particularly in connection with scientific studies. Arranged primarily to aid Senior agricultural students in the illustration of their theses, when such illustration is desirable.

BOTANY.

Professor Mathews and Assistant Professor Gilbert.

ELEMENTARY BOTANY.

I. Spring Term. Freshman. Lectures T. 11:30. Laboratory. M. W. F. 1:30. Four Hours.

This course consists of a study of the elements of structural botany and plant physiology, with determination of a number of species of the flowering plants.

During the course participation in one or more trips to neighboring points of botanical interest will be required. Expense 75c to $1.00 each.

Text-books: Bergen and Davis' *Principles of Botany* and *Laboratory Manual.* Reference books: Gray's *Manual of Botany* and Bailey's *Lessons with Plants.*

GENERAL BOTANY.

II. Fall Term. Sophomore. Lectures T. Th. 11:30. Laboratory M. T. Th. or by appointment, 1:30. Five Hours.

Winter Term. Lectures T. Th. 11:30. Laboratory by appointment. Five Hours.

The work of the course comprises a general survey of the morphology and physiology of plants, and is designed to give the student who goes no further with the subject a comprehensive view of the entire vegetable kingdom, while for the student who will continue his botanical study it is intended to afford a substantial basis for more exhaustive special studies. While it is accompanied with lectures and recitations, the laboratory method is the form of instruction principally used, and from the very beginning of his work the pupil is directed to the study of plants themselves, using the text-books as an aid to correct his mistakes and to enlarge his field of view.

Text-books: Bergen and Davis' *Principles of Botany* and *Laboratory Manual.* Reference Works: Campbell's *Evolution of Plants.* Campbell's *Text-book of Botany.* Strasburger's *Text-book of Botany.*

SYSTEMATIC BOTANY.

III. Spring Term. Sophomore. Lectures T. Th. 11:30. Laboratory by appointment. Four Hours.

This course involves practice in the description and identification of the ferns and flowering plants, with special reference to those groups which are of economic importance. As in Course I, one or more field excursions may be required.

Reference books: Bergen and Davis' *Principles of Botany.* Gray's *Manual of Botany* and Gray's *Field, Forest and Garden Botany.*

PLANT HISTOLOGY.

IV. Fall Term. Lectures and Laboratory M. W. F. 9 to 11:30. Three Hours.

The student is given instruction and training in collodion, paraffin and other methods of preparing vegetable tissues for microscopic study. This is accompanied and followed by a study of the slides so prepared.

Text-book: Chamberlain's *Methods in Plant Histology.*

PLANT PHYSIOLOGY AND PATHOLOGY.

V. Spring Term. Lectures and Laboratory work M. W. F. 9 to 11:30. Three Hours.

This course is designed to present the main facts and principles of plant physiology, and to take up briefly by the aid of collected specimens and greenhouse materials, a study of some of the more important diseases of plants, with a discussion of remedies.

THE PLANT KINGDOM.

VI. Junior or Senior. Lectures T., Th., 11:30. Laboratory 1:30 by appointment. Three or four hours.

A general course which is arranged primarily for classical students, hence more fully outlined under College of Arts and Science.

AGRICULTURAL CHEMISTRY.

Professors Tuttle and Maxson.

AGRICULTURAL ANALYSIS.

I. Winter Term. By appointment. Eight or more laboratory hours per week. Elective. Junior or Senior.

This course in quantitative analysis is arranged primarily for students of Agriculture. The elements of quantitative analysis are studied with special reference to the constituents of soils, fertilizers and agricultural products.

Prerequisite: Elementary inorganic chemistry of the Freshman year and the qualitative analysis of the first term Sophomore. See courses in Chemistry in College of Arts and Science.

ENTOMOLOGY.

Miss McCann.

GENERAL ENTOMOLOGY.

I. Fall Term. T. Th. Two hours.

An elementary course comprising a study of the characteristics of the orders, sub-orders, and important families of insects.

ECONOMIC ENTOMOLOGY.

II. Winter Term. M. W. F. 8. Three hours. Spring Term. T. Th. 8. Two hours.

A course designed to familiarize the agricultural student with the more important noxious insects and with the methods of combating them.

Advanced courses III (Advanced Economic Entomology), IV (Life-histories), VI (Systematic Entomology), in the department of Entomology in the College of Arts and Science, are open as electives to Agricultural students who have taken I and II.

RURAL ENGINEERING.

Professor Rowe and Assistant Professor Terrill.

LAND SURVEYING.

I. Spring Term. Sophomore. W. F. Laboratory 1:30. Two hours.

An elementary course in land surveying methods and the use of surveying instruments, with recitations, lectures and field work. The field work affords practice in the use of chain, tape, compass, transit and level.

ROADS.

II. Spring Term. Junior or Senior. Lectures 9 T. Th. Two hours.

Highways and highway construction. Road Material, Macadam Roads, Sand Clay Roads, Gravel Roads. Specifications for roads. Recitations, assigned readings and report.

Other courses in the School of Civil Engineering are offered elsewhere in this catalogue.

THE TWO YEARS' COURSE IN AGRICULTURE.

While it is felt that the four years' course in Agriculture is none too long a course of preparation for those who expect to engage in agricultural pursuits, it is clearly recognized that there are many young men whose circumstances make it impossible for them to devote to their education as large an amount of time or money as is involved in the completion of a full college course.

It is believed that an earnest young man who desires to excel in his chosen occupation of farming may be greatly benefited by a less extended training in the Agricultural College.

Applicants for admission to this course must be at least eighteen years of age, and unless more than twenty-one years of age, must pass an examination in Arithmetic, Geography, Grammar, and United States History, or bring High School or other satisfactory certificates for these branches.

Applicants who are over twenty-one, are admitted without examination, on trial, provided they can write a creditable letter, can carry on ordinary arithmetical operations, and give evidence by

their credentials and personal bearing, of having a serious purpose in entering the course.

It should be clearly understood that this shorter course does not lead to a degree, and no study taken in pursuing this course will be afterwards credited toward the full course leading to a degree, except with the approval of the College Faculty.

The two years' course is of necessity a somewhat flexible one, varying with the preparation of the individual student, but the following schedule is given to show approximately what will be assigned to the average student.

The conditions relating to matriculation, fees, military drill, gymnasium practice, and other college privileges and duties are the same as those pertaining to full course students.

It is coming to be seen by all intelligent people that success in farming, as in any other occupation, can come only as a result of a clear, definite knowledge of the subject. Such knowledge may come partly through long personal experience, often a costly method of obtaining it; much of it through an intelligent use of the agricultural press, and through attendance upon farmers' institutes and other means of information.

It is believed that a young man can get much valuable acquaintance with the principles and application of Agricultural Science more easily and with less expense at an agricultural college than by his experience on the farm alone.

In accordance with this belief, and to meet the needs of young men who for any reason cannot take the more extended courses, the College has for several years been conducting

THE SHORT WINTER COURSE IN AGRICULTURE.

This course begins in the first week of January of each year and extends through a period of ten weeks, thus coming at a time when the farmers' sons can most easily be spared from service at home. It emphasizes the practical and business aspects of farming as a means of livelihood and is aimed to meet the needs of young men, either farmers or farmers' sons, who wish to secure a more thorough preparation for their life-work, and is designed to give instruction of the most helpful and practical kind possible.

As it aims primarily to aid the young man upon the business side of farming, not especially in the direction of academic scholar-

ship, there are no examinations for admission as in the longer courses. The applicant, however, must be at least seventeen years of age, and it is essential that he should have a good common school education, and the more thorough and extensive his general education has been, the more benefit he will derive from the course. It is particularly important that he should have had good training in English and Arithmetic, as short course students are sometimes seriously handicapped by their deficiencies in these subjects.

Tuition is free to residents of Kentucky. Non residents pay a nominal fee of $5.00 for matriculation.

Persons interested in this course should write for the *Short Course Circular* which will be sent, upon application to the Dean, College of Agriculture, State University, Lexington, Ky.

TWO YEARS' AGRICULTURAL COURSE.

		First Hour 8-9	Second Hour 9-10	Third Hour 10:30-11:30	Fourth Hour 11:30-12:30	Afternoon 1:30-3:30
First Year	1	Soil Physics 3 Zoology IV 2	Elemen. Botany 2	English 3 Elemen. Botany 2	Farm Equipment 3	Farm Equipment (W) Drawing 2 (by appt.) Zoology 3
	2	Cereals 3 Zoology IV 2	Plant Culture 2	English 3	Chemistry 4 (M. T. W. Th.)	Chemistry 2 Drawing 2 Zoology 3
	3	Fruit Culture 2	Forage Crops 2	English 3 Botany I lec. 1 (T)	Chemistry 3	Botany I 3 (by appt.) Chemistry 3
Second Year	1	Study of Breeds 3 Entomology I 2	Pomology 2	Economics V 2	Botany 3 Physiology 3	Study of Breeds (Sat.) Botany 3
	2	Entomology I 3	Animal Nutrition 3	Economics V 2 Dairying 3	Veterinary Science 3	Dairy Lab. 2 Wood Work 3
	3	Live Stock Management 3 Entomology II 2	Road Construction 2	Economics V 2	Home Grounds 1 lec. (F.) Animal Nutrition 3 Rural Architecture 2	Dairy 3 (W. Th. F.) Home Grounds 1 (by appt.)

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays; except as indicated.

COLLEGE OF CIVIL ENGINEERING

FACULTY AND ASSISTANTS

JAMES KENNEDY PATTERSON, Ph. D., LL. D., President.

WALTER ELLSWORTH ROWE, C. E.,
Dean, Professor of Civil Engineering.

JAMES GARRARD WHITE, A. M.,
Professor of Mathematics and Astronomy.

MERRY LEWIS PENCE, M. S.,
Professor of Physics.

FRANKLIN E. TUTTLE, Ph. D.,
Professor of Chemistry.

ALEXANDER ST. CLAIR MACKENZIE, M. A., F. R. S. L.,
Professor of English Language and Literature.

ARTHUR McQUISTON MILLER, A. M.,
Professor of Geology and Zoology.

LEON KAUFMAN FRANKEL, M. E.,
Professor of Mechanics.

WILLIAM JOSEPH CARREL, C. E.,
Assistant Professor of Civil Engineering.

ROBERT CRAIG TERRELL, C. E.,
Assistant Professor of Rural Engineering.

RALPH NELSON MAXSON, Ph. D.,
Professor of Chemistry.

JOSEPH MORTON DAVIS, A. B., B. S.,
Assistant Professor of Mathematics.

WILLIAM SNYDER WEBB, M. S.,
Assistant Professor of Physics.

PHILIP WORTHINGTON CORBUSIER, 1st Lieut., U. S. A.

ELIJAH LATHAM REES, C. E.,
Assistant in Mathematics.

LEO LOGAN LEWIS, B. M. E.,
Instructor in Drawing.

CHARLES EDGAR SCHOENE, B. M. E.,
Instructor in Descriptive Geometry.

HAROLD HARDESTY DOWNING, B. C. E.,
Instructor in Surveying.

W. WALTER H. MUSTAINE, B. S.,
Professor of Physical Training.

COLLEGE OF CIVIL ENGINEERING

Professor Rowe, Assistant Professors Carrel and Terrell.

The College of Civil Engineering was organized September, 1887, and has had a steady and uninterrupted growth from the beginning.

The home of the College of Civil Engineering will be in the new Civil Engineering and Physics Building, which is nearing completion. This building is a large three-story brick, trimmed with cut stone, and has a floor area of about forty thousand square feet. The lecture rooms, laboratories, and offices are located in this building. With the increased facilities for doing work, the College of Civil Engineering will be able to greatly increase the quantity and quality of its work, as well as to better organize the department.

The Transit.—For the past four years the students of the College of Civil Engineering have published the "Transit," a monthly University magazine. This publication has filled a great need at the University.

The Brooks Engineering Society, named in honor of the former Dean of the College, is a flourishing organization and gives abundant opportunity for the discussion of general and special engineering topics.

EQUIPMENT.

The field and office equipment belonging to the department consists of nine transits, five engineers' levels, two solar attachments, one needle compass, one plane table, one precise pantograph, one planimeter, one Thatcher computing machine, one set of splines, six hand levels, one sextant, one aneroid barometer, one cement testing machine, one set of railroad curves, level rods, cross-section rods, tapes, flags, and minor accessories.

LIBRARY.

The library for the use of engineering students contains a well selected supply of standard literature and periodicals pertaining

especially to engineering, and to this library numerous additions are made yearly.

AIMS.

The Course of Civil Engineering is planned to give the student a knowledge of the subjects necessary to enable the civil engineer to develop himself into a skillful practitioner of his profession in any of its branches. So far as possible, the importance of each subject taught is illustrated by its application to some work similar to that which is met with in actual practice. An effort is made to make the course valuable, not only for the professional uses, but also from an educational standpoint; therefore, while the student is learning each subject, both theoretically and practically, the training of his mind as well as the needs of the profession are kept in view. In addition to the purely technical matters included in the course, provision is made for the study of English, Mathematics, Physics, Chemistry, Geology, History, and Economics.

DEGREES.

The courses of study in Civil Engineering lead to the degree of B. C. E. (Bachelor of Civil Engineering).

The advanced degree of C. E. (Civil Engineer) may be granted to a resident student in one year from the date of taking the B. C. E. degree from the State University of Kentucky, or any other institution of equal requirements, provided the work assigned has been satisfactorily completed, the required examinations passed, and an acceptable thesis presented.

The advanced degree of C. E. (Civil Engineer) may also be granted to a non-resident student, who is a graduate of the State University of Kentucky, three years after graduation, if the candidate has been engaged in practical engineering work during that time, passes the required examinations, and presents an acceptable thesis.

COURSE OF STUDY.

Professor Rowe, Assistant Professors Carrel and Terrell.

I.—DRAWING.

a. GEOMETRICAL PROBLEMS. Detail and dimension drawing, pen topography, free-hand and mechanical lettering.

b. DESCRIPTIVE GEOMETRY. A study of the representation of lines, planes, surfaces, shades, shadows, and perspectives. Lectures recitations, drawings, and assigned problems.

c. STEREOTOMY. Plane-sided surfaces, structures containing developable surfaces, structures containing double curved surfaces.

II.—SURVEYING AND GEODESY.

a. LAND SURVEYING. An elementary course in land-surveying methods and the use of surveying instruments, with recitations, lectures and field work. The field work affords practice in the use of chain, tape, compass, transit, and level.

b. TOPOGRAPHICAL SURVEYING. The use of the hand level, the theory and use of the stadia and other instruments employed in making a topographical survey are studied; also the methods of topographic surveying. A complete topographic survey is made based on a system of triangulation, including the calculations, and completing as well as platting the map.

c. GEODESY. Base-line measurements, measurements of angles, horizontal and vertical; field methods for time, latitude, longitude, and azimuth. Students are required to make and reduce observations illustrating the work of the course.

III.—APPLIED MECHANICS AND HYDRAULICS.

a. ELEMENTARY STRENGTH OF MATERIALS.—Elastic and ultimate strength; general properties; moments for beams; cantilever and simple beams; columns and struts; the torsion of shafts; elastic deformations; resilience of materials; reinforced concrete.

b. ELEMENTARY MECHANICS. Concurrent forces; parallel forces; center of gravity; resistance and work; simple machines; gravity and motion; inertia and rotation.

c. ADVANCED STRENGTH OF MATERIALS. A study of the principles and applications to engineering of the mechanics of solids, as related to the mutual actions, motions, pressures, strength, stiffness, and resilience of the members of structures and machines.

d. ANALYTICAL MECHANICS. Statics of a material point; statics of a rigid body; statics of flexible cords; rectilinear motion of a material point; curvilinear motion of a material point; moment of inertia; dynamics of a rigid body; work, energy, power, and friction.

e. HYDRAULICS. This course consists of text-book exercises to-

gether with the solution of numerous problems covering the principles of hydrostatics and hydrodynamic pressure, the flow of water through orifices and nozzles, over weirs and through pipes and open channels, also the loss from friction and other sources.

f. IRRIGATION AND DRAINAGE. Grades, cross-section and capacity of canals; surveys, design of structures, dams, conduits, levees, etc. Lectures, readings, and collateral reports.

g. MATERIAL LABORATORY. Testing of wood, iron, steel, and cement. This course is given in connection with strength of materials.

h. HYDRAULIC LABORATORY. Experimental hydraulics. Lectures, computations, and drawings.

IV.—MUNICIPAL AND SANITARY ENGINEERING.

a. WATER SUPPLY AND WATERWORKS DESIGN. Requisites of supply; sources of supply; rainfall; surface water; rivers and lakes; ground water; gravity systems; pumping systems; dams and embankments; purification of water; pumping and pumping engines; designing, construction, maintenance.

b. SANITARY ENGINEERING. Sewerage systems, separate and combined; hydraulics of sewers; determination of size and capacity; surveys for drainage systems; design of system in detail; specifications and estimate of cost; inspection of work; methods of disposal; irrigation; filtration; chemical precipitation; bacteriolithic methods; house drainage, garbage disposal.

c. SANITARY DESIGN. This course consists of the study and preparation of maps, profiles, detail of manholes, flush tanks, catchbasins, and all other details necessary to make up a complete design for the collection and purification of sewage.

d. HIGHWAY ENGINEERING. Location of country roads; earthwork; drainage and culverts; bridges; retaining walls; reconstruction and improvement of country roads; maintenance; staking out the work; specifications and contracts; implements and prices.

e. STREETS AND PAVEMENTS. Pavements; material employed in the construction of pavements; resistance to traction. Lectures, assigned readings, and reports.

V.—RAILWAY ENGINEERING.

a. RAILROAD CURVES. An elementary course in the theory of railway curves, with sufficient field practice to give familiarity with field methods.

b. RAILWAY LOCATION. This course consists of the study of economic methods of railway location together with the actual location of a railway line several miles in length, including reconnaissance, preliminary survey, topography, maps, projecting the location, making approximate estimates and final location.

c. RAILWAY CONSTRUCTION. The work in construction will consist of lectures, recitations, and assigned readings in connection with office and field work, including cross-sectioning, calculation of quantities, haul, monthly and final estimate. A complete estimate of quantities and cost of line will be made.

d. RAILWAY MAINTENANCE. Construction and maintenance of track and accessory structures. The improvement of gradient and alignment. The design and maintenance of yards and terminals. Lectures, recitations, and assigned readings.

e. ECONOMICS OF RAILWAY OPERATION. Organization. Relation of management and operation departments to construction and maintenance departments. Block signaling and interlocking. Rapid transit. Employment, education and discipline of force. Accounts and accounting. Reports. Betterments.

VI.—BRIDGE ENGINEERING.

a. STRUCTURAL DRAFTING. The work in structural drafting consists of fifteen plates of structural details. This course is completed before any other work of a structural nature is undertaken.

b. BRIDGE STRESSES. This course is the analytical method of finding stresses in roof and bridge trusses and consists of the following: roof trusses, bridge trusses under live and dead loads, final stresses for bridge trusses, American Bridge trusses, bridge bracing members and floors.

c. BRIDGE STRESSES. Graphic method. Principles and methods, roof trusses, bridge trusses, locomotive wheel loads, trusses with broken cords, miscellaneous trusses.

d. STRUCTURAL DETAILS. Methods of proportioning individual members of framed structures, and the design of joints and splices in steel and wooden structures; design of a roof truss and a railway plate girder bridge; practice in making complete shop drawings.

e. METAL CONSTRUCTION. The study and design of mill buildings are taken up and also the study of railroad trestles, mine structures, grain elevators, towers, tanks, etc.

f. BRIDGE DESIGN. Theory and design of steel structures; including a complete design for highway and railway bridges.

VII.—CONSTRUCTION.

a. TUNNELING. A study of the principles of tunneling, and of the methods employed in constructing some of the noted tunnels.

b. MASONRY CONSTRUCTION. Properties of stone, brick, cement and concrete, and their uses in engineering structures. Foundations, retaining walls, piers and abutments, dams and chimneys, the design of masonry structures including arches, dams, and the application of the principles of Descriptive Geometry to problems in stone cutting.

c. REINFORCED CONCRETE. Determination of forms and porportions. Lectures, recitations, computations, and drawings. Design of columns, beams, and also a complete design of an arch of reinforced concrete construction, including its abutments and centering

d. CEMENT TESTING AND HANDLING. In this course students are given cement testing and also actual practice in handling cement in making walks, curbs, foundations, hollow block, and reinforced slabs.

VIII.—LAW OF CONTRACTS, SPECIFICATIONS AND THESIS.

a. CONTRACTS. Offer and acceptance; consideration; contracts under seal; assignments; joint and several contracts; the statute of frauds; conditions; impossibility; illegality; discharge of contracts.

b. SPECIFICATIONS. A detailed study of various specifications. The student will be required to write several specifications.

c. THESIS. The object of the thesis is to determine the student's ability to enter upon a course of independent investigation and thus to apply some of the fundamental principles.

I.—ARCHITECTURE.

a. WOOD CONSTRUCTION. Study of columns, beams, girders, of wood and metal. Solution of examples. Wood and its uses in construction and decoration, defects and modes of protection from decay. Construction and design of wooden floors, walls, ceilings, roofs and joinery, doors, windows, stairs, etc.

b. ARCHITECTURAL PERSPECTIVE. This work consists of problems in angular, parallel, vertical and curvilinear perspective, as well as in perspective shades and shadows.

c. MASONRY AND METAL CONSTRUCTION. Foundations of stone, brick, concrete, and piles. Materials employed in stone masonry, uses, defects, qualities and mode of preparation. Stone cutting. Brick masonry. Special properties and value of metal in a structure

d. REQUIREMENTS AND PLANNING OF BUILDINGS. Necessary requirements to be considered in planning schools, churches, libraries, theaters, hospitals, and other usual types of buildings. Problems in planning are given.

c. HISTORY OF ARCHITECTURE. This course continues throughout the year beginning with Egyptian and ending with modern architecture. A careful study is made of the more important styles. Especial attention is given to ideas useful or suggestive in American work. Recitations, illustrated lectures and assigned readings.

f. SANITARY CONSTRUCTION. Design for special problems. Plumbing; water-closets; baths; urinals; etc. Sewerage disposal; water supply. Recitations, assigned readings and lectures.

g. GRAPHIC STATICS AND ROOF-TRUSS DESIGN. Forces, equilibrium, reactions, moments, bending moments, and shear on beams. Design of wooden and metallic roof trusses.

h. WORKING DRAWINGS. Conventional methods for representing the different parts of buldings in general and in detail. Systems of lettering and figuring drawings; working drawings, tracings, drawings for reproduction.

i. ARCHITECTURAL DRAWINGS. Continuation of the study of Graphic Statics with the application to the analysis of metallic roofs of wide span. Roof trusses of unusual form. The strength of walls, dams, retaining walls and large chimneys is investigated, also the effect of moving loads on girders and the construction and details of steel skeleton buildings. Working Drawings.

j. HEATING AND VENTILATING. Different systems of heating by furnaces, hot water and steam systems are studied in detail. Requirements for good ventilation. Blower systems of heating. Automatic regulation. Plans and Specifications.

k. HISTORY AND CRITICISM OF ART. A course of illustrated lectures, supplemented by readings, devoted to a critical analysis of the development of beauty through the historical period.

l. ARCHITECTURAL ENGINEERING. Readings, reports and discussions of correct literature pertaining to architectural construction.

m. Superintendence, Estimates, and Specifications. Duties of superintendent, his relation to architect, owner and contractor. Various methods of making estimates. A study of specifications is first taken up and then several sets of specifications are written.

n. Thesis. Subject assigned and the preliminary work on thesis must be commenced during the first term of the senior year.

COURSES FOR GRADUATES.

a.—Railway Location and Construction.
b.—Yards and Terminals.
c.—Motive Power and Rolling Stock
d.—Railway Operation and Management.
e.—Metallic Arches.
f.—Bridge Design.
g.—Reinforced Concrete.
h.—Water Power Development.
i. Engineering Jurisprudence.

ADVANCED DEGREES.

For the degree of C. E. a major study must be selected from Railway Location and Construction, Yards and Terminals, Motive Power and Rolling Stock, Railway Operations and Management, Metallic Arches, Bridge Design, Reinforced Concrete, Water Power Development, Engineering Jurisprudence, Municipal or Mining Engineering; and minor studies will be assigned from Mathematics, Astronomy, Mechanical Engineering, Geology, Chemistry, Physics, Political Economy, English, French and German.

SCHEDULE OF STUDIES FOR THE DEGREE OF BACHELOR OF CIVIL ENGINEERING.

Year	Term	First Hour. 8-9 a. m.	Second Hour. 9-10 a. m.	Third Hour. 10:30-11:30 a.m.	Fourth Hour. 11:30-12:30 a.m.	Afternoon 1:30-3:30 p.m.	Afternoon 3:30-4:30 p.m.	Saturday. 9-12 a.m.
Freshman	1	English 3 Drawing 2	Trigonometry 5	Physics 2 El. St. Mater. 3	Chemistry 3 Drawing 2	Physics Lab. 2 Drawing 3	Drill	Drawing
	5	English 3 El. Mechanics 2	College Algebra 5	Physics 3 Surveying 2	Chemistry 2 Drawing 3	Chem. Lab. 2 Physics Lab. 2	Drill	Drawing
	3	English 3 El. Mechanics 2	College Algebra 5	Physics 3 Surveying 2	Chemistry 2 Drawing 3	Chem. Lab. 3 Physics Lab. 2	Drill	Field Work
Sophomore	1	Roof-truss Design 5	Adv. Physics 3 R. R. Location 2	Higher Surveying 5	Analytical Geometry 5	Chem. Lab. 4 Field Work 1	Drill	Field Work
	2	Descriptive Geometry 5	Adv. Physics 3	Calculus 5	Analytical Geometry 5	R. R. Curves Office Work	Drill	Descriptive Geometry
	3	Descriptive Geometry 5	Adv. Physics 3	Calculus 5	Analytical Geometry 5	Field Work 5 Des. Geom. 2	Drill	Field Work
Junior	1	Hydraulics 2 Brdg. Stresses 3	Mechanics of Materials 5	Calculus 5	Structural Drafting 5	Topographic Field Work 5	Drill	Cement Testing
	2	Brdg. Stresses 5	Analytical Mechanics 5	R. R. Spiral 2	Sph. Trig. 3 Econ. Geology 2	Graph. Statics 3 Assaying 2	Drill	Assaying
	3	Mason. Dams 5 Retaining Walls	Analytical Mechanics 5	Railway Construction 5	Econ. Beology 2 Metallurgy 3	Railroad Field Work 3	Drill	Railroad Field Work
Senior	1	Reinforced Concrete 2 Geodesy 3	History 5	R. R. Mainte. 2 Eng. XIX 1 W. Brdg. Design 2	Masonry Construction 3	Bridge Design	Law of Contracts 3	Bridge Design
	2	Water Supply 2 Tunneling 3	Economics 5	Sanitary Eng. 3 R. R. Opera'n 2 Eng. XIX 1 W.	Roads, Streets, Pavements 3	Bridge Design	Law of Real Estate 3	Sewer Design
	3	Hydraulic Machinery 5	Thesis	Specifications 5 Eng. XIX 1 W.	Thesis	Hydraulic Design	Thesis	Thesis

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays.

RURAL AND HIGHWAY ENGINEERING

Professor Rowe and Assistant Professor Terrell.

At the regular semi-annual meeting of the Board of Trustees of the State University of Kentucky, in June, 1908, a course of study in Rural and Highway Engineering was provided for. The primary object of this course is to provide instruction for young men along useful lines of engineering usually neglected or little emphasized in our universities.

In order to encourage young men to take the course as outlined for rural and highway engineering two free scholarships are granted to each county in the State. These scholarships are awarded by the Fiscal Courts of the respective counties. Appointments to the course are made prior to the first day of September and are good only for the course of study specified, viz: Rural and Highway Engineering.

ADMISSION.

Applicants for admission to the regular four years' course of instruction leading to the degree of Bachelor of Civil Engineering (B. C. E.) in Rural and Highway Engineering, unless graduates of accredited high schools or other institutions recognized by the University, will be examined upon the subjects set forth in the list of requirements for admission and published elsewhere in this catalogue, and will be admitted on the same conditions as matriculates of other courses of study in the University. Applicants for admission to the short course in Rural and Highway Engineering will be required to have a good knowledge of English, Arithmetic, Elementary Algebra, Elementary Physics, Plane Geometry. Students taking the short course will not be considered as candidates for a degree.

APPOINTMENTS.

Each county in the State is entitled to two free scholarships in the College of Civil Engineering for the purpose of taking the course in Rural and Highway Engineering. An appointment to one of these scholarships entitles the holder thereof to free tuition in Rural and Highway Engineering but to no other fees, nor does it give traveling expenses or dormitory privileges.

Students desiring to secure one of these appointments should make application to the County Judge of their respecives counties, stating their educational qualifications and whether or not they desire the appointment for the regular four years' course or for the short course.

AIMS.

The great object of both the four years course and the short course is to educate young men who, after receiving this special training at the University, will take up some line of constructive engineering which will result in better roads, bridges and farm structures for the country and better streets and sanitary conditions for the towns and cities of the commonwealth.

COURSE OF STUDY.

I.—HIGHWAY ENGINEERING.

a. HIGHWAY LOCATION. Principles and methods followed in locating highways. Location of several miles of road.

b. HIGHWAY CONSTRUCTION. *Method of construction, materials to* be used and how to use them. Determining the size and kind of culverts, bridges and other openings in roadways. Methods of determining the final quantities.

c. HIGHWAY MAINTENANCE. A study of the best methods to be followed in maintaining and keeping highways and bridges in good repair. Lectures, assigned readings, and reports. Inspection of roads in the vicinity of the University.

d. ROAD MACHINERY. A study of the various types of machines useful in the construction of roads. Rock crushers, road rollers, road wagons, road drags, and any other machines of value in road construction.

II.—DRAWING.

a. MECHANICAL DRAWING. Geometrical Drawing, Geometrical problems, detail and dimension drawing. Pen topography, freehand and mechanical lettering.

b. DESCRIPTIVE GEOMETRY. A study of the representation of lines, planes, surfaces, shades, shadows and perspective. Lectures, recitations, drawings, and assigned problems.

c. FRAMED STRUCTURES. Design of dwelling houses, and other framed structures, together with plans and specifications and estimate of probable cost.

III.—SURVEYING.

a. LAND SURVEYING. An elementary course in land surveying methods and the use of surveying instruments, with recitations, lectures and field work. The field work affords practice in the use of chain, tape, compass, transit, and level.

b. TOPOGRAPHICAL SURVEYING. The use of the hand level, the theory and practice of stadia and other instruments employed in making a topographical survey are studied; also the method of topographical surveying. A complete topographical survey is made based on a system of triangulation including the calculations and completing a topographical map.

c. GEODESY. Base line measurements, measurements of angles, horizontal and vertical; field methods for time, latitude, longitude and azimuth. Students are required to make and reduce observations illustrating the work of the course.

IV.—CEMENT AND ITS USE.

a. A study of the properties and uses of cement in making walks, curbs, building blocks, silos, fence posts, and general farm dwellings. Lectures and laboratory practice.

b. CEMENT TESTING. Testing for various samples of cement for tension and compression.

c. REINFORCED CONCRETE. Determination of forms and proportions. Lectures, recitations, computations and drawings. Design of columns, beams and also the complete design of a reinforced concrete arch, including its abutment and centering.

d. MASONRY CONSTRUCTION. Properties of stone, brick, cement and concrete, and their uses in engineering structures, foundations and retaining walls.

V.—APPLIED MECHANICS AND HYDRAULICS.

a. ELEMENTARY MECHANICS. Concurrent forces; parallel forces; center of gravity; resistance and work; simple machines; gravity and motion; inertia and rotation.

b. ELEMENTARY STRENGTH OF MATERIALS. Elastic and ultimate strength; general properties; moments for beams; cantalever and simple beams; columns and struts; the torsion of shafts; elastic deformation; resilience of materials; reinforced concrete.

c. ADVANCED STRENGTH OF MATERIALS. A study of the principles and applications to engineering of the mechanics of solids, as

related to the mutual actions, motions, pressures, strength, stiffness, and resilience of the members of structures and machines.

d. ANALYTICAL MECHANICS. Statics of a material point; statics of a rigid body; statics of flexible cords; rectilinear motion of a material point; curvilinear motion; moment of inertia; dynamics of a rigid body; work, energy, power, and friction.

e. HYDRAULICS. This course consists of text-book exercises, together with the solution of numerous problems covering the principles of hydrostatics and hydrodymics.

VI.—MUNICIPAL AND SANITARY ENGINEERING.

a. WATER SUPPLY AND WATER WORKS DESIGN. Requisites of supply; sources of supply; rainfall; surface water; rivers and lakes; ground water; gravity systems and pumping systems of waterworks; dams and embankments; purification of water; pumping engines; design, construction, maintenance.

b. SANITARY ENGINEERING. Sewerage Systems, separate and combined; hydraulics of sewers; determination of size and capacity; surveys for drainage system; design of system in detail; specifications and estimate of cost; inspection of work; methods of disposal; irrigation; filtration; chemical precipitation; bacteriolithic methods; house drainage; garbage disposal.

c. SANITARY DESIGN. This course consists of maps, profiles, details of manholes, flush-tanks, catch-basins and all other details necessary to make up a complete design for collection and purification of sewage.

d. FARM SANITATION. Design for special problems; plumbing, water closets, baths, urinals, sewage disposal, water supply. Recitations, assigned readings, lectures and designs.

e. STREETS AND PAVEMENTS. Pavements; material used in the construction of pavements; resistence to traction. Lectures, assigned readings and reports.

VII.—BRIDGE DESIGN AND CONSTRUCTION.

a. BRIDGE STRESSES. The subject of bridge stresses will be taken up from both an analytical and a graphical standpoint as outlined in the course offered to civil engineering students.

b. BRIDGE DESIGN. Complete designs of various types of steel highway bridges will be made, including the weight and probable cost of structure.

c. REINFORCED CONCRETE BRIDGE DESIGN. A complete design of a reinforced concrete bridge, together with centering and estimate of cost of bridge will be made by each student.

VIII.—LAW OF CONTRACTS AND SPECIFICATIONS.

a. LAW OF CONTRACTS AND SPECIFICATIONS. A short course of the law of contracts as applied in engineering construction will be given. A detailed study of typical contracts and specifications will follow the general instructions given on the law of contracts.

IX.—COMPARATIVE STUDY OF ROAD LAWS AND RECENT ROAD LEGISLATION.

a. COMPARATIVE STUDY OF ROAD LAWS AND ROAD LEGISLATION. This course of study consists of a systematic study of the road laws of the various States.

SCHEDULE OF STUDIES FOR RURAL AND HIGHWAY ENGINEERING.

Year	Term	First Hour. 8-9 a. m.	Second Hour. 9-10 a. m.	Third Hour. 10:30-11:30 a.m.	Fourth Hour. 11:30-12:30 a.m.	1:30-3:30 p.m.	3:30-4:30 p.m.	Saturday. 9-12 a.m.
Freshman	1	English 3 Drawing 2	Trigonometry	Physics 2 Drawing 3	El. Strength of Materials 5	Drawing 5	Drill 4:30-5:30 Gym. 3	Drawing
	2	English 3 El. Mech. 2	Drawing 5	Physics 3 Surveying 2	Road Location 3	Drawing 2 Phys. Lab. 3	Drill 4:30-5:30 Gym. 3	Drawing
	3	English 3 El. Mech. 2	Drawing 5	Physics 3 Surveying 2	Road Construction 5	Drawing 3 Phys. Lab. 2	Drill 4:30-5:30 Gym. 3	Field Work Drawing
Sophomore	1	Drawing 2 Road Law 3	Highway Location 5	Adv. Survey. 2 Field Work 3	Highway Bridges 5	Field Work. 5	Drill Law of Contr'ts 4:30-5:30	Field Work
	2	Streets & Pvmt. Road Law 3	Framed Struct.	Reinforced Concrete 5	Highway Bridges 5	Curves 5	Drill Real Estate 4:30-5:30	Field Work
	3	Sidewalk 1 Construction 5	Retaining Walls 5	Masonry 5	Drawing 5	Field Work 5	Drill Bills, Notes, etc. 4:30-5:30	Field Work

Numerals indicate the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays.

COLLEGE OF MECHANICAL AND ELECTRICAL ENGINEERING

FACULTY AND ASSISTANTS

JAMES KENNEDY PATTERSON, Ph. D., LL. D., President,
Professor of History, Economics, and Metaphysics.

FREDERICK PAUL ANDERSON, M. E., Director,
Professor of Mechanical Engineering.

JAMES GARRARD WHITE, A. M.,
Professor of Mathematics and Astronomy.

ALEXANDER ST. CLAIR MACKENZIE, M. A., F. R. S. L.,
Professor of English and Logic.

MERRY LEWIS PENCE, M. S.,
Professor of Physics.

ALEXANDER MASSEY WILSON, M. E.,
Professor of Electrical Engineering.

LEON KAUFMAN FRANKEL, M. E.,
Professor of Machine Design.

FRANKLIN ELLIOTT TUTTLE, A. M., Ph. D.,
Professor of Chemistry.

CHARLES JOSEPH NORWOOD, M. S.,
Professor of Mining Engineering.

WALTER ELLISWORTH ROWE, C. E.,
Professor of Civil Engineering.

LOUIS EDWARD NOLLAU, M. E.,
Assistant Professor of Mechanical Engineering.

JOSEPH DICKER,
Instructor in Foundry and Forge Shop.

LEO LOGAN LEWIS, B. M. E.,
Instructor in Drawing.

CHARLES EDGAR SCHOENE, B. M. E.,
Instructor in Electrical Laboratory.

MISS ELIZABETH SHELBY KINKEAD,
Lecturer on English Literature.

ARZA LYTLE WILHOITE, B. M. E.,
Instructor in Steam Laboratory.

W. WALTER H. MUSTAINE, B. S.,
Physical Director.

PHILIP WORTHINGTON CORBUSIER, First Lieut., U. S. A.,
Commandant, and Professor of Military Science and Tactics.

GORDON THURMAN,
Engineer and Assistant in Wood Shop.

GEORGE McINTYRE HOWARD,
Assistant in Experimental Laboratory.

JOHN BORN DICKER,
Assistant in Shops.

MRS. ANNA BERRY JONES,
Secretary to the Director.

MECHANICAL AND ELECTRICAL ENGINEERING

Professors Anderson, Wilson, and Frankel.

The successful man of today is one who has an education that has a market value. This applies to all classes of men. The writer, the lawyer, the surgeon, the merchant, or the engineer can measure his value to the world largely by what men are willing to pay for his services. The conception of an education has been greatly modified in recent years. A man is educated who is skilled in doing some useful thing; who manifests an interest in all men engaged in useful work; who is always striving to be more skillful and better informed in his own work. The beauties of art, literature and philosophy do not belong to any class of men. The man who is engaged in productive work should find first that culture that comes from doing his work well, but his happiness and breadth of life will be increased if he finds some of the gems in the world of literature and art.

The technical school is responsible to a large degree for the present status of the science of engineering. Machines today are built by men well versed in the refinements of mechanical engineering. The great industries of this country are continually looking for young men who have a scientific training in the art of machine designing and power transmission. The steam engine presents each year new possibilities, and the evolution in this direction has recently taken shape in the steam turbine. The gas engine is being more widely applied than ever before. The recent development of available water power, and the growth of the interurban railway lines have made new fields of endeavor for the highly trained mechanical engineer.

Kentucky has not been slow to recognize the fact that she must provide for her sons a great school in mechanical and electrical engineering, in order to equip them for a work that offers large opportunities in this age of industrial achievements. For fifteen years the State University of Kentucky has been sending her mechanical and electrical engineers to all parts of the country, where they have achieved great distinction with the largest machine, en-

gine and electrical apparatus building concerns. Kentucky boys have made such a record that there is a demand for State University of Kentucky mechanical and electrical engineers that can not be supplied. In the class of 1906 there were thirty men and there were over one hundred applications for these graduates. There were eleven applicants for State University men to take up teaching work in mechanical and electrical engineering in some of the best known universities in this country. The class of 1907 all secured good positions and all of the thirty-three 1908 graduates, notwithstanding the business depression, have found employment in good engineering positions. No other state in the Union makes such liberal concessions to her young men to gain an education as does Kentucky. A county appointed student not only gets his tuition, matriculation fees and room rent free, but the Legislature has actually provided that he receive his traveling expenses from his home to the college and return. The expenses for any resident of the state, whether he be appointed or not, are reduced to a minimum. Every young Kentuckian should recognize that the state has put at his command the means of obtaining an education in mechanical and electrical engineering that is second to none. He should further appreciate the fact that the state is making provisions that would cost each student at least two hundred dollars a year for tuition should all the expenses of his training be gotten in a school not supported by state or federal aid.

BUILDING AND EQUIPMENT.

Mechanical Hall is the home of the College of Mechanical and Electrical Engineering. It contains thirty thousand square feet of floor area and is admirably adapted for all recitation, lecture, drawing and laboratory work.

The equipment of the department is described briefly as follows: The drawing rooms contain drawing tables and boards to accommodate about one hundred students.

Power is supplied to the shops by a 10-inch by 24-inch Hamilton-Corliss non-condensing engine.

The wood shop contains thirty benches, each with a complete set of bench tools; and twenty-two lathes, each with a complete set of wood-turning tools. Besides these, there are a band saw, a jig saw, two circular saws, a trimmer and a grindstone.

The foundry contains a 30-inch cupola furnace, having a ca-

pacity of a ton of metal per hour, a brass furnace, twelve complete sets of moulder's tools, twelve benches, besides the ladles, flasks, clamps, core oven, pattern rack, and other equipment such as is used in practical foundry operation.

The blacksmith shop is equipped with fifteen down-draft forges. With each forge there is a set of blacksmith tools. A power hammer is available for heavy work.

The machine shop contains seven lathes, two milling machines, one planer, one shaper, two drilling machines, one dry emery grinder, one wet emery grinder, one universal grinding machine, two sensitive drills, twelve vises for bench work in metal, an air compressor, some pneumatic tools, and a small punch and shear.

The tool room is equipped with a varied assortment of such tools and supplies as are used in the shops. In connection with the shops there is a wash-room containing lockers for the accommodations of the students.

There are two separate boiler-houses. One contains a 50-horse-power Babcock and Wilcox boiler and a No. 3 Dean pump. The boiler is used for heating and to supply steam to the Hamilton-Corliss engine, which furnishes power to the shops. The other boiler-house is situated close to the steam laboratory, and a 100-horse-power Babcock and Wilcox boiler has just been installed. This boiler can furnish steam at 200 pounds pressure, and an elaborate equipment for boiler testing has been installed, including induced draft apparatus, barrels and scales for weighing water, and devices for burning oil and gas, as well as coal.

The steam engineering laboratory is equipped with indicators, planimeters, gauges, pyrometers, reducing motion apparatus, scales, micrometers, tachometers, etc. It contains a 40-horse-power Houston, Stanwood and Gamble cross-compound throttling engine, a 10-horse-power Corliss engine, a 25-horse-power Buffalo Forge engine, a 35-horse-power Westinghouse single-acting compound engine, a small slide-valve engine for elementary experimental work in valve setting, a small engine with a Stephenson valve gear, and a 10-horse-power De Laval turbine. There are also two 4-horse-power Fairbanks-Morse gasoline engines with gas attachments, and the necessary auxiliary apparatus for testing.

The addition of an experimental laboratory has recently been completed. One room contains all the testing machines for testing materials of engineering; another contains photometric ap-

paratus, telephone laboratory, and appliances for electrical measurements and testing; the third room contains a 150-horse-power Buffalo Forge tandem compound engine; 200-horse-power Wheeler condenser, which is so arranged that all engines in the main laboratory can be operated condensing. A testing plate has been arranged for bolting down engines and generators for commercial testing; an automobile testing plant has been installed which will take care of the largest automobile built, allowing the same to be run at the maximum speed and power.

The attention that will be paid to automobile engineering in the future is an important element of development.

For work in testing materials of construction there is a 100,000 pound Riehle testing machine, and a Fairbanks-Morse cement-testing equipment. A 200,000 pound Olsen machine is being installed.

For the experimental engineering work in electrical engineering there are a 10 kw., d. c. Edison dynamo, a 9 kw., d. c. motor, a 2-horse-power General Electric induction motor, a 1.5 kw. polyphase dynamo, a Wagner induction motor, d. c. generator set furnishing 3 kw., a potentiometer, a photometer, and several galvanometers, Wheatstone bridges, and other apparatus of the same general character.

There is quite an extensive equipment for pursuing the study of telephony, consisting of a small switchboard containing jacks and drops for both common battery and magneto circuits, built by the American Telephone Company. Then there are a number of subscribers' instruments, some of the American Telephone Company's make, some of the Kellogg Company's, and some of the Western Electric Company's. This equipment is sufficient to enable the students to obtain a comprehensive grasp of some of the advanced problems of telephony.

The aim of the College of Mechanical and Electrical Engineering, as a part of the State University, will be primarily to train young men to be competent to take up the work usually assigned to graduates of engineering schools, either in mechanical or electrical engineering. In addition to this, as opportunity offers, it is expected that students will engage in advanced scientific research pertaining to all the branches of mechanical, electrical and chemical engineering.

COURSE OF STUDY.

The practical work extends over a period of two years, and includes the experience in the wood shop, machine shop, foundry, and forge shop. During this period the class-room work and drawing are preparatory to the theoretical studies taken up during the third and fourth years. The course in Mechanical Engineering, as administered at the State University of Kentucky, may be considered as being divided into three parts, as follows:

1. Mechanical Engineering Proper. Under this heading come the studies of steam engineering practice, the operation and design of gas engines and producers, and the operation and design of manufacturing machinery.

2. Chemical Engineering. This is intended especially for those who will engage in the production of iron and steel, and involves study of the various methods of analysis of iron, steel, coals, fluxes, and refractory substances.

3. Electrical Engineering. This involves the study of the design and operation of electrical apparatus and machinery.

The foregoing is a general classification. Each of the subjects mentioned permits of further subdivision to suit the needs of the student.

DEGREES.

The courses of study in Mechanical and Electrical Engineering all lead to the degree of B. M. E. (Bachelor of Mechanical Engineering). The advanced degree, M. E. (Mechanical Engineer), or E. E. (Electrical Engineer), may be obtained by a resident student in one year after taking the degree B. M. E. from the State University of Kentucky, or any institution of equal requirements, provided he has done the work assigned him satisfactorily, passed his examination, and presented an acceptable thesis.

A non-resident student may obtain the degree of M. E. three years after graduation, if he has been engaged in practical engineering work during that time, passes an examination, and presents an acceptable thesis. At least two years' notice must be given to the Faculty that post-graduate work is to be done, and the work must be approved by the Faculty.

FRESHMAN YEAR.

1. Technical Instruction. Thirty-five weeks, one hour per week. (a) Recitation on the forms of wood-working tools and the

cutting and peculiarities of timber. (b) Lectures on the operation of the various forms of wood-working machinery. (c) Lectures on pattern-making, molding and casting.

2. MECHANICAL AND FREE-HAND DRAWING. Thirty-five weeks, seven and a half hours per week. (a) This drawing includes free-hand sketches, drawing from copies and models, using parts of machines in the Mechanical Laboratories as models. (b) Free-hand lettering. (c) Exercises in tinting and shading. (d) Tracing. (e) Blue-printing.

3. SHOP-WORK. Thirty-five weeks, eleven and a half hours per week. (a) Bench-work in wood, including exercises in the following operations: planing, sawing, rabbeting, plowing, notching, splicing, mortising, tenoning, dovetailing, framing, paneling, and the general use of carpenters' tools. (b) Wood-turning, involving the various principles of lathe-work in wood. (c) Pattern-making, which gives the student experience in the construction of patterns for foundry work. (d) Foundry work, including the various operations of molding, core-making and the melting of iron and brass.

4. ENGLISH. Thirty-five weeks, three hours per week.

5. COLLEGE ALGEBRA. Twenty weeks, five hours per week.

6. TRIGONOMETRY. Fifteen weeks, five hours per week.

7. PHYSICS. Fifteen weeks, two hours per week; twenty weeks, three hours per week.

8. CHEMISTRY. Fifteen weeks, three hours per week; twenty weeks, two hours per week.

SOPHOMORE YEAR.

1. MECHANICAL DRAWING. Fifteen weeks, eight hours per week. (a) Drawing the parts of machines and complete machines to scales. (b) Isometric and Descriptive Geometry problems. (c) Design of machine details.

2. SHOP-WORK. Thirty-one weeks, ten hours per week. (a) Exercises in iron and steel forging. (b) Exercises in vise-work in metal. (c) General machine work; including screw cutting, drilling, planing, and the milling of iron, brass, and steel.

3. SHOP PRACTICE. Fifteen weeks, two hours per week.

4. DESCRIPTIVE GEOMETRY. Twenty weeks, eight hours per week.

5. PHYSICAL LABORATORY. Fifteen weeks, five hours per week.

6. ADVANCED PHYSICS. Fifteen weeks, three hours per week.

7. ANALYTICAL GEOMOTRY. Thirty-five weeks, five hours per week.

8. Surveying. Twenty weeks, two hours per week.

9. Calculus. Twenty weeks, five hours per week.

10. Electricity and Magnetism. Twenty weeks, three hours per week.

11. Field Work in Surveying. Four weeks, ten hours per week.

JUNIOR YEAR.

1. Kinematics. Fifteen weeks, five hours per week. Under this head are studied the velocity ratios in various motions, construction of gears, cams, quick-return motions, and the manner of designing trains of mechanism.

2. Mechanical Drawing. Fifteen weeks, nine hours per week; ten weeks, ten hours per week, and ten weeks, eight hours per week. The work consists of Kinematic Drawing, including spur, bevel, worm and spiral gearing: Design of shop machines, such as lathes, planers, shapers, drills, etc., including an original design by each student of some shop machine complete, with all detail drawings.

3. Analytical Mechanics. Twenty weeks, five hours per week.

4. Strength of Materials. Fifteen weeks, five hours per week.

5. Elements of Electrical Engineering. Fifteen weeks, five hours per week.

6. Graphic Statics. Ten weeks, five hours per week.

7. Calculus. Fifteen weeks, five hours per week.

8. Electrodynamic Machinery. Ten weeks, five hours per week.

9. Theory of Machine Design. Five weeks, five hours per week.

10. Dynamo and Motor Design. Ten weeks, five hours per week.

11. Electrical Design. Ten weeks, five hours per week, and five weeks, five hours per week.

12. Electrical Laboratory. Ten weeks, two hours per week.

13. Chemistry and Gas Analysis. Ten weeks, five hours per week.

14. Flue Gas Analysis. Ten weeks, three hours per week.

15. Chemical Laboratory. Fifteen weeks, four hours per week.

16. Testing of Materials Laboratory. Fifteen weeks, one hour per week.

17. Metallurgy. Ten weeks, two hours per week.

SENIOR YEAR.

1. THERMODYNAMICS. Fifteen weeks, three hours per week. This work consists of a study of the laws of thermodynamics, thermal capacities, and the application of thermodynamics to the steam engine, steam turbine, and gas engine.

2. STEAM BOILERS. Fifteen weeks, two hours per week. A study of the various commercial steam boilers, consumption of fuel, incrustations, determining the horse power of boilers, boiler tests, the design of boilers for efficiency and economy, and the methods of heat transmission.

3. VALVE GEARING. Fifteen weeks, three hours per week. The study of various forms of standard engine valve and methods of designing.

4. HYDRAULICS. Fifteen weeks, two hours per week.

5. ALTERNATING CURRENTS; DYNAMO AND MOTOR DESIGN. Fifteen weeks, five hours per week.

6. ELECTRICAL LABORATORY. Twenty-five weeks, three hours per week.

7. ALTERNATING CURRENTS AND POWER PLANTS. Ten weeks, five hours per week.

8. LOGIC. Thirty-five weeks, two hours per week.

8. HISTORY. Thirty-five weeks, three hours per week.

10. DYNAMOMETERS AND MEASUREMENT OF POWER. Ten weeks, two hours per week.

11. STEAM TURBINES. Ten weeks, three hours per week.

12. VALVE GEAR DESIGN. Ten weeks, eight hours per week, and five weeks, five hours per week. This consists in working out valve gear problems.

13. ENGINE AND MACHINE DESIGNING. Fifteen weeks, five hours per week. A study of the modern methods of designing engines, boilers, and machines.

14. EXPERIMENTAL ENGINEERING. Twenty-five weeks, six hours per week. This includes a study of the steam engine indicator, making engine, boiler, and materials for construction tests, and experimental engineering work in electrical engineering.

15. THEORY AND PRACTICE OF PHOTOGRAPHY. Ten weeks, five hours per week.

16. ELECTRICAL DESIGN. Twenty-five weeks, three hours per week. This consists of drawing-room work, Saturday mornings.

17. Thesis Work. Ten weeks, forty hours per week. Every student, before he attains the degree of B. M. E., must present a satisfactory thesis on some new design of a machine or an original investigation. The greater part of the third term of the Senior year is given to the preparation of this thesis. The subjects for theses are assigned to students by the Dean of the Mechanical and Electrical Engineering Faculty, and the completed theses are kept on file with the college records, that they may serve as a reference for future investigators.

JUNIOR AND SENIOR INSPECTION TRIPS.

Annual trips, for the purpose of inspecting manufacturing and power plants, are taken by the Junior and Senior classes. The Juniors, for several years, have visited Cincinnati, Hamilton, and Dayton. During the last seven years the Seniors have visited Chicago and its vicinity on the annual trip.

During the Spring term, four days are set apart for the Junior trip and six for the Senior. The experiences of these trips are considered to be among the most valuable of the engineer's collegiate life.

SCHEDULE OF STUDIES FOR THE DEGREE ON BACHELOR ON MECHANICAL ENGINEERING

Year		First Hour. 8-9 a. m.	Second Hour. 9-10 a. m.	Third Hour. 10:30-11:30 a.m.	Fourth Hour. 11:30-12:30 a.m.	1:30-3:30 p.m.	3:30-4:30 p.m.	Saturday. 9-12 a.m.
Freshman	1	English 3 Drawing 2	Trigonometry 5	Physics 2 Drawing 3	Chemistry 3 Drawing 2	Wood Shop Bench Lathe	Drill Gym. 4:30-5:30	Wood Shop Drawing
	2	English 3 Drawing 2	College Algebra 5	Physics 3 Drawing 2	Chemistry 2 Drawing 3	Pattern Making and Foundry	Drill Gym. 4:30-5:30	Pattern Making and Drawing
	3	English 3 Drawing 2	College Algebra 5	Physics 3 Drawing 3	Chemistry 2 Drawing 3	Pattern Making and Foundry	Drill Gym. 4:30-5:30	Pattern Making and Drawing
Sophomore	1	Analytical Geometry 5	Adv. Physics 3 Shop Practice 2	Elementary Design 5	Physical Lab. 5	Iron and Steel Forging	Drill Gym. 4:30-5:30	Elementary Design
	2	Analytical Geometry 5	Elec. & Mag. 3 Surveying 2	Calculus 5	Desc. Geom. 5	Machine Shop Work	Drill Gym. 4:30-5:30	Descriptive Geom. Draw.
	3	Analytical Geometry 5	Elec. & Mag. 3 Surveying 2	Calculus 5	Desc. Geom. 5	Machine Shop Work & Sur- veying	Drill Gym. 4:30-5:30	Descriptive Geom. Draw.
Junior	1	Elementary Electricity 5	Mechanics of Materials 5	Calculus 5	Kinematics 5	Kinem. Draw. Chemical Lab.	Drill	Testing of Materials
	2	Analytic Mechanics 5	Electrical Design 5	Chem. and Gas. Analysis 5	Mach. & Elec. Design 5	Machine Des.	Drill	Flue Gas Analysis
	3	Graphical Statics 5	Dyn. and Mot. Design 5	Analytical Mechanics 5	Dyn. Ele. Machinery 3 Metallurgy 2	Machine Des. Elec. Lab. Steam Lab.	Drill	Electrical Design
Senior	1	Thermodyn. 3 Hydraulics 2	History 3 Logic 2	Alter. Cur. and Dyn. Mot. Des. Eng. XIX 1 W.	Valve Gears 3 Steam Boiler 2	Valve Des. and Elec. Lab.	Library	Electrical Design
	3	Altern. Current and Power Plants 5	History 3 Logic 2	Steam Eng. and Pump Design Eng. XIX 1 W.	Dynamo- meters 2 Steam Turbi 3	Valve and Dyn. and Mot. Des.	Library	Electrical Design
	3	Thesis 5	History 3 Logic 2	Photography 4 Eng. XIX 1 W.	Thesis 5	Thesis	Library	Thesis

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays.

COLLEGE OF MINING ENGINEERING

FACULTY AND ASSISTANTS

JAMES KENNEDY PATTERSON, Ph. D., LL. D., Pres.,
Professor of History and Political Economy.

CHARLES JOSEPH NORWOOD, M. S., Dean,
Professor of Mining Engineering and Metallurgy.

HARRY DRAPER EASTON, B. S.,
Assistant Professor of Mining and Metallurgy.

JAMES GARRARD WHITE, A. M.,
Professor of Mathematics.

MERRY LEWIS PENCE, M. S.,
Professor of Physics.

ALEXANDER ST. CLAIR MACKENZIE, M. A.,
Professor of English Language and Literature.

ARTHUR McQUISTON MILLER, A. M.,
Professor of Geology and Mineralogy.

FRANKLIN ELLIOTT TUTTLE, A. M., Ph. D.,
Professor of General Chemistry.

RALPH NELSON MAXSON, Ph D.,
Professor of Inorganic Chemistry.

FREDERICK PAUL ANDERSON, M. E.,
Professor of Mechanical Engineering.

ALEXANDER MASSEY WILSON, M. E.,
Professor of Electrical Engineering.

LEON KAUFMAN FRANKEL, M. E.,
Professor of Machine Design.

WALTER ELLSWORTH ROWE, C. E.,
Professor of Civil Engineering. (*Hydraulics.*)

RALPH DETWEILER QUICKEL, B. S.,
Instructor in Mining and Assaying.

THOMAS JAMES BARR, B. M. E.,
Instructor in Mining Machinery.

PHILIP WORTHINGTON CORBUSIER, Lieut. U. S. A.,
Professor of Military Science.

MISS ELIZABETH SHELBY KINKEAD,
Lecturer on English Literature.

LOUIS EDWARD NOLLAU, M. E.,
Instructor in Descriptive Geometry.

LEO LOGAN LEWIS, B. M. E.,
Instructor in Drawing and Shopwork.

MINING ENGINEERING.

Professor Norwood, Assistant Professor Easton, and Messrs. Quickel and Barr.

The College of Mining Engineering as at present organized offers three courses in mining, namely:

1. The full course, which extends through four years and leads to the degree of Bachelor of Mining Engineering.

2. A two years' course for young men who for any reason may not be prepared to take the full course, but who desire to obtain more than an elementary training in the methods of mining. Requirements for entrance are less exacting than are those for the full course, just as the range of instruction is less comprehensive. No degree is conferred, but a certificate of proficiency in the studies pursued is given.

3. A short course for practical miners, mine foremen, and mine managers who desire to improve their knowledge of the principles that underlie correct mining. This course, which covers a term of ten weeks, is necessarily given in the spring or summer. For the present it is given during the summer. Details concerning the course are set forth in a special circular. Persons desiring to take the examinations for mine foremen and for Assistant Inspectors of Mines will find the course quite helpful.

BUILDINGS.

In 1907-'08 the University authorities erected a commodious Mining Laboratory. The building is of brick, 40 feet by 80 feet, and two stories high. The first floor is used for instruction in ore dressing and metallurgy; the upper one for assaying and metallurgy. Space is provided on the first floor for the clay-testing kilns of the State Geological Survey, and the chemical laboratory of the Survey occupies part of the second floor. This building constitutes a wing of a building, for which an allotment has been made by the University authorities, which will contain class-rooms, drawing-rooms, offices, etc., for the College, and offices and rooms for records, books, maps, etc., of the State Inspector of Mines and the Geological Survey, together with the State Geological Museum.

At present, rooms in the Natural Science Building are used for instruction and for the State offices and Museum.

EQUIPMENT.

For lecture-room illustrations and demonstrations the equipment includes an excellent electric light stereopticon, and a reflectoscope, with a large number of special slides; many charts, photographs, and blue prints, illustrating mining methods and mining machinery; a working model of a shaft hoist with safety-catches; examples of mining tools; safety lamps of various types; apparatus for instruction in methods of detecting mine gases and testing safety lamps; apparatus for studying dust explosions; and instruments for measuring ventilation. Also a collection of ores and metallurgical products.

The Assay and Metallurgical Laboratory is provided with several gasoline assay furnaces; a plant of gas furnaces; a coke (or charcoal) furnace; crushing, grinding and sampling apparatus, etc.; an Abbe Double Trojan Ball Mill; a Roasting Machine for "barrel chlorination," and apparatus for studying the cyanide and amalgamation processes. A Calorimeter for the study of fuels and a special furnace for testing clays are also at the command of the College. Furnaces and apparatus for the study of smelting processes for copper, iron and lead; the extraction of non-ferrous metals; pyrometry; the heat treatment of iron and steel; and for the study of metallography, will be provided by the beginning of the coming session.

It is intended that the Mining Laboratory shall not only serve the purpose of instruction, but that it shall prove helpful, as a testing laboratory, to those engaged in mining operations in the coal, lead, zinc and spar districts of the State. The present equipment includes a standard, full-sized Wilfley Concentrating Table; a Three-stamp Mill, made by the Allis-Chalmers Company (to whom the School is indebted for generous treatment); a Hallet Hand Jig; a Vezin Jig; a Munroe Laboratory Slime Table; a Munroe Laboratory Classifier; a Dings Electro-Magnetic Separator; a Blake-Morscher Electro-Static Separator; a Campbell Coal-washer; a complete model of the St. Bernard Mining Company's Coal-washery; and a complete ventilating fan and fan-house. The last three were provided through the generosity of Mr. John B. Atkinson, President of the St. Bernard Mining Company, Earling-

ton, Ky. The fan has been so installed that various problems relating to mine ventilation may readily be studied. Through the courtesy of the George D. Whitcomb Company, one of that company's latest type of coal-cutting machines has been deposited with the College, for use in demonstrating the application of compressed air in mining operations.

THE FULL COURSE.

This course is laid out with the design of affording the student a thoroughly good foundation for professional work in Mining, Metallurgy, Assaying and Geology, and of so preparing him that he may readily and quickly assimilate that knowledge of the details of practice which may be gained only through experience. In addition to the technical work relating to Mining, the student has a fairly liberal amount of English, Mathematics, Physics, Chemistry, History, and Logic.

MINING.

The instruction in the special theme of Mining (including both coal and metal) is laid out along a continuous line, each subject being introductory to that which follows, and is given by lectures, supplemented by text-books and special reading. A general statement of the subjects discussed under the head of Mining is given under the appropriate years following.

MINE SURVEYING.

In Mine Surveying, which comes in the Sophomore and Junior years, the application of the art of surveying to the work of mining engineering is emphasized. Following the preliminary instruction and the solution of general problems, the practical applications are taken up, including running outcrop; determining the proper locations of mine opening and tipple; locating buildings, bodies of water and streams with relation to underground workings; bringing branch lines in from main track; carrying meridian into mine; plumbing shafts, surveying entries and rooms, grading mine entry for track, setting out curves, changing distances between room necks with variations of the entry, driving both ways, locating bore-holes for pipes, etc., solving drainage problems, surveying stopes with German dial (string survey) and with transit, construction of mine maps, and sections, etc. Opportunity for

practice in underground surveying is afforded at the coal mines and at the vein mines (lead, zinc, and spar) within short distance from Lexington. The mine maps filed by the various companies with the State Inspector of Mines are at the service of the student for study and comparison.

CHEMISTRY AND METALLURGY.

In Chemistry, preparatory for Metallurgy, three terms of work are given, beginning in the Freshman year. The course for the first term consists of lectures and recitations on general chemistry, together with laboratory work. The following term is devoted to qualitative analysis—determinations of the metals. Quantitative analysis comes in the third term, and is given in the Sophomore year.

In Metallurgy, which begins in the third term of the Sophomore year, five terms of work are taken by the student in mining and metallurgy. In addition, a term of instruction is provided for the student in mechanical engineering, two terms for the student in chemistry, and two for the student in civil engineering. The work in Metallurgy is apportioned thus, the periods indicated being times per week:

METALLURGY I. Elements of Metallurgy, including a general review of typical metallurgical processes. For students in Mining Engineering, Sophomore, 3d term, 3 afternoons. For students in Civil Engineering, Junior 2d term, 4th hour, 3 times.

METALLURGY II. Iron and steel specialized; metallurgical calculations; introduction to the metallurgy of copper. Junior Mining, 1st term, 3 afternoons.

METALLURGY III. Copper concluded; lead and zinc;metallurgical calculations. Junior Mining, 2d term, 3 times.

METALLURGY IV. Silver, gold, and alloys. Introduction to metallography. Junior Mining, 3d term, 3 times, mornings, and lab. 3 times.

METALLURGY V. Other metals. Metallography. Fuel testing. Senior Mining, 1st term, 3 times, mornings, and lab 3 times. Senior, 2d term, lab. 5 times.

METALLURGY VI. Iron and steel. For students in Mechanical Engineering and in Civil Engineering. Junior, 3d term, 4th hour, 2 times.

METALLURGY VII. Elements of Metallurgy, including a general

discussion of processes for the production of iron, steel, copper, lead, zinc, the extraction of the precious metals, etc. For students in Chemistry. Junior, 1st and 2d terms, 2d hour, 3 times.

ASSAYING AND ORE DRESSING.

Assaying is carried on during two terms of the Junior year. Advanced assaying may be taken up during the Senior year.

Ore dressing, which includes the various processes for separating and concentrating ores and other useful minerals, is carried through two terms of the Junior year, and may be continued in the Senior year.

APPLIED ELECTRICITY.

Instruction in Applied Electricty is given in the Junior and Senior years. A full term is given to lectures, in connection with design, on electrical appliances with especial reference to their use in mining operations, including electric haulage, hoisting and pumping machinery, trolley lines, intracommunicating telephones, power generators, installation of electric motors, winding of armatures, etc. A number of afternoons are given to work in the Steam and Electric Laboratory in the study of the care and management of steam and electric machinery and gasoline engines.

ADVANTAGES OF LOCATION.

The State University is exceptionally well situated with reference to the practical study of both coal and metal mining (including lead, zinc and iron), and for the study of metallurgical practice in certain lines, there being within the State numerous coal and metal mines, and several iron and steel metallurgical establishments within easy reach of Lexington. Practical work in concentrating lead ores may be studied at the Gratz and Kissinger mines, in near-by counties. At the Gratz mine the plant includes crushers, jigs, a Huntington mill, and Woodbury concentrators. At the Kissinger mine the plant includes crusher, rolls, Huntington mill, Woodbury concentrators, and a smelter. The latter mine may be reached by trolley line and a short drive. Elaborate lead and zinc concentrating plants may be studied in the western part of the State. Coal washing and coking may be studied at Ashland, where a Robinson washer is used, and at Earlington, where a Campbell plant is in operation. The copper mines of Tennessee, the iron mines of Virginia, Alabama and Tennessee, and the gold mining

regions of Alabama and Georgia, with their accompanying metallurgical plants, may be reached within twenty-four hours or less of travel.

COURSE OF STUDY.

The schedule on a succeeding page exhibits the daily order in which the studies leading to the degree of B. E. M. are given, together with the number of periods per week assigned to each.

The courses are as follows:

FRESHMAN YEAR.

First Term. English, Physics, Trigonometry, Woodwork (Tools and Machinery), Drawing, Shopwork (Bench and Lathe).

Second Term. English, College Algebra, Physics, Chemistry, Drawing.

Third Term. English, College Algebra, Physics, Chemistry of Metals, Drawing.

SOPHOMORE YEAR.

First Term. Analytical Geometry, Advanced Physics, Mine Survey, Elementary Design, Iron and Steel Forging.

Second Term. Analytical Geometry, Electricity and Magnetism, Quantitative Analysis, Calculus, Descriptive Geometry, Mine Surveying and Mapping.

Third Term. Analytical Geometry, Electricty and Magnetism, Calculus, Descriptive Geometry, Elements of Metallurgy, Mine Surveying and Mapping.

JUNIOR YEAR.

Electrical Engineering, First Term; Professor Wilson.

Calculus (concluded), First Term; Professor White.

Strength of Materials, First Term; Professor Frankel.

Metallurgy, Three Terms; Professor Norwood, and Assistant Professor Easton.

Analytical Mechanics, Second and Third Terms; Professor Frankel.

Economic Geology, Second and Third Terms; Professor Miller.

Assaying, Second and Third Terms; Instructor Quickel.

Mineralogy, Second and Third Terms; Professor Miller.

Dynamo-Electric Machinery, Third Term; Professor Wilson.

Mine Surveying, First Term; Assistant Professor Easton.

MINING I. *Introductory, Excavating, Quarrying.* (*a*) Excavation in soft-ground and in rock. (*b*) Explosives and Blasting: Kinds and effects of explosives; theory and practice of blasting; placing, charging, and firing holes under various conditions; substitutes for explosives (*c*) Quarrying: Plants and methods for various sorts of rock; underground quarries. Professor Norwood; Assistant Professor Easton.

MINING II. *Boring, Shaft-Sinking, Shaft-Boring.* (*a*) Boring: Methods with auger, with rods, and with rope; rotary boring; casing; drive piping. (*b*) Shaft-sinking: General principles. Methods in soft-ground and in rock. Hoisting, ventilating, and draining during sinking. Timbering, walling, tubbing, and linings for special cases. Sinking linings in watery ground and in quicksand. (*c*) Shaft-boring: General observations. Various methods described and compared. Assistant Professor Easton.

MINING III. *Development, Methods of Working.* (*a*) Exploration and Development. Choice of exploratory methods—shaft, adit, slope. Location of openings with reference to development. Laying out the workings, and order of exploration. Driving tunnels, drifts, gangways, slopes, levels, cross-cuts. Upraises—vertical and inclined. Winzes—methods of sinking and raising. (*b*) Methods of Working and of Supporting Excavation: General rules as to choice of mode of working away, etc. Breaking ground (1) in coal mining and (2) in metal mining. Support of excavations (1) by pillars of mineral, (2) by timbering, (3) by caving and filling. Methods of working applicable to deposits according to their origin, thickness, inclination, and character. Open cuts and stream workings. Hydraulic mining, Dredging. Assistant Professor Easton.

MINING IV. *Ore and Coal Dressing, Milling, Coal Washing.* General principles and theories. Picking, crushing, theory of mineral separations, sizing, classification, jigging, concentration and concentrators. Coal-washing. Gold and silver milling; stamp and other mills. Amalgamation: Theory and practice; care of mill plates; losses of mercury, etc. Pan amalgamation. "Patent" substitutes for plate amalgamation. Pan assays for free-milling ores, etc. Professor Norwood.

SENIOR YEAR.

History and Political Economy, Two Terms; President Patterson.

Steam Engine and Boilers, First Term; Professor Anderson.
Hydraulics, First Term; Professor Rowe.
Alternating Currents and Power Plants, Second Term; Professor Wilson.

Metallurgy, First Term; Professor Norwood.
Metallurgical and Mining Laboratories, First and Second Terms; Professor Norwood, Instructor Quickel.

Assaying, Second Term; Instructor Quickel.
Mine Plant Design, Second and Third Terms; Assistant Professor Easton.

Thesis Work.

MINING V. *Ore Deposits, Prospecting.* (*a*) Geological Considerations. Origin of Ores. Classification of ore deposits. Irregularities and disturbances of beds and veins. (*b*) Prospecting: Systematic methods. Value of Geology. Tracing outcrops. Construction of sections. Professor Norwood.

MINING VI. *Extraction, Ventilation, etc.* (*a*) Extraction and removal of material: Mine and surface haulage roads; rope and other means of haulage. Hoisting. Drainage. Ventilation: Theoretical considerations; methods of ventilation; distribution of air supply. (*b*) Mine Gases and Illumination. (*c*) Accidents: Causes; places; explosions; safeguards; rescue and relief. Professor Norwood, Assistant Professor Easton.

MINING VII. *Mine Plant.* Machinery and appliances for mining, hoisting, draining, ventilating, hauling, screening, loading, storing, etc. Assistant Professor Easton, Instructor Barr.

MINING VIII. *Examination and Valuation of Mines, etc.* Methods and precautions in examination and valuation. "Salting," concealing exhausted workings, etc. Relation of capital invested to actual dividends. Mine management. Cost sheets. Professor Norwood.

MINING IX. *Mine Visitation.* Opportunity for visiting mines under the guidance of the Dean, or of an Assistant Inspector of Mines, will be given at the close of the term.

The larger part of the third term is devoted to thesis work, subjects for which are assigned by the Dean.

ADVANCED DEGREE.

For the degree of E. M., Ore Dressing, Milling, Coal Mining, Metal Mining, Mine Plant, Metallurgy, or Electricity Applied to Mining, may be selected as major study; and minor studies may be assigned from Civil Engineering, Mechanical Engineering, Electrical Engineering, Geology, Chemistry, Physics, Mathematics, Political Economy, Sociology, English, French, and German.

THE TWO YEARS' COURSE.

This course is intended for those who for any reason cannot take the Full (Engineer's) Course of four years, and especially for persons who desire to fit themselves for such positions as Mine Manager, Mine Superintendent, Assistant Engineer, and Assistant Mine Inspector; also for those to whom a knowledge of mining will be of service in business or professional dealings even though they should not be directly connected with mining operations. The instruction includes the following subjects:

FIRST YEAR.

Advanced Arithmetic.	Algebra.
Plane Geometry.	Solid Geometry.
Plane Trigonometry.	Elementary Physics.
Mining and Quarrying.	Physiography.

Free-hand and Mechanical Drawing.

SECOND YEAR.

English Literature.	Elementary Chemistry.
Elementary Geology.	Elements of Metallurgy.
Mining.	Assaying.
Surveying.	Map Drawing.
Mine Accounts.	Mine Plant Design.

For those persons who have completed some or all of the mathematics advanced work will be arranged. Applicants must be not less than 17 years of age, and unless more than 21 years of age must pass an examination in the common school courses in Arithmetic, English Grammar, Geography, and United States History, or they must present satisfactory certificates showing that they have successfully pursued those subjects elsewhere. Applicants over 21 years of age are admitted without examination. County appointees receive tuition free; the charge for others is $25.00 per session.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. E. M.

Year	Term	First Hour. 8-9 a. m.	Second Hour. 9-10 a. m.	Third Hour. 10:30-11:30 a.m.	Fourth Hour. 11:30-12:30 a.m.	Afternoon 1:30-3:30 p.m.	Afternoon 3:30-4:30 p.m.	Saturday. 9-12 a.m.
Freshman	1	English 3 Drawing 2	Trigonometry 5	Physics 2 Drawing 3	Drawing 5	Wood Shop Bench Lathe 3 Phys. Lab. 2	Drill 5 Gym. 3	Wood Shop Drawing
	2	English 3 Drawing 2	College Algebra 5	Physics 3 Drawing 2	Chemistry 4 Drawing 1	Phys. Lab. 2 Chem. Lab. 2	Drill 5 Gym. 3	Drawing
	3	English 3 Drawing 2	College Algebra 5	Physics 3 Drawing 2	Chemistry 3 Drawing 2	Phys. Lab. 2 Chem. Lab. 3	Drill 5 Gym. 3	Drawing
Sophomore	1	Analytical Geometry 5	Adv. Physics 3 Mine Survey 2	Elementary Design 5	Drawing 5	Iron and Steel Forging	Drill Gym. 2	Elementary Design
	2	Analytical Geometry 5	Elec. & Mag. 3 Mine Survey 2	Calculus 5	Quant. Ana. 1 Desc. Geom. 4	Quant. Chem. Lab. 3	Drill Gym. 2	Quant. Anal.
	3	Analytical Geometry 5	Elec. & Mag. 3 Mine Survey 2	Calculus 5	Desc. Geom. 5	Elementary Metallurgy Sur. & Maps 2	Drill Gym. 2	Surveying Maps
Junior	1	Electric Eng.	Strength of Materials 5	Calculus 5	Mining I, II 5	Metallurgy 3 Mine Survey 2	Library	Mine Survey
	2	Mining III 5	An. Mechanics	Metallurgy 3 Ore Dressing 2	Econ. Geo. 2	Assaying 3 Mineralogy 2	Library	Assaying
	3	Mining III 5	Ore Dressing 2 Metallurgy 3	Analytical Mechanics 5	Dyn. Elec. Machy. 3 Econ. Geo. 2	Met. & Assay. Lab. 3 Mineralogy 2	Library	Assaying Mining Lab.
Senior	1	Hydraulics 2 Steam Engine 3	History 3 Pol. Economy 2	Mining VI, VII 5	Mining V 3 Metallurgy 2	Met. Lab.	Library	Mining Lab.
	2	Alt. Currents Power Plant	History 3 Pol. Economy 2	Mining VII 5	Mine Plant Design 5	Met. Lab. 3 Assaying 2	Library	Design Assaying
	3	Mine Plant Design	Thesis	Thesis Design	Min. VIII, IX 5	Thesis	Library	Thesis

Roman numerals indicate courses; Arabic, the number of recitations per week. Classes in subjects marked 3 recite Mondays, Wednesdays and Fridays; those marked 2, Tuesdays and Thursdays.

COLLEGE OF LAW

FACULTY

JAMES KENNEDY PATTERSON, Ph. D., LL. D., President.
WILLIAM THORNTON LAFFERTY, A. M.,
Dean and Professor of Law.
CHARLES KERR,
Professor of Law.
THOMAS EDWIN MOORE, A. B.,
Professor of Law.
_____
Professor of Law.
JAMES EDWARD TUTHILL, Ph. D.,
Assistant Professor of Political Economy and Sociology.
JOHN R. ALLEN, A. B., LL. B.,
Resident Lecturer.
RICHARD C. STOLL, A. B., LL. B.,
Resident Lecturer.
JOHN T. SHELBY, LL. B.,
Resident Lecturer.
GEORGE R. HUNT, LL. B.,
Resident Lecturer.

NON-RESIDENT LECTURERS.

AUGUSTUS E. WILLSON, Governor of Kentucky.
EDWARD C. O'REAR, Chief Justice Kentucky Court of Appeals.
HENRY S. BARKER, Judge Kentucky Court of Appeals.
J. P. HOBSON, Judge Kentucky Court of Appeals.
W. E. SETTLE, Judge Kentucky Court of Appeals.
JOHN D. CARROLL, Judge Kentucky Court of Appeals.
JOHN M. LASSING, Judge Kentucky Court of Appeals.
WILLIAM ROGERS CLAY, Commissioner Kentucky Court of Appeals.

COLLEGE OF LAW

The Legislature of the State of Kentucky in March, 1908, by special enactment, converted Kentucky State College into a University, which now assumes its place at the head of the educational system of the State, as Kentucky State University. It was the design of the Legislature to make a strong state educational institution, and additional appropriations were made for that purpose. Additional courses of instruction were provided for, one of which was a course in law. Accordingly the Board of Trustees directed that the College of Law be established as one of the integral parts of the University, and that it be opened September, 1908, for the admission of students. A course of study covering a period of two years was prescribed, but an experience of one year has shown that a longer period is required for a student to acquire a knowledge of the various elements of the law which will enable him to meet the needs of the profession. Commencing with September, 1909, the course will be extended to three years, and will embrace work of a collateral nature, which experience has proven to be of practical value in connection with the technical instruction.

Formerly, it was possible for the law student to begin and complete his professional studies in the office of a practicing lawyer. The demands upon the beginner were not so great; the authorities were few; the leading principles were settled and their application was comparatively simple. Now greater and better things are required. Our country is experiencing remarkable growth and development. The requirements for a successful career in all lines of business and in all professions necessitate the laying of a broader foundation before encountering these greatly changed conditions. Agriculture, mechanical engineering, and, in fact, all kinds of business demand greater preparation. In the profession of the law this requirement is even more apparent. The design of this College is to teach the student the fundamental principles of English and American Law, and to so extend the course of study as to fit him for the bar in any State. The course offered will be thorough and comprehensive, giving such training as will prepare him for usefulness as a citizen, and success as a practitioner. The instruction will not be limited to persons who may choose the

law as a profession, but will be given also to special students who may elect to take a limited course on such subjects as will be found useful in the pursuit of some other business or occupation.

ADMISSION.

The candidate for admission to the first-year class in the College of Law must, in September, 1909 and 1910, be able to meet the requirements for admission to the Freshman Class of any of the colleges of the University as given on page twenty-six. In September, 1911, students beginning the study of law must present evidence of having successfully completed the work of their Freshman year in this University or one of equal standing. All students who have matriculated in the College of Law, and have paid the fees required, will have the privilege of attending free of charge any of the lectures and recitations of the University. Students above the grade of Sophomore and who carry their full line of work in other departments of the University may, by the consent of the Faculty, have the privilege of attending, free of charge, any of the lectures and recitations of the College of Law.

ADMISSION AS SPECIAL STUDENTS.

Persons whose preliminary preparation is not such as to entitle them to enter the regular courses as candidates for a degree, or persons who have read law for a considerable period before making application for admission, and such reading has not been sufficiently extensive to bring them within the rules for admission to any class are allowed to become special students, with the privilege of pursuing a selected course of study, in any of the specified subjects, but without the privilege of being enrolled as candidates for a degree. All such students must satisfy the Dean that they are qualified to pursue the work with profit to themselves, and will be required to complete the subjects selected with the same thoroughness as regular students.

Should a special student desire subsequently to become a candidate for a degree, he must make up all the work required for the entrance examination before the beginning of the year when he proposes to graduate.

ADMISSION TO ADVANCED STANDING.

Students who are qualified to pass the entrance requirements, may be admitted to advanced standing, by presenting satisfactory evidence that they have pursued successfully the study of the subjects for which they wish credit, in an approved law school. If advanced standing is desired by students who have pursued a course of private reading, such students will be examined upon the subjects offered, and the examination will be final in all subjects in which passing grades are made. When study in a law office is offered with the application for advanced standing, an affidavit by the attorney under whom the study was carried on should be presented.

COURSE OF INSTRUCTION.

First Year.

Study of the Common Law. Three hours per week for twelve weeks.

Domestic Relations. Three hours a week for twelve weeks.

Torts. Two hours a week for twenty-four weeks.

Criminal Law. Three hours a week for eighteen weeks.

Contracts. Two hours a week for thirty-five weeks.

Bills, Notes and Cheques. Three hours a week for twelve weeks.

Partnership. Three hours a week for eight weeks.

Agency. Two hours a week for twelve weeks.

Principles of Sales. Three hours a week for eight weeks.

Real Property. Two hours a week for thirty-five weeks.

Junior Year.

Common Law Pleadings. Two hours a week for twelve weeks.

Corporations. Two hours a week for thirty-five weeks.

Evidence. Three hours a week for eighteen weeks.

Insurance. Three hours a week for eight weeks.

Bailment and Carriers. Three hours a week for eight weeks.

Equity Jurisprudence. Two hours a week for thirty-five weeks.

Code Pleading. Three hours a week for twelve weeks.

Wills and Administration. Three hours a week for eight weeks.

Commercial Law. Three hours a week for ten weeks.

Sociology. Two hours a week for thirty-five weeks.

Senior Year.

Damages. Two hours a week for eighteen weeks.

Conflict of Laws. Three hours a week for sixteen weeks.

Elements of Constitutional Law. Three hours a week for sixteen weeks.

Roman Law. Two hours a week for twenty-four weeks.

Political Economy. Two hours a week for thirty-five weeks.

Bankruptcy. Three hours a week for six weeks.

Code and Statute Law. Three hours a week for ten weeks.

International Law. Three hours a week for eight weeks.

Jurisdiction and Proceedings in the United States Court. Two hours a week for nine weeks.

Civil and Criminal Procedure. Two hours a week for thirty-five weeks.

METHOD OF INSTRUCTION.

The method of instruction pursued will be the use of text-books, lectures and illustrative cases, and such other methods as the Faculty may deem advisable. The value which the study of cases possesses in illustrating the practical application of legal principles, is fully appreciated, and the student will be required to use the library freely, in searching for cases illustrative of the principles taught him. He will be required to present the result of his investigation in the class room, that the subject may be discussed before the class until thoroughly understood.

Examinations will be held on each subject as it is completed, and a general examination will be held at the end of the year upon the entire year's work.

MOOT AND PRACTICE COURT.

The training given in a law school is not complete unless the student acquires a knowledge of actual practice. This is secured by the introduction of the Practice Court, which is presided over by one of the professors. A room is especially equipped for this work, with all the furnishings usually found in a well regulated court room. The court will be provided with a full corps of officers made up of the students, each of whom will alternate in official service until each member of the class has had sufficient practice to become familiar with the duties of each office. Students will be required to prepare and file in the court pleadings, de-

murrers, etc., and as counsel they will carry through the various steps taken in a cause from its inception to the final judgment. Criminal cases and cases in both law and equity will be made up and tried under the procedure practiced in a regular court. Record books will be kept in which each case will be recorded, showing its style, name of attorney and each step taken during the proceedings. At the conclusion of each case files will be made of all pleadings and other documents used. Appeals will be prosecuted to the Court of Appeals, and each student will be instructed in the preparation of the case, and in the procedure before that court.

In this court besides moot court work on assumed facts, actual controversies will be arranged, and assigned for trial on issues of fact before a jury, when witnesses will be examined, arguments made before the court and jury, and all other incidents of a contested trial will be experienced.

Students will at intervals attend the Fayette county courts which are in continuous session. Experience gained in these and in the Practice Courts of the College will give the student a good knowledge of the practical part of the course of instruction.

The preparation of wills, deeds, abstracts of title, and all other documents usually required of the practitioner will be taught.

PRIVILEGES AND LIBRARY.

Students of the College of Law will be admitted to all the privileges of the literary societies, gymnasium and library, upon equal terms with other students of the University. A law library is being accumulated and located in one of the department rooms assigned for this purpose, and is open daily for the free use of the students. By permission of the Fayette Bar Association they are also permitted to use the large library under its control, which is located in the Court House in Lexington, and contains a very large and valuable collection of text-books, reports of both Federal and State Courts, pamphlets and other books of value usually found in our best law libraries.

LAW SOCIETY.

The Henry Clay Law Society is an organization composed of the law students, which convenes once each week in the Practice

Court room. In this society the students by study and actual practice will learn the rules of parliamentary law, and its use in deliberative assemblies. They will organize legislative assemblies and learn the procedure in the framing and passage of bills, both State and Federal. Subjects of a public nature will be discussed so as to familiarize the students with the affairs of the country that will confront them in their experience as citizens and professional men.

LOCATION.

The College of Law is located in commodious quarters on the University grounds, and is supplied with class rooms, court room, auditorium for lectures, a library room and office.

CERTIFICATES.

A student who has been connected with this College for a period not entitling him to graduate, may on application to the Dean receive an official certificate of attendance, which states the time of his attendance and the degree of his attainments in the subjects taken.

COMBINED COURSE.

Under an arrangement that will be made, it will be possible for a student to carry on to some extent under certain conditions collegiate studies and studies in law at the same time. By so doing he will be able to shorten from seven to six years the time required to earn the degrees in both courses.

GRADUATION.

To attain the degree of Bachelor of Laws (LL. B.) a student must have attained the age of 21 years, have satisfied the entrance requirements, and have performed all required exercises and passed the regular examinations.

Special students or students admitted to advanced standing will be entitled to the privilege of becoming candidates for the degree when their work is made up as heretofore stated.

EXPENSES.

A matriculation fee of $5.00 will be charged each law student; the tuition fee is $30.00 per year, and a diploma fee of $10.00 will be charged each graduate. Good board can be had in private families at prices ranging from $3.00 to $4.50 per week. The books for the required work will cost about $30.00 per year.

LECTURES IN ENGLISH LITERATURE

ENGLISH XIX.

Miss Elizabeth Shelby Kinkead, Lecturer.

The course of instruction by means of weekly lectures in English literature was established by the action of the Board of Trustees in June, 1903, and the present lecturer was appointed. The work is of an interpretative and critical rather than of a technical nature, and therefore does not infringe upon that offered in the regular department of English. The object of the course is the elucidation of the principles of literature as related to life. Lectures are delivered solely upon specimens of English literature that may be termed classic, such writings, however, being selected as are not emphasized in the average text-book course, but with which persons of culture are familiar. Thus the student who goes out from the class has had opportunity to become somewhat acquainted with certain models of literature, through the medium of formulated criticism, and by means of recitation by the lecturer of the more beautiful passages of the composition discussed. In addition, therefore, to the mere intellectual value of such instruction, is the possible gain of that polish and enlightenment of spirit which is derived from contact with what is fine and delicate. In the lectures an attempt is made to inspire the student and to quicken in him the power of imagination which is necessary to success in every calling in life—just as necessary to the success of the engineer and the scientist as to that of the author and the professional man. It is through ideas, and not through mere knowledge of facts, or through technical training alone, that all great achievements are accomplished. The facts and the technical training are absolutely necessary, as a matter of course, but they are only the tools, with which ideas work; and the best means of arousing ideas in an undeveloped mind is through the presentation of the exalted thoughts and inspiring records of literature.

The lectures are delivered every Wednesday morning at ten o'clock in the Senior lecture room of Mechanical Hall, and attendance upon the course is compulsory upon the members of the Senior class. It is required that every member of the class shall take notes upon the lectures and prepare at each examination time a paper illustrating the principles that have been explained during the term.

DEPARTMENT OF PHYSICAL EDUCATION

I. FOR YOUNG WOMEN.

Mrs. Robert Lee Stout, Director.

(Graduate New Haven Normal School of Gymnastics.)

Upon the completion of a well equipped gymnasium in January, 1902, the Department of Physical Education for Women was organized under the present Director.

DEPARTMENTAL AIMS.

The aims of Physical Education are hygienic and educational: 1st. To stimulate the functioning of all bodily organs, and correct defects of the body external. 2nd. To develop the mental faculties of attention, discrimination, judgment, reaction time and self-control. 3rd. To develop character by the creation of high ideals.

GYMNASTICS.

A German gymnastic lesson is composed of four parts: Military Tactics, Free Gymnastics, Apparatus Work, Artistic Gymnastics or Classic Dancing.

Students are required to do two hours' work each week in the gymnasium. Physical Education is compulsory for all young women except Seniors, and as part of the curriculum is graded as other studies. Pupils must have an examination of heart and lungs by the University physician, Dr. Pryor, and an anthropometric examination by the Director before entering for work.

SWIMMING.

The swimming school for women is the only one of the kind in the South, and it was organized three years ago. It opens after the Annual Gymnastic Tournament in April, and is remarkably popular. Swimming is the best exercise for perfecting health after warm weather begins.

The system taught is that of Max Schwartz, of Yale, and after five or six lessons in the pool the pupils have caught the art of the breast-stroke, with correct breathing.

The pupil who makes an annual average of 13.5 and upwards may enter the class in May, if she so elects. Young women who learned to swim last spring will be taught advanced forms.

Each lesson lasts for half an hour and is given to groups of six. All pupils are drilled in resuscitation of drowning persons, after the manner of the United States Life-saving Crews.

BASKET-BALL.

Social games like basket-ball have a definite purpose in Physical Education. Players require quickness of thought, judgment, and self-control under excitement. They learn to sacrifice self for the sake of the team as a whole. Gymnastic training has given our young women such suppleness and endurance that their fame is more than local.

II. FOR YOUNG MEN.

W. W. H. MUSTAINE, B. S., *Director.*
J. W. PRYOR, M. D., *Medical Advisor.*

ASSISTANTS.

H. H. DOWNING, J. S. CROSTHWAITE, T. B. SHORT.

"Orandum est ut sit mens sana in corpore sano."—Juvenal.

Plato is said to have called any one lame, who exercised the mind while the body was allowed to suffer. In these days when so much time is spent in training the mind, when specilization in almost all lines has developed to such a degree that man has practically lost his all-round activity, when labor-saving machines are saving his muscles but not his nerves, when competition is so close and the motto "Press Onward" is ever before him, when the rush of our population from the healthful influences of country life to vitiating influences of the cities is increasing,—in short, when nearly all of the conditions and activities that have served to make our ancestors healthy and the great legacy of health which was inherited by our fathers and in a measure, by us, are being gradually withdrawn from us, it urgently behooves all of us to pay more attention to our physical welfare.

This is especially the case with college students. In college the student is urged toward mentality. It is the purpose of the Department of Physical Education to see not only that our students do not deteriorate in health and general physical stamina, but that they actually improve, while pursuing their studies here. Many of them come from rural communities. These are usually strong and vigorous. For this they are indebted to pure air, good food, sunshine, and healthful exercise. It were exceedingly inadvisable to withdraw

these conditions from them. They cannot thrive in changed conditions as well as the city boys who are more or less accustomed to the opposite environment. But there is even a greater need of this work for the city boys who are pale, flat-chested, and poorly developed.

Montaigne said: "It is not a soul, it is not a body that we are training, but a *man* and we must not divide him." Educators are taking hold of this idea, that real education must be broad enough to include the entire man. This Department is supported by the Board of Trustees and the Faculty of the institution the same as any other department. It includes nearly all of the students. It is for the masses. The work is required for graduation. During the past year about eighty per cent of all the students enrolled were present at every lesson .

PHYSICAL EXAMINATION.

Upon entrance every student is subjected to a medical examination of the heart and lungs by the Medical Advisor. If found ineligible to enter the work of the Department, theoretical work is assigned. If eligible, the Director of the Department will make an anthropometric examination consisting of the important physical measurements, strength tests, capacity of lungs, etc. He will also note the condition of the skin and examine for the usual physical deformities. Tests will be made of the vision, the hearing, and the color sense, and information concerning the family history of the student will be secured.

If advisable, special work will be prescribed, based upon the foregoing examinations; otherwise, the student will be assigned to some of the regular classes.

AIMS.

The work of the department will be conducted with six purposes in view, (*a*) the promotion and maintenance of health, (*b*) the development of the muscles for strength, grace, and good carriage, (*c*) the prevention and correction of physical deformities, such as flat foot, round shoulders, flat chest, spinal curvature, etc., (*d*) the overcoming of hereditary tendencies to disease, (*e*) the development of the faculties of attention, judgment, precision, discrimination, etc., and (*f*) the cultivation of the highest ethical ideals.

Two or more hours per week are required during the entire collegiate year, theoretical instruction being the more prominent during the warm weather of the Fall and Spring.

PHYSICAL INTROSPECTION.

Another feature of the work is that of physical introspection. Under this head is included (*a*) the effort to enlist the interest of the student in his physical welfare and to teach him the value of physical education, (*b*) frequent talks on applied physiology as well as on personal and public hygiene, (*c*) lectures on the several aspects of physical education including (1) its history,—status among the Greeks and growth of the present time, (2) its relation to sociology, psychology, and morality, (3) its relation to bacteriology and hygiene, and (4) first aid to the injured.

THE LITERATURE.

A feature of the coming year will be text-book instruction in the care of the body,—value of air, sunshine, bathing, exercise, hygiene, etc. Selections will be made from the following books: Gulick's *The Efficient Life,* Gulick's *Physical Education by Muscular Exercise,* Blaikie's *How to Get Strong and Stay So,* Buckley's *Studies in Physical Culture,* Masso's *Psychic Processes and Muscular Exercise,* Chesterton's *Theory of Physical Education,* Dulles' or Butler's *Emergencies.* Other books and magazine articles will be assigned for parallel reading, and essays on various subjects relating to health will be required.

FLOOR WORK.

Swedish gymnastics will form the foundation of the practical floor work, but this will be frequently interspersed with German gymnastics and musical accompaniment. Arrangements have been made with the Military Department whereby the entire cadet corps

will be instructed in the physical drill and "setting up" exercises by the Director of this Department at stated intervals during the winter term. Swedish exercises will also form a part of this instruction.

For recreation basket-ball and other gymnastic games will be employed. Opportunities for instruction in such personal contests as boxing, fencing, single sticks, wrestlng, etc., are provded and the work will be conducted by special instructors. As much of the work of the Department as possble will be conduced out-of-doors.

The attention of all patrons of the University is respectfully called to this Department and their hearty support is earnestly requested.

DEPARTMENT OF MILITARY SCIENCE

Lieutenant Corbusier.

The military instruction is under the charge of an officer of the United States Army. The course as a whole has special reference to the duties of the line. A full supply of arms and ammunition is furnished by the War Department for the use of the cadets in this course.

Every male student able to perform military duty, and not excused for sufficient cause, is required to drill twice each week and to attend the required lectures and recitations throughout the Freshman and Sophomore years. The standings in study and drill are placed on record, and are requisite to graduation in every course in the University.

The battalion is composed of four companies and the artillery and signal detachments. The officers are usually selected from the Junior class and the non-commissioned officers from the Sophomore class. The officers are paid a small sum for their services.

The uniform prescribed is of olive drab, cut after the army pattern. In order that all uniforms worn here may be, in quality, make, and finish, in strict accordance with the specifications adopted by the University, all students enrolled in the military department are required to obtain them from the firm only that may for the time being be under agreement to furnish said uniforms at a stated price and of standard quality.

THEORETICAL INSTRUCTION FOR ALL MALE STUDENTS.

Infantry drill regulations, U. S. Army. Firing regulations. Manual of guard duty. Army regulations.

Lectures on the organization and administration of the United States Army, and the general principles of the art of war. Freshman and Sophomore years, one hour per week.

PRACTICAL INSTRUCTION FOR MALE STUDENTS.

Infantry.—School of the soldier, squad, company and battalion; ceremonies; guard duty; minor tactics.

Artillery.—School of the cannoneer, and battery, dismounted; ceremonies; guard duty. Freshman and Sophomore years, two hours per week.

THEORETICAL INSTRUCTION FOR ALL OFFICERS AND SERGEANTS.

Military administration; field engineering; elements of the art of war; preparation of reports and returns.

Sophomore and Junior years, one hour per week.

MILITARY DEPARTMENT

ROSTER OF BATTALIONS.

FIRST LIEUT. P. W. CORBUSIER, 7th CAVALRY, U. S. A.,
Commandant.

REGIMENTAL STAFF.

R. C. Mayhall, *Captain and Adjutant.*
P. B. Blakemore, *Captain and Quartermaster.*

NON-COMMISSIONED STAFF.

J. R. Dean, *Regimental Sergeant Major.*
M. A. Cleveland, *Regimental Quartermaster-Sergeant.*

COLOR SERGEANTS.

W. A. Obenchain.
W. A. Lurtey.

FIRST BATTALION.

Edgar Bennett, *Major.*
L. C. Bridges,
1st. Lieut. and Batt. Adjut.

SECOND BATTALION.

T. P. Warren, *Major.*
F. W. Staples,
1st. Lieut. and Batt. Adjut.

BATTALION SERGEANTS MAJOR.

F. T. Miles, First Battalion.
A. C. Ball, Second Battalion.

BAND.

R. B. Moss,
1st Lieutenant and Drum Major.
C. G. Taylor,
1st Lieutenant and Chief Musician.
Paul Francis,
2nd Lieutenant and Principal Musician.

SERGEANTS.

M. M. Harrison
C. W. Denham
T. S. Karn
R. L. Jones

CORPORALS.

H. B. Hedges
R. N. Woodson
W. Collins
V. B. Milligan

COMPANY A.

E. B. Webb, *Captain.*
W. A. Wallace, *1st Lieut.*
V. L. Downing, *2nd Lieut.*

COMPANY B.

J. S. Garvin, *Captain.*
R. H. Cram, *1st Lieut.*

COMPANY C.

H. H. Hudson, *Captain.*
B. H. Logan, *1st Lieut.*

COMPANY D.

H. W. Smith, *Captain.*
T. O'Day, *1st Lieut.*
R. A. Bateman, *2nd Lieut.*

COMPANY E.

R. S. Webb, *Captain.*
T. B. Short, *1st Lieut.*
B. H. Collings, *2nd Lieut.*

COMPANY F.

J. F. Grimes, *Captain.*
W. G. Clugston, *1st Lieut.*
T. Slade, *2nd Lieut.*

THE ACADEMY

FACULTY

(In the order of appointment.)

WALTER KENNEDY PATTERSON, A. M., Principal.

KNOX JAMESON, A. B.

JOHN LESLIE PURDOM, A B.

ALFRED GAY McGREGOR, A. B.

WILLIAM SHACKLETTE HAMILTON, A. B.

Assistants.

ACADEMY

The Academy was established as an integral part of the institution by the General Assembly in order to prepare students to enter the Freshman Class in any of the Colleges of the State University. A large number of county appointees and others who have passed through the common schools require fully three years of preparation before they can enter the Freshman Class. Because of its relationship to the University and because it is created for the express purpose of bridging over the interval between the common schools and the Freshman Class, it possesses special advantages for this work. It adapts itself in quality and quantity to the kind of preparation needed and to its amount. The burden of work required in the colleges of the University renders thorough preparation indispensable and this preparation the Academy supplies.

COURSE OF STUDY.

FIRST YEAR. Arithmetic, Wells' *Academic;* Algebra, Wells' *Essentials* to Chapter XVII; English Grammar, Patterson's *Advanced;* Latin Grammar, Moore and Slicher's *Elements;* American History, Montgomery.

SECOND YEAR. Algebra, Wells' *Higher* to Chapter XXVIII; Plane Geometry, Beman and Smith; Rhetoric, Genung's *Outlines;* Synonyms, Crabb; Latin Grammar, continued; Twelve Lives of Nepos, or an equivalent; four books of Cæsar; Latin Prose Composition, D'Ooge; Beginning German, Bierwirth; *Glueck Auf,* Mueller and Wenckebach; Greek Grammar, Benner and Smyth.

THIRD YEAR. Solid Geometry, Beman and Smith; Studies in English Literature, Swinton; Selections from *Ovid*—2,500 lines with instruction in scanning; six orations of *Cicero;* Elements of German, Bierwirth; *Hoeher als die Kirche, Immensee;* German Prose Composition, Howe; Greek Grammar, continued; Xenophon's *Anabasis,* four books; Homer's *Iliad,* four books; Greek Prose Composition, Pearson; General History, Myers; New Physical Geography, Tarr; Elements of Physics, Gage.

COURSE IN READING

FIRST YEAR. Coleridge's *Ancient Mariner;* Milton's *L' Allegro, Il Penseroso, Comus* and *Lycidas.* In Class.

Scott's *Ivanhoe;* Scott's *Lady of the Lake.* Parallel.

SECOND YEAR. Macaulay's *Essay on Addison;* Macaulay's *Life of Johnson;* Burke's *Speech on Conciliation with the American Colonies;* Shakespeare's *Julius Caesar.* In Class.

Shakepeare's *Merchant of Venice;* Shakepeare's *Macbeth;* Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur.* Parallel.

The Academy is under the immediate direction and management of the Principal and four Assistants.

The students are subject to the same rules and regulations as the students of the University. The attendance at the University is required only during the hours of recitation and other prescribed University exercises, the preparation of their lessons being made elsewhere.

The courses of study in the Academy are provided for those who enter directly from the common schools, and supply the necessary training intermediate between the Freshman class of the University and the course of study prescribed by the State Board of Education for the common schools.

Students matriculating in the Academy are required to pursue one of its prescribed courses of study, and are not permitted to

take any study outside of this course except on the recommendation of the Principal.

ENTRANCE REQUIREMENTS.

Every applicant, to be admitted to the Academy, is required to pass a satisfactory examination in Spelling, Reading, Writing, Geography, American History, English Grammar, and Arithmetic.

County Appointees must present Certificates of Appointment, made on actual examinations held in pursuance of *law* by a County Board of Examiners, duly appointed for that purpose by the County Superintendent.

Applicants from the graded schools of the State must have completed with credit the eighth-grade studies.

Other applicants must have completed the common school course prescribed by the State Board of Education.

Those who enter at any other time than the beginning of the academic year will be required to pass a satisfactory examination on the work already gone over by the classes they propose to enter.

ENTRANCE EXAMINATIONS.

Examinations will be held as follows: Thursday, September 2, 1909, in Arithmetic, English Grammar, Higher Algebra and Rhetoric; Friday, September 3, in Essentials of Algebra, Latin Grammar, Plane Geometry, Nepos and Caesar; Saturday, September 4, in Political and Descriptive Geography, American History, Greek Grammar, and Beginning German; Monday, September 6, in General History and Physical Geography. The hours of examination on each day will be from 8 a. m. to 12 m. and from 2 p. m. to 5 p. m.

For the benefit of those other than county appointees, who desire to know the character of the examination which applicants for admission will be required to pass, the following examination papers are submitted as a sample. It is not to be understood that these are the questions on which applicants will be examined, but that they indicate the minimum attainments necessary to enter the Academy of the University. Those who expect to enter more advanced classes will be required to pass an examination on all that the class which they propose to enter has passed over.

I.—ARITHMETIC.

Find the greatest common divisor of:

$\frac{8}{9}$, $\frac{16}{21}$, $4\frac{4}{5}$, and $13\frac{5}{7}$.

Simplify: $\dfrac{6\frac{5}{8}, -5\frac{1}{5}, +4\frac{3}{4} - 3\frac{1}{2}.}{8\frac{9}{10} - 7\frac{7}{8} + 6\frac{4}{5} - 5\frac{1}{4}.}$

Find in gallons the contents of a cylindrical tank five feet in diameter and seven feet deep.

If .488 of a ton of coal cost $3.05, what will be the cost of 7.56 tons?

A certain number is divided into parts proportional to the numbest 3, 6, 11 and 18, such that the fourth part exceeds the third part by 35. What are the parts?

How many shot $\frac{1}{16}$ of an inch in diameter can be made from a ball 1 foot in diameter?

What per cent above cost must goods be marked to allow a discount of $12\frac{1}{4}$ per cent from the list price and still make a profit of $13\frac{4}{18}$ per cent?

What annual income will be realized by investing $4331.25 in a $7\frac{3}{4}$ per cent stock, at a premium of $23\frac{1}{2}$ per cent, brokerage $\frac{1}{4}$ per cent?

If A can do a piece of work in 3 days, B in 4 days, and C in 5 days, how long will it take them all to finish the work after A and C have worked 1 day?

A farmer sows 7 bushels, 3 pecks, 1 quart, and $1\frac{1}{2}$ pints of seed, and reaps 147 bushels, 2 pecks, and 1 quart. What is the yield per bushel of seed?

II.—GRAMMAR.

Name. define, and give examples of all the parts of speech.

In what three ways may the gender of nouns be indicated? Give examples.

Give the plural forms of ox, axis, folio, cargo, radius, penny, brother-in-law, and wagon-load.

Write the possessive case of fly, men, ladies, Cyrus, The Harpers, and Brown and Co.

Define redundant and defective verbs, and give the principal parts of am, can, cleave, choose, lay, lie, and set.

Define inflection, declension, comparison, and conjugation.

Define gender, case, mood, and voice.

Give the different ways in which infinitive and participial phrases are used.

Parse all of the words in the following sentences: "I know him to be a leader," "The ditch is twenty feet wide."

Analyze the following sentence:

So nigh is grandeur to our dust,
So near is God to man,
When duty whispers low, "Thou must."
The youth replies, "I can."

III.—HISTORY.

Give a brief account of the first settlement in each of the original thirteen colonies.

Define Charter, Proprietary, and Royal governments as applied to the colonies, and name the colonies that were under each of these forms of government.

Give the dates, causes, and results of each of the colonial wars.

Describe the Declaration of Independence, its causes, and two important battles of the War of the Revolution.

Give the boundaries of the United States at the time of the adoption of the Constitution, and indicate briefly the time, manner, and extent of each subsequent acquisition of contiguous territory.

Name the causes and results of the War of 1812, and give an account of the battles of Lake Erie and New Orleans.

State the causes of the Civil War and describe the following battles: Antietam, Gettysburg, Atlanta.

Give a full account of two naval battles of the Spanish-American War.

Give a brief account of each of the great Political Parties since the adoption of the Constitution, indicating their prominent principles.

Write a brief account of Benjamin Franklin, John Quincy Adams, Andrew Jackson, Daniel Webster, John C. Calhoun, James G. Blaine.

IV.—GEOGRAPHY.

Where is the Sea of Japan? Bay of Bengal? Arabian Sea? Gulf of Guinea? Caribbean Sea? Hudson's Bay?

What great lakes in Africa? Western Asia? Where are the great lakes of the Western Hemisphere? Where is the Amazon River? The Mississippi? In what direction do these rivers flow? Where is the Nile?

In what ocean are most of the islands of the world? What

large islands between Asia and Australia? What large island east of Africa? What group southeast of the United States? What group encloses the Behring Sea?

Name in order, from North to South, the States touching the east bank of the Mississippi, and give chief towns in each.

Bound California, Massachusetts, Ohio, Florida, and name the capital and chief city of each.

What are the chief natural products of Eastern Kentucky? Of Central Kentucky? Of Western Kentucky?

Do the island possessions acquired by the United States since 1898 lie north or south of the Tropic of Cancer?

What European nations have possessions in Asia? Give the location of these possessions.

Name the constitutional monarchies of Europe and give their capitals.

Locate Manchuria, Cape Colony, Venezuela, Oklahoma.

SCHEDULES OF STUDIES IN THE ACADEMY—1909-10.

I Arts and Science.

Year	Term	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	SIXTH HOUR.
FIRST	I	Advanced English Grammar.	Latin Grammar.	Academic Arithmetic.	Essentials of Algebra.		Physical Training.
	II	English Grammar and Composition.	Latin Grammar and Easy Latin.	Academic Arithmetic.	Essentials of Algebra.	American History.	Physical Training.
SECOND	I	Rhetoric and Synonyms or Greek Grammar.	Higher Algebra.	Latin Grammar and Nepos.	Plane Geometry.	General History.	Physical Training and Military Science
	II	Rhetoric and Composition or Greek Grammar.	Higher Algebra.	Caesar and Latin Prose Composition.	Plane Geometry.	General History.	Physical Training and Military Science.
THIRD	I	Physics.	Studies in English Literature.	Solid Geometry.	Ovid and Scanning.	German or Anabasis and Prose Composition.	Physical Training and Military Science.
	II	Physics.	Studies in English Literature.	Physical Geography.	Cicero and Latin Prose Composition.	German or Anabasis and Prose Composition.	Physical Training and Military Science.

II Engineering.

Year	Term	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	SIXTH HOUR.
FIRST	I	Advanced English Grammar.	Latin Grammar.	Academic Arithmetic.	Essentials of Algebra.		Physical Training.
	II	English Grammar and Composition.	Latin Grammar and Easy Latin.	Academic Arithmetic.	Essentials of Algebra.	American Hsitory.	Physical Training.
SECOND	I	Rhetoric and Synonyms.	Higher Algebra.	Latin Grammar and Nepos.	Plane Geometry.	German.	Physical Training and Military Science.
	II	Rhetoric and Composition.	Higher Algebra.	Caesar and Latin Prose Composition.	Plane Geometry.	German.	Physical Training and Military Science.
THIRD	I	Physics.	Studies in English Literature.	Solid Geometry.	German and Prose Composition.	General History.	Physical Training and Military Science.
	II	Physics.	Studies in English Literature.	Physical Geography.	German and Prose Composition.	General History.	Physical Training and Military Science.

ALUMNI

1869.

Munson, William Benjamin, B. S.....Denison, Texas.

1870.

Munson, Thos. Volney, B. S., M. S., '83, D. Sc., '06..Denison, Tex.

1871.

Harding, Enoch, B. S.....Fort Worth, Texas.

1874.

Carswell, Robert Emmett, B. S.....Decatur, Texas.
Dean, John Allen, B. S.....Owensboro.
Hardin, Thomas Rollins, B. S., M. S., '76.....Winchester.
Smith, Edward Everett, B. S.....Chicago, Ill.

1875.

Brown, Edgar Thomas, B. S., M. S., '77.....Chicago, Ill.

1877.

Floete, Franklin, B. S.....St. Paul, Minn.
Ward, Ballard Preston, B. S.....Rural Retreat, Va.

1878.

Cole, Moses Salvador, B. S.....Rivas, Nicaragua.
*Mackie, Mahlon, B. S.....Mt. Sterling.

1879.

Blakely, Charles Graham, B. S., M. S., '84.....Topeka, Kansas.
Hays, Napoleon Bonaparte, B. S., M. S., '84.....Pineville, Ky.
Perry, Caleb Sykes, B. S.....Shepherd, Texas.
Wright, Henry Moses, B. S.....Atlanta, Ga.

1880.

*Crawford, James, B. S.....Lexie, Tenn.
Peter, Alfred Meredith, B. S., M. S., '85.....Lexington.
Weller, Nicholas John, B. S.....Pineville.
Whatley, George Croghan, B. S.....Birmingham, Ala.

1881.

Pence, Merry Lewis, B. S., M. S., '85.....Lexington.

1882.

*Berry, George Gist, B. S.....Lexington.
DeRoode, Louis Kuinders, A. B., A. M., '86.....Philadelphia, Pa.
Patterson, John Letcher, A. B., A. M., '86.....Louisville.
Rogers, Edward Lee, A. B.....Lexington.
Shackleford, John Armstrong, A. B., A. M., '86...Tacoma, Wash.

*Deceased.

Stoll, John William, A. B.....Lexington.

1883.

*King, William Elijah, B. S.....Nelson County.
Taylor, James W., A. B., A. M., '86.....Carlisle.

1884.

Eubanks, Burton Prendergast, B. S.....Dallas, Texas.
Graves, Clarence Scott, B. S.....Lexington.
*Jones, Henry Clay, B. S.....Monticello.
Kastle, Joseph Hoeing, B. S., M. S., '86.....Washington, D. C.
Ramsey, Russell Thomas, B. S.....Denver, Colo.
Riley, Otis Violett, B. S.....Pineville.

1885.

DeRoode, Rudolph John Julius, B. S., M. S., '87..Glens Falls, N. Y.
Gess, George Thomas, B. S.....Lexington.
Gordon, John Crittenden, B. S.....Eminence.
Lambuth, William David, A. B.....Seattle, Wash.
Scott, James Russell, B. S.....Lexington.
*Thornbury, William Garland, B. S.....Brooklyn, N. Y.

1886.

Morgan, Thomas Hunt, B. S., M. S., '88.....New York.
*Prewitt, Robert Lee, A. B.....Memphis, Tenn.
Prewitt, William Chandley, A. B.....Fort Worth, Texas.

1887.

Hifner, Kearney Lee, B. S.....Lexington.
Shackleford, Thomas Wheatley, A. B.....Seattle, Wash.

1888.

*Bartlett, Frederick Vincent, B. S.....Lexington.
Bryan, George Gist, B. S.....Norfolk, Va.
Curtis, Henry Ernest, B. S., M. S., '92.....Lexington.
Gunn, Belle Clement, B. S.....Springfield, Ohio.
Payne, Robert Treat, B. S.....Santa Rosa, Mexico.

1889.

Ellershaw, Edward, A. B., A. M., '92.....Bristol, England.
Frazer, Hugh Miller, B. S.....Lexington.
*Patterson, William Andrew, B. S.....Lexington.
Prewitt, Annie Gist, B. S.....Lexington.
Walker, Robet Bernie, B. S.....New York.

1890.

Anderson, Richard Thomas, Jr., B. S.....Lexington
Baker, Annie Jane, B. S.....Lexington.
Brock, Charles Robert, B. S.....Denver, Colo.
Forston, Keene Richards, B. S.....Washington, D. C.
Gunn, John Wesley, C. E.....Lexington.
Hoeing, Charles, A. B.....Rochester, N. Y.

*Deceased.

Wilson, Margaret Agnes, B. S.....Deadwood, Colo.
Yates, James Anderson, B. S., M. S., '99.....Pittsburg, Kansas.

1891.

Berry, Henry Skillman, B. S.....Lexington.
Clardy, U. L., B. S.....Cheyenne Agency, S. D.
Muncy, Victor Emanuel, B. S., M. S., '07, B. M. E., '08.....
Cincinnati, Ohio.
Wallis, William Russell, C. E.....Memphis, Tenn.
Warner, B. Callie, B. S.....Washington, D. C.

1892.

Cox, Arthur Melville, A. B.....Cynthiana.
*Elkin, Fielding Clay, B. S.....Lexington.
Hunt, Irene Leonora, B. S., B. Ped.....Lexington.
Maxey, John Gee, A. B.....Louisville.
Page, William Seabury, C. E.....Danville, Wash.
Pottinger, Samuel Lancaster, A. B.....Louisville.
*Reynolds, Frank Craig, C. E.....Lexington.
Scovell, Frank Elmer, C. E.....Chamois, Mo.
Shaw, Hiram, B. S.....Chicago, Ill.
Shelby, Isaac Prather, C. E.....Pine Bluff, Ark.
Southgate, Butler Turpin, A. B.....Lexington.

1893.

Adams, Katherine Innis, A. B.....Las Cruces, N. M.
Bryan, John Irwin, B. S., B. M. E., '95.....Thompkinsville, N. Y.
Courtney, Edmond, B. Ped.....Covington.
Gunn, Henry Martin, B. S.....Tacoma, Wash.
Hobdy, William Cott, B. S.....Angel Island, Cal.
Johnson, James Richard, B. M. E.....Richmond.
McFarlin, John William, B. S.....Franklin.
Railey, Morton Sanders, C. E.....Washington, D. C.
Roberts, Daniel Stillwell, B. Ped., A. M., '01.....Louisville.
Smith, Denny Perryman, B. S.....Cadiz.
Speyer, Rosa, B. S., M. S., 1900.....Leipsig, Germany.
Ware, Cora E., B. Ped.....Pineville, La.
*White, Milford, C. E., M. S., 1900.....Lexington.
Willis, Benjamin Grant, B. S.....Lexington.

1894.

Aulick, Edwin Chesterfield, A. B.....Louisville.
Bradshaw, George Dickie, B. Ped.....Chicago, Ill.
Brand, Edward, A. B., A. M., '96, M. S., '05....Birmingham, Ala.
Curtis, Carlton Coleman, B. S.....New York.
Faig, John Theodore, B. M. E., M. E., '97.....Cincinnati, Ohio.
Garred, Ulysses Anderson, B. M. E.....Anaconda, Mont.
*Griffing, Emma Rosetta, B. S.....Lexington.
Hays, James Morrison, A. B.....Barbourville.
Hughes, Leonard Samuel, B. S.....Angel Island, Cal.
Jones, Mattison Boyd, A. B.....Los Angeles, Cal.

*Deceased.

Keiser, Benjamin Christopher, B. S.....St. Louis, Mo.
Kroesing, Lillie, B. S.....Lexington.
Newton, Nathan Alexander, B. M. E., M. E., '99.....Oil City, Pa.
Norman, Albert Clift, B. M. E.....Port Townsend, Wash.
Oots, Nina Pearl, B. S.....Lexington.
Shelby, Katherine, B. S.....Lexington.
Sledd, Dora, B. Ped.....Chicago, Ill.
Trigg, William Clay, C. E.....Memphis, Tenn.
Warner, Hattie Hocker, B. S., M. S., '96.....Angel Island, Cal.

1895.

Atkins, Mary Lyons, B. S.....Lexington.
Barber, Lanis Spurgeon, B. S.....Tallahassee, Fla.
Bush, Henry Skillman, B. S.....Lexington.
Didlake, Mary LeGrand, B. S., M. S., '97.....Lexington.
Downing, Joseph Milton, B. M. E.....Mantua, Ohio.
Faulkner, John Vick, C. E.....Simon, Ind. Ter.
Fitzhugh, Lucy Stuart, A. B., A. M., '96.....Lexington.
Foster, Nettie Belle, B. S.....Lexington.
King, Elizabeth Whittington, A. B., A. M., '97.....Lexington.
Lewis, Thomas Stone, A. B.....Lexington.
McConathy, James Asa, B. S.....Kirklevington.
McCaughliffe, Mary Catherine, B. S.....Lexington.
Murrill, Paul Ingold, B. S., M. S., '96.....Wilmington, Del.
Newman, Roberta, B. S.....Lexington.
Reynolds, Nellie Anna, B. S., M. S., '96.....Lexington.
Stoll, Richard Charles, A. B.....Lexington.
Weaver, Rufus Lee, B. S.....New York.
Willmott, John Webb, A. B.....Wewoka, Okla.
Woods, John Joseph, A. B.....Lexington.

1896.

Alford, Smith Edison, A. B.....Flushing, Long Island.
Carnahan, James Williams, A. B.....Cincinnati, Ohio.
Case, Daniel Morris, B. M. E.....Lexington.
Davidson, Harry Adolph, C. E.....Louisville.
Dean, Thomas Roland, A. B.....S. McAlister, Okla.
Duck, Alice, B. S.....Lexington.
Dunlap, John Jennings, A. B.....Covington.
Kerrick, Felix, A. B., A. M., '01.....Louisville.
Lyle, Joseph Irvin, B. M. E., M. E., '02.....Plainfield, N. J.
McDowell, Edward Campbell, B. M. E.....Berwick, Pa.
Orman, Henry, B. M. E.....Danville.
Trigg, Jhon Henry, B. S.....Corinth.
Woods, John Wesley, A. B.....Ashland.

1897.

Allen, William Raymond, A. B.....Muscogee, Okla.
Anderson, Henry Clay, B. M. E.....Ann Arbor, Mich.
*Atkins, Antoinette Thornton, B. S.....Lexington.

*Deceased.

Blessing, George Frederick, B. M. E., M. E., '04..Swathmore, Pa.
Bullock, Samuel Archibald, B. M. E., M. E., '04..Philadelphia, Pa.
Cassidy, Elizabeth, B. S.....Chicago, Ill.
Clarke, Mary Eva, B. S., M. S., '98.....Lexington.
Collier, William Henry, B. M. E.....Jackson, Tenn.
DeBow, Samuel Carruthers, B. M. E.....Union City, Tenn.
Downing, George Crutcher, B. Ped., M. S., '98.....Frankfort.
Duck, Berkley Wilson, B. M. E.....Indianapolis, Ind.
Duncan, William Adolphus, B. M. E.....San Francisco, Cal.
Frazer, Joseph Christie, B. S., M. S., '98.....Pittsburg, Pa.
Geary, John Thomas, B. S.....Lexington.
Gordon, Robert Lee, A. B., A. M., '98.....Bartlesville, Okla.
Gunn, Clara Brooke, B. S.....Lexington.
*Haley, John Thomas, B. S.....Lexington.
Hendren, James Harry, B. S.....Blanche.
Hicks, Arthur Lee, A. B.....Washington, D. C.
Kelly, Thomas Conway, B .M. E., M. E., '06.....Cincinnati, Ohio.
McHargue, Barbara Susan, B. S.....Morris, Minn.
Morgan, George Matt, B .S.....Cincinnati, Ohio.
Pope, Robert Lee, A. B.....Williamsburg.
Scott, John, A. B.....Manila, P. I.
Searcy, Lula, B. Ped..... Lexington, Okla.
Simrall, James Orlando Harrison, A. B.....Lexington.
Warner, Logan Hocker, B. S.....Wilmington, Del.
White, Martha Ripperdan, B. S., M. S., '02.....Swathmore, Pa.

1898.

Brock, George Green, A. B., M. S., '99.....London.
Brock, Lafayette Breckinridge. B. S.....Lexington.
Cahill, William James David, L. M. E.....Lexington.
Campbell, Thomas Luther, A. B.....Memphis, Tenn.
Carpenter, William Thomas, B. M. E.....San Francisco, Cal.
Farley, Frank Preston, A. B.....Flatlick.
Hammock, David William, B. S.....Cane Creek.
Hamilton, Thomas Smith, B. M. E., M. E., '99.....Louisville.
Johnson, Jack Stubblefield, A. B.....Paris.
King, Margaret Isadora, A. B.....Lexington.
Loevenhart, Arthur Solomon, B. S., M. S., '99.....Madison, Wis.
Loevenhart, Edgar Charles, B. M. E.....Panama.
Lucas, Ida West, A. B.....Flushing, Long Island.
Straus, Charles Louis, B. M. E., M. E., '99.....Lexington.
Terry, Lila Beatrice, A. B.....Paris.
Trosper, Henderson Taylor, A. B.....London.
Turner, Job Darbin, B. Ped.....Lexington.
Ward, Paul Sterling, B. M. E.....Covington.
Wilson, Henry Clay, A. B.....Cynthiana.

1899.

Allen, Leonard Barnes, B. C. E.....Ashland.
Brock, Walter Lucas, A. B.....London.
*Deceased.

Bronaugh, Will Logan, B. M. E., M. E., '03.....Chicago, Ill.
Bullock, Frederick Dabney, B. S.....Baltimore, Md.
Bullock, Joseph Hunt, B. S.....Lexington.
Butler, Frances Victor, A. B., A. M., '02.....Paris.
Copland, Alexander Chisholm, B. C. E.....Richmond, Va.
Cox, Jane Bramblett, A. B.....Lexington.
*Davidson, Joseph Ernest, B .C. E.....Louisville.
Graves, Leila May, B. S.....Huntington, W. Va.
Grinstead, Wrenn Jones, A. B.....Richmond.
Horton, Minnie Leigh, A. B.....Mt. Sterling.
Hughes, James William, B. M. E.....Philadelphia, Pa.
Jett, Carter Coleman, B. M. E.....Youngstown, Ohio.
Johnston, Philip Preston, B. M. E.....Lexington.
*Maddocks, Roydon Keith, B. C. E.....Wehrum, Pa.
Marks, Samuel Blackburn, B. S.....Lexington.
Morrow, Joseph, B. Ped.....Rankin.
Roberts, George, B. Ped., M. S., '01.....Lexington.
Sasser, William Henry, B. S.....Hazard.
Scherffius, William Henry, B. S., M. S., '05.....Lexington.
Scholtz, Theodore Walter, B. M. E.....Edgewood, Pa.
Simpson, Eugene Erwin, A. B., A. M., B. M. E.....Lexington.
Smith, Sidney Allan, A. B.....Lexington.
Vance, Arthur John, B. M. E.....Cincinnati, Ohio.
*Warren, Richard Evans A. B.....Lexington.
Wilmott, Jennie Walker, B. S.....Cincinnati, Ohio.
Young, Bradley Woodruff, B. S.....Seattle, Wash.

1900.

Allen, Robert McDowell, A. B.....Washington, D. C.
Bowden, Mary Willa, A. B.....Winchester.
Brock, David Morrice, B. C. E.....Memphis, Tenn.
Cornett, Charles George, B. Ped.....Pineville, Ore.
Cox, Lula May, B. S.....Deatsville.
Darling, Lewis, Andrew, B. M. E.....Ithaca, N. Y.
Frankel, Leon Kaufman, B. M. E., M. E., '02.....Lexington.
Graham, James Hiram, B. C. E., C. E., '03.....Knoxville, Tenn.
Graves, James Madison, B. M. E., M. E., '01.....Pittsburg, Pa.
Gunn, John Tevis, A. B., A. M., '01.....Lafayette, Ind.
Hardin, Calvin Evans, B. S.....Leesville, Ala.
Hestand, John Emerson, B. S.....Edmonton.
Hundley, Leslie, B. S.....Rome.
Johnston, John Pelham, B. M. E., M. E., '01.....Lexington.
Johnston, Marius Early, B. S.....Lexington.
Jones, Thomas Almon, A. B.....Creelsboro.
Lester, Arthur Vane, B. C. E.....Richmond, Va.
McCarty, William Carpenter, B. S.....Richester, Minn.
Musselman, Joseph Franklin, B. M. E., M. E., '04.....New York.
Neal, Mary Eliza, A. B.....Paris.
Nichols, Thomas Ashbrook, B. M. E.....Detroit, Mich.
Peyton, Nellie Evans, B. S.....Lexington.

*Deceased.

*Ragan, Leonidas, A. B.....Shearer Valley.
Reed, Jewett Villeroy, B. S.....Jeffersonville, Ind.
*Reiser, Eugene Feist, B. M. E.....Louisville.
Scrugham, James Graves, B. M. E., M. E., '06.....Reno, Nev.
Smith, Albert Elias, B. S.....Hindman.
Smith, Joshua Soule, B. M. E.....Chicago, Ill.
Spears, Miranda Louise, B. S.....Tucumcari, N. M.
Wilson, Joseph Buckley, B. M. E., M. E., '05.....Louisville.

1901.

Bassett, Henry Preston, B. S., M. S., '02.....Woodbury, N. J.
Bewlay, Henry, B. M. E.....Chicago, Ill.
*Blessing, Charles Albert, B. M. E.....Carrollton.
Bliss, Charlotte Miriam, A. B.....Louisville.
Bradley, Charles Walter, B. M. E.....Norfolk, Va.
Butler, Nannie Etta, B. S.....Lexington.
Craig, William James, A. B.....Owensboro.
Cutler, Frank Garfield, B. M. E., M. E., '04.....Ensley, Ala.
Dabney, Albert Smith, A. B.....Cadiz.
Daugherty, Frank, B. M. E.....Philadelphia, Pa.
Ellis, Nicholas Henry, B. Ped.....Cold Springs.
Gilbert, John Whittington, B. S.....Lawrenceburg.
Gordon, Mary Logan, A. B.....Frankfort.
Hailey, George Hereford, B. C. E.....Springfield, Ill.
*Humphrey, Claude Loecher, B. M. E.....Lexington.
Hunt, Robert Bruce, B. M. E.....St. Augustine, Fla.
Johnson, William Platt, B. Ped.....Paducah.
Jones, Leila Eleanor, B. Ped.....Arlington, Cal.
Kaufman, Philip Levy, B. M. E.....Chicago, Ill.
Klein, Garnet Rosel, B. M. E., M. E., '05.....Avalon, Pa.
Lary, Alleen Pettit, B. S.....Lexington.
Lewis, Charles Dickens, B. Ped.....Berea.
Luten, Drew William, A. B.....Arkadelphia, Ark.
Marshall, Albert Ross, B. S., M. S., '02.....Campton.
Milburn, Frank William, B. M. E., M. E., '04.....Columbus, Miss.
Moore, Thomas Brent, A. B.....New York.
Offutt, Jimmie Morrison, B. S., M. S., '04.....Seattle, Wash.
Pennington, William Lee, B. Ped.....The Ridge.
Perkins, Wade Hampton, B. C. E.....Crab Orchard.
Rankin, Flora Emma, A. B.....Rankin.
Rice, Guy Wickliffe, B. C. E.....Huntington, W. Va.
Richmond, Thomas Logan, B. Agr.....Arlington, Cal.
Seibert, Frank Thomas, B. M. E.....Alamogordo, N. M.
Sharon, John Albertus, B. Ped.....Richmond.
Shedd, Oliver March, B. S., M. S., '04.....Lexington.
Taylor, Gibson Walker, A. B.....Fredericksburg, Va.
Treas, Charles, B. C. E.....Greenville, Miss.
Webb, William Snyder, B. S., M. S., '02.....Lexington.
West, Perry, B. M. E., M. E., '04.....New York.

*Deceased.

Williams, Ella Campbell, B. S., M. S., '02.....Pineville.

1902.

Barr, Thomas James, B. M. E.....Cannel City.
Berry, Jesse Cecil, B. Ped.....Orlando, Tenn.
Boulware, Lemuel Ford, A. B.....Campbellsburg.
Bowling, Willet Lee, B. M. E.....Los Angeles, Cal.
Campbell, Walter Gilbert, A. B.....Washington, D. C.
Clay, Matthew Martin, B. C. E.....Lexington.
Cox, Spencer Foster, B. M. E.....Philadelphia, Pa.
Crider, Albert Foster, A. B. M. S., '03.....Biloxi, Miss.
Ditto, Leola, B. Ped.....Eminence.
Donan, Daniel Cummins, B. Ped., M. S., '03.....Louisville.
Doyle, Chester Lawrence, B. M. E.....Louisville.
Dunn, Oswald Thorp, B. C. E., C. E., '04.....Louisville.
Evans, Edwin Clinton, B. M. E., M. E., '05.....Syracuse, N. Y.
Ewell, George Watkins, A. B.....Seattle, Wash.
Frazee, George Burbridge, Jr., B. M. E.....Louisville.
Gaither, Morton Williams, B. M. E.....City of Mexico, Mexico.
Grady, Clyde, A. B., A. M., '03.....Smith's Mills.
Hart, William Frederick, B. C. E.....St. Louis, Mo.
Hatfield, Ulysses Grant, B. Ped.....Russell Spring.
Haynes, Robert, B. Ped.....Capiz, P. I.
Hoeing, Howard Aubrey, B. M. E., M. E., '05.....Milwaukee, Wis.
Hoeing, Wallace, B. M. E., M. E., '05.....Louisville.
Hughes, William Neal, B. C. E.....Washington, D. C.
Humphrey, Hubert Lee, B. M. E.....Cleveland, Ohio.
Jackson, John Hunt, B. Ped.....New Columbus.
Jett, Charles Mills, B. M. E.....Minneapolis, Minn.
Jones, Theodore Tolman, A. B., A. M., '03.....Lexington.
Kehoe, John Hickey, B. M. E.....Rawhide, Nev.
Lawhorn, Jesse Sherman, B. Ped.....Middleburg.
Lyne, William B., B. M. E.....Oshkosh, Wis.
Maddox, David Campbell, A. B.....Hickman.
Martin, Lewis Wynn, B. M. E., M. E., '05.....St. Louis, Mo.
Mason, Glenn Frank, B. S., M. S., '03.....Avalon, Pa.
McDonald, Samuel Gilbert, B. Agr.....New Castle.
Moorman, Robert Emmett, B. C. E.....Glendeane.
Pulverman, William Edward, B. M. E., M. E., '05.Philadelphia, Pa.
Scott, Wellington F., A. B.....Lexington.
Smith, Chester Martin, B. M. E.....Chicago, Ill.
Smith, Orville Francis, B. C. E.....Phoenixville, Pa.
Stoner, John Lee, B. C. E.....Pikeville.
Sumner, Herman, B. M. E.....Greenville.
Taylor, Flemin Coffee, B. M. E., M. E., '05.....Ensley, Ala.
Taylor, Lewis Nelson, B. S.....Somerset.
Threlkeld, Lal Duncan, A. B.....Paducah.
Uppington, George Paul, B. M. E.....Boston, Mass.
Warnock, Thomas Edwin, B. M. E., M. E., '03.....Janesville, Wis.
Williams, Cora, B. Ped.....Bellevue.
Wilson, Richard Napoleon, B. M. E.....Lansing, Mich.

1903.

Austin, Mary Wickliffe, A. B.....Paris.
Barkley, George LaRue, B. M. E.....Springfield, Ill.
Bradford, Homer Theodore, B. M. E.....Falmouth.
Brown, John Edwin, B. Agr.....Shelbyville.
Bullock, Barry, A. B.....Lexington.
Chorn, Sarah Marshall, A. B., A. M., '05.....Lexington.
Cutler, Thomas Henry, B. M. E.....Gary, Ind.
Ellis, Richard Washington, B. M., M. E., '06.....Brooklyn, N. Y.
Elvove, Elias, B. S., M. S., '04.....Pittsburg, Pa.
Evans, Frederick Huston, B. M. E., M. E., '06.....Peoria, Ill.
Finneran ,James Cornelius, B. M. E.....New Orleans, La.
Finneran, Thomas Francis, B. C. E.....Midway.
Gaither, Edward Basil, B. M. E.....City of Mexico, Mexico.
Galloway, Clarence Albert, A. B.....Independence, Mo.
Hamilton, Lloyd Logan, B. M. E.....Minneapolis, Minn.
*Hancock, Mason Wallace, A. B.....Columbia.
Heaton, Herman Creel, B. M. E., M. E., '05.....Chicago, Ill.
Higgins, Lucy Joseph, A. B.....Louisville.
Hutchings, John Bacon, B. C. E.....Louisville.
Kelly, Edwin Owen Guerrant, B. S., M. S., '04..Manhattan, Kan.
Lancaster, John Ralph, B. M. E.....Cleveland, Ohio.
Lyle, Cornelius Railey, B. M. E.....Pittsburg, Pa.
Marks, William Mathews, B. M. E.....Charlotte, N. C.
Marshall, Isabella West, A. B.....Lexington.
McKee, Neal Trimble, B. M. E., M. E., '06.....Mt. Sterling.
McLaughlin, Marguerite, A. B.....Lexington.
Miller, Mina Garrard, B. S.....Clarksville, Tenn.
Naive, Miriam Wynter, B. S.....Gary, Ind.
Norvell, Lucy Hargis, A. B.....Carlisle.
Peckinpaugh, Charles Leon, B. C. E.....Sheffield, Ala.
Pence, Alice Courtney, B. S., M. S., '04.....Moorhead, Minn.
Perrine, Charles Duke, B. M. E.....Mercedes, Texas.
Rand, Edward, B. M. E.....San Francisco, Cal.
Render, Fannie Prudence, A. B.....Orlinda, Tenn.
Sadler, Reuben Batson, B. S., M. S., '04.....Wilmore.
Shannon, Bernadette, A. B.....Lexington.
Spencer, Howell Mason, B. M. E.....San Francisco, Cal.
Sprake, Eleanor Hedges, A. B.....Piqua.
*†Tandy, Clarke Howell, A. B.....Lexington.
Thomas, Smith Riley, B. M. E.....Little Rock, Ark.
Thompson, John James, B. M. E.....Cincinnati, Ohio.
Vogt, John Henry Leon, B. M. E.....Stearns.
Whitfield, Nellie Herbert, B. S., M. S., '04.....Lexington.
Whittinghill, Jackson Pate, B. S.....Owensboro.
Whittinghill, Roscoe Timoleon, B. Ped.....Owensboro.
Wurtele, Edward Conrad, A. B.....Shively, Ky.

*Deceased.
†First Kentucky holder of Rhodes Scholarship.

1904.

Arnett, Richard Hood, B. Ped.....Troy.
Austin, Lillian, A. B.....Paris.
Barclay, Robert Hargrave, B. E. M.....Louisville.
Bell, Howard Kerfoot, B. S., B. C. E.....Lexington.
Buford, Nancy Bell, A. B.....New Castle.
Butner, Robert Clarke, B. M. E.....Lexington.
Clo, J. Marry, B. S., M. S., '05.....Charlottesville, Va.
Coleman, Harry Raymond, B. Ped.....Chicago, Ill.
Cremin, Edna Truetta, A. B.....Louisville.
Srutchfield, William Boulden, A. B., A. M., '05.....Lexington.
Denny, Samuel Alfred, B. S.....Madisonville.
Dodson, Marcus Alvin, B. Ped.....Greenwood.
Dowling, Edward Thomas, B. M. E.....Lexington.
Doyle, Martin Augustus, B. M. .....E.....Tompkinsville, N. Y.
Dyer, Orville Kirk, B. M. E.....Buffalo, N. Y.
Freeman, William Edwin, B. M. E.....Lexington.
Fry, Henry Skillman, B. M. E.....Rochester, N. Y.
Gardner, James Henry, B. S., M. S., '06.....Washington, D. C.
Gary, William Edward, B. S.....Louisville.
Gilliland, Eugene, B. M. E.....Cincinnati, Ohio.
Gilmore, Charles Robert, B. S.....Muskogee, Okla.
Gordon, Amos Alvin, B. C. E.....Pottsville, Pa.
Grey, William David, B. C. E.....Louisville.
Gullion, Carroll Hanks, B. M. E., M. E., '06.....Chicago, Ill.
Harding, George Othniel, B. C. E.....Campbellsville.
Hart, Benjamin Robert, B. S., M. S., '07.....Cincinnati, Ohio.
Hart, Margaret Rebecca, A. B.....Pisgah.
Hedges, Fleming Dillard, A. B.....San Rafael, Cal.
Hoagland, Roy Chan, B. S.....Eminence.
House, Beverly Pryor, A. B.....Manchester.
Howard, Styles Trenton, B. M. E.....Clemson College, S. C.
Hunter, Patrick Owen, B. M. E.....Philadelphia, Pa.
Jaeger, Helen Louise ,A. B.....San Diego, Cal.
Jenkins, Alexander Lewis, B. M. E.....Cincinnati, Ohio.
Johnson, Frank Yarbrough, B. M. E.....Savannah, Ga.
Johnston, Hampton Wallace, B. M. E.....Cleveland, Ohio.
Kelly, Walter Pearson, B. S.....Lafayette, Ind.
Lewis, Joseph Graham, B. C. E.....Eugene, Ore.
Madara, Helen Glenn, A. B.....Buffalo, N. Y.
Maguire, Mary Josephine, B. S.....Lexington.
Matlack, Charles Aloysius, B. M. E.....Lexington.
Matthews, John Eve, B. M. E., M. E., '07.....Philadelphia, Pa.
McCann, Sue Dobyns, B. S., M. S., '05.....Lexington.
McCauley, James Simeon, B. M. E.....Atlanta, Ga.
McCaw, Eloise Chesley Hance, B. S.....Hamlet, N. C.
Monson, Bessie Lee, B. Ped.....Anniston, Ala.
Montgomery, Francis, Josepn, A. B.....Manila, P. I.
Nollau, Louis Edward, B. M. E.....Lexington.
Payne, William Campbell, B. S.....Cynthiana.

Peratt, Charles Oscar, A. B.....Paducah.
Pickles, George Wellington, B. C. E.....Springfield, Ill.
Porch, Madison B., B. S.....Bellevue, Pa.
Puckett, Homer, B. C. E.....Milwaukee, Wis.
Ramey, Emerson Everett, B. M. E, M. E., '07.....Oakland, Cal.
Renz, Gertrude, B. S.....Louisvillle.
Rice, Heber Holbrook, B. S.....Huntington, W. Va.
Sandefur, James Franklin, A. B.....Cambridge, Mass.
Schneiter, Frederic Lewis, B. C. E.....Evansville, Ind.
*Schultz, Elmer Wilkerson, A. B.....Lexington.
Shelby, John Craig, A. B.....Lexington.
Shobe, William Merritt, B. Agr.....Salem, N. J.
Smedley, Sarah Cleveland, A. B.....Lexington.
Smith, Claude Robert, B. S.....Elizabethtown.
Smith, Thomas Marshall, B. S., M. S., '05.....Cynthiana.
Stackhouse, Clifton Carr, B. M. E.....Ensley, Ala.
*St. John, Claire Porter, B. M. E.....Brooklyn, N. Y.
Thurman, Zella Mae, B. S.....Somerset.
Tucker, Nannie Susan, A. B.....Maysville.
Vaughn, Earl Cleveland, A. B.....Lexington.
Warder, William Henry, B. C. E.....Glasgow.
Ware, Cornelius, B. Ped.....Pulaski.
Wilkie, Margaret Donald Erskine, B. S., A. B., M. S., '05...
Lexington.
Wilson, George Hancock, B. S.....Lexington.
Wurtele, Henry Joseph, B. C. E.....Gary, Ind.

1905.

Adamson, Keith Frazee, B. M. E.....Philadelphia, Pa.
Akin, Allison, B. M. E.....New York City.
Amoss, Harold Lindsay, B. S., M. S., '07.....Washington, D. C.
Baumgarten, Louis Erwin, B. M. E.....Ensley, Ala.
Bickel, Charles Alfred, B. M. E.....Milwaukee, Wis.
Brashear, Sue Ashbrook, A. B.....Cynthiana.
Bryan, Ruth Mitchell, A. B.....Lexington.
*Burtt, Wilson Bryant, B. C., C. E., '06.....Philippine Islands.
Campbell, Marion, B. S.....Louisville.
Cline, Edgar Allen, B. M. E.....Kansas City, Mo.
Coons, Joseph Morrison, B. C. E.....Mt. Sterling.
Darnall, Frank Kendrick, B. M. E.....Wilkinsburg, Pa.
Dietrich, Karl Lander, B. M. E.....Milton, Pa.
Drake, Jimmie, A. B.....Okena, Okla.
Edwards, Harry Griswold, B. M. E.....Schenectady, N. Y.
Eubank, Walter Pendleton, B. C. E.....Glasgow, Ky.
Gfroerer, Fannye Rosalie, B. S.....Louisville.
Gilbert, George Hubbard, B. M. E.....Chicago, Ill.
Grady, William Henry, B. M. E.....Indianapolis, Ind.
Ham, Clarence Walker, B. M. E.....Ithaca, N. Y.
Haynes, Chastain Wilson, B. S.....Marion.
Ingels, Howard Payne, B. M. E.....New York City.
*Deceased.

Johnston, Fayette, B. M. E.....Lexington.
Kelly, William Cobb, B. C. E.....Bloomington, Ill.
Kroell, Oscar Robert, B. M. E.....Lexington.
Layson, William George, B. M. E.....Indianapolis, Ind.
Morris, Stewart Minor, B. M. E.....Anaconda, Mont.
Murphy, Ernest James, A. B.....Antequera, Bohol, P. I.
Murrell, Artemus, Delig, B. M. E.....St. Louis, Mo.
Ogg, Grace, Truman, A. B.....Mt. Sterling.
Owens, Charles Beland, B. M. E.....Berwick, Pa.
Payne, William Johnson, B. M. E.....Philadelphia, Pa.
Pierce, Claude Stone, A. B.....Aparri, P. I.
Pope, Henry B., B. E. M., E. M., '06.....Brooks.
Powell, Max West, B. M. E.....Springfield.
Prather, Harry Logan, B. M. E.....Pinole, Cal.
Ransom, Edward Rogers, B. Agr.....Blandville.
Roberts, Virgil Dick, B. M. E.....Hamburg, Ark.
Rogers, Anna Gist, A. B.....Toyhoule, Texas.
Schoene, William J., B. Agr.....Geneva, N. Y.
Scholtz, Herman Frederick, B. C. E.....Louisville.
Shipp, Joel Fithian, B. M. E.....Atlanta, Ga.
Sprake, James Breckinridge, B. M. E.....Iowa City, Iowa.
Stiles, Elijah Bland, B. C. E.....Springfield, Ill.
Thomas, Bennett, B. M. E.....Lexington.
Tomlinson, Hugh Joseph, B. M. E.....Toledo, Ohio.
Tye, Rachel, A. B.....Williamsburg.
Urmston, Henry Howard, B. M. E.....Ames, Iowa.
Wallis, Charles Reese, B. M. E.....Schenectady, N. Y.
Walsh, Robert Bright, A. B.....Heidelberg, Germany.
Wathen, Sallyneill, B. S.....Louisville.
Weaver, Walter Simeon, B. Agr.....Lancaster, Ky.
Webb, Elzie, B. C. E.....Covington.
Werness, Inga Marie, B. S.....Louisville.
West, Howard Murphy, B. M. E.....New York City.
Woerner, Emma Josephine, B. S.....Louisville.
Wood, Hugh Nelson, B. C. E.....Hopkinsville.
Woosley, Herman Cassidy, B. Agr.....Lexington.
Wright, Charles Roy, B. C. E.....Stanford.

1906.

Allen, David Hugh, B. M. E.....Beloit, Wis.
Baxter, William Jefferson, A. B.....Logana.
Bogard, Frank, B. M. E.....Clemson College, S. C.
Brown, Llewellyn Chauncey, B. M. E.....Riverside, Ill.
Bryan, Daniel Boone, B. M. E.....Cincinnati, Ohio.
Cartwright, Coleman Clyde, B. C. E.....Louisville.
Chinn, Alexander Julian, B. M. E.....Buffalo, N. Y.
*Clo, Nelson Lewis, B. M. E.....Science Hill.
Darling, Henry Bosworth, B. M. E.....Chattanooga, Tenn.
Downing, William Franklin, B. M. E.....Geogetown.
Dragoo, Robert Estill, B. M. E.....Lexington.

Du Valle, Rankin Powers, B. C. E.....Barren Fork.
Edmonds, George Peck, B. M. E.....Lebanon.
Freeman, Thomas Willmott, B. M. E.....Seattle, Wash.
Goggin, Bessie Engleman, B. S.....Somerset.
Gough, Achilles Calloway, B. M. E.....Ames ,Iowa.
Gregory, Mary Cottell, A. B.....Louisville.
Hamilton, James Clay, B. M. E.....Boston, Mass.
Harper, Joseph Nelson, M. S.....Clemson College, S. C.
Hedges, Charles Cleveland, B. S.....Ithaca, N. Y.
Hopgood, Roy Caldwell, B. M. E.....Chicago, Ill.
Hopson, Katherine Temple, A. B.....Lexington.
Hutchcraft, Lucy Keller, A. B.....Lexington.
Jones, Sadocie Connellee, B. Agr.....Urbana, Ill.
Kelly, Edward Patrick, A. B.....Richmond.
Kemper, William Priest, B. C. E.....Mt. Sterling.
Lancaster, Charles Prentice, B. C. E.....Paris.
Lancaster, John Wilbur, B. Ped.....Josephine.
Lewis, Alexander Thornton, B. M. E.....New York City.
Magee, Wallace Hopkins, B. M. E.....Indianapolis, Ind.
Mahan, Fred Coyt, B. M. E.....Manila, P. I.
Mahoney. Margaret Elizabeth, B. S.....Leitchfield.
McClelland, Byron, B. S.....Newark, N. J.
McCulloch, Eugenia Susan, B. S.....Louisville.
McDowell, Omer, B. M. E.....Hugo, Okla.
McHargue, James Spencer, B. S.....Lexington.
McPherson, Charles Jarrett, B. M. E.....Philadelphia, Pa.
Montgomery, George Carter, B. M. E.....Kansas City, Mo.
Moore, Henry Ray, B. M. E.....Chicago, Ill.
Newman, James Cleveland, B. M. E.....Norfolk, Va.
Nisbet, James Clarence, B. C. E.....Providence.
Nunnelley, Eva May, A. B.....Lexington.
Paddison, George Lucas, A. M.....Oxford, Miss.
Rankin, French Warder, B. M. E.....Beloit, Wis.
Read, Henry English, B. M. E.....Hodgenville.
Riefkin, Philip, B. M. E.....Washington, D. C.
Robinson, Herman Clayton, B. M. E.....Riverside, Ill.
Rogers, James Dell, B. C. E.....Cannonsburg, Pa.
Scott, Henry Skillman, B. M. E.....Bement, Ill.
Scott, Mary Estill, B. S.....Pineville.
Scrugham, Mary, A. B.....Lexington.
Sellman, Frank Raymond, B. M. E.....San Francisco, Cal.
Smith, Maxwell Waide, B. C. E.....Little Rock, Ark.
Stevens, Harold Edwin, B. Agr.....Manila, P. I.
Sweeney, Mary E., M. S.....Lexington.
Taylor, Hugh Wilbur, B. Agr.....Carlisle, Pa.
Terrell, Robert Craig, B. C. E.....Lexington.
Trice, John Buckner, B. M. E.....Schenectady, N. Y.
Volkman, Alice, A. B.....Louisville.
Wallis, Anna, A. B.....Lexington.
Warren, Joseph Evans, B. S.....Lexington.

Weir, Fanny, A. B.....Louisville.
Wendt, Wiley, B. C. E.....Lansing, Mich.
Whitlock, Albert Newlon, A. B.....Cambridge, Mass.
Wiley, Rodman, B. C. E.....Orville, Cal.
Wilkie, Florence, A. B.....Ludlow.
Wilson, Horace Hildebrand, B. M. E.....Berwick, Pa.

1907.

Acker, Robert Lewis, B. C. E.....Wendling, Ore.
Alexander, Josie McCoun, A. B.....Paris.
Allan, John Griffin, B. C. E.....Arno, Texas.
Ammerman, John Roger, B. M. E.....Manila, P. I.
Baer, Stanley T., B. C. E.....Louisville.
Bagby, Mary Logan, A. B.....Camden Point, Mo.
Boggess, Louis Sterling, B. C. E.....Lawrenceburg.
Branson, Don Pedro, B. S. in Agr.....Manila, P. I.
Brown, William Waters, B. C. E.....Ensley, Ala.
Carmody, Catherine Gertrude, A. B.....Mt. Sterling.
Carse, Robert Allen, B. M. E.....Berwick, Pa.
Coleman, Samuel Boin, B. C. E.....Butte, Mont.
Craig, Berrywick Staley, B. M. E.....Schenectady, N. Y.
Cram, Ambrose Byrd, B. C. E.....Brazil, S. A.
Crawley, Alice Lyle, A. B.....Louisville.
Crenshaw, Anne Scott, A. B.....Versailles.
Denham, Ernest Meyers, B. C. E.....Jellico, Tenn.
Dodd, Daniel Jackson, B. C. E.....Chicago, Ill.
Donan, Arthur Liston, B. C. E.....Ambridge, Pa.
Edgar, Graham, B. S.....Lexington.
Estill, David Chenault, B. M. E.....Lynn, Mass.
Farrell, Walter Augustus, B. M. E.....Cincinnati, Ohio.
Fish, Clarence Beauchamp, B. Ped.....Baltimore, Md.
Gordon, Flora McPheeters, A. B.....Barboursville.
Gunwell, Paul Clifton, B. M. E.....Washington, D. C.
Hamilton, William Shacklette, A. B.....Lexington.
Hart, Robet Singleton, A. B.....Pisgah.
Herman, Joseph George, B. C. E.....Chicago, Ill.
Hillenmeyer, Louis Edward, B. S. in Agr.....Lexington.
Howard, Guylie Benton, B. M. E.....Rockvale.
Karsner, Albert Sharkey, B. C. E.....Chicago, Ill.
Kirby, Augustus Montillmon, A. B.....Manila, P. I.
Kornfeld, Louise Marie, B. S.....Louisville.
Lawson. Fayette Hewitt, B. M. E.....Chicago, Ill.
Lazarus, Goldye Theo., B. S.....Louisville.
Letton, James Harvey, B. C. E.....Abingdon, Va.
Lewis, Leo Logan, B. M. E.....Lexington.
Lewis, Viola Cosby, A. B.....Louisville.
Lockridge, Mary Andrew, A. B.....Mt. Sterling.
Maddocks, Florence May, B. S.....Clarksville, Tenn.
Madison, James Talbot, B. C. E.....Hollywood, Miss.
Mahan, Charles Alfred, B. S. Agr., M. S., '08.....Manila, P. I.
Martin, Sadie Spears, A. B.....Visalia.

McClelland, Thomas Brown, A. B.....Lexington.
McKinney, Walter, B. C. E.....Hamburg, Ark.
Nicholls, William Durrett, B. S. in Agr.....Lexington.
Ott, Thomas Foreman, B. S.....Georgetown.
Parrish, Charles Swift, A. B.....Lexington.
Paullin, Frank Chester, B. C. E.....Springfield, Ill.
Rankin, Fred Jones, B. M. E.....Lynn, Mass.
Rees, Elijah Latham, B. C. E., C. E., '08.....Lexington.
Rule, Perrin, B. M. E.....Chicago, Ill.
Scearce, George Gwin, B. S.....Frankfort.
Scherffius, Benjamin Franklin, B. Agr.....Lexington.
Schoene, Charles Edgar, B. M. E.....Lexington.
Shannon, Philip Francis, B. C. E.....Lexington.
Smith, Ina Kay, A. B.....Lexington.
Spears, Howell Davis, B. S.....Lexington.
Sprague, Joseph Miles, B. M. E.....Ensley, Ala.
Stigers, James Francis, B. C. E.....Paragould, Ark.
Stiles, Mildred, A. B.....Pasadena, Cal.
Strachan, George Morrise, B. C. E.....Louisville.
Sumner, Gordon, B. C. E.....Bevier, Pa.
Thomas, John William, B. M. E.....Georgetown.
Thorne, James Webstein, B. M. E.....Schenectady, N. Y.
Towery, Beverly Todd, A. B.....Cambridge, Mass.
Wallis, Elizabeth Ward, B. S.....Bardstown.
Webster, Margaret Butler, A. B.....Louisville.
Woodward, William Drane, B. C. E.....Beaver Dam.
Yager, John Joel, B. M. E.....Bpffalo, N. Y.

1908.

Alden, William Oliver, B. C. E.....Petersburg.
Allen, Lutie Darrall, A. B.....Lexington.
Babbage, Arthur Wallace, A. B.....Cloverport.
Battaile, James Frank, B. M. E.....Lexington.
Beaumont, Arthur Bishop, B. S.....Mayfield.
Becker, Theodore, B. M. E.....Chicago, Ill.
Bell, Benjamin Duncan, B. C. E.....Nicholasville.
Bennett, Benjamin Warfield, B. M. E.....Detroit, Mich.
Bogard, George Taylor, B. M. E.....Richmond.
Bowden, Aberdeen Orlando, A. B.....Sedalia.
Bowlds, Fleming, Education.....Lexington.
Boyd, Hattie Elizabeth, A. B.....Louisville.
Brewer, Bruce Elder, B. S. Agr.....Williamstown.
Brewer, Leo, A. B.....Mayfield.
Browning, John Keith, B. M. E.....Maysville.
Bryant, Thomas Ripley, B. S. Agr.....Eminence.
Buckner, Ella Simpson, A. B.....Lexington.
Buckner, Garrett Davis, B. S.....Lexington.
Carter, Sarah McEachin, A. B.....Lexington.
Chinn, Aubyn, A. B.....Frankfort.
Corneilson, Hubert LeGrand, B. M. E.....West Lafayette, Ind.
Craft, Morgan Tennyson, A. B.....London.

Crowder, Margaret Lee, A. B.....Sinai.
Curtis, James Stewart, B. M. E.....Beloit, Wis.
Dean, Willis Johnson, B. C. E.....Owensboro.
Denham, Newton Randolph, B. M. E.....Williamsburg.
Downing, Harold Hardesty, B. C. E.....Lexington.
Earle, Irlie Benjamin, B. C. E.....Madisonville.
Elam, Arthur Matthew, B. M. E.....Champaign, Ill.
Frost, Minnie Carfield, A. B.....Louisville.
Galloway, Clinton Robert, B. M. E.....Redwood Falls, Minn.
Graham, Frank Heber, B. M. E.....Chicago, Ill.
Grannis, James Kidwell, B. C. E.....Flemingsburg.
Green, Warren Thornton, B. M. E.....Louisville.
Guerrant, Russell Hamilton, B. M. E.....Wilmore.
Hamilton, Wm. P. Browning, B. M. E.....Lexington.
Hanna, Aline Guthrie, A. B.....Lexington.
Haynes, Louise Sarah, A. B.....Indianapolis, Ind.
Herring, Henry Lemuel, B. M. E.....Oakville.
Holland, Reuben Miller, A. B.....Whiteville.
Howerton, Thomas McC., B.C.E.....Shelbyville.
Kiesel, Walter Christian, B. M. E.....Chicago, Ill.
Kelley, Cott C., B. C. E.....Hickory Flat.
Kirk, Estill, B. C. E.....Philpot.
Kirk, Maurice Cushman, B. C. E.....Maysville.
Leigh, Florence Bascom, A. B.....Little Rock, Ark.
McCandless, Helen, A. B.....Louisville.
McCorkle, Graham King, B. M. E.....Chicago, Ill.
McPherson, Robert Lee, Education.....Somerset.
Martin, Grace Lee, A. B.....Lexington.
Mathews, Wm. Chamberlain, B. M. E.....Beloit, Wis.
Metzler, Daniel, B. M. E.....Louisville.
Muncy, Victor Emanuel, B. M. E.....Cincinnati, Ohio.
Newberger, Wallace, B. M. E.....Louisville.
Oldham, Edwin Bronston, B. M. E.....Chattanooga, Tenn.
Pence, Christina, A. B.....Lexington.
Penrod, Alphon, B. M. E.....Chicago, Ill.
Piper, Mary Hammond, A. B.....Lexington.
Pogue, Joseph Latham, B. M. E.....Ensley, Ala.
Porter, Colton Alexander, B. M. E.....Ely, Minn.
Poynter, Arthur Lawrence, B. M. E.....Louisville.
Rice, Clayton Jefferson, B. C. E.....Greenville.
Rodes, William, B. S.....Lexington.
Roswell, Charles Miller, B. M. E.....Cincinnati, Ohio.
Schultz, Oscar Lewis, B. C. E.....Hartford.
Shaw, Lillian Belle, A. B.....Jetts
Shelby, William W., Jr., B. M. E.....Henderson.
Smiley, Proctor Knott, B. M. E.....Catlettsburg.
Smith, Milton Sears, B. M. E.....Bpffalo, N. Y.
Stone, Neville Earle, B. C. E.....Hopkinsville.
Sweeney, Sunshine, A. B.....Lexington.
Taylor, Guy Baker, B. S.....Lexington.

Walker, Madie Lee, A. B.....Lexington.
Wanless, Margaret Jane, A. B.....Louisville.
Watson, James Saffet, B. C. E.....Lexington.
Wells, Emery, B. C. E.....Lexington.
Wheat, Frank Merrill, B. S.....Williamsburg.
Wilnoit, Arza Lytle, B. M. E.....Lexington.
Wilkes, Francis Marshall, B. M. E.....Chicago, Ill.
Wilson, James Morrison, B. C. E.....Louisville.
Yates, Howard Clifford, A. B.....Covington.

REGISTER OF STUDENTS

Post Graduates.

Alexander, Josie, A. B..... Paris.
Beaumont, Arthur Bishop, B. S..... Mayfield.
Downing, Harold Hardesty, B. C, E..... Lexington
Hanna, Aline Guthrie, A. B..... Lexington.
Hart, Robert Singleton, Jr., A. B..... Pisgah.
McClelland, Thomas Brown, A. B..... Lexington.
Pence, Christina, A. B..... Lexington.
Shelby, William Washington, B. E. M..... Henderson.
Taylor, Gibson Walker, A. B..... Henderson.
Taylor, Guy Baker, B. S..... Lexington.
Wendt, Wylie Brodbeck, B. C. E.....Lansing, Mich.

Seniors.

Akers, Mary Elizabeth.....Arts ..... Lexington.
Akers, Susan Gray.....Arts ..... Lexington.
Bennett, Clarence Sanson.....Mech. Eng. ..... Narrows.
Bennett, Edgar .....Mech. Eng. ..... Basin Spring.
Bewlay, Willard Crawford.....Mech. Eng. ..... Lexington.
Blumenthal, Philip Lee.....Science ..... Lexington.
Browning, George Francis.....Mech. Eng. ..... Lewisburg.
Cannon, Harry Sharp.....Arts ..... Nicholasville.
Carroll, Tarlton Combs.....Arts ..... Louisville.
Caudill, Stephen Emory.....Civ. Eng. ..... Whitesburg.
Chambers, James Floyd.....Civ. Eng. ..... Owensboro.
Chisholm, Otho Balfour.....Agriculture.....Campbellsville.
Cook, Holton .....Civ. Eng. ..... Murray.
Crawford, Andrew Jackson.....Mech. Eng. ..... Georgetown.
Crosthwaite, John Scearce.....Arts ..... Lexington.
Daugherty, Helen Lucille.....Arts ..... Paris
Davis, Harry Arnold.....Science ..... Maysville.
Eifort, Harry Earl.....Mech. Eng. ..... Ashland.
Ellis, Cecil Byrnes.....Arts ..... Tracy.
Garvin, Cecil Clement.....Civ. Eng. ..... Olive Hill.
Glass, Rhoda Virginia.....Arts ..... Lexington.
Haff, Robert Schuyler.....Civ. Eng. ..... Frankfort.
Hardesty, Lizzie Belle.....Science ..... Muir.
Harp, David William.....Civ. Eng. ..... Herford, Texas.
Harrison, Erbie Lee..... Arts ..... Glasgow
Hinesley, Pearl Russell.....Arts ..... Louisville.
Horine, Ernest England.....Mech. Eng. ..... Nicholasville.
Horine, John Sherman.....Mech. Eng. ..... Nicholasville.
Hudgins, Thomas Frederick....Mech. Eng. ..... Olive Hill.
Hudson, William Edward.....Min. Eng. ..... Bowling Green.

Isaacs, Edith Jeannette.....Science ..... Louisville.
Jablow, Charles.....Mech. Eng. ..... Louisville.
Johns, Charles Ashby.....Mech. Eng.....Pittsburg, Kan.
Kaufman, Sara Rachel.....Science ..... Lexington.
Lowry, Hiter H., Jr.....Mech. Eng. ..... Nicholasville.
Luten, Inez Ware.....Arts ..... Hickman
Maddox, Robert Lytton.....Arts ..... Mayfield.
Marks, Lewis Thornton.....Mech. Eng. ..... Versailles.
Mathers, Albert Merion.....Mech. Eng. ..... Carlisle.
Moore, Virgil Yandell.....Arts ..... Marion
Neblett, Patrick Henry.....Arts ..... Turner's Station.
Neighbors, Jesse Thomas.....Mech. Eng. ..... Glendale.
Orr, Thomas James.....Mech. Eng. ..... Princeton.
Parrish, Charles Swift.....Mech. Eng. ..... Lexington.
Perkins, Charles Richard.....Mech. Eng. ..... Covington.
Perrine, Emmett Burgess.....Mech. Eng. ..... Maysville.
Raney, Murray.....Mech. Eng. ..... Carrollton.
Rankin, Harry Lee.....Civ. Eng. ..... Monticello.
Rapier, Stephen Augustus.....Mech. Eng. ..... Bardstown.
Reddish, William Dandridge....Science ..... Somerset.
Reidel, Gus B.....Mech. Eng....Los Angeles, Cal.
Robinson, James Russell.....Arts ..... London
Rodes, Mary McEachin.....Arts ..... Lexington.
Sanders, Hugh Berkley.....Science ..... Louisville.
Scott, George Thomas.....Agriculture ..... Madisonville.
Shankland, Marshall Wood.....Civ. Eng. ..... Lexington.
Shelby, William Washington....Civ. Eng. ..... Henderson.
Smarr, Roy Whittaker.....Civ. Eng. ..... Brooksville.
Stackhouse, William Owsley....Arts .. .. Lexington.
Stout, Benj. Ellis Warren.....Civ. Eng. ..... Owensboro.
Talbott, Daniel Cline.....Mech. Eng. ..... N. Middletown.
Taylor, Newton Stout.....Mech. Eng. ..... Carlisle.
Taylor, Harry Edward.....Min. Eng.....Crawford, Tenn.
Tigert, John James.....Mech. Eng. ..... Louisville.
Townsend, Hal Eubank.....Mech. Eng.....Bowling Green.
Troll, Ivy Marie.....Science ..... Louisville.
Tucker, Frederick Harvey.....Science ..... Madisonville.
Wallace, Leonard DeLong.....Arts ..... Lexington.
Wells, Charles D.....Civ. Eng. ..... Bloomfield.
White, Charles.....Mech. Eng. ..... Warsaw.
Wilson, Benjamin Dunbar.....Science ..... Lexington.
Yankey, Andrew George.....Civ. Eng. ..... Springfield.

Juniors.

Adams, Robert William.....Science ..... Henderson.
Allison, Leonidas Metcalfe.....Civ. Eng. ..... Carlise.
Ammerman, Edward Clifton.....Mech. Eng. ..... Cynthiana.
Atkins, Robert Ryland.....Min. Eng. ..... Lexington.
Barbee, Richard Carroll.....Civ. Eng. ..... Lexington.
Barker, Richard McLean.....Civ. Eng. ..... Adairville.

Becker, George	Agriculture	Louisville.
Blakemore, Page Blanton	Min. Eng.	Hopkinsville.
Bridges, Leonard Cabell	Mech. Eng.	Stamping Grounds.
Brown, Lawrence Edward	Mech. Eng.	Somerset.
Campbell, John	Mech. Eng.	Butler.
Cassady, Marietta Finley	Arts	Versailles.
Cawood, Frank Finley	Civ. Eng.	Cawood.
Clark, William Frederick	Mech. Eng.	Carthage, Mo.
Coons, William Lester	Civ. Eng.	Lexington.
Cornish, William Redmon	Mech. Eng.	Birmingham, Ala.
Crafton, Milton C.	Civ. Eng.	Henderson.
Cram, Royalston Haywood	Mech. Eng.	Williamstown.
Crawford, Tarleton Wade	Mech. Eng.	Lynn Grove.
Crowder, Florence	Arts	Sinai.
Curtis, John James	Mech. Eng.	Greendale.
Dawson, John Stanley	Mech. Eng.	Bloomfield.
Dorman, James Cardwell	Mech. Eng.	Nicholasville.
Douglas, Ernest Thompson	Mech. Eng.	Owenton.
Eastwood, George Robert	Agriculture	Madisonville.
Elliott, Alvin Clarence	Education	Eubank.
Estes, Jordon Grove	Civ. Eng.	Lebanon.
Ewan, Avery Early	Agriculture	Helena.
Fleming, Rubye Ringo	Arts	Hickman.
Fox, Walter Cuthbert	Civ. Eng.	Newport.
Frankel, Monroe Jacob	Mech. Eng.	Louisville.
Garman, Frederick	Science	Lexington.
Garvin, John St. Clair	Mech. Eng.	Olive Hill.
Graham, Lawrence B.	Civ. Eng.	Bowling Green.
Hall, James Henry	Mech. Eng.	Lexington.
Hayden, Mary Elizabeth	Arts	Lewisport.
Hays, Thomas Hercules	Mech. Eng.	Versailles.
Hibler, Jessie Fithian	Education	Paris.
Horine, Irving	Mech. Eng.	Nicholasville.
Hudson, Halcomb	Arts	Lexington.
Hughes, Joseph Irvine Craig	Mech. Eng.	Versailles.
Hutchcraft, David Keller	Mech. Eng.	Lexington.
Irvin, Oscar William	Science	Greenville.
Jones, Lida	Science	Lexington.
Kuebler, Chester Arthur	Mech. Eng.	Louisville.
Lewis, Edward Huhg	Civ. Eng.	College Hill.
Logan, Ben Harrison	Mech. Eng.	Trenton.
Logan, Dulaney	Mech. Eng.	Bowling Green.
Lowry, Robert Alexander	Min. Eng.	Catlettsburg.
Lusk, Joseph Sherwood	Civ. Eng.	Dayton.
McCarrall, Charles	Min. Eng.	Hopkinsville
Marshall, Sarah Rosetter	Arts	Lexington.
Mayhall, Russell Collins	Mech. Eng.	Frankfort.
Miller, Humphrey	Mech. Eng.	New Hope.
Mills, George Pemberton	Mech. Eng.	Lexington.
Mills, Grover Cleveland	Mech. Eng.	Kenton.

Mosby, William Eugene.....Civ. Eng. ..... Bardwell.
Nelson, Harry Andrew.....Civ. Eng. ..... Uniontown.
O'Roark, Lauren Snyder.....Mech. Eng. ..... Cannel City.
Paynter, Walker Burton.....Mech. Eng. ..... Lawrenceburg.
Pence, Mary Belle.....Arts ..... Lexington.
Post, Shelby.....Civ. Eng.....Kingston, N. Y.
Rembold, Elmer Lewis.....Science ..... Owensboro.
Riefkin, Jacob B.....Mech. Eng. ..... Newport.
Robertson, Isaac William.....Science ..... Smithland.
Robinson, Benjamin Franklin...Civ. Eng. ..... Lexington.
Ryan, Charles Obie.....Arts ..... Monticello.
Schoene, Katherine.....Science ..... Henderson.
Shanklin, Shelby.....Mech. Eng. ..... Lexington.
Shelby, Joseph Bryan.....Mech. Eng. ..... Lexington.
Shuff, Evans Layton.....Mech. Eng. ..... Georgetown.
Sisco, Pope .....Mech. Eng. ..... Bardstown.
Slade, Theodore.....Mech. Eng. ..... Lexington.
Smith, Hal Walker.....Civ. Eng. ..... Henderson.
Stivers, Sherman Harry.....Civ. Eng. ..... Paris.
Strong, Robert Guthrie.....Science ..... Louisville.
Terrell, Daniel Voiers.....Civ. Eng. ..... Bedford.
Waller James William.....Civ. Eng. ..... Paris.
Warren, Thomas Philip.....Civ. Eng. ..... Lexington.
Webb, Erle Benton.....Arts ..... Willard.
Wells, Frank Thomas.....Mech. Eng. ..... Bloomfield.
Wilcox, John Henry.....Arts ..... Elkin.
Wilhoit, John .....Mech. Eng. ..... Versailles.
Wilson, Homer.....Arts ..... Lexington.
Wilson, Robert Clyde.....Mech. Eng. ..... Lexington.
Winston, Algernon Sidney.....Civ. Eng. ..... Sturgis.

Sophomores.

Adams, Lois Litsey.....Mech. Eng. ..... Harrodsburg.
Aulick, Ollie Spurgeon.....Civ. Eng. ..... Georgetown.
Babb, Harvey Arthur.....Education ..... Providence.
Bain, Charles Kremer.....Min. Eng. ..... Lexington.
Baird, Obed Elmo.....Education ..... Utica.
Ball. Arthur Carlton.....Agriculture ..... Millersburg.
Barrows, Willard Dante.....Civ. Eng. ..... Dixon.
Bateman, Roy Atkins.....Mech. Eng. ..... Bradfordsville.
Beatty, Thomas Elmer.....Mech. Eng. ..... Smithfield.
Boyd, James Alfred.....Mech. Eng. ..... Cave City.
Brownfield, Wyatt.....Civ. Eng. ..... Elizabethtown.
Bruner, Jacob Franklin.....Education ..... Whitesville.
Carr, Havaland.....Science ..... Claysville.
Carr, Ophelia Smith Todd.....Education ..... Lexington.
Cary, James White.....Mech. Eng. ..... Versailles.
Cary, Mattie Virginia.....Arts ..... Versailles.
Cash, Richard Turner.....Civ. Eng. ..... Elizabethtown.
Cassidy, Perry Rogan.....Mech. Eng. ..... Lexington.

Cleveland, Minor Armenius	Mech. Eng.	Falmouth.
Clugston, William George	Arts	Lexington.
Collings, Benjamin Hays	Civ. Eng.	Lebanon Junction.
Daniel, Charles Elwood	Mech. Eng.	Hazel Green.
Day, Oscar Lee	Mech. Eng.	St. Matthews.
Denham, Clarence Wilder	Civ. Eng.	Williamsburg.
Downing, Virgil Leonard	Mech. Eng.	Lexington.
Duncan, Wallace Clifton	Mech. Eng.	Springfield.
Dunlap, George Green	Civ. Eng.	Dry Ridge.
Ebbert, Sprigg Case	Mech. Eng.	Covington.
Ensminger, Robert Fulton	Mech. Eng.	Harrodsburg.
Edwards, Richard Alexander	Education	Lynnville.
Ferguson, Lillian Terry	Science	LaCentre.
Fields, John Smarr	Mech. Eng.	Brooksville.
Fitzpatrick, John James	Mech. Eng.	Liberty.
Foster, John Milton	Mech. Eng.	Richmond.
Francis, Paul	Min. Eng.	Red Ash.
Garrett, John Wilmore	Mech. Eng.	Fort Garrett.
Giltner, James Bristow	Mech. Eng.	Carrollton.
Grimes, John Frank	Civ. Eng.	Lexington.
Hailey, Robert Mockbee	Civ. Eng.	Paducah.
Harn, Walter Andrew	Civ. Eng.	Lexington.
Haswell, Arthur Board	Mech. Eng.	Hardinsburg.
Hedges, Henry Berkley	Mech. Eng.	Lexington.
Hendrickson, George Matt	Mech. Eng.	Nicholasville.
Hollar, Orie Willard	Mech. Eng.	Paris.
Hollaway, Phil Rarick	Mech. Eng.	Nicholasville.
Hubbard, Alpha	Arts	Hubbard.
Hughes, Frances Cleveland	Education	Lexington.
Jenkins, Troy	Agriculture	Mayfield.
Johnson, Marion Gilbert	Science	Lawrenceburg.
Johnston, William Thomas, Jr.	Mech. Eng.	Newport.
Jones, Roger Walter, Jr	Mech. Eng.	Lexington.
Korfhage, Harry George	Mech. Eng.	Louisville.
Karn, Fred Stone	Mech. Eng.	Owensboro.
Kohn, Emanuel	Mech. Eng.	Louisville.
Kridler, George Matthew	Mech. Eng.	Somerset.
Lewis, James Otis	Education	Stanley.
Lurtey, William Augustus	Mech. Eng.	Maysville.
Lytle, Hendricks Gilbert	Civ. Eng.	Flemingsburg.
McConnell, John Rice	Mech. Eng.	Catlettsburg.
McGuire, Frances Folsom	Education	Mt. Vernon.
Mastin, James Edward	Agriculture	Versailles.
Mayhall, Creston Clark	Science	Somerset.
Mayes, James Robert	Civ. Eng.	Springfield.
Meadors, Gilcin	Mech. Eng.	Pine Knot.
Merchant, George Brite	Civ. Eng.	Sulphur.
Miles, Frank Thrope	Mech. Eng.	Ft. Thomas.
Milligan, Vincent Bartlett	Mech. Eng.	Lexington.
Moore, Harvey Lee	Mech. Eng.	Georgetown.

Morris, Jesse Neal.....Civ. Eng. ..... Sulphur.
Moynahan, Bernard Thomas....Civ. Eng. ..... Nicholasville.
Needy, John Alfred.....Civ. Eng. ..... Louisville.
Obenchain, William Alexander..Civ. Eng. ..... Bowling Green.
O'Day, Thomas Michael.....Mech. Eng. ..... Lexington.
Penney, William Servant.....Civ. Eng. ..... Waddy.
Phister, Albert Brown.....Mech. Eng. ..... Ft. Thomas.
Ramage, James Russell.....Civ. Eng. ..... Louisville.
Ramsay, Alexander Timberlake..Mech. Eng. ..... Louisville.
Reiter, William Arthur.....Min. Eng. ..... Fredonia.
Rogers, John .....Civ. Eng. ..... Glasgow.
Routt, Grover Cleveland.....Agriculture ..... Stinnett.
Sargent, Elizabeth Ewing.....Arts ..... Frankfort.
Schmid, Robert Lynden.....Civ. Eng. ..... Louisville.
Shanklin, George Bryan.....Mech. Eng. ..... Lexington.
Short, Thompson Bailey.....Mech. Eng. ..... Lexington.
Shultz, William Claude.....Arts ..... Narrows.
Simrall, Ann Dowd.....Arts ..... Mt. Sterling.
Sloan, Jesse Neal.....Civ. Eng. ..... Shelbyville.
Smarr, Ben McAtee.....Mech. Eng. ..... Brooksville.
Smith, David Walter.....Mech. Eng. ..... Nicholasville.
Smith, Lucius Ernest.....Science ..... Melrose, N. M.
Smith, Mary Barret.....Education ..... Richmond.
Spencer, Mary Scott.....Arts ..... Lexington.
Staples, Frederick William.....Mech. Eng. ..... Lexington.
Stevenson, Wilbur Wesley.....Mech. Eng. ..... Fulton.
Tanner, Thomas Butler.....Mech. Eng. ..... Lexington.
Taylor, Orville Heber.....Civ. Eng. ..... Beaver Dam.
ToeWater, George Myers.....Mech. Eng. ..... Lexington.
Vaughn, Ester.....Arts ..... Waddy.
Vivion, Glave Goddard.....Mech. Eng. ..... Harrodsburg.
Walesby, Alfred Edwin.....Civ. Eng. ..... Louisville.
Wall, Franklin Pearce.....Mech. Eng. ..... Cayce.
Wallace, William Abithal.....Civ. Eng. ..... Cerulean.
Wardle, Charles William.....Min. Eng. ..... Maysville.
Webb, Edgar Hedger.....Arts ..... Sadieville.
Webb, Richard Spurr.....Mech. Eng. ..... Lexington.
Wharton, Russell Zollinger.....Mech. Eng. ..... Valley View.
White, Kessack Duke.....Min. Eng. ..... Louisville.
Wilken, George B.....Agriculture ..... Louisville
Wilkie, Ralph James Erskine...Mech. Eng. ..... Lexington.
Williams, Alice Cary.....Arts ..... Lexington
Wilson, David Hunter.....Mech. Eng. ..... Louisville.
Wright, Walter Franklin.....Arts ..... Manchester.

Freshmen.

Ammerman, Walter Helm.....Mech. Eng. ..... Cynthiana.
Ashbrook, James Reid.....Mech. Eng. ..... Cynthiana.
Auxier, Garland Leslie.....Science ..... Edinburg.
Baker, Frederick Reid.....Mech. Eng. ..... Lexington.

Barner, Mary Leonore, 1.....Education ..... Barboursville.
Battaile, Dolly Taylor, 3.....Science ..... Lexington.
Bennett, Sallie McChesney, ½..Science ..... Lexington.
Boghossian, Menos Hoosep, ½..Mech. Eng.....Taheran, Persia.
Boering, Ira Belle .....Arts ..... London.
Brown, Silas Lee.....Civ. Eng. ..... Humphrey.
Bruner, Claude Beverly, 1½....Civ. Eng. ..... Lexington.
Burton, Henry Morris, 2.....Arts ..... Sulphur.
Bryant, Ethel May, 2.....Arts ..... Tolesboro.
Buchanan, Harry George.....Mech. Eng. ..... Ft. Thomas.
Byers, Elizabeth Leon, ½.....Arts ..... Lexington.
Cheatham, James Leslie, 1.....Civ. Eng. ..... Henderson
Chipman, Ferd.....Mech. Eng. ..... Falmouth.
Colbert, Louis Frasier.....Civ. Eng. ..... Cloverport.
Collins, Minerva.....Agriculture ..... Hindman.
Collins, William, ½.....Agriculture.....N. Middletown.
Collis, Mark, Jr.....Min. Eng. ..... Lexington.
Colyer, Louisa Evans.....Education ..... Richmond.
Corum, Sue Elizabeth, 2½.....Arts ..... Hickman.
Coryell, Oliver Paul, 1½.....Arts ..... Springdale.
Croft, Carl, ½.....Civ. Eng. ..... Fulton.
Creekmore, Cora Temperance...Arts ..... Lexington.
Crowell, Charles Frederick.....Min. Eng. ..... Ashland.
Cruickshank, Allene Peirce.....Science ..... Lexington.
Daniel, Walter Holt.....Min. Eng. ..... Paris.
Davis, Ruby Evelyn.....Education ..... Carlisle.
Deskins, Rush Monroe, 1.....Arts ..... Pikeville.
Dickey, Helen Lee.....Education ..... Richwood.
Dowty, Wilhelmina J.....Science ..... Hamilton, Ohio.
Duncan, James Ray.....Mech. Eng. ..... Nicholasville.
Dunn, Charles Francis, ½.....Education ..... Morning View.
Earle, Thomas Evans, 2½.....Civ. Eng. ..... Dawson Springs.
Edelen, James Leonard.....Mech. Eng. ..... Frankfort.
Faris, William Hendricks.....Mech. Eng. ..... Flemingsburg.
Faulkner, Francis Alma, 1½...Arts ..... Barboursville.
Fisher, James Ernest, 1½.....Mech. Eng. ..... Millersburg.
Foster, John Rollie.....Min. Eng. ..... Flemingsburg.
Fowler, Paul Lycurgus, 1½.....Civ. Eng.....Ritzville, Wash.
Frye, Alchin Laverene, 1½.....Arts ..... Lexington.
Fuller, George Thomas, 2.....Arts ..... Mayfield.
Gaiser, Jacob Henry.....Mech. Eng. ..... Bellevue.
Galloway, Howard Cleveland....Mech. Eng. ..... Falmouth.
Gastineau, Wallace Atlee.....Arts ..... Middlesboro.
Gillis, Cleo, 2.....Education ..... Lexington.
Glass, James Howard, 2.....Agriculture.....Rock Dale.
Gnadinger, Charles Byron.....Science ..... Lexington.
Golden, James Stephen, 2½....Arts ..... Barboursville.
Goodwin, George Early.....Civ. Eng. ..... Lexington.
Gower, John Thomas, ½.....Mech. Eng. ..... Newport.
Graber, James Clide.....Mech. Eng. ..... Ashland.

Gragg, Viola Evelyn.....Education ..... Somerset.
Gratz, Alexander Howerton.....Civ. Eng. ..... Lexington.
Greathouse, Joseph Felix.....Arts ..... Versailles.
Hager, William Bruce.....Min. Eng. ..... Frankfort.
Hancock, Kathlene Grace.....Arts ..... Brooksville.
Hancock, Minnie Margarite, 1½.Arts ..... Brooksville.
Harrison, Marion Myrl, 1½.....Arts ..... Philpot.
Harned, Chester Ray.....Science ..... Hodgenville.
Hays, Margaret.....Education ..... Somerset.
Hill, Joshua Wallace.....Civ. Eng. ..... Bardstown.
Howard, Bailey Caldwell, ½...Min. Eng. ..... Owensboro.
Hughes, Mary Irene, 1.....Arts ..... Maysville.
Humble, Joseph Mette.....Science ..... Newport.
Jones, Jesse Milton, 2½.....Arts ..... Rankin.
Jones, Robert Leslie.....Mech. Eng. ..... Walton.
Kelley, Hugh, 3 .....Arts ..... Utica.
King, Alvin William.....Mech. Eng. ..... Cox's Creek.
Lee, Daniel Franklin.....Science ..... Campbellsburg.
Link, Edgar William.....Mech. Eng. ..... Lexington.
Lowe, ames Thomas, ½.....Mech. Eng. ..... Williamstown.
Lowey, Hester.....Science ..... Nicholasville.
McClure, Allen, 1½.....Science ..... Lexington.
McDaniel, Oscar Pearl, 1½.....Mech. Eng. ..... Ewing.
McIntire, Frank Crosier, 1.....Mech. Eng. ..... Brandenburg.
McKenney, Henry Fields.....Arts ..... Falmouth.
McMurtrey, Alfred.....Civ. Eng. ..... Cynthiana.
McMurtrey, John Dallas, 1½...Civ. Eng. ..... Burksville.
Marks, Thomas .....Mech. Eng. ..... Versailles.
Martin, Felix, 2.....Science ..... Greenville.
Martin, Otto Carlston.....Arts ..... Hartford.
Masters, Herbert Ray, 1.....Mech. Eng. ..... Richmond.
Mathias, Anna Elizabeth, 1.....Education ..... Carlisle.
May, Clarence Bascon, 1½.....Education ..... Carlisle.
Meinhart, Roy Henry, 2.....Mech. Eng. ..... Ashland.
Melton, Harry Edgar.....Mech. Eng. ..... Lexington.
Mitchell, Frank Finley, ½.....Education ..... Eli.
Moss, Ray Bingham, 1.....Min. Eng. ..... Pineville.
Nicol, William Todd.....Mech. Eng. ..... Lexington.
Norton, Hannah Moyer.....Education ..... Ashland.
Noland, Hattie, 1½.....Education ..... Richmond.
Oliver, Jesse .....Mech. Eng. ..... Bloomingdale.
Oliver, Pierson Sherwood, 1.....Mech. Eng. ..... Fulton.
Pace, Murl Erichsen, ½.....Arts ..... Scottsville.
Palmore, Hovey Duncan, 1.....Civ. Eng. ..... Persimmons.
Park, Lillian Brandenburg.....Science ..... Frankfort.
Phillips, Benjamin Forest.....Civ. Eng. ..... Alexandria.
Pollard, Olie Nicholas, 2.....Mech. Eng. ..... Lexington.
Pollitt, Mabel, ½.....Arts ..... Vanceburg.
Porch, Mary Edwin.....Education ..... Somerset.
Porter, Roy Oliver.....Min. Eng. ..... Maysville.

Powell, Guy Sole, ½.....Civ. Eng. ..... Robards.
Prewitt, John Coleman, ½.....Civ. Eng. ..... Shelbyville.
Puryear, Edward Jones, Jr., 2..Science ..... Greenville.
Ragan, Yandell.....Arts ..... Cold Springs.
Reynolds, Henry Edmund.....Mech. Eng. ..... Slaughterville.
Ribelin, Ellis Bridges.....Mech. Eng. ..... Carrolltown.
Ridd, Stanley John .....Mech. Eng. ..... Newport.
Robinson, Benjamin Franklin...Mech. Eng. ..... Lancaster.
Robinson, Earl .....Mech. Eng. ..... Richmond.
Rochester, Nathaniel Gray.....Arts ..... Marion.
Sargent, Margaret, 1.....Arts ..... Frankfort.
Saunders, Shirley Dean, 2.....Mech. Eng. ..... Franklin.
Scott, George Atwill.....Civ. Eng. ..... Paducah.
Shannon, William James .....Civ. Eng. ..... Lexington.
Shoemaker, Henry Burton.....Mech. Eng. ..... Falmouth.
Sink, Verna.....Science ..... Lexington.
Smith, David Walter.....Mech. Eng. ..... Nicholasville.
Smith, John Warren.....Mech. Eng. ..... Winchester.
Smith, Willis Eugene, 1½.....Agriculture.....Melrose, N. M.
Sower, William Christian.....Mech. Eng. ..... Frankfort.
Stanfill, William Abner, 2½....Arts ..... Barboursville.
Stofer, Richard Thompson.....Mech. Eng. ..... Mt. Sterling.
Sublet, Arthur, Jr., 1.....Mech. Eng. ..... Versailles.
Tarpley, Jesse Frank, 2.....Mech. Eng. ..... Franklin.
Tarter, Elmer Edward, 1.....Education ..... Brady.
Theising, William Skinner.....Min. Eng. ..... Covington.
Thomas, John Barrett.....Civ. Eng. ..... Falmouth.
Thompson, L. Roeleme, ½.....Education ..... Frankfort.
Threlkeld, Polk Laffoon, ½.....Civ. Eng. ..... Morganfield.
Tichenor, William Raymond.....Science ..... Hopkinsville.
Tinsley, Elmer Wendell..... Arts ..... Hartford.
Townsend, William Henry.....Education ..... Glensboro.
Utley, Newton Willard.....Civ. Eng. ..... Eddyville.
Vanaman, Charles Worchester..Mech. Eng. ..... Lexington.
Vogliotti, Herman Frederick....Mech. Eng. ..... London.
Wadsworth, John Henry.....Civ. Eng. ..... Ashland.
Walker, Henry Means, 2.....Agriculture.....Rectorville.
Walker, Robert Wade, 1.....Mech. Eng. ..... Richmond.
Watkins, George Clarke.....Mech. Eng. ..... Lexington.
Wegener, Julia.....Education ..... Augusta.
Weller, Leslie Neal.....Arts ..... Pineville.
Wells, Walter Scott.....Civ. Eng. ..... Paintsville.
White, Edward James.....Mech. Eng. ..... Ashland.
Wilmore, James Azure, 1.....Arts ..... Gradyville.
Wilson, Meek Boyd.....Education ..... Lynnville.

The number following a name indicates the unit conditions for entrance to Freshman which must be removed by September next in order to entitle the student to Sophomore classification.

Law Students.

Ballard, Richard Bryan.....Lancaster.
Baker, Alex Frank.....Kansas City, Mo.
Clay, James Thomas.....Paris.
Ewell, Logan.....London.
Fears, John Carroll.....New Castle.
Faulkner, Henry Clarence.....Barboursville.
Hamilton, William Shacklette.....Brandenburg.
Jones, Morgan Frederick.....Macon, Ga.
Kelley, Clement Franklin.....Pittsburg, Pa.
Martin, Otto Carlston.....Hartford.
Newton, Henry Robert.....Williamstown.
Ogata, Louis Ichize.....Kumamati, Japan.
Pope, George Riley.....London.
Prewitt, William Wathen.....Osceola, Ark.
Rowe, Walter Ellsworth.....Lexington.
Reed, Samuel P.....Furnace.
Spradling, Marion Clyde.....Berry.
Shearer, William Logan.....Monticello.
Salyers, Squire Webber.....Frankfort.
Simms, Robert Lee.....Frankfort.
Staples, Harry.....Lexington.
Strong, South.....Jackson.
Taylor, Carroll Gholson.....Lexington.
Turner, Job Darbin .....Lexington.
Taylor, McChord.....Lexington.
Terrell, Robert Craig.....Bedford.
Wilson, Ethelbert Reed.....Lexington.

SHORT COURSES IN AGRICULTURE.

I.—Two Years Course.

Second Year Students.

Hillenmeyer, Walter William.....Lexington.
Money, Lester Sleadd.....Shelbyville.
Wilson, William Boone.....Eminence.

First Year Students.

Allen, Paul.....Finchville.
Armstrong, Clem Glenn.....Elkton.
Barker, William.....Trenton.
Baird, George Caldwell.....Shelbyville.
Cardwell, John Wesley.....Harrodsburg.
Cayce, Kenneth Odin.....Hopkinsville.
Cocke, Richard Ivanhoe.....Wickliffe.

Conditt, George Witherspoon.....Marion.
Daugherty, Clyde Thomas.....Wakefield.
Franks, Clifford Carlisle.....Dry Ridge
Hall, Dudley Joseph.....Eminence.
Hancock, Eugene Bateman.....Augusta.
Jones, Mary Posey.....Uniontown.
McConnell, John Avent.....Lexington.
Skillman, John Miller.....Hardinsburg.
Stephenson, Corbett.....Fredonia.
Taylor, Mallory Gibson.....Maceo.
Thaxton, Andrew Jackson.....Millersburg.
Wilson, William McGranaghan.....Lexington.

II.—Short Winter Course.

Burton, Madison Rhodes.....Carlisle.
Coons, Clarence Emery.....Mt. Sterling.
Davis, Arthur J.....Sip.
Edwards, Harry Griswold.....Louisville.
Gratz, Nicholas Warfield.....Lexington.
Hester, Horace.....Mayfield.
Lee, John Joseph.....Cynthiana.
Linnig, Micheal John.....Valley Station.
Price, Robert Hanna.....Shelbyville.
Richardson, John H.....Bedford.
Riley, Elbert Roy.....Union.

Short Course in Mining Engineering.

Abercrombie, William M.....Drakesboro.
Arnols, William Jesse.....Greenville.
Cardwell, James Marion.....Drakesboro.
Davies, Hywell Brooks.....Kensee.
Johnston, William Bradley.....Lancaster.
Jones, Huw Dyfan.....Central City.
Kelly, Thomas Henry.....Drakesboro.
Mercer, Albert J.....Powderly.
Miller, D'Arcy Stewart.....Owensboro.
Myers, Herbert.....Powderly.
Sears, George Thomas.....Central City.
Stevens, Robert Gerry.....Vulcan, W. Va.
Taylor, John Edley.....Crawford, Tenn.
VanGorder, Arthur Dewitt.....Ralston.

Rural and Highway Engineering.

Atwill, Albert Lee.....Hickman.
Baldwin, Woodson S.....Baldwin.
Lewis, Joseph Millett.....Owensboro.
Marshall, Alexander Keith.....Maysville.

Marshall, Caleb Wallace.....Lexington.
Marshall, William Jefferson.....Henderson.
Meyer, Charles Louis.....Henderson.
Priest, Thomas Hill.....Louisville.
Robertson, John Edward.....Waddy.
Sauer, Albert Daniel.....Shelbyville.
Scherffius, Cleveland Hendrick .....Lynnville.
Speyer, Harry Aaron.....Lexington.
Stone, William Carl.....Hinton.

Special Students.

Bayless, Elizabeth.....	Arts	Paris.
Branham, Marguerite.....	Domestic Science..	Lufkin, Tex.
Brown, Oakley Thompson.....	Mech. Arts	London.
Burnam, Marjorie.....	Domestic Science.....	Paris, Ill.
Culver, Randall Nathaniel.....	Mech. Arts	Waverley.
Gooslin, Pearl.....	Dom. Sci..	Williamstown, W. Va.
Howard, Ellis Manning.....	Civ. Eng.	Owensboro.
Hurst, Nettie.....	Arts	Paris.
Kelley, Clement Franklin.....		Pittsburg, Pa.
O'Day, Margaret.....	Science	Lexington.
Pence, Kate.....	Arts	Lexington.
Pierce, Wallace Duncan.....	Civ. Eng.	Cloverport.
Shubinski, Moses James.....	Law	Lexington.
Shull, Mrs. Lena Mearl.....	Science	Lexington.
Skiff, Ralph.....	Civ. Eng.	Erlanger.
Wallis, Nell Virginia.....	Science	Lexington.
Wells, Carleton Howells.....	Arts	Cincinnati, O.
Wells, Don Edwards.....	Arts	Erie, Kan.
White, Ezekiel Fields.....	Mech. Arts	Paint Lick.
Willis, Carlton Howells.....	Science	Lexington.

THE ACADEMY.

Third-year Students.

Name.	Post-office.	County.
Anderson, Charles True.....	Lexington	Fayette.
Back, Thomas Kelley.....	Jackson	Breathitt.
Battaile, Dolly Taylor.....	Lexington	Fayette.
Berkshire, William Stewart.....	Petersburg	Boone.
Butler, Thomas Fisher.....	Hinton	Harrison.
Cooper, Henry Montgomery....	Midway	Woodford.
Duncan, Robert Edward.....	Lawrenceburg	Anderson.
Eastin, Eckford Preston.....	Lexington	Fayette.
Eversole, Lydia Margaret.....	Hazard	Perry.
Farmer, Henry Lester.....	George	Harlan.
Hardesty, Llewellyn Coons.....	Muir	Bourbon.
Hart, Derrill Wason.....	Pisgah	Woodford.

Hayden, Gretchen Marie	Deatsville	Nelson.
Hedden, Thomas Clarke	Finchville	Shelby.
Ireland, Thomas Hughes	Skillman	Hancock.
Kunzman, John William	Buechel	Jefferson.
Kelley, Hugh	Utica	Daviess.
Lyon, Robert Lee	Irvington	Brecinridge.
McCoy, Edward Malcolm	Lexington	Fayette.
Martin, Mary Louis	Williamstown	Grant.
Pedigo, Jackson Murray	Horse Cave	Hart.
Rowland, Robert Bush	Arlington	Carlisle.
Sudduth, Watson Andrews	Lexington	Fayette.
White, Edward Rice	Cave City	Barren.
Woodson, Robert Marion	Eddyville	Lyon.

Second-year Students.

Beaumont, Wortham Conkling	Mayfield	Graves.
Blanchett, Louie Paubel	Sugar	Gallatin.
Blevins, Charles Elmo	Mt. Sterling	Montgomery.
Brown, McAuliffe	Hardinsburg	Breckinridge.
Bryson, Arthur Titus	Fullerton	Greenup.
Byars, Walton McLean	Adairville	Logan.
Bradshaw, Annie Pearl	Bliss	Adair.
Chambers, John Sharpe	Murray	Calloway.
Christopher, Bertha	Buena Vista	Garrard.
Clem, Ruby Elmer	Bedford	Trimble.
Compton, Russell Raymond	Garfield	Breckinridge.
Cornett, Claude Campbell	Harlan	Harlan.
Covington, Harry Stockdell	Lexington	Fayette.
Craddock, William	Munfordville	Hart.
Cramer, Mary Elizabeth	Lexington	Fayette.
Cregor, Nathan Minton	Lebanon	Marion.
DeLong, Joseph Curtis	Lexington	Fayette.
Dowd, Genevieve F. Theresa	Lexington	Fayette.
Downing, John Lowry	Scottsville	Allen.
Drake, Burgess	South Hill	Butler.
Edwards, Owen Travis	Liletown	Green.
Eubank, Warren Lyddane	Lexington	Fayette.
Faries, Fithian Brent	Paris	Bourbon.
Faulkner, James Edward	Barboursville	Knox.
Ferguson, Elizabeth Walton	LaCentre	Ballard.
Ford, Harrie Louise	Oklahoma	Tulsa.
Ford, Hart Talbot	Oklahoma	Tulsa.
Fotsch, Anna Theresa Catherine	Lexington	Fayette.
Garnett, Reuben Everard	Glasgow	Barren.
Gentry, James Alvin	Narrows	Ohio.
Gillis, Inis	Lexington	Fayette.
Goode, Mollie Catherine	Lexington	Fayette.
Goodwin, Joseph Alfred	Lexington	Fayette.
Gorin, James Reuben	Rowletts	Hart.

Grace, Joseph Alvis	Kevil	Ballard.
Grasty, Allen Wise	Henderson	Henderson.
Gregory, Robert Loyd	Harlan	Harlan.
Haffler, Erle Lee	LaGrange	Oldham.
Hager, Charles Ernest	Brandenburg	Mead.
Haswell, Vivian Daniel	Hardinsburg	Breckinridge.
Hendley, Harry Jackson	Mayfield	Graves.
Hewlett, Coleman	Livia	Daviess.
Humphrey, William David	Kidd's Store	Casey.
Hunt, Lee	Pleasant Ridge	Daviess.
Jackson, Stonewall	Arlington	Carlisle.
Jarboe, John Felix	Cloverport	Breckinridge.
Jenkins, Granville Dockery	Glendale	Hardin.
Jetton, Walter Cole	Sedalia	Graves.
McDaniel, Benjamin Clinton	Lexington	Fayette.
Marcum, Ruby Leon	Burnside	Pulaski.
Miller, Robert Lake	Kirksey	Calloway.
Moore, Ogden	Cynthiana	Harrison.
Parker, John Preston	Lexington	Fayette.
Peck, Myna May	Lowes	Graves.
Pence, Edgar Allen	Lexington	Fayette.
Powers, Robert Lee	Parksville	Boyle.
Reed, James Davidson	Springfield	Washington.
Richardson, Gilbert	Kenton	Kenton.
Robinson, Thomas	Gray	Knox.
Rogers, Adams Eldridge	Lexington	Fayette.
Rogers, Isaac Wallace	Murray	Calloway.
Routt, Senica Claborn	Stinnett	Anderson
Sayre, James	Lexington	Fayette.
Scott, Alice Mabel	Buena Vista	Garrard.
Sharp, Ira D	Nicholasville	Jessamine.
Shultz, Frederick Thomas	Narrows	Ohio.
Smith, Cassius Clay	Tompkinsville	Monroe.
Standrod, Drew William	Rock Castle	Trigg.
Stone, Albert Lee	Bonanza	Floyd.
Troutman, Joseph Taylor	Livia	McLean.
Walker, Edward Bullock	Clinton	Hickman.
Welsh, Marie Scott	Lexington	Fayette.
Westcott, Lydia Elizabeth	Clay City	Powell.
White, Charles	Akersville	Monroe.
Wilson, Alan Barrios	Cave City	Barren.
Wilson, Curtis Burnam	Paint Lick	Garrard.
Wilson, John Estill	Paint Lick	Garrard.
Wilson, William Claude	Dalton	Hopkins.
Woodward, John Bruce	Maysville	Mason.
Yankey, Frank Grinstead	Springfield	Washington.
Zweigart, Thomas Frederick	Maysville	Mason.

First-year Students.

Atchisin, Norman	Owingsville	Bath.
Ball, Clarence William	Lexington	Fayette.
Ball, Henry Land	Lexington	Fayette.
Baughn, William	Lexington	Fayette.
Bennett, Arthur Ray	Narrows	Ohio.
Berry, Marvin Finus	Clinton	Hickman.
Blount, John Sherman	Carlisle	Nicholas.
Bourne, Jewell Elizabeth	Hanly	Jessamine.
Boyd, Edgar Lee	Canton	Trigg.
Caldwell, George Creed	Cave City	Barren.
Campbell, Hugh Park	Irvine	Estill.
Carter, John Herman	Burkesville	Cumberland.
Center, George Washington	Campton	Wolfe.
Chadwick, Curtis Estill	Naples	Greenup.
Chilton, Myra Belle	Port Royal	Henry.
Cobb, Edwina Rose	Stearns	Whitley.
Cockrill, Harry Simpson	Irvine	Estill.
Coffey, James Russell	Frankfort	Franklin.
Crafton, Herman	Franklin	Simpson.
Craig, James William	Lexington	Fayette.
Craig, Samuel Crawford	Glendale	Hardin.
Croan, Walter	Shepherdsville	Bullitt.
Dawson, James Duncan	Bloomfield	Nelson.
DeLong, George Edmund	Lexington	Fayette.
Depp, Waller Armstrong	Glasgow	Barren.
Dixon, Henry Clifton	Holland	Allen.
Douglas, John Joseph	Lexington	Fayette.
Eades, Frank Owen	Ashland	Boyd.
Edmonds, Harlow Wolford	Sunshine	Russell.
Eversole, Elijah Wilburn	Manchester	Clay.
Faulkner, Mildred	Barboursville	Knox.
Fotsch, Alice Gertrude	Lexington	Fayette.
Godfrey, Thomas Leslie	Lexington	Fayette.
Hamilton, Marguerite Lee	Edmonton	Metcalfe.
Hamilton, Minnie Pearl	Edmonton	Metcalfe.
Harris, John Dismukes	Mayfield	Graves.
Hatcher, Lackey Neal	Allen	Floyd.
Herren, Jesse Franklin	Liberty	Casey.
Hill, Owen Alva	Central City	Muhlenburg.
Hinton, James	Plummer's Landing	Fleming.
Hunt, Forest Thomas	Worthville	Carroll.
Ingram, Elmer	Ironton	Trigg.
Jennette, William Sylvester	Hanly	Jessamine.
Justice, Zachariah	Fishtrap	Pike.
Keith, Clara Upton	Upton	Hardin.
Lee, Lucas Joseph	Corinth	Owen.
Lilly, Pleas Richardson	Irvine	Estill.
Litsey, Horace Edward	Springfield	Washington.

Little, Charles Kenneth	Toledo, Ohio,	Lucas.
Lovelace, Harry Gordon	Red Ash	Whitley.
Lovelace, Roscoe Conkling	Red Ash	Whitley.
Lynch, Lawrence	Allen	Floyd.
McConnell, James Hubbard	Arlington	Carlisle.
Maddox, Richard Nance	Mayfield	Graves.
Marcum, Olive Myrtle	Stearns	Whitley.
May, Joseph McKenster	Prestonsburg	Floyd.
Mays, John Edward	Catlettsburg	Boyd.
Miller, Grover Cleveland	New Hope	Nelson.
Miller, Ola Henderson	Lane	Wolfe.
Moore, Loy Buel	Adairville	Logan.
Morgan, Manson M	Stinnett	Anderson.
Morris, Wilburn	Mayfield	Graves.
Neisz, Ruby	Kirkwood Springs	Hopkins.
Page, Cleo Kidwell	Tompkinsville	Monroe.
Parrish, Rodger Mills	Scottsville	Allen.
Park, Buford	Irvine	Estill.
Parker, James Edwin	Gray	Knox.
Paschall, Jesse Horace	Murray	Calloway.
Ramsey, James Chandler	Lexington	Fayette.
Robinson, Hallie Lee	Buechel	Jefferson.
Sallee, William Merritt	Keene	Jessamine.
Samuel, Benjamin Henry	Columbus	Hickman.
Simmons, Roland Moore	Adairville	Logan.
Sterett, Baird	Hawesville	Hancock.
Taylor, Clarence Hopson	Canton	Trigg.
Taylor, Robert Brooks	Little Rock	Arkansas.
Todd, Thomas Jefferson	Irvine	Estill.
Waldrop, John Mitchell	Ashland	Boyd.
Weckesser, William Paul	Mt. Sterling	Montgomery.
Wiser, Edwin Alexander	Stearns	Whitley.
Woodson, Harry Netherland	Flat Lick	Knox.
Wright, Floyd Holmes	Liberty	Casey.

Unclassified Students.

Clarke, James Robert	LaGrange.
Davis, George Wheatley	Germantown, Tenn.
Dean, John Randolph	Owensboro.
Egbert, Margaret Ethelyn	Lexington.
Ginn, Eloise Elizabeth	Lexington.
Hobday, Earle Edward	Brooksville.
Johnson, John Elliott Cooper	Tallega.
Karrick, James Vance	Lexington.
Plummer, Wildred Wayne	Newport.

SUMMER SCHOOL.

I.—In Arts and Sciences.

Adams, Robert William.....Henderson.
Allison, Leonidas Metcalf.....Carlisle.
Ammerman, Edward Clifton.....Lexington.
Bailey, Edgar Allen.....Morgantown.
Baker, Frederick Reed.....Lexington.
Banham, Pearle.....Creceluis.
Blakemore, Page Blanton.....Hopkinsville.
Blumenthal Philip Lee.....Lexington.
Bowden, Aberdeene Orlando.....Maysville.
Bridges, Edward Stanley.....Carrolton.
Bruner, Claude Beverly.....Nicholasville.
Buchignani, Alarguerite.....Lexington.
Burchefield, James Ralph.....Pineville.
Carmody, John Paul.....Mt. Sterling.
Carr, Haviland.....Claysville.
Chisholm, Otho B.....Acton.
Clarke, William Frederick.....Castleage, Mo.
Collis, Mark, Jr.....Lexington.
Collis, Robert.....Lexington.
Crosthwaite, John Scearce.....Lexington.
Dunn, Charles Francis.....Morning View.
Edwards, Richard Alexander.....Boydsville.
Farrell, Josephine.....Lexington.
Fredericksen, Neil Christian.....Copenhagen, Denmark.
Foster, John Milton.....Richmond.
Fuller, George Thomas.....Mayfield.
Garman, Frederick.....Lexington.
Glass, Rhoda Virginia.....Lexington.
Goodwin, George Early.....Lexington.
Hager, Charles Ernest.....Brandenburg.
Harris, Ielia Jane.....Richmond.
Harrison, Marion Myrle.....Philpot.
Hodges, Grover Cleveland.....Pineville.
Horine, John Sherman.....Nicholasville.
Ireland, Thomas Hughes.....Skillman.
Jewell, Frances.....Lexington.
Lee, John Joseph.....Cynthiana.
Link, Edgar William.....Lexington.
Lusby, J. W.....Grayson.
Luten, Inez Ware.....Hickman.
Lynch, Lena Margaret.....Frankfort.
McClelland, Thomas Brown.....Lexington.
McMurtry, John Dallas.....Burksville.
Maddox, Robert Lytton.....Mayfield.
Mayhall, Russell Collins.....Frankfort.
Miller, Humphrey.....New Hope.

Million, Jackson Egbert.....Richmond.
Moore, Ida Pearl.....Stanford.
Neville, Zelinda.....Lexington.
Payne, John Howard.....Cold Spring.
Pence, Mary Bell.....Lexington.
Ragan, Yandell.....Cold Spring.
Rives, Henry William.....Lebanon.
Robertson, Benjamin Franklin.....Lexington.
Routt, Grover Cleveland.....Stinnett.
Scott, George Thomas.....Madisonville.
Shultz, William Claude.....Narrows.
Slade, Theodore.....Lexington.
Smith, Lucias Ernest.....Guynion, Okla.
Stackhouse, William Ousley.....Lexington.
Stephenson, Corbutt.....Fredonia.
Tucker, Frederick Harry.....Madisonville.
Tunis, John Theodore.....Lexington.
Vanaman, Charles Worcester.....Philadelphia, Pa.
Vaughn, Esther.....Waddy.
Wallace, Harry Buford.....Lexington.
Weller, Leslie Neal.....Pineville.
White, Edward Rice.....Cave City.
Wilkie, Ralph James Erskine.....Lexington.
Williams, Byron Demetrius.....Auburn.
Wilson, Curtis Burnham.....Paint Lick.
Wilson, John Estille.....Paint Lick.

II.—In Mechanics Arts.

Barton, Raymond.....Worthington, Ind.
Baxter, Edward.....Lexington.
Burchfield, James Ralph.....Pineville.
Caudill, Stephen Emery.....Whitesburg.
Cawood, Frank Finlay.....Harlan.
Cornish, William Redmon.....Lexington.
Fogwell, Harrison Harvey.....Lafayette, Ind.
Foster, John Milton.....Richmond.
Frankel, Monroe Jacob.....Louisville.
Haynes, Clyde Givens.....Morganfield.
Hendricks, Thomas.....Cynthiana.
Himmelright, Raleigh John.....Wadsworth, Ohio.
Howe, Samuel Theodore.....Topeka, Kan.
Keubler, Chester Arthur.....Louisville.
Lindstrom, Arthur Carl.....Richmond, Ind.
Parrish, Charles Swift.....Lexington.
Rees, Paul.....Wadsworth, Ohio.
Richmond, George.....Port Clinton, Ohio.
Robinson, Benjamin Franklin.....Lexington.
Rush, James.....Derry, Pa.

Sage, William.....Lafayette, Ind.
Samuel, Robert Loveall.....Maysville.
Stickle, John L.....Pittsburg, Pa.
Wall, Marion.....South Pittsburg, Pa.
Williams, Byron Demetrius.....Auburn.
Wilson, Carter Lindsay.....Louisville.
Wilson, Richard.....Lexington.
Zinsmeister, Lee.....Madison, Ind.

SUMMARY

Collegiate Students.	Arts.	Science.	Civ. Eng.	Mech. Eng.	Min. Eng.	Education.	Agriculture.	Total.
Post Graduates	0	2	2	0	1	0	0	11
Seniors	19	10	13	27	2	0	2	72
Juniors	11	8	21	37	4	2	3	86
Sophomores	11	6	25	52	5	9	5	112
Freshmen	32	16	23	46	9	19	5	149
Total	77	41	84	162	21	30	15	430

Collegiate Students	430
Law Students	27
Rural and Highway Engineering	13
Short Courses in Agriculture	33
Short Course in Mining Engineering	14
Special Students	20
Academy	188
Unclassified Students	9
Summer School Students	100
Total	834
Deduct, Counted Twice	62
Whole number	772

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