

CATALOGUE
OF THE
OFFICERS, STUDIES, AND STUDENTS
OF THE
STATE COLLEGE OF KENTUCKY,
LEXINGTON,
WITH A PART OF THE REGULATIONS,
FOR THE
SESSION ENDING JUNE 7, 1906.

LEXINGTON:
PRESS OF JAMES M. BYRNES,
1906.

PATTERSON HALL.

This Hall, a home for the young women of the College, 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 and a line of the City electric railway. Within a quarter of a mile of the College on the south, a half mile of the Court House, the Phoenix Hotel and the Post-office on the north, and distant not more than ten minutes by rail-way 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 14 by 68 feet, wide halls, a closet 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, for which ample provision has also been made in the rear lawn, with tennis court and croquet grounds, as well as in the large gymnasium.

Sixty-eight commodious and well-furnished rooms afford accommodation for a hundred and twenty-two persons, for whom the careful and judicious matron will provide lodging free, and excellent board at \$3 a week, the occupants furnishing their own napkins, towels, and bedding, except mattresses and pillows, and paying their laundry bills.

Built durably of stone, brick, wood and iron, and made practically fire-proof; 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; and those who are favored with a county appointment, the mode of obtaining which is set forth elsewhere in this catalogue, will find that residence at The State College is brought within the means of any young woman who earnestly desires to fit herself for a life of usefulness.

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THE STATE COLLEGE OF KENTUCKY.

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, 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 the city 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 of the Commonwealth whose means are limited. The Normal Department, for which provision is also made, is intended to aid in building up the Common School system by furnishing properly qualified teachers. This College, 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 interest of

Kentucky. Being entirely undenominational in its character, it will appeal 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 advantages 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 colleges to which the State College partly 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, a Normal School has been added by the State and an Experimental Station by the United States, while 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.

THE NORMAL SCHOOL.

The Normal Department of the State College exists under the authority of acts of the General Assembly approved April 23, and April 29, 1880. Section 7 of the first act briefly defines the object for which the Department was established, "a Normal Department or course of instruction for irregular periods, designed more particularly, but not exclusively, to qualify teachers for common and other schools, shall be established in connection with the College." The second act provides the necessary endowment to make the Department effective.

Ten years ago, in order to prepare young men and women for doing the highest work in their chosen profession, the Department of Pedagogy was established, with a four years' collegiate course, offering Pedagogy as a major study. The attendance upon this course has steadily increased, and the work done has been of a high order.

THE KENTUCKY EXPERIMENT STATION.

The Agricultural Experiment Station of the State College of Kentucky 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, and in 1887 it became the beneficiary of the first annual appro-

priation of \$15,000 under the Hatch act providing for the establishment of Agricultural Experiment Stations in the several States and Territories.

The work of the Station is directed to two objects: 1. To a constant succession of experiments made by specialists, in order to learn what 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 those of the people of Kentucky who seek profit from any one of those prime sources of wealth—the soil, the flock, and the herd.

Results of experiments have been published in seventeen annual reports and one hundred and twenty-six 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 10,000 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 fifteen 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 College in the education of students for the leading industrial pursuits, but, directly or indirectly, through the wide and continual diffusion of knowledge for the benefit of so large a proportion of our population, it is bound to be extremely useful to the Commonwealth at large.

LOCATION.

The State College of Kentucky is established in the Old City Park, just within the southern boundary 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 thirty-odd thousand inhabitants, is in the heart of the far-famed Bluegrass 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 water works, 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 of 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, and Versailles, those projected to Winchester, Richmond, and Nicholasville shall be added, the hourly trains of these six roads will enable students residing near them to attend the College conveniently from their homes as far as twenty miles away.

GROUNDS.

The campus of the College 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. A portion of the land has recently been reserved for a botanical garden, in which will be grown the most desirable native plants, with a view to testing their adaptability to cultivation and to giving increased facilities to students taking agricultural and biological courses. Two and a half acres, forming the northeast portion of the campus, inclosed and provided with a grand stand, are devoted to the field sports of the students.

About three-quarters of a mile south of the campus, on the Nicholasville pike, an extension of South Limestone street, is the Experiment Station Farm, consisting of about two hundred and 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 equipped and organized Station. The front of the farm is pasture and orchard. The back portion is divided off into two hundred one-tenth acre plots, for convenience in making crop tests.

BUILDINGS.

The Main Building.—This is a structure of stone and brick, 140 feet long and 68 feet in width. It contains the office of the President and of the Business Agent, and on the third floor, counting the basement floor as one, is 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.

The Old Station Building.—This handsome structure is well planned for the object for which it was built. It is seventy feet in length and fifty-four feet in width, with a tower projection in front, and an octagonal projection eighteen by eighteen on the north side. The building is two stories high, upon a basement eleven feet from floor to ceiling. The main entrance is on the first floor, on the west side of the building, through an archway fifteen feet wide.

This building is henceforth to be devoted exclusively to the Department of Chemistry.

Mechanical Hall.—This building covers altogether an area of about 20,000 square feet, is constructed of stone and pressed brick, and is well furnished with machinery and appliances for work in Mechanical Engineering.

The Dormitories.—The two large dormitories on the campus afford lodgings for the students who wish to lessen expense in this direction. Other buildings on the campus are a brick dwelling for the President and a cottage occupied by the Commandant.

Science Hall—This hall, built during the year 1897 for the departments of Natural Science, is 96 x 97 feet, of pressed brick, trimmed with Bowling Green stone. The wide halls, the numerous and spacious lecture rooms, laboratories and offices in its three stories are conveniently arranged, well lighted, and the rooms are well furnished.

The 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.

The Gymnasium.—This imposing structure of pressed brick and Bedford stone, 100 x 157 feet, with the central part three stories high, the right wing one and the left two, stands 150 feet north of the Main Building and cost \$30,000.

The first floor of the central portion contains the Armory, lockers for women, and the offices of the Commandant and the Physical Director. The second floor is occupied by Alumni Hall, the Trustees' room, and a society hall. The third floor is divided into two society halls and a hall for the Y. M. C. A. All these rooms are commodious and finely adapted to their purpose. The right wing, which is 48 x 95 feet, is used as a drill-room during bad weather. The basement of the left wing is set apart for 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.

The building is finished in yellow pine, heated by steam, and lighted by electricity.

The New Station Building.—This house, on South Limestone, and a fourth of a mile from the campus, was completed in the winter of 1904.

The building is of two stories and the basement, of pressed brick with oolitic limestone-trimmings. The foundation is of Kentucky gray limestone, faced with broken ashlar oolitic limestone, the balustrade of terracotta. 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 114 feet long x 60 deep, is colonial, adhering as strictly as possible to classic proportions and combinations.

Patterson Hall.—This large and handsome three-story structure, a home for the young women of the College, is now ready for occupancy. Pleasantly located on South Limestone street, a fourth of a mile north of the College, and on the street railway which lies along the western border of the spacious grounds; built durably of brick, stone, iron and wood, and made practically fire-proof; with long and wide porches and with a large closet in every room; with adequate provision for light, heat, ventilation and exercise, this Hall offers to 122 occupants, two in a room, everything needed for their health, safety, convenience, comfort and physical culture.

Cost of ground, building and equipment, \$60,000.

DEVELOPMENT.

The growth of the College 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 having authorized the Commissioners of the Sinking Fund to sell the 330,000 acres apportioned to Kentucky, by the mismanagement of the Commissioners' agent the State realized for its land only \$165,000.

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 commission to re-locate the College, to provide for its continuance in operation till re-located, and to prepare "a plan for a first-class University." Kentucky University claiming and retaining the former site of the College, 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 offering 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 offering \$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 added.

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

1885. The Commandant's House 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 established, an experimental farm of forty-eight acres purchased, and the College greenhouse built.

1889. The Experiment Station Building completed.

1890. The Second Dormitory 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 College receives 85 per cent. and the school of the colored people at Frankfort 15 per cent.

1891. The Department of Mechanical Engineering established.

1891. The Department of Anatomy and Physiology established.

1892. The Mechanical Building and Workshops completed.

1894. Greenhouses for the Experiment Station built.

1894. The Department of Physics established.

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

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

1898. The building for Natural Science completed.
 1898. Sixty-four and a half acres added to the Experimental Farm, making 113 in all.
 1900. Sixty thousand dollars 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 added to the Experimental Farm, making 203 in all. The Gymnasium, the Drill Room, the Halls for the Societies and the Y. M. C. A. completed.
 1901. The Department of Mining Engineering added.
 1902. The School of Physical Culture added.
 1902. Thirty thousand dollars additional appropriated by the General Assembly for the Young Women's College Home, making \$60,000 in all.
 1904. Patterson Hall, the Young Women's College Home, completed.
 1904. Fifteen thousand dollars per annum appropriated by the General Assembly to defray the expenses of the College.
 1905. The New Experiment Station completed.
 1906. The School of Household Economy added.
Increase of Property.—The property of the College is estimated to be worth \$800,000 more than it was in 1880.

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

Increase of Teachers.—Before 1880 the College had six Professors; it now has seventeen Professors and thirty-six assistants.

Increase of Students.—The number in 1898-99 was 480, the largest till then in the history of the College; in 1903-1904 it was 732; in 1905-1906 it is about 780.

Increase of Graduates.—No fact more distinctly marks the growth of the College 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.

THE STATE UNIVERSITY OF KENTUCKY.

Delaware excepted, Kentucky alone of the forty-five States enjoys the unenviable distinction of having no State University and no equivalent of one. While our State is discredited by her educational inferiority in this and other respects, and especially by her disgraceful illiteracy, it is yet encouraging to know that there is an earnest and apparently a growing demand for an institution of higher title, grander proportions and wider usefulness than the State College. During its forty years the College, with limited means and in the face of much opposition, has done a work of incalculable value. The record made by it has long ago justified its existence and now calls for its expansion; the State has eight hundred thousand dollars invested in it; and its advantages of location are, for Kentucky, incomparable. Not far from the center of the State; in a region unsurpassed for health, fertility and beauty, and supporting a proud, wealthy, and intelligent people, a people moreover always distinguished for devotion to education and schools; with ten railways, soon to be increased to thirteen, diverging from it, Lexington as the site of the State University offers attractions that are preeminent and manifold.

The glory of Wisconsin is her system of public schools headed by her magnificent University, and yet that State has fewer inhabitants if more wealth than Kentucky. In 1904 Kentucky gave her State College \$36,830; Wisconsin gave her University \$471,500; in 1905, \$558,000.

Let us hope that we are in the dawn of a brighter day, and that we are to have a University on a grand scale, worthy of its chief benefactor, the City of Lexington, and commensurate with the pride and power of this great Commonwealth.

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JAMES OSCAR LABACH, M. S.,
Chemist of Food Division.

MISS MARY LEGRAND DIDLAKE, M. S.,
Assistant in Entomology and Botany.

SAXE DABNEY AVERITT, M. S.,
Assistant Chemist.

OLIVER MARCH SHEDD, B. S.,
Assistant Chemist.

HUGH WILBUR TAYLOR,
Assistant in Entomology and Botany.

HERMAN WOOSLEY, B. Agr.,
Assistant in Agriculture.

MISS LILLIE LISTON,
Stenographer.

U. S. WEATHER BUREAU.

OBSERVER, ROBERT HENRY DEAN.

There has been established at the College by the U. S. Department of Agriculture a Station of the Weather Bureau, with first-class instrumental equipment, and working in close connection with the College and the Experiment Station. Students who are interested in the study of meteorology and kindred sciences will find at this Station of the Bureau a rare chance for special investigation, and they are welcome to such benefits as the Station affords.

ADMISSION.

A student is admitted to the State College in one of six ways:

- I. By examination.
- II. By certificate from an accredited school.
- III. By certificate from the College Academy.
- IV. By transfer of credits from a college or university.
- V. As a special student.
- VI. By certificate from the Normal School.

1. ADMISSION BY EXAMINATION.

For the Freshman Class students are examined on the following:

1. IN ENGLISH.—(a) On Advanced Grammar. Selections for analysis and parsing are arranged to test the candidate's knowledge of the structure of the language. (b) On Rhetoric and Composition. The candidate is required to write two essays of not less than two hundred words each, one on a subject taken from a prescribed work of some standard author, the other on a subject chosen by the candidate. The books from which subjects will be taken are: Addison's *Sir Roger de Coverly* papers; Burke's *Conciliation with the Colonies*; Coleridge's *Ancient Mariner*; Eliot's *Silas Marner*; Irving's *Life of Goldsmith*; Lowell's *Vision of Sir Launfal*; Macaulay's essay on *Addison* and *Life of Johnson*; Milton's *Lycidas*, *Comus*, *L'Allegro* and *Il Penseroso*; Scott's *Ivanhoe* and *Lady of the Lake*; Shakespeare's *Julius Cæsar*, *Macbeth* and *Merchant of Venice*; Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, *The Passing of Arthur*.

The candidate must be familiar with the plots, incidents and characters of each work, and be prepared to show his ability to write correct English. No candidate will be admitted whose work is notably deficient in a knowledge of spelling, punctuation, paragraphing, and syntax.

2. IN HISTORY.—(a) On Eggleston's History of the United States, or an equivalent. (b) On General History, in amount equivalent to Anderson's or Myers' General History.

3. IN GEOGRAPHY.—(a) On Advanced Descriptive, Mathematical, and Political Geography, as presented in Butler's Complete, or The Natural Advanced, Geography. (b) On Physical Geography, as presented by Tarr or Davis.

4. IN MATHEMATICS —(a) On Arithmetic. A thorough knowledge of the subject is required. (b) On Algebra. The student must show a thorough knowledge of the subject as presented in Wentworth's Higher Algebra, including factors, common divisors and multiples, fractions, involution, embracing the binominal theorem for positive integral exponents, evolution, theory of exponents, radicals, imaginary quantities, inequalities, equations of the first and second degrees involving one or more unknown quantities, equations solved like quadratics, simple indeterminate equations, and equations involving radicals. The student is expected to state and explain the reason for every step in his work. (c) On Geometry. The student must exhibit a knowledge of the subject as treated in books I to V inclusive of Beman and Smith's Geometry, including the larger part of the matter relating to triangles, parallels and parallelograms, polygons and circles, as presented in the best American text-books. The student should be able to apply the principles of Geometry to practical examples, to construct diagrams quickly and accurately. In proving a theorem or solving a problem he should be able to prove every statement made, by going back, step by step, till he rests on primary definitions and axioms.

5. IN LATIN.—On genders, declensions, conjugations, syntax, and idioms as they are treated in Smiley & Storke's Beginner's Latin Book; Viri Romæ; ten lives of Nepos; five books of Cæsar; Daniell's New Latin Composition; Creighton's History of Rome.

Strict attention must be paid to quantity and accent.

6. IN GREEK.—On genders, declensions, conjugations, accents, syntax, and idioms, as they are treated in White's Beginner's Greek Book; Moss' Greek Reader; five books of Xenophon's Anabasis; Pearson's Greek Prose Composition; Oman's History of Greece.

7. IN GERMAN.—After September 1, 1907, on Becker's Elementary German. After September 1, 1908, Harris' German Composition will be added, and proficiency in easy sight-reading required as soon as these subjects are taught in the Academy of this College.

8. IN PHYSICS.—After September 1, 1907, on High School Physics complete, as treated in some elementary text-book.

Candidates for admission to the courses in Science, Agriculture, Mechanical and Civil Engineering will be examined on 1, 2, 3, 4, 7 and 8.

Candidates for admission to the course in Pedagogy will be examined on 1, 2 (a), 3 (a), 4, 5, 7 and 8.

Candidates for admission to the course in Classics will be examined on 1, 2 (a), 3 (a), 4, 5, 6 and 7. If French and German be substituted for Greek, 6 will be omitted.

II. ADMISSION FROM AN ACCREDITED SCHOOL.

An applicant for admission to a class in the College who presents from the Principal or Superintendent of an accredited school a certificate that he has duly completed the courses of study prescribed for admission to that class will receive from the President of the College a permit entitling him to admission thereto without further examination.

III. ADMISSION FROM THE COLLEGE ACADEMY.

A student who presents from the Principal of the Academy a certificate that he has properly completed either course of study set forth in the curriculum of the Academy, will be admitted to the Freshman Class of the corresponding course in the College without further examination.

IV. ADMISSION FROM A COLLEGE OR UNIVERSITY.

An applicant for admission who has been a student of another college or of a university of respectable standing, upon presenting a certificate of his honorable dismissal therefrom, may be admitted *ad eundem gradum* in this College, provided that he shall satisfy the appropriate professors that he has duly completed a course of study equivalent to that completed by the class which he proposes to enter.

V. ADMISSION AS SPECIAL STUDENT.

A graduate of another college or of a university may enter this College at any age in order to pursue a special line of work and study, but all others must be at least twenty-four years of age, the limit below which appointments of beneficiaries under the law must be made.

The Board of Trustees has authorized the appointment of a Board of Examiners, by whom all applicants for admission shall be examined.

Students who bring certificates of graduation from accredited schools shall present them to this Board, who will pass the students in the subjects covered by certificate, without further examination. On all other subjects they shall be examined for admission and classification.

The Board of Trustees allow the President of the College, at his discretion, to give free tuition to honor graduates of such accredited schools as properly prepare students for the College.

Applicants for admission to the Academy or the Normal School shall be examined *on all branches embraced in the Common School course as required by law*, and no one who has not passed actual examination shall be admitted to either.

Students who desire to pass from the Normal School or the Academy into the College shall be admitted on identical conditions, as set forth on pages 13, 14 and 15.

DEPARTMENTS AND SCHOOLS.

The studies of the State College are distributed into eighteen Departments and three Schools, each in charge of a responsible head, the heads of the Departments constituting the Faculty. Arranged in chronological order the Departments and Schools are :

- I. History, Political Economy, and Metaphysics.
- II. Botany, Horticulture, and Agriculture.
- III. The English Language and Literature.
- IV. Military Science.
- V. Chemistry.
- VI. Mathematics and Astronomy.
- VII. Modern Languages.
- VIII. Greek and Latin.
- IX. The Academy.
- X. Pedagogy.
- XI. Civil Engineering.
- XII. Mechanical and Electrical Engineering.
- XIII. Anatomy and Physiology.
- XIV. Geology.
- XV. Zoölogy.
- XVI. Physics.
- XVII. Entomology.
- XVIII. Mining Engineering.
- XIX. The Normal School.
- XX. The School of Physical Culture.
- XXI. The School of Domestic Science.

COURSES OF STUDY.

1. DEPARTMENT OF HISTORY, POLITICAL ECONOMY, AND METAPHYSICS.

PRESIDENT PATTERSON.

The course of instruction in this Department includes an outline of Ancient, Medieval, and Modern History. 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.

In the period covered, Modern History and the History of England and of the United States occupy the most prominent place.

Walker's Science of Wealth is made the basis of instruction in Political Economy. Students are, however, made familiar with the principles upon which rest the rival doctrines of Protection and Free Trade.

The study of Mental and Moral Philosophy extends through one year. Sir William Hamilton is used as the basis of instruction in Metaphysics, and Mackenzie in Ethics. Concurrently with recitations from these authorities, the pupil is made familiar with the principles upon which rival systems of philosophy and morals are based, and the arguments by which they are maintained. Ancient and modern systems are thus brought under review, and the necessary data furnished upon which to ground intelligent opinions.

II. DEPARTMENT OF AGRICULTURE, HORTICULTURE, AND BOTANY.

PROFESSOR MATHEWS, ASSISTANT PROFESSOR HOOPER.

This Department occupies rooms on the first floor of the Natural Science Building, including a general laboratory, a lecture room and advanced laboratory, and an instructor's office.

Each laboratory is suitably furnished with tables, water and gas fixtures, charts, etc., and the lecture room with opera chairs, a stereopticon, etc. The further equipment, both for elementary work and for the use of advanced students, is new and of the best quality, and includes an ample supply of compound and dissecting microscopes for the individual use of each student, several first-class microtomes, ovens and sterilizing apparatus, together with delicate balances and other apparatus for the study of plant physiology.

Among other facilities for study, the Department possesses a greenhouse (85 x 20 feet), giving an opportunity for the continuous study of

living plants throughout the winter months, and for experiment work in plant physiology.

The herbarium contains a nearly complete representation of the flora of Kentucky, with a considerable number of foreign exchanges. It is due primarily to the efforts of the late Dr. Robert Peter, who made a quite 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. Constant additions are now being made to the herbarium by collecting excursions over the State and by exchanges with other institutions.

The Department Library is receiving constant accessions of carefully selected books, and already contains the most important botanical, agricultural and horticultural works of reference, and these, as well as the best current literature upon these subjects, are available to students during college hours.

For the study of agriculture and horticulture, many of the appliances already mentioned are again utilized, and in addition, the complete equipment of the Experiment Station incidentally affords superior opportunities for the instruction of students.

A large dairy barn has recently been erected and is completely equipped with the most approved appliances for the care of dairy cattle and dairy products. The dairy room is provided with separators, churns, and other facilities for the care of milk and the manufacture of butter and cheese.

The operations of the farm department of the Experiment Station also furnish an excellent opportunity for the study of the effects of various fertilizers, varieties of wheat, corn, and other field crops.

The college equipment in farm machinery has recently been enlarged by the addition of sulky and disk plows, subsoilers, corn planters and cultivators, drills, binders, potato diggers, and various dairy appliances.

The Horticultural Department of the Station has an excellent forcing and greenhouse plant upon the College grounds, consisting of four glass houses of the most approved methods of construction, containing 4,000 square feet of glass, in addition to hot beds and cold frames outside. These houses are run through the winter months in the conduct of experiments upon the culture of lettuce, radishes, tomatoes, cauliflower and other vegetables, and upon the various methods of plant propagation.

The extensive list of varieties of vegetables and fruits growing upon the Experiment Farm gives an opportunity for a comparative study of varieties rarely, if ever, found upon the ordinary farm.

The College campus contains a large number of ornamental trees and shrubs, and numerous varieties of annual and perennial flowering plants, and with other public grounds in Lexington affords ample facilities for the study of ornamental and landscape horticulture.

The general subjects comprised within the scope of this department are subdivided as follows:

Botany.**I. ELEMENTARY BOTANY.**

SPRING TERM—This course is the equivalent of the usual high school botany and is required of all students of the Scientific, Normal, and Agricultural courses who have not completed a corresponding course in some preparatory school. It consists of a study of the elements of structural botany and plant physiology, with determination of a number of species of the flowering plants. If satisfactory evidence is presented, by examination or otherwise, that such a course has been completed before entering the College, the student will be admitted directly to the general botany of the Sophomore Class.

Text-book and reference works: Bergen's Elements of Botany; Gray's Lessons and Manual of Botany; Bailey's Lessons with Plants.

II. GENERAL BOTANY.

FALL AND WINTER TERMS—Required of all Sophomores in the Scientific, Normal, and Agricultural courses.

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. He is early instructed in the use of the compound and dissecting microscopes, and with their aid he begins in the Fall term the study of the simplest forms of the vegetable kingdom.

Text-book: Coulter's Plant Structures, supplemented by lectures, laboratory directions, and by numerous standard works of reference.

III. SYSTEMATIC BOTANY.

SPRING TERM.—Required of Sophomores who elect Geology, Zoölogy, Anatomy and Physiology, Botany, or Agriculture as a major study.

The principal feature of this course is the taxonomy and classification of the ferns and flowering plants, with special reference to those groups which are of economic importance.

IV. PLANT HISTOLOGY, ECONOMIC BOTANY.

FALL TERM.—Required of Juniors who elect Botany or Agriculture as major study.

In Economic Botany, which is assigned for Tuesdays and Thursdays, a thorough study is made of selected families of plants, with regard to their characteristics, distribution, habitat, economic importance, etc. In Histol-

ogy 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.

V. PLANT PHYSIOLOGY.

SPRING TERM.—Required of Juniors who elect Botany or Agriculture.

The course is conducted by lectures and laboratory experiments, which aim to bring to the student a clear conception of the main facts and principles of plant physiology, and naturally supplements the histological studies of the Fall Term.

To a considerable extent the laboratory experiments are carried on in the College greenhouses.

Text-books: The laboratory manuals of Ganong and Macdougall.

Agriculture.

I. SOILS.

FALL TERM—JUNIOR. This course includes a careful study of the nature, origin and waste of soils; the chemical, mineral and physical nature of soils; the physics of plant breathing and root action; the relation of air and moisture to the soil; soil temperature, and the objects, methods and implements of tillage. The principles and practice of farm drainage is considered at length.

Test book: King's Physics of Agriculture.

II. GRASSES AND FORAGE CROPS.

FALL TERM—JUNIOR. In this course the grasses and forage crops of Kentucky 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, etc.

III. THE CEREALS, TOBACCO AND HEMP.

WINTER TERM—JUNIOR. A comprehensive study is made of the cereals with reference to varieties, fertilization, culture, harvesting, production, use and marketing. Following this a similar study is made of the two Kentucky crops; tobacco and hemp.

Text-book: Hunts's The Cereals in America.

IV. RURAL ARCHITECTURE AND FARM MECHANICS.

SPRING TERM—SENIOR. The course in rural architecture includes construction in the arrangement, location and construction of farm buildings—farm homes, barns, silos, etc. The very fine barns to be found in this section afford excellent illustrative material for the work in barn construction. The work in farm mechanics embraces lectures on the steam and gasoline engines, and each farm implement is studied in detail. The

students take apart and reassemble many of the more complicated machines used on the farm.

Lectures. *Text-book*: King's Physics of Agriculture.

In connection with the above course lectures will be delivered to the class by the Weather Observer, Mr. R. H. Dean, on the principles underlying weather forecasting by the U. S. Weather Bureau.

Animal Husbandry.

I. STUDY OF BREEDS AND LIVE STOCK JUDGING.

WINTER TERM—JUNIOR. During this term a thorough study is made of the different market and breed types of horses, cattle, sheep, and swine. Each breed is discussed with reference to its origin, history, and development, introduction to America and adaptability to Kentucky conditions. Live stock representing the different breeds and market types of animals will be brought before the class, and the work supplemented with a large number of lantern slides. Visits are made to the famous live stock farms in the vicinity of Lexington, and in December the Senior class will visit the Chicago International Live Stock Exposition, and while on this trip visits will be made to several of the foremost stock farms of Illinois and Ohio.

Lectures. *Text-book*: Craig's Judging Live Stock.

II. DAIRYING.

WINTER TERM—JUNIOR. A study is made of the production, composition, and testing of milk, its marketing, separation, and pasteurization. Then follows a careful study of cream ripening, and the manufacture of butter and cheese. A study is made of creamery and cheese factory construction. The class room work is supplemented by practical work in the creamery.

Lectures. *Text-book*: Wing's Milk and its Products.

III. VETERINARY SCIENCE, HORSE-SHOEING.

FALL TERM—SENIOR. In this course a brief study is made of animal anatomy and physiology, and obstetrics; then follows a discussion of the causes, treatment and prevention of the common diseases of horses, cattle, sheep and swine. This course is concluded by a thorough discussion of the proper method of shoeing horses, and the treatment of the different ailments of horses' feet.

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

IV. ANIMAL NUTRITION.

WINTER TERM—SENIOR. Having studied animal anatomy and physiology and the subject of chemistry, the senior students are prepared to next study the subject of animal feeding. The students compound rations for the different animals of the farm, and study each feed stuff offered on

the Kentucky market. The department has samples of all the different feeds found on the American markets. The feeding experiments under way on the Experiment Station farm afford facilities for illustrative purposes.

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

V. ANIMAL BREEDING AND MANAGEMENT.

SPRING TERM—SENIOR. This course embraces a study of the principles of breeding, including selection, heredity, atavism, variation and fecundity, etc., with a presentation of the methods of breeding, in-and-in breeding, cross breeding, line breeding, etc., and a historical study of their results. Pedigrees will be tabulated and familiarity with recognized stud and herd books cultivated.

The latter part of this term is devoted to a discussion of the proper methods of housing, feeding, care and management of the different kinds of farm stock.

Lectures. *Text-book*: Miles' Animal Breeding.

Horticulture.

Required in the Agricultural Course. The work in this subject begins in January of the Junior year and extends through two terms. The time allotted to the subject is divided between lectures, recitations, and actual practice in horticultural operations, special prominence being given to the latter feature of the course.

In the lectures are discussed the principles underlying horticultural practices; the propagation of plants; the physiological considerations upon which are based the operations of budding, grafting, pruning, training, etc.; greenhouses, their construction, heating, and management; and vegetable, fruit, and landscape gardening. In connection with the lectures, the work in the greenhouses and upon the college and experimental grounds is freely used for illustrative purposes, and occasional visits are made to the greenhouses, nurseries, market and fruit gardens in or near Lexington.

In the practical part of his studies the pupil is not only taught the best methods of doing his work, but is encouraged to seek for the principles that make such methods best. He performs for himself the various operations of seed testing and seed sowing; propagation by cutting, layering, division, etc.; budding, grafting, crossing, hybridizing, and other forms of horticultural practice.

In order to make this work of the highest value to the student, he is required throughout the course to make accurate observations and careful notes upon his progress, and upon the results of these processes.

THE AGRICULTURAL COURSE.

The distinctive feature of this course is the instruction in those branches of study which bear the most direct and practical relation to agricultural pursuits. It includes as subjects of primary importance the study of Gen-

eral and Agricultural Chemistry, General Zoölogy and Entomology, Botany, Horticulture, Geology, General Agriculture, and Animal Husbandry.

In addition to these subjects, the student devotes considerable time to the work of other departments, including a year in English and Mathematics, courses in Drawing, French, and German, Physiology, Physics and Political Economy.

To meet the needs of young men who for any reason cannot hope to complete a four years' course in Agriculture, a special course of two years has been arranged.

This course includes all of the more distinctively agricultural subjects of the full course, but does not lead to a degree. A certificate of proficiency will, however, be issued to those students who complete the studies of the entire course in a satisfactory manner.

The schedule of studies for this course will be found on another page. (See "Schedule of Studies.")

THE SHORT (WINTER) COURSE IN AGRICULTURE.

In this course an opportunity has been provided for young men who desire to excel in their chosen occupation of farming to secure an elementary knowledge of those scientific principles which lie at the foundation of all success in agriculture. In order that such a course of study may not interfere with the work of the busy season upon Kentucky farms, it begins in January immediately after the Christmas recess, and continues for ten weeks. Its aim is to give to ambitious young farmers accurate and practical information on such important topics as manures and commercial fertilizers; agricultural chemistry; soils and their origin; plant life on the farm; vegetable and fruit growing; diseases of plants; injurious insects; the principles of veterinary science, and the treatment of the simpler ailments of farm animals; care and feeding of live stock; the dairy cow; milk and the manufacture of butter and cheese.

In such subjects as will permit it, actual practice will be given in the manipulation of materials and appliances of study, such as the care of milk, practical butter-making, spraying plants for injurious insects and diseases, and in horticulture the practices of seed-sowing, pruning and training, grafting, etc.

This course affords to young men on farms, whose time and means are limited, an opportunity to utilize the winter months to the highest possible advantages by fitting themselves more thoroughly for their life-work.

No examinations are required for admission to this course, the only requirements being that the applicant must be of good moral character, must have had a good common school education, and be at least sixteen years of age.

To residents of Kentucky, instruction in this course will be free, the only expense being the cost of a few books and other necessary incidentals, together with board and room and other personal expenses. Board and a

room can be secured at prices varying from three to five dollars per week, so that the total expense of a student during his entire ten weeks' stay need not exceed from thirty-five to fifty dollars.

Further information regarding this course may be obtained by addressing President Patterson or Professor Mathews, at the College.

III. DEPARTMENT OF ENGLISH.

PROFESSOR MACKENZIE.

The course in the English language and literature is perhaps as thorough and comprehensive as local conditions will permit. The training is of such a nature as to promote individuality, and to this end occasional work is done in journalism, short-story writing, etc. For the pioneer few fields seem so fascinating as that which Posnett calls Comparative Literature. Literary art is but a branch of anthropology, and in attempting to trace its evolution we may find a tentative solution of some of the more urgent problems. Possibly in the class lectures the booklover may find some suggestions new enough and true enough to quicken both reason and imagination.

The Carnegie Institution was intended to be an impartial friend of all studies that tend to interpret nature to man and man to himself, but as at present organized no grant is to be made for original research in art or in philology. Philology is a science that gives opportunities for further research, though there is no occasion to impair breadth of vision by excessive application to the microscope.

FRESHMAN YEAR.

FIRST TERM—Literature of the Nineteenth Century. The works of the Masters are regarded as kindred social phenomena. Lectures, collateral reading, and weekly exercises.

SECOND TERM—Rhetoric, its power and its powerlessness; its connection with grammar and logic. The aim is to give (a) some knowledge of rhetorical science, keeping in touch with the philosophy of literary expression; (b) practice, with personal criticism, in the various forms of composition, each student being allowed to lay stress on such lines as he desires.

THIRD TERM—One or two plays of Shakespeare, Jonson, or Goldsmith. Lectures on the Drama, its history and technique.

SOPHOMORE YEAR.

English Literature of the Seventeenth and Eighteenth Century in alternate years. In discussing what Dallas calls "The Gay Science" the Ossianic and other literary controversies receive incidental attention. The principles of versification.

JUNIOR YEAR.

FIRST TERM—English literary history of the alleged Dark Age. Readings in Middle English as found in Thomas the Rhymer and others who

were independent of Chaucer. Bi-weekly study of Lloyd Mifflin's "Collected Sonnets".

SECOND TERM—Introduction to *Comparative Literature*. Some clues to a general theory of literary evolution from the days of primitive man. Can one principle be found that will account for the growth and decay of definite literary types—dramatic, lyric, epic—in all times and climes? Can the strictly scientific method lead to safe speculation upon the future of literature?

THIRD TERM—History of the English language; lectures on its origin, its Keltic, Teutonic, and classical elements, and its inflexions.

Anglo-Saxon—The course in Old English lasts throughout the year. Grammar and composition are learned simultaneously until the class is capable of reading selections from one or two of the more familiar texts.

SENIOR YEAR.

Anglo-Saxon—Cynewulf's Christ, or some similar work. Lectures review the beginning of our literature and its relationship to the Keltic literature of Britain.

Comparative Philology.—An introduction to the scientific study of language in order to learn a few fundamental principles of: (1) Semeiology; (2) Spoken language, including phonology and grammar; (3) Recorded language, including pictography. The course consists of lectures, but requires some private collateral reading.

Oriental Studies—For the benefit of the more ambitious students of Comparative Philology, a course in elementary Sanskrit or Hebrew is offered.

It may help those who intend to specialize in theology, and may awaken a taste for Aryan or Semitic philology, a more thorough study of which can be pursued at the student's leisure.

Electives—In the course of studies leading to the degree of A. B. (major study, English), Junior students may elect Greek or Latin, and are obliged to take at least one term of Analytical Geometry; Seniors may elect French, Latin, or one of the Oriental studies.

Prize—The works of some standard author, open for competition to all regular Junior and Senior students, are offered for the best critique of the poets of Kentucky.

Thesis—Senior students who take the A. B. course (major study, English) are required to write a thesis on a topic approved by the Professor of English. It must display considerable research, and be untainted by plagiarism. An original poem of at least one hundred lines in either English or Latin may be offered as an alternative.

GRADUATE STUDY.

1. Gothic language and literature. 2. The origin and literary history of the Arthurian legends and romances. 3. Early Scottish literature, from Barbour (1375) to George Buchanan (1582), including Dunbar, Gavin Doug-

las, and Lindsay; or, 4. Such a topic as may obtain the sanction of the Professor of English.

Gothic—Like Anglo-Saxon Gothic has undergone only the first sound-shifting or ablaut, and is therefore one of the Low Germanic languages. In phonology and inflection it is the most primitive member of its family and has thus the highest historical interest for students of Old English. Grammar with readings from the Gospels. Initiation into some of the mysteries of Anglo-Saxon, Norse, and Gothic runes, followed by a brief discussion of the 3 x 8 formulation of the futhark.

SEMINAR. *Old English Legal Codes*—A special course interesting alike to the prospective law student, the philomath, and the jurist. If deemed desirable, a brief preliminary training in Anglo-Saxon syntax.

Logic.

The Science of Logic; lectures on Pure Logic, in which Stoichiology and Methodology are explained and illustrated; explanations and illustrations of the analytics of Aristotle and the New Analytic of Sir William Hamilton; exercises in Figure, Mood, and Reduction; lectures on fallacies and Sources of Error; lectures on Inductive and Analogical Reasoning; lectures on Evidence.

IV. DEPARTMENT OF MILITARY SCIENCE.

LIEUTENANT BURTT.

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 College.

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 cadet gray; coat, trimmed with black mohair braid; trousers, with black cloth stripe, 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 College, 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 in 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.

V. DEPARTMENT OF CHEMISTRY.

PROFESSOR PALMER, MR. PADDISON.

The Chemical Department dates from the establishment of the institution. For many years it was under the direction of Dr. Robert Peter, who, by his labors in analytical chemistry, has probably done more than any other man to develop the abundant mineral resources of the State. Formerly the chemical laboratories occupied the eastern part of the main College Building. In 1880, the Kentucky Experiment Station Building having been completed, the Chemical Department was removed to the more suitable rooms of the Experiment Station. The lecture-room and the laboratories, qualitative and quantitative, of the Chemical Department are well adapted to their purpose and are among the best constructed and most handsomely furnished of the rooms in the College. The qualitative laboratory contains the large working tables, each of which can easily accommodate ten students. The quantitative laboratory is also well equipped with tables, hoods, water, gas, and electricity, and has desk room for at least fourteen students in all. The lecture-room is well lighted and heated and beautifully furnished and commodious, having a seating capacity of about seventy-five.

By the recent removal of the Experiment Station to its new building, the Chemical Department of the State College has succeeded to the entire building, a part of which it had occupied hitherto conjointly with the Experiment Station. With its facilities thus enlarged, and in a building now wholly devoted to Chemistry, an opportunity is offered for the expansion of the Chemical Department in various directions.

APPARATUS.

The Department is well supplied with the commoner forms of chemical apparatus and chemicals. In addition to these it owns several of the more expensive pieces of apparatus, such as several delicate balances for analytical work; a grand model Bunsen & Kirchoff spectroscope; platinum apparatus; a glass model ice-machine. These will be added to from time to time, as the needs of the Department demand and the resources of the institution permit; as it is now, however, the equipment is such as readily to enable the student to obtain at first hand a good working knowledge of the principles of chemical science.

COURSE IN CHEMISTRY.

The Chemical course is one of the several scientific courses offered by the College. It is offered with the view of preparing the student for life work in Chemistry, or of fitting him for the study of medicine and kindred professions. To the accomplishment of this purpose the following course of study, extending over a period of four years, has been adopted.

STUDIES REQUIRED.

The first year is devoted to the study of English, German, Physiology, Free-hand Drawing, and Mathematics, including Plane Geometry, Trigonometry, and Algebra. The second year to German, Physics, Botany, Chemistry, and Mathematics, including Solid and Analytical Geometry and Calculus. The third year to Theoretical Chemistry, English, Calculus, French, and laboratory work on the Chemistry of the metals and on Qualitative Analysis, Mineralogy, and Blow-pipe Analysis. The fourth year to Quantitative Analysis, Organic Chemistry, Chemical Reading on advanced topics, and to Chemical Research, History and Political Economy, Logic and Mental Philosophy.

For further information as to requirements, the Schedule may be consulted, page 59.

THE TRAINING IN CHEMISTRY PROPER.

The study of Chemistry proper, as outlined in the above, is sufficient in its scope to bring the student into close contact with the great fundamental truths of the science.

The course in General Chemistry, extending through the second and third terms of the second year, consists of lectures and recitations five times weekly on the non-metals and their compounds and the simpler laws of chemical change. The lectures are illustrated by experiments; the laboratory work is carefully directed, and the student receives every possible encouragement to do creditable work.

In the third year the study of Chemistry consists of laboratory work and Theoretical Chemistry. The study of Theoretical Chemistry, consisting of lectures recitations, and readings five times weekly throughout the year, is intended to acquaint the student with the greatest generalizations and theories of modern chemistry and their historical development.

In this connection about fifty lectures are delivered annually upon the following general topics: ten upon the Atomic Theory, its development, and the methods at present used in the determination of atomic weights; fifteen upon the Compounds of Carbon, Isomerism and Structural Formulæ; ten upon the History of Chemistry; five upon the Periodic Law; five upon the Spectroscope, Spectrum Analysis, and the Chemistry of the Heavenly Bodies; five upon the more important current chemical investigations.

By way of supplementing the work of the lecturer, students pursuing this course will be required to do a certain, rather liberal, amount of general reading upon the matter treated as in the lectures or upon such other topics as may be assigned to them. For this purpose the nucleus of a chemical library has been formed, which may be freely consulted by any or all students in the College, and the leading chemical journals of this and other lands will there be kept on file. The broadening influences of such a course of study can scarcely be overestimated, and the students who complete it satisfactorily will find themselves abreast of the highest and best chemical thought of our time.

The laboratory work during the first term of the third year is devoted to the study of the metals and their more important compounds, and to qualitative analysis. This work is intended to supplement the work of the first year upon the non-metals, and also to familiarize the student more fully with the commoner methods of chemical manipulation and practice. The laboratory work of the first term will be followed up during the second and third with laboratory work in quantitative analysis, by means of which the student learns the value of precise and accurate work and the constancy and definite character of chemical reactions. The chemical work of the last year will consist of such special work as the student may elect, together with the preparation of a thesis embodying the results of this special work. The object of such special arrangement is to perfect him in that branch of the science for which he shows a liking or talent. In this connection it may be well to state that facilities are offered for special work along the following lines: Theoretical and Physical Chemistry, Organic Chemistry, Agricultural Chemistry, Physiological Chemistry, general analytical work, and special analytical work on fertilizers, iron and steel fuels.

CHEMISTRY REQUIRED IN OTHER COURSES.

Instruction in Chemistry in other courses of study is designed to meet the special needs of the student in these various directions.

In the Classical Course the study of this science extends over five months, five times weekly, and is intended simply to introduce the student to the subject by the way of general education.

In the Scientific Course the work extends over ten months. A portion of this time is devoted to the study of metals and qualitative analysis by means of laboratory work. In the course of Mechanical Engineering the instruction is adapted as completely as possible to the needs of students in this department. Instruction in chemistry in this course extends over a

period of two terms, five months of which are devoted to the study of the non-metals and their compounds; five to the chemistry of the metals with special reference to the properties which render them useful to the mechanical engineer, and also with reference to their mode of occurrence in nature and the methods of obtaining them from the ores; one term's work in metallurgy is also required.

For students in Civil Engineering a course in Chemistry has been provided as follows: General Chemistry, one term; laboratory work on the metals, one term.

In the course of Mining Engineering instruction in Chemistry extends over a period of three terms, and includes the following subjects: General Chemistry, the Chemistry of the Metals and Quantitative Analysis. In addition, one term's work in Metallurgy is required.

The instruction in Chemistry is also adapted as fully as possible to the needs of students in Biology. Instruction in this branch extends over two terms, five times weekly. The first half of the time is devoted to the study of Elementary Chemistry. This is followed by laboratory work in the afternoon upon those elements which are regarded as essential to animal and vegetable life.

VI. DEPARTMENT OF MATHEMATICS AND ASTRONOMY.

PROFESSOR WHITE, ASSISTANT PROFESSOR DAVIS.

PREPARATORY.

A thorough knowledge of Arithmetic, of Algebra, through quadratic equations, as presented in Fisher and Schwatt's Higher Algebra, and of Plane Geometry as presented in books I to V inclusive of Beman and Smith's Geometry, is required for admission to the Freshman Class in Mathematics.

FRESHMAN CLASS.

FIRST TERM—Wentworth's Plane Trigonometry.

SECOND TERM—Beman and Smith's Solid Geometry.

THIRD TERM—Fisher and Schwatt's Higher Algebra, from Chap. XXV.

SOPHOMORE CLASS.

FIRST TERM—Nichols' Analytical Geometry begun.

SECOND TERM—Nicholos' Analytical Geometry continued; Low's Descriptive Geometry begun.

THIRD TERM—Nichols' Analytical Geometry completed; Low's Descriptive Geometry completed; Granville's Calculus begun.

JUNIOR CLASS.

FIRST TERM—Granville's Calculus continued.

SECOND TERM—Granville's Calculus completed.

SENIOR CLASS.

FIRST TERM—Spherical Trigonometry and Astronomy.

SECOND TERM—Young's Elements of Astronomy begun.

THIRD TERM—Young's Elements completed.

VII. DEPARTMENT OF MODERN LANGUAGES.

PROFESSOR WERNICKE.

German.

The courses offered in German are :

Ga1: Preparatory course in German, taught in the Academy, beginning September 1907. Three consecutive terms.

Ga2: Second year of preparatory German, taught in the Academy, to be introduced later. Three terms.

G1: First year of collegiate German. Systematic Grammar, Composition, Literature. Two terms.

Gs: An introduction to scientific prose. One term.

G2: Literature and composition continued. History of Literature.

G3: Advanced and special composition. Essay work.

Gc: Conversational exercises for advanced students.

G1: Study of an author or a phase of literature. Primarily for graduates.

Gph: Elements of Germanic Philology. For graduates.

F2: Introduction to French literature. Syntax and Composition.

Three terms.

F3: Advanced Composition. One term.

Fh: History of French literature, consisting of lectures and weekly reports on collateral reading (two terms).

Fc: Advanced conversational exercises (one term).

Si: Elementary Spanish (two terms).

S2: Advanced Spanish (one term).

Ii: Elementary Italian.

I2: Advanced Italian.

All classical and scientific students take Fi, the former also F2. Candidates for the degree of M. S., if French be one of their minor studies, will be assigned F2; if French be their only minor study, further work may be required. Candidates for the degree of M. A. will take Fh if French be one of their minor studies; F3 *plus* Fh if it be their only minor. In addition thereto, those who select French as their major study will take either Fc, or Si *plus* S2, or Ii, and will present a thesis written in French (about 4,000 words).

The text-books in this Department are frequently changed, and a large portion of the instruction in all classes is independent of the manual adopted. Texts recently used are,

Gr: Joyne-Meissner's and Thomas' Grammars; Thomas & Hervey's Reader; Carmen Sylva's *Aus meinem Koenigreich*.

Gs: Hodges' Scientific German; Gore's Science Reader; Dippold's Science Reader.

G2: Goethe's *Torguato Tasso*; Freytag's *Luther*; Schiller's *Wallenstein*, Maria Stuart, etc.; Scheffel's *Trompeter*; Freytag's *Soll und Haben*; Harris' *Composition*.

G3: Lessing's *Nathan*, *Mina von Barnhelm*, *Laokoon*, etc.; Kleist *Prinz von Homburg*.

Gh: Bernhardt's *Litteraturgeschichte*.

Gl: Klenze's *Gedichte*.

Gph: Paul's *Mittel-hochd. Grammatik*; Wackernagel, *Edelsteine*.

F1: Frazer & Squair's Grammar; Edgren's Grammar; Cameron, Tales of France, Fontaine's Napoleon, Erckmann-Chatrian, Waterloo.

F2: Loti's Pêcheur d'Islande; Lacombe's Petite Histoire; Rostand's Cyrano de Bergerac; Grandgent's Composition; Luquiens' Places and Peoples; Herdler's Scientific French Reader, Bazin's Les Oberlé.

Fh: Demogeot's and Aubert's Littérature Française.

S1: Loiseaux, Grammar and Reader.

S2: Same, Knapp's Readings; Alarcon's El Capitan Veneno.

I1: Grandgent's Grammar; Bowen's Reader.

I2: Goldoni's Comedies; Pellico's Prigioni.

VIII. DEPARTMENT OF GREEK AND LATIN.

PROFESSOR NEVILLE, ASSISTANT PROFESSOR JONES.

Latin.

PREPARATORY.

First Session—Smiley & Storke's Beginner's Latin Book, the study involving a daily exercise in inflection and in translation from and into Latin on the blackboard; Viri Romæ.

Second Session—Second Year Latin, or four books of Cæsar; Daniell's New Latin Composition; Creighton's History of Rome.

FRESHMAN CLASS.

Six orations of Cicero; selections from Ovid, with instruction in scanning; the first and twenty-first books of Livy; Johnson's Private Life of the Romans.

SOPHOMORE CLASS.

Six books of Virgil; Cicero De Senectute; the Captives of Plautus or Suetonius's Life of Augustus; Sallust's Conspiracy of Catiline.

JUNIOR CLASS.

Horace (except a part of the Epodes and most of the Satires), with the scanning of the more common metres; letters of Cicero and of Pliny; the first half of Bradley's Arnold's Latin Prose Composition.

SENIOR CLASS

Tacitus—The Germania and the Agricola; the third, seventh, eighth, and tenth Satires of Juvenal; or, instead of the seventh and eighth, an essay of Seneca's; poems of Catullus; the second half of Arnold's Composition; Wilkins' Sketch of Latin Literature.

Greek.

PREPARATORY.

First Session—White's Beginner's Greek Book, with a daily exercise in inflection and in translation from and into Greek on the blackboard (all Greek to be written with the accents).

Second Session—Greek Reader; four books of Xenophon's Anabasis; Oman's History of Greece.

FRESHMAN CLASS.

Six books of the Iliad; selections from Herodotus; Plato's Apology and Crito; exercises in Greek syntax.

SOPHOMORE CLASS.

Four orations of Lysias; four of Demosthenes; Xenophon's *Memorabilia*, or dialogues of Lucian; exercises in syntax and prose composition.

JUNIOR CLASS.

Two books of Thucydides; poems of Theocritus, Bion, and Moschus.

SENIOR CLASS.

Three dramas (Prometheus, Medea or The Clouds, *Œdipus Rex* or *Antigone*); Jebb's *Sketch of Greek Literature*.

The curriculum leading to the classical degree of A. B., and set forth in the Schedule on page 69, includes English, Greek, Latin, French, 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 course 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. Indeed, as showing the educational trend of the most intelligent people that has ever existed, it is a fact of impressive significance that a vast *Thesaurus Linguae Latinae*, *The Thesaurus of the Latin Language*, and written in Latin, the product of five leading universities of the Germans, and therefore of the world, Berlin, Leipzig, Goettingen, Munich and Vienna, is now appearing from the press of Teubner. This magnificent and monumental work is to consist of twelve volumes quarto, each as large as Webster's Unabridged, and to sell, when durably bound, for more than \$200 a copy. No other language has had such a dictionary, and this *Thesaurus* is the greatest contribution ever made to the study of that language which to every highly civilized people is more important than any other except their own; which has formed nearly half of ours and more than half of three others; and which, therefore, cannot, in any rational scheme of education, be neglected or disparaged but must retain its place if not its primacy among the most useful studies that man can pursue.

In 1934, the last year reported, there were in American colleges, universities, and technological schools, 118,029 students: in classical courses, 52,131; in other culture courses, 13,009; in general science, 9,540; in mechanical engineering, 6,894; in civil, 6,118; in electrical, 4,389; in mining, 2,324; in agriculture, 2,196.

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 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, 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 443 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; in those of Württemberg, Latin at 81, Greek at 40, 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 Lycées, 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.

The National Commissioner of Education reports that in the secondary schools of the United States there were, in 1889-1890, 100,144 students of Latin; in 1897-1898, 274,293, an increase of 174 per cent., and greater than any other study; that in the same nine years the students of Greek increased from 12,869 to 24,994, an increase of 94 per cent.; and that in 1897-1898, 49.44 per cent., almost exactly one-half of all the students of secondary schools, were studying Latin. When the immense number of classical students in the 629 colleges and universities of the United States is added to the 300,000 and more now in our secondary

*"The classical literature is, and will continue to be, the source of all our culture. It must remain, therefore, not only an 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 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.

schools (369,329 in 1904) it will be plain that there is no decline in the demand for classical learning.

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 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.

IX. The Academy is described after the Collegiate Departments.

X. DEPARTMENT OF PEDAGOGY.

PROFESSOR MILFORD WHITE.

The Normal Department of the State College exists under the authority of acts of the General Assembly approved April 23 and April 29, 1880. Section 7 of the first act briefly defines the object for which the Department was established, "a Normal Department or course of instruction for irregular periods, designed more particularly, but not exclusively, to qualify teachers for common and other schools, shall be established in connection with the College." The second act provides the necessary endowment to make the Department effective.

Acting under the clause above quoted from the incorporating act, the authorities of the College have organized two distinct but closely related sub-departments of work for teachers. These are the Normal School and the College course in Pedagogy; the one designed to prepare teachers for the elementary schools; the other, for secondary schools and colleges.

In this arrangement the State College of Kentucky is unique and possesses a distinct advantage. Through the Normal School it comes into close and sympathetic touch with the masses of the teachers throughout the State; and through the college course it comes into vital contact with the more advanced teachers and the higher schools.

Many students who come to the Normal School are led, as the result of what they see of the college work, to undertake an advanced course. The Normal School thus discharges a function whose value cannot be overestimated, in that it introduces many of the most intelligent youth of the State to the facilities which the College can offer them.

THE COLLEGE COURSE IN PEDAGOGY.

In 1893 the College authorities, in response to a strong demand for advanced instruction for teachers, organized a full collegiate course with Pedagogy as a major. This action put the State College on a par with other institutions in the North and West, for there are few State universities in those sections that do not support a department for the advanced teaching of education.

This course is co-equal in number and difficulty of subjects, in the time required for its completion, and in disciplinary and cultural value, with the other full collegiate courses. The purpose of the course is to fit young men and women for the best service as teachers in high schools, academies, and colleges.

To realize this purpose the course offers, in addition to the usual amount of work in science, language and mathematics, specialized instruction in the following subjects, which give to this course its distinctive character.

GENERAL PEDAGOGY.

In the third term of the Sophomore year the student is given a general view of the whole field of Pedagogy through a synoptic outline of the subject. The purpose is to present enough of each topic in Pedagogy to show the trend of each important question in modern education. The work is carried on both by lectures and class discussions.

PSYCHOLOGY.

In the first term of the Junior year the subject of Psychology is presented, chiefly with reference to its value to the teacher. Psychology is treated as a basis of the science of education and the art of teaching. No time is spent in mere speculative discussions, but from the very first the effort is made to connect the subject vitally with the teacher's actual work in the school. Especial attention is given to the mind's functions in Acquiring, Assimilating, and Expressing. The value of Psychology also is shown as the basis of Methodology, and of Educational Economy.

The text-book is "Halleck's Psychology."

In the second term of the Junior year a few more of the valuable topics in higher Psychology are taken up. The special Psychology of some of the advanced branches will be studied.

The work will be library research, lectures, and class discussions.

EDUCATIONAL ECONOMY.

In the third term of the Junior year the different subjects comprised under the general term "Educational Economy," are taken up in detail. No text-book is used, but the well-stocked library of the Department is put at the service of the students, and from all available sources they are expected to work up such subjects as (1) the organization and administration of the individual school, in country and city; (2) the organization and administration of State and city systems of schools; (3) the course of study;

(4) fatigue; (5) buildings and grounds; (6) control and discipline; and (7) the correlation of the school and the community.

These topics are discussed with constant reference to their underlying psychological and sociological principles.

This term's work is particularly suited to those who are preparing for principalships and county or city superintendencies.

METHODOLOGY.

Through the first term of the Senior year the student carries the work in Methodology, all of which is based directly upon Psychology.

The principles of general method, and the special methods of each school subject are thoroughly discussed, and much drill is given in the making of lesson-plans.

The text-book used is "Roark's Method in Education."

THE HISTORY OF EDUCATION.

The second term of the Senior year is devoted to the History of Education.

It is found much the best plan to place this study last in the curriculum, because by the time it is taken up the students in Pedagogy are sufficiently familiar with the different divisions and problems of the subject to understand and interpret the history of educational development.

The text-book used is "Seeley's History of Education," but in this subject the library is freely used.

PROFESSIONAL READING.

For a student to get the best results from the study of any subject, he should read as widely as possible in the literature of the subject. This is especially true of education, which has such a wealth of literature and touches closely so many other subjects. One term, and when possible more time, is devoted to the reading and analysis of such books as Butler's "The Meaning of Education," Jordan's "The Care and Culture of Men," Hanus' "Educational Aims and Educational Values," Henderson's "Education and the Larger Life," Hinsdale's "Jesus as a Teacher," etc.

The department library is well stocked with the best pedagogical literature, and pupils are urged to make constant use of it.

OBSERVATION WORK.

As much time as possible is used by the students in visiting schools in the city of Lexington and the rural districts near by. Reports upon this observation of the work of experienced teachers are prepared and handed in by each pupil, and form the basis of class discussions.

THESES.

Each candidate for the Bachelor's Degree in Pedagogy is required to write a thesis upon some theme assigned by the Dean. This work must be done acceptably and a copy of the thesis left with the Department.

By act of the late General Assembly graduates of this Department (Bachelors of Pedagogy) are authorized to teach during life, unless they cease teaching for five consecutive years.

XI. DEPARTMENT OF CIVIL ENGINEERING.

PROFESSOR BROOKS.

The course of Civil Engineering is planned to acquaint the students with the knowledge of the subjects necessary to enable the civil engineer to develop himself into a skilled practitioner of his profession in any of its several branches. So far as is 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 render 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 his profession is kept in view. In addition to the purely technical matters included in the course, provision is made for the study of English, History and Political Economy.

EQUIPMENT.

The Department of Civil Engineering occupies the second floor of Engineers' Hall, which contains an office and recitation and drawing-rooms for the accommodation of classes of twenty-five students. The drawing-room is equipped with tables, boards, drawing paper, and all the larger and more expensive drawing instruments, which are at the disposal of all students. The surveying instruments belonging to this Department are of the highest grades of the various makers, and among them are included five transits—one each by Buff and Berger, Heller & Brightly, Keuffel & Esser, Mahn, and Ware; three levels by Gurley, Brandis, and Seelig & Kandler; a sextant by Gurley; a compass by Gurley; a plane-table by Keuffel & Esser; a precise pantagraph, and a solar instrument by Saegmüller, together with level and stadia rods, tapes, and other minor accessories. The library for the use of students in engineering contains a well selected supply of standard literature and periodicals pertaining especially to Civil Engineering.

The technical studies in the course of Civil Engineering fall under the heads of Drawing, Surveying, Construction, Applied Mechanics, Bridge and Machine Design, and Sanitary Engineering.

LABORATORIES.

Instruction is given in the Physical Laboratory during the first term of the Sophomore year, and in the Chemical Laboratory during the second term of the Junior and Senior years.

DRAWING.

The work in drawing is begun in the first term of the Freshman year, and consists of free-hand sketching from models, engineering structures, and from drawings, and in practice in the use of drafting instruments. In the Sophomore year the time is occupied in mapping, with exercises in topography, and special attention is given to the rapid and accurate formation of Roman and other appropriate styles of letters. In the second term, four hours a week are devoted to the solution of problems in Descriptive

Geometry. During the winter of the Junior year a topographic map is plotted from notes of a survey made by the class during the autumn. Such a map made by the present Junior class embraces four city blocks, a farm of about two hundred acres, and was plotted on a scale of two hundred feet to an inch. One hour a day during the second term is devoted to problems in stone-cutting. A topographic map of railroad location, with cross sections and profile, is completed in the third term, and graphic analyses of frame structures are made during the year. In the Senior year the work in drawing consists of problems in design and of construction details.

Text-books: Low's Descriptive Geometry; Siebert & Biggin's Stone Cutting; Reinhardt's Technique of Mechanical Drafting.

SURVEYING.

The course in Surveying is begun in the second term of the Sophomore year, with the study of text-books on the theory of plane surveying, supplemented by ample practice in the solution of numerical examples. This is followed by daily field practice in the use and adjustment of surveying instruments, with exercises in leveling, determination of inaccessible distances, and in farm surveys. In the first term of the Junior year a topographic survey of a tract of land adjacent to the College property is made, based on a system of accurate triangulation. In the second term the theory of railroad surveying is studied, especial attention being given to spirals and other modern features of railroad practice. A line of railroad is run and cross-sectioned, and an estimate made of the cost of construction. The study of Geodesy is taken up in the Senior year, embracing the theory of adjustment of a system of triangulation and the methods of determining latitude, longitude, and azimuth. The State College system of triangulation has been begun and will be yearly perfected and extended by the Senior classes.

Text-books: Merriman and Brooks' Hand-book for Surveyors; Brooks' Street Railway Location; Nagle's Railroad Engineer's Field Book; Merriman's Geodetic Surveying.

CONSTRUCTION.

The methods of construction are taught by lectures on limes, cements, wood, steel, and other building material; on principles of foundations on land and under water; on masonry walls and dams; on roads, railroads, and street paving; on the theory and erection of arches; on tunneling, and on the construction of high steel buildings. The lectures include descriptions and sketches of notable existing structures, and short excursions will be arranged for the class as often as possible. The latest methods of conducting tests of cement, iron, steel, wood, brick and other material are practised by each student in the well-equipped laboratory belonging to the College.

Text-book: Baker's Masonry.

APPLIED MECHANICS.

The work in applied mechanics extends over the Junior and Senior years, and includes the theory of the strength and elasticity of beams, columns, and shafts; of stresses in framed structures and arches; of the theory

of dynamos and steam engines and its application to pumping and hoisting machinery and to locomotives.

Text-books: Merriman's Mechanics of Materials; Unwin's Elements of Machine Design; Merriman & Jacobi's Roofs and Bridges, Parts I and II; Barr's Pumping Machinery; Bowser's Analytic Mechanics.

BRIDGE DESIGN.

The course in Roofs and Bridges is begun in the first term of the Junior year and continues through two years. The theory of computation of stresses by both analytical and graphic methods is thoroughly taught from the text-book and numerous numerical examples. At the beginning of the Senior year the design of bridges is begun, and the method of instruction is to proceed from the simple to the complex. The outline and details of existing structures are examined, and the student becomes familiar with drafting-office methods by constant reference to working drawings.

Text-books: Merriman & Jacobi's Roofs and Bridges, Part III; Howe's Roof Design.

SANITARY ENGINEERING.

The work in Hydraulics includes the study of the flow of water through orifices, pipes, and large channels; the theory and tests of water motors and the measurement of power. In Sanitary Engineering the course comprises the consideration of the separate and combined systems of sewerage; the methods of sewage disposal, and the collection, purification, and distribution of a system of water supply.

Text-books: Merriman's Hydraulics; Ogden's Sewerage.

XII. DEPARTMENT OF MECHANICAL AND ELECTRICAL ENGINEERING.

PROFESSORS ANDERSON AND FAIG, ASSISTANT PROFESSOR WILSON.

This department was organized August, 1891. The growth in attendance has been healthy, and for some years it has had the largest attendance of all of the four year courses.

The home of this department is Mechanical Hall, a brick building trimmed with stone, having a floor area of 20,000 square feet. There are three recitation rooms and two drawing rooms, in which theoretical subjects and mechanical drawing and design are taught.

Practical experience in the wood and pattern shop, the foundry, the blacksmith shop and the machine shop, is obtained during the first two years of the course.

Experimental work in mechanical and electrical engineering is done in the engineering laboratories. The main laboratory is in Mechanical Hall, and contains the necessary machinery and apparatus for experimental work of a dynamic character, in both mechanical and electrical engineering. An auxiliary laboratory is situated in a detached two-story building. This building contains concrete piers, so that careful measurement can be made

in the study of magnetic and electric phenomena; it also contains apparatus for work in photometry and telephony.

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 is a band saw, jig saw, two circular saw tables, a trimmer, and a grindstone.

The foundry contains a 30-inch cupola furnace, having a capacity of a ton of metal per hour, a brass furnace, twelve complete sets of molder's tools, twelve benches, besides the ladles, flasks, clamps, core oven, pattern rack, and other equipment such as 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, one milling machine, 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 press.

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 accommodation of the students.

There are two boiler-houses. One contains 50 H. P. Babcock and Wilcox water tube boiler and a No. 3 Dean steam pump. The other contains a 55-H. P. tubular boiler and a No. 3 Davidson steam pump.

The main engineering laboratory is equipped with steam engine and gas engine indicators, planimeters, steam gauges, pyrometers, reducing motions, scales, micrometers, tachometers, watermeters, etc. It contains a 40-H. P. Houston, Stanwood & Gamble cross compound, throttling engine, a 25-H. P. automatic cut-off high speed engine, a 10-H. P. Corliss engine, a 35-H. P. Buffalo Forge Company engine, a 35-H. P. Westinghouse compound engine, and a 4-H. P. Fairbanks-Morse gas engine. The above equipment is used in connection with the boilers, in experimental work in heat engineering.

For experimental work in connection with the study of analytical mechanics, there is a 100,000 pound Riehle testing machine, with an extensometer, besides a Flather dynamometer.

For the experimental work in electrical engineering, there are, in the main laboratory, a 10 K. W. d. c., Crocker-Wheeler dynamo, an 8.5 K. W. d. c., Edison dynamo, a 9 K. W. d. c. electric dynamo, a 35 K. W. d. c. electric motor, a K. W. d. c. dynamo, besides other small motors. There is a switch-board on which the necessary instruments are mounted. The switch-board is built so that, by means of plug connections, any generator

may be applied to any load. Besides the switch-board instruments, there is a varied assortment of portable instruments, voltmeter, ammeters, and wattmeters.

In the auxiliary laboratory there is an electric blue printing machine, a photometer, a small telephone switch-board, galvanometers, Wheatstone bridges, an assortment of coils for investigating alternating current phenomena, a small storage battery.

The equipment of the department, as a whole, is such that many interesting phases of engineering may be investigated. For instance, the telephone equipment, while not elaborate, is sufficient to give a clear insight into the operation of modern telephone systems. The aim of the department is to train young men to be competent, efficient engineers, and the equipment is used with that end in view.

It is the custom to visit the power houses and telephone exchanges of Lexington and vicinity, so as to keep in touch with practical 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 Kentucky State College, 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 go into the making 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.

Of course 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 B. M. E. (Bachelor of Mechanical Engineering). The advanced degree, M. E. (Mechanical Engineer), may be obtained by a resident student in one year after taking the degree of B. M. E. from the State College of Kentucky, or any other 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.

Curriculum.

FRESHMAN YEAR.

Technical Instruction—Twenty-six weeks, three hours 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.

Mechanical and Free-Hand Drawing—Twenty-six weeks, six hours per week, and ten weeks, ten 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.

Shop-work—Thirty-six weeks, twelve hours per week. (a) Bench-work in wood, including exercises in the following operations: Planing, sawing, rabbeting, plowing, notching, splicing, mortising, tenoning, dove-tailing, 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.

English—Thirty-six weeks, five hours per week.

Algebra—Ten weeks, five hours per week.

Solid Geometry—Nine weeks, five hours per week.

Trigonometry—Thirteen weeks, five hours per week.

Physics—Twenty weeks, five hours per week.

SOPHOMORE YEAR.

Mechanical Drawing—Sixteen weeks, four hours per week; sixteen weeks, five hours per week. (a) Drawing the parts of machines and complete machines to scale. (b) Isometric and Descriptive Geometry, problems. (c) Design of machine details.

Shop-work—Thirty-six weeks, twelve 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.

Descriptive Geometry—Nineteen weeks, five hours per week.

Physical Laboratory—Seventeen weeks, five hours per week.

Analytical Geometry—Thirty-two weeks, five hours per week.

Chemistry—Nineteen weeks, five hours per week.

Surveying—Nineteen weeks, three hours per week.

Metallurgy—Twelve weeks, six hours per week. The above includes the study of fuel and refractory substances, and the process employed in puddling iron and making steel.

Calculus—Ten weeks, five hours per week.

Electricity and Magnetism.—Nineteen weeks, five hours per week.

JUNIOR YEAR.

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.

Mechanical Drawing—Thirty-six weeks, ten 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.

Chemical Laboratory—Fifteen weeks, six hours per week.

Analytical Mechanics—Twenty weeks, five hours per week.

Strength of Materials—Fifteen weeks, five hours per week.

Experimental Engineering Laboratory—Ten weeks, six hours per week.

Elements of Electrical Engineering—Fifteen weeks, five hours per week.

Graphic Statics—Ten weeks, five hours per week.

Calculus—Twenty-two weeks, five hours per week.

Electrodynamic Machinery—Ten weeks, five hours per week.

Theory of Machine Design—Ten weeks, five hours per week.

Dynamo and Motor Design—Ten weeks, eight hours per week.

Electrical Appliances—Ten weeks, five hours per week.

SENIOR YEAR.

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 Boilers—Ten weeks, five 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 transmission.

Valve Gearing—Fifteen weeks, five hours per week. The study of various forms of standard engine valves and methods of designing.

Hydraulics—Fifteen weeks, two hours per week.

Alternating Currents—Seventeen weeks, five hours per week.

Mechanical Drawing—Seventeen weeks, ten hours per week. This consists in working out valve gear problems.

Engine and Machine Designing—Fifteen weeks, five hours per week. A study of the modern methods of designing engines, boilers and machines.

Experimental Engineering—Fifteen weeks, ten hours per week. This includes a study of the steam-engine indicator, making engine boiler, and materials for construction tests, and experimental work in electrical engineering.

Political Economy—Ten weeks, five hours per week.

Theory and Practice of Photography—Ten weeks, five hours per week.

Electrical Design—Nineteen weeks, three hours per week.

History—Twenty weeks, five hours per week.

Dynamometers and Measurement of Power—Twelve weeks, five hours per week.

Thesis Work—Nineteen weeks, twelve 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 second and third terms 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 TRIP.

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 three 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.

SUMMER SCHOOL OF MECHANIC ARTS.

The regular curriculum in Mechanical and Electrical Engineering has no elective course. In order to provide opportunity for instruction in them, a Summer School has been established, which continues in session ten weeks. In this school instruction is given in all the subjects taught in the regular course of Mechanical and Electrical Engineering, as well as in elective courses of the Mechanic Arts.

The Summer School is designed especially for technical students, locomotive engineers and firemen, stationary engineers, artisans and mechanics. Special attention is paid to courses in Mechanical Drawing, Machine Design and Shop-work.

XIII. 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 Colt's Criterion 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 path-

ological 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.

This method of instruction is quite popular with students. It affords a detail not to be obtained from models or charts or from subjects for dissection.

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 (Kühne's), heart-holder, ergograph, rheochord, plethysmograph, tambour, signal magnet, etc.

The Department is supplied with all kinds of models, such as an Auzoux papier-maché manikin, Auzoux's models of the eye in full and in section, models of the ear, larynx, 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 of 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.

All students who take the course leading to the degree of B. S. are required to attend lectures two terms of twenty weeks, five hours per week, during the Freshman year, and one term of fifteen weeks during the Sophomore year. The same amount of work is required of candidates for the degrees of B. Ped. and B. Agr. Candidates for the degree of A. B. are required to attend during the first term of the Sophomore year. Two classes for ten weeks are organized at the beginning of the second term for the benefit of Normal students who take the studies leading to the County Certificate.

COURSE PREPARATORY TO THE STUDY OF MEDICINE.

This course, leading to the degree of B. S., 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.

The studies of the Freshman and Sophomore years are identical with those of the other scientific courses, except that there is an additional course in Botany during the third term of the Sophomore year, and an additional course in Physics in the afternoon of that term. Students who take this course have the advantage of work in the X-rays.

The principal differentiation from the other scientific courses is found in the Junior and Senior years. The first term of the Junior is devoted to the following studies: Systematic Zoölogy, Osteology, French, and laboratory work in Chemistry, the second term to Organic Chemistry, Osteology, French, and laboratory work in Zoölogy; and the third term to Physical Chemistry, Osteology, French, and Physiological Chemistry. The first term of the Senior year is devoted to French, History, Logic, Geology, and laboratory work in Physiology; the second term to Entomology, History, Metaphysics, Physiology, and thesis work; and the third term, to Entomology-Political Economy, Moral Philosophy, Physiology, and Embryology.

The Laboratory Course in Physiology—Is required of Seniors during the first term in the afternoon from 2.30 to 4.30. 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 earthworm 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; superposition in tetanus, 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 sphygmograph 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 Fleischl's haemometer; 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.

Every effort is made to stimulate and maintain interest throughout the course.

The students who complete the four years' course will be credited with one year's work at many of the Medical Colleges belonging to the American Association of Medical Colleges. Credit is also given for other work done. To a prospective student of medicine the advantages of this course can hardly be estimated. The additional training in Botany, Physics, Zoölogy, Osteology, Embryology, Chemistry, Physiological Chemistry, and in experimental and laboratory work in Physiology, places him far in advance of those who have not pursued these studies.

As a prerequisite to entrance upon this course, students must have completed the Classical Course of the Academy, or its equivalent.

To those who are to become students of medicine, this Department, offers inducements rarely enjoyed in educational institutions.

Text-books: Martin's Human Body, Stewart's Manual, Syllabus of the Professor's lectures.

Books of Reference: Gray's Anatomy, Gerrish's Anatomy, Shaefer's Physiology, Hall's Physiology. American Text-Book, Loeb's Physiology of the Brain.

XIV, XV. DEPARTMENTS OF GEOLOGY AND ZOÖLOGY.

PROFESSOR MILLER.

Geology.

EQUIPMENT AND FACILITIES.

This 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 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, tables, lantern stands, sliding blackboard, wall screen, and means for quickly darkening the room, is admirably adapted for recitation and lecture uses.

The collections in Mineralogy and Palæontology 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, and photographic illustrations.

In addition to the facilities afforded by the in-door equipment, the situation of the College itself happens to be peculiarly favorable from a geological standpoint. Located as it is in the center of the Blue-grass Region, at 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. Both for this reason, therefore, and because geology is pre-eminently an outdoor study, the "Excursion" is made a prominent feature of the instruction in this Department. It is by the field work these excursions afford that the student's ability to apply in-door knowledge previously acquired is put to the test, and his powers of making generalizations in the open air are exercised.

BRANCHES OF STUDY.

The general order of succession in the geological studies is as follows: (1) Palæontology; (2) Mineralogy; (3) Advanced Geology. Besides these, in which what follows is intimately based upon what precedes, are two self-contained studies; (4) A Shorter Course in Geology and (5) Economic Geology.

I. PALAEOLOGY.

SECOND TERM—Required of Juniors who elect as their major study Geology, Botany, Zoölogy, Anatomy and Physiology, or Pedagogy.

Lectures on the nature and zoölogical positions of different fossil groups are given, and the student is expected to become familiar with the fossils themselves by actual examination. Special attention is paid to fossils, common in Kentucky. The collections of the department are well suited for this purpose. The instruction is entirely by lectures and laboratory work.

II. MINERALOGY.

THIRD TERM—This study follows Palæontology, and is required of the same students, with the addition of those who elect Agriculture as their major.

The object of the study is to render the students familiar with the composition and physical characters of those common minerals and rocks likely to be met with both in course of every-day observation and in geological pursuits. The instruction involves both laboratory and text-book work. Crosby's Tables for Determination and his Common Minerals and Rocks are the books used.

III. ADVANCED GEOLOGY.

FIRST TERM—Required of students who elect as their major study Geology, Botany, Zoölogy, or Pedagogy.

Candidates for A. B. may take this or course IV.

It is meant to be the culmination for those who have availed themselves of all the opportunities for the study of Geology offered in this Department. It is to be hoped that some of these students may be induced to go further, and either in their home localities or elsewhere make a beginning of doing original work. Kentucky, with its large amount of territory practically unexplored geologically, offers an especially fine field to young geologists.

Text-book: Scott's Introduction to the Study of Geology.

IV. SHORTER COURSE IN GEOLOGY.

FIRST TERM—For Seniors who are candidates for the degree of A. B. The only prerequisite for this course is the second term of Zoölogy.

Text-book: Brigham's Text-book of Geology.

SECOND TERM—Required of students who elect as their major study Geology, Agriculture, Chemistry, Physics, Civil Engineering, or Mining Engineering.

As the name indicates, it is the practical or inorganic rather than the organic side of Geology that is here made prominent. Historical Geology is studied briefly and in outline. Fossils are considered important in so far as they serve to determine rocks, whereas in General and Biological Geology the reverse may be considered true. Structural Geology becomes relatively important, and Mineralogy and Lithology occupy a leading place. 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 Asphalts; Building Stone, Clay, and Cement; Geological Fertilizers; Relation of Geology to Agriculture; Relation of Geology to Engineering.

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

In addition to the above, a course of about seven lectures on the Relation of Geology to Agriculture is given in connection with the Short Course in Agriculture.

Zoölogy.

EQUIPMENT AND FACILITIES.

The Department of Zoölogy occupies two rooms on the first floor of the Natural History Building. These rooms are provided with tables and a special set of apparatus, including compound microscopes, for each student. Besides this there is a complete general equipment for all lines of zoölogical work, such as a full set of zoölogical charts, imported from Germany for use in the study of systematic Zoölogy; microtomes and paraffin baths for work in microscopy; a selection of type skeletons to illustrate osteology; alcoholic specimens of both marine and inland forms to illustrate general Zoölogy, with duplicates for class dissections; and finally the Department is

equipped with a library of standard zoölogical literature, including the leading periodicals devoted to the interests of biological science. Moreover, opportunities for collecting zoölogical material, as well as for studying the habits of living animals, are afforded by the "Excursions" mentioned above.

BRANCHES OF STUDY.

These are six, enumerated as follows: (1) Systematic Zoölogy; (2) Laboratory Zoölogy; (3) Osteology; (4) Embryology; (5) Physiological Psychology; (6) Economic Entomology.

I. SYSTEMATIC ZOÖLOGY.

FIRST TERM—Required of students who elect as their major study Geology, Zoölogy, Botany, Agriculture, Chemistry, Pedagogy, Anatomy and Physiology, or Physics.

A general presentation of the subject is here attempted. The practical work is limited to that which can be satisfactorily accomplished in exercises of one hour each. Alternating with lectures on the different sub-kingdoms, classes and orders of animals, accompanied with some species determination by the student, a text-book, Arthur Thompson's *Animal Life*, is used to present to the class in a form suitable for discussion such interesting topics of Biology as Interrelation of Plants and Animals, the Struggle for Existence, Coloration of Animals, Social Life of Animals, Protoplasm, Origin of Life, Physiological Division of Labor, Animal Psychology, Principles of Embryology, The Past History of Animals, The Doctrine of Evolution, Heredity, Animal Life, and ours.

II. LABORATORY ZOÖLOGY.

SECOND TERM—Required of those who elect as their major study Zoölogy, Geology, Botany, Pedagogy, Anatomy and Physiology, or Agriculture.

The work of this term consists largely of animal dissection, and it also involves an extensive use of the compound microscope. Students are taught not only how to examine under the microscope living organisms of small size, but also to prepare these and the tissues of higher animals as permanent mounts for microscopical study.

Laboratory Text-book: Needham's *Zoölogy*, furnished to each student as a part of the equipment, for the use of which a small fee is charged.

THIRD TERM—This term is devoted to laboratory work exclusively, and this consists of a thorough study of the anatomy and development of some vertebrate, as the frog.

III. OSTEOLGY.

FIRST TERM—Required of students who elect as their major study Zoölogy, Anatomy and Physiology, or Geology.

Five hours a week are given to the comparative study of the vertebrate skeleton—chiefly that of Mammalia.

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

IV. EMBRYOLOGY.

THIRD TERM—Required of Juniors who elect as their major study Zoölogy, Anatomy and Physiology or Agriculture.

Five hours a week are assigned for this study. Instruction consists of lectures upon the general facts and principles of Embryology, accompanied by practical work on the embryonic development of such vertebrates as the frog and chick.

Text-book: Balfour's Elements of Embryology.

XVI. DEPARTMENT OF PHYSICS.

PROFESSOR PENCE.

EQUIPMENT AND FACILITIES.

The Department of Physics occupies three rooms in the basement of the main College building. The principal lecture-room is eighteen feet by forty-four feet. The laboratory is twenty feet by twenty-four feet. The third room is twenty feet by twenty-four feet, and is used for both lecture and laboratory work. These rooms are furnished with seats, cases for apparatus, working tables, electricity, gas, water, and drainage. One table is on piers. There is also a dark room.

The equipment of apparatus for experimental and demonstrative work is worth about \$3,000. Some of the better pieces are a Geissler mercury air pump, delicate balances, a *Societe Genevoise* spectrometer, a Michelson interferometer, fine Wheatstone bridges and resistance sets, galvanometers, magnetometer, voltmeters, ammeters, a motor-generator with normal output of twenty amperes under twenty-five volts, a storage battery with normal output of ten amperes under twenty-five volts, a fine X-ray outfit with a fifteen inch spark induction coil from Queen & Co. There is also a good library, which contains some of the best standard works on Physics, and some of the best current scientific literature.

COURSE IN PHYSICS.

The course in Physics is offered to those who may find in its schedule of studies on page —, lines of work which pursued will enable them to enter successfully on some life profession. It is intended for those whose natural tastes and abilities lead them to pursue such studies, as well as for those who wish to teach Physics, or to do other work in Physical Science. In the present highly scientific age, the greatest developments are being made in Physical Science, and those who are best able to utilize physical resources are those who are best able to recognize physical laws and accurately interpret physical phenomena.

The course is not strictly technical, but is broadly scientific. As seen in the schedule of studies, three years are devoted to Theoretical and Experimental Physics, three and one-half to Mathematics and Astronomy, two to English, two to German, and one each to Chemistry, Physiology, Botany, and French. One year is also given to History and Political Economy, and one to Logic, Mental and Moral Philosophy. Four months are assigned to Zoölogy, and four to Geology.

Course of instruction.

FRESHMAN.

SECOND AND THIRD TERMS—Text-book: Twenty weeks, one hour daily. For students in Civil, Mechanical, and Mining Engineering.
Text-book: Gage's Elements of Physics.

SOPHOMORE.

FIRST TERM—Text-book: Fifteen weeks, one hour daily. For students in Pedagogy, Agriculture, and in the Science courses.

Text-book: Carhart and Chute's High-School Physics.

Laboratory: Fifteen weeks, one hour daily. Elementary experiments in the Mechanics of Solids, Liquids, and Gases, and in Heat. For students in Civil, Mechanical, and Mining Engineering.

Text-book: Gage's Physical Experiments.

SECOND TERM—Laboratory: Ten weeks one and one-half hours daily. (1) Experiments in Sound, Light, Electricity, and Magnetism. For students in Mining Engineering. (2) Experiments in the Mechanics of Solids, Liquids and Gases, and in heat. For students in Pedagogy, and in the Science courses.

Text-book: Gage's Physical Experiments.

SECOND AND THIRD TERMS—Text-book: Twenty weeks, one hour daily. For students in the Arts course.

Text-book: Gage's Elements of Physics.

Text-book and lectures: Twenty weeks, one hour daily. Electricity and Magnetism. For students in Civil, Mechanical, and Mining Engineering.

Text-book: To be selected.

THIRD TERM—Laboratory: Ten weeks, one and one-half hours daily. Experiments in Sound, Light, Electricity and Magnetism. For students whose major study is Anatomy and Physiology, Pedagogy, Chemistry or Physics.

Text-book: Gage's Physical Experiments.

JUNIOR.

FIRST TERM—Text-book and lectures: Fifteen weeks, one hour daily. Electricity and Magnetism*.

Text-book: S. P. Thompson's Electricity and Magnetism.

SECOND TERM—Text-book and lectures: Ten weeks, one hour daily. Heat*.

Text-book: Cumming's Heat.

SECOND AND THIRD TERMS—Laboratory: Twenty weeks, one and one-half hours daily. Physical Measurements in Mechanics, Sound and Heat*.

Text-book: Sabine's Physical Measurements.

THIRD TERM—Text-book and lectures: Ten weeks, one hour daily. Light*.

Text-book: Glazebrook's Light.

SENIOR.

FIRST TERM—Laboratory : Fifteen weeks, one and one-half hours daily. Physical Measurements in Light, Electricity and Magnetism*.

Text-book: Sabine's Physical Measurements.

SECOND AND THIRD TERMS—Thesis*.

*For students whose major study is Physics.

XVII. DEPARTMENT OF ENTOMOLOGY.

PROFESSOR MILLER, MISS MCCANN.

The purpose of the work done in this Department, is to place in the hands of students who expect to make farming their occupation, and of others, the means of defense against loss from the depredations of injurious insects.

Required of Juniors in the Agricultural course, and of Seniors in the Scientific courses in which Botany and Zoölogy are major studies.

SECOND TERM—Laboratory work, Physiology, internal anatomy, classification. Five hours a week.

THIRD TERM—Reading, discussion, and laboratory work. Breeding, life-histories, habits, economy, ecology, determination of species, literature, methods. Three hours a week.

The Scientific Course, with Entomology as a major study, is intended to fit those who pursue it for the work in entomology required in agricultural colleges.

XVIII. DEPARTMENT OF MINING ENGINEERING.

PROFESSOR NORWOOD,

State Inspector of Mines and State Geologist.

The establishment of this School was authorized by an Act of the General Assembly, Session of 1898. The 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. The effort is made to acquaint the student not only with the methods of mining and mine management in particular, but to give him such instruction in mechanical and civil engineering as may satisfy the needs of the modern mining engineer. The schedule of studies for the first two years, while distinctive in some minor respects, upon the whole is closely similar to those followed during the same years in the Schools of Mechanical Engineering and of Civil Engineering. Actual differentiation occurs at the entrance of the Junior year.

The instruction in the special theme of Mining (including both coal and metal), which begins with the Junior year, 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. The School is equipped with an excellent electric light stereopticon, and a reflectoscope, with a large number of special slides for illustrating lectures; in addition thereto many charts, photographs, and "blue prints," illustrating mining methods and mining machinery, have been procured. The equipment for lecture-room demonstrations also includes a working model of a mine hoist, with safety-catch for cages; a Vajen-Bader head protector for use in exploring mines filled with noxious gases (by courtesy of the Vajen-Bader Company); safety lamps of various styles, and apparatus for measuring ventilation. For the more elaborate study of mine gases, the School has the use of the apparatus provided for the office of the State Inspector of Mines. A general statement of the subjects discussed under the head of Mining is given under the appropriate years following.

Opportunity for practice in mine 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. The instruments provided for the study of mine surveying include a transit, a level, plummet lamps, a "hanging compass" and accessories (for "string survey" of pitching deposits), and apparatus for surveying bore-holes.

In Chemistry three terms are required. In the Sophomore year the course consists of lectures and recitations on the non-metals and their compounds, and the simpler laws of chemical change. In the Junior year, the first term is devoted to the study of the metals and their more important compounds, and to qualitative analysis. Laboratory work in quantitative analysis is taken up in the third term.

In Metallurgy and Ore Dressing three terms of work are required. The first term is given to a general study of the metallurgy of nine or ten metals, including iron, copper, zinc, tin, lead, nickel, cobalt, silver and gold. Huntington and Macmillan's text-book is used as a guide. The instruction is given in the Sophomore year, by the Professor of Chemistry. The work of the second term, which occurs in the Junior year, includes a more particular study of certain processes for the extraction of silver and gold, such as the amalgamation, chlorination and cyanide processes, together with assaying. For the present, this work will be carried on in the Mining Laboratory, under the supervision of the Professor of Mining. The third term is devoted to the study of the various processes of separating and concentrating ores and other useful minerals, and includes work in the Mining Laboratory.

The course in mining is made as "practical" as the limitations of college instruction permit. With this in view, the equipment project for the Mining Laboratory includes the installation of such an ore dressing and coal washing plant as will permit work to be conducted along practical lines. It is intended that the 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 Allie-Chalmers Company (to whom the School is indebted for generous treatment); a Hallett Hand Jig; 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, Earlington, Ky. A standard three-compartment Hartz Jig has been promised by a friend of the College. The fan has been so installed that various problems relating to ventilation may readily be studied. The machines are operated by electric motor and gasoline engine. The laboratory equipment also includes an assaying outfit, and apparatus for the study of cyaniding and chlorinating ores. Negotiations for the purchase of an electric concentrator, a crusher, and a set of rolls are in progress.

The State College 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 the 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 studies that lead to the degree of B. E. M.

The courses are as follows :

FRESHMAN YEAR.

FIRST TERM—English, Plane Trigonometry, Woodwork (Tools and Machinery), Drawing (Lettering, etc.), Shop-Work (Bench and Lathe).

SECOND TERM—English, Solid Geometry, Physics, Free-hand Drawing, Mechanical Drawing.

THIRD TERM—English, Higher Algebra, Physics, Mechanical Drawing.

SOPHOMORE YEAR.

FIRST TERM—Analytical Geometry, Chemistry, Physical Laboratory, Surveying, Geology, Iron and Steel Forging, Mechanical Drawing.

SECOND TERM—Analytical Geometry, Electricity and Magnetism, Metallurgy, Descriptive Geometry, Drawing, Descriptive Geometric Problems.

THIRD TERM—Analytical Geometry, Calculus, Electricity and Magnetism, Descriptive Geometry, Surveying and Mapping.

JUNIOR YEAR.

Electrical Engineering, first term; Assistant Professor Wilson.

Calculus concluded, first and second terms; Professor White.

Strength of Materials, first term; Professor Faig.

Chemistry of Metals, first term; Professor Palmer.

Surveying and Mapping, first term; Professor Brooks.

Special Metallurgical Processes and Assaying, second term; Professor Norwood (temporarily).

Analytical Mechanics, second and third terms; Professor Faig.

Dynamo-electric Machinery, second and third terms; Assistant Professor Wilson.

Mineralogy, Blow-piping, third term; Professor Miller.

Quantitative Analysis, third term; Professor Palmer.

MINING 1. INTRODUCTORY, EXCAVATING, QUARRYING.—(a) Objects and definitions: Connection with auxiliary sciences; coal and metal mines compared; mineral rights, etc. (b) Excavation in soft ground and in rock: Tools and methods; steam excavators and dredges; by water, etc. (c) Explosives and blasting: Kinds and effects of explosives; theory and practice of blasting; placing, charging, and firing holes under various conditions; precautions in blasting; substitutes for explosives. (d) Quarrying: Plants and methods for various sorts of rock; underground quarries.

MINING 2. BORING, SHAFT-SINKING, SHAFT-BORING.—(a) Boring: Methods with auger, with rods, and with rope; rotary boring, boring tools; casing; recovering lost tools; 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.

MINING 3. PROSPECTING, DEVELOPMENT, METHODS OF WORKING.—(a) Mineral deposits: Geological considerations. Relations of ore deposits to country rock; influence upon topography; connection between topographic forms due to geological structure and the existence of veins. General broad classification of mineral deposits, lodes, veins, beds and placers; regular and irregular. Elements defining the nature and mode of occurrence of a deposit. Effect of variability and disturbances of stratified and crystalline rocks. Irregularities and disturbances of beds and veins. Solution of

problems. (b) Prospecting: Systematic methods. Value of geology. Tracing outcrops; hillside and stream float; old and existing works; traditions; trenching and flooding; bore-holes, adit levels, pits, cross-cuts. Tracing lodes; effects of cross-courses as to heaves and contents; panning. Dipping needle. (c) Exploration and Development: Preliminary questions as to commercial feasibility of working particular deposits. Choice of exploratory methods—shaft, adit, slope. Location of openings with reference to development. Laying out the workings, and order of exploitation. Driving tunnels, drifts, gangways, slopes, levels, cross-cuts. Advancing by single breast and by benches. Maintaining alignment—"sights." Accidents, Upraises—vertical and inclined. Winzes—methods of sinking and raising. (d) 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. Coal, Vein, and Mass mining. Open cuts and stream workings. Hydraulic mining. Dredging.

SENIOR YEAR.

History and Political Economy, President Patterson.

Hydraulics, first term; Professor Brooks.

Steam Engine, Compressed Air, first term; Professor Anderson.

Economic Geology, second term; Professor Miller.

Alternating Currents and Power Plants, second term; Assistant Professor Wilson.

Mine Plant Design. (Drawing)

Thesis work.

MINING 4. 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.

MINING 5. ORE DRESSING LABORATORY.

MINING 6. MINE SURVEYING.—General principles of underground surveying. Carrying meridian into mine, etc; locating lines of work; construction of mine maps and sections; plumbing shafts, surveying bore-holes; "string" surveying, etc.

MINING 7. EXTRACTION, VENTILATION, ETC.—Extraction and removal of material: Mine and surface haulage roads; rope and other means of haulage. Hoisting. Drainage: Controlling and removing water; dams, drainage levels, air lift. Ventilation: Theoretical considerations; mine gases; methods of ventilation; distribution of air supply. Illumination. Descent

and ascent. Accidents: Causes; places; explosions; safeguards; rescue and relief.

MINING 8. MINE PLANT.—Machinery and appliances for mining, hoisting, draining, ventilating, hauling, screening, loading, storing, etc.

MINING 9. 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.

MINING 10. 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.

DEGREES.

The State College confers the degrees of—

Bachelor of Science (B. S.),
Bachelor of Arts (A. B.),
Bachelor of Agriculture (B. Agr.),
Bachelor of Civil Engineering (B. C. E.),
Bachelor of Mechanical Engineering (B. M. E.),
Bachelor of Mining Engineering (B. E. M.),
Bachelor of Pedagogy (B. Ped.),
Master of Science (M. S.),
Master of Arts (A. M.),
Master of Agriculture (M. Agr.),
Master of Civil Engineering (C. E.),
Master of Mechanical Engineering (M. E.),
Master of Mining Engineering (E. M.),

CONDITIONS OF GRADUATION.

To attain the Bachelor's degree the applicant must have been a student of the College at least one session, and he must have passed the examinations on all the courses of study leading to the desired degree.

To attain the Master's degree the applicant must have attained the Bachelor's; he must have pursued, for at least one session in this College or two sessions elsewhere, a major study selected by himself and one or two minor studies assigned him by the Faculty; and finally, he must at least thirty days before the end of the session, have satisfied the Faculty that he is duly proficient in his studies, and have presented to the College an acceptable thesis on his major study or on some part thereof.

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

A student who completes a part of any course in a satisfactory manner may, in attestation of the fact, receive a Certificate of Proficiency.

COURSES GROUPED FOR DEGREES.

I. COURSES FOR THE DEGREE OF B. S.

History, Political Economy, and Metaphysics,	President Patterson.
Botany,	Professor Mathews.
The English Language and Literature,	Professor Mackenzie.
Military Science,	Lieutenant Burt.
Chemistry,	Professor Palmer.
Mathematics and Astronomy,	Professor White, Dean.
The French and German Languages,	Professor Wernicke.
Anatomy and Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Physics,	Professor Pence.
Drawing,	Instructor Webb.

For the degree of M. S., Chemistry, Biology, Geology, Mathematics, or Physics may be selected as major study; and minor studies will be assigned from Biology, Chemistry, Geology, Mathematics, Physics, English, History, Political Economy, Metaphysics, French, and German.

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Botany (Entr.)
SOPHOMORE.	1	Anal. Geom.	German.	Physics.	Physiology.	Drill.	Botany.
	2	Anal. Geom.	German.	Botany.	Chemistry.	Drill.	Physics.
	3	Anal. Geom.	German.	Calculus.	Chemistry.	Drill.	Physics.
JUNIOR.	1	Theor. Chemistry.	English.	Calculus.	French.	Drill.	Chemistry.
	2	Theor. Chemistry.	English.	Calculus.	French.	Drill.	Chemistry.
	3	Mineralogy.	English.	Theor. Chemistry.	French.	Drill.	Quant. Analysis.
SENIOR.	1	Zoölogy.	History.	Logic.	Chem. Reading.	Drill.	Organ. Chemistry.
	2	Quant. Analysis.	History.	Metaphysics.	Econ. Geology.	Drill.	Chem. Research
	3	Quant. Analysis	Polit. Economy.	Mor. Philos.		Drill.	Chem. Research Thesis.

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Analyt. Geom.	German.	Physics.	Physiology.	Drill.	Botany.
	2	Analyt. Geom.	German.	Botany.	Chemistry.	Drill.	Physics (Lab.)
	3	Analyt. Geom.	German.	Calculus.	Chemistry.	Drill.	
JUNIOR.	1	Zoology.	Osteology.	Calculus.	French.	Drill.	Chemistry (Lab.)
	2	Palaeontology.	English.	Calculus.	French.	Drill.	Zoology (Lab.)
	3	Mineralogy.	English.	Syst. Botany.	French.	Drill.	Embryology.
SENIOR.	1	Entomology.	History.	Logic.	Spher. Trigon. Astronomy.	Drill.	Geology.
	2	Entomology.	History.	Metaphysics.		Drill.	Thesis.
	3	Entomology.	Polit. Economy.	Mor. Philosophy.	Astronomy.	Drill.	Thesis.

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Analyt. Geom.	German	Physics.	Physiology.	Drill.	Botany.
	2	Analyt. Geom.	German.	Botany.	Chemistry.	Drill.	Lab. Physics.
	3	Analyt. Geom.	German.	Calculus.	Chemistry.	Drill.	
JUNIOR.	1	Zoölogy.	Osteology.	Calculus.	French.	Drill.	Lab. Chem.
	2	Palæontology.	Surveying.	Calculus.	French.	Drill.	
	3	Mineralogy.			French.	Drill.	Surveying.
SENIOR.	1	Thesis.	History.	Logic.	Spher. Trigon. Astronomy.	Drill.	Gen. Geol.
	2	Mech. Drawing.	History.	Metaphysics.	Geology.	Drill.	Thesis.
	3		Polit. Econ.	Moral Philos.	Astronomy.	Drill.	Thesis.

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Analyt. Geom.	German.	Physics.	English.	Drill.	Gen. Botany.
	2	Analyt. Geom.	German.	Gen. Botany.	Chemistry.	Drill.	Lab. Physics.
	3	Analyt. Geom.	German.	Syst. Botany.	Chemistry.	Drill.	
JUNIOR.	1	Zoölogy.	Plant. Histology.	Econom. Botany.	French.	Drill.	Lab. Chemistry.
	2	Palæontology.		Econom. Botany.	French.	Drill.	Lab. Zoölogy.
	3	Mineralogy.	Plant. Physiology.	Econom. Botany.	French.	Drill.	Lab. Zoölogy.
SENIOR.	1		History.	Logic.	Spher. Trigon. Astronomy.	Drill.	Geology.
	2	Entomology.	History.	Metaphysics.	Thesis.	Drill.	Thesis.
	3	Entomology.	Polit. Economy.	Mor. Philosophy.	Astronomy.	Drill.	Thesis.

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR	THIRD HOUR	FOURTH HOUR.	FIFTH HOUR	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Analyt. Geom.	German.	Physics.	Physiology.	Drill.	Gen. Botany.
	2	Analyt. Geom.	German.	Gen. Botany.	Chemistry.	Drill.	Physics.
	3	Analyt. Geom.	German.	Calculus.	Chemistry.	Drill.	Physics.
JUNIOR.	1	Electricity. Magnetism.	English.	Calculus.	French.	Drill.	Chemistry.
	2	Heat.	English.	Calculus.	French.	Drill.	Physics.
	3	Light.	English.		French.	Drill.	Physics.
SENIOR.	1	Zoölogy.	History.	Logic.	Spher. Trigon. Astronomy.	Drill.	Physics.
	2		History.	Metaphysics.	Geology.	Drill.	Thesis.
	3		Polit. Economy.	Mor. Philosophy.	Astronomy.	Drill.	Thesis.

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Elem. Entomology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Elem. Entomology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Analyt. Geom.	German.	Physics.	Physiology.	Drill.	Gen. Botany.
	2	Analyt. Geom.	German.	Gen. Botany.	Chemistry.	Drill.	Lab. Physics.
	3	Analyt. Geom.	German.	Syst. Botany.	Chemistry.	Drill.	
JUNIOR.	1	Zoölogy.	Adv. Entomology.	Adv. Entomology.	French.	Drill.	Lab. Chemistry.
	2	Palæontology.	Adv. Entomology.	Adv. Entomology.	French.	Drill.	Lab. Chemistry.
	3	Mineralogy.	Syst. Entomology.	Syst. Entomology.	French.	Drill.	Lab. Chemistry.
SENIOR.	1	Econ. Entomology.	History.	Logic.	Spher. Trigon. Astronomy.	Drill.	Geology.
	2	Econ. Entomology.	History.	Metaphysics.	Thesis.	Drill.	Thesis.
	3	Econ. Entomology.	Polit. Economy.	Mor. Philosophy.	Astronomy.	Drill.	Thesis. Photog.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (MAJOR, ANAT. AND PHYSIOL.)

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Analyt. Geom.	German.	Physics.	Physiology.	Drill.	Gen. Botany.
	2	Analyt. Geom.	German.	Gen. Botany.	Chemistry.	Drill.	Lab. Physics.
	3	Analyt. Geom.	German.	Syst. Botany.	Chemistry.	Drill.	Lab. Physics.
JUNIOR.	1	Zoölogy.	Osteology Comp.	Osteology Human.	French.	Drill.	Lab. Chemistry.
	2	Organic Chemistry		Osteology Human.	French.	Drill.	Lab. Zoölogy.
	3	Physical Chemistry		Osteology Human.	French.	Drill.	Physiology. Chemistry.
SENIOR.	1	French.	History.	Logic.	Geology.	Drill.	Lab. Physiology.
	2	Entomology.	History.	Metaphysics.	Physiology. Thesis.	Drill.	Thesis.
	3	Entomology.	Polit. Econ.	Moral Philos.	Physiology. Thesis.	Drill.	Embryology.

II. COURSES FOR THE DEGREE OF A. B.

History, Political Economy, and Metaphysics,	President Patterson.
Botany,	Professor Mathews.
The English Language and Literature,	Professor Mackenzie.
Military Science,	Lieutenant Burt.
Chemistry,	Professor Palmer.
Mathematics and Astronomy,	Professor White.
The French and German Languages,	Professor Wernicke.
The Greek and Latin Languages,	Professor Neville, Dean
	Ass't Professor Jones.
Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Physics,	Professor Pence.

For the Degree of A. M., Greek, Latin, English, History, Mental Science, French, German, or Gothic may be selected as major study; and minors will be assigned from Greek, Latin, English, Mathematics, History, Metaphysics, Political Economy, French and German.

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

YEAR TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1 English.	Trigonometry.	Greek. German.	Latin.	Drill.	
	2 English.	Solid Geometry.	Greek. German.	Latin.	Drill.	
	3 English.	Algebra.	Greek. German.	Latin.	Drill.	
SOPHOMORE.	1 Latin.	Greek. German.	Physiology.	English.	Drill.	
	2 Latin.	Greek. German.	Physics.	Chemistry.	Drill.	
	3 Latin.	Greek. German.	Physics.	Chemistry.	Drill.	
JUNIOR.	1 Analyt. Geom.	English.	Greek. Latin.	French.	Drill.	
	2 Analyt. Geom.	English.	Greek. Latin.	French.	Drill.	
	3 Analyt. Geom.	English.	Greek. Latin.	French.	Drill.	Botany.
SENIOR.	1 Latin. French.	History.	Logic.	Geology.	Drill.	Geology.
	2 Latin. French.	History.	Metaphysics.	Spher. Trigon. Astronomy.	Drill.	Zoölogy.
	3 Latin. French.	Polit. Economy.	Mor. Philos.	Astronomy.	Drill.	

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

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	<i>English.</i>	Trigonometry.	Greek. German.	Latin.	Drill.	
	2	<i>English.</i>	Solid Geom.	Greek. German.	Latin.	Drill.	
	3	<i>English.</i>	Algebra.	Greek. German.	Latin.	Drill.	
SOPHOMORE.	1	Latin.	Greek. German.	Physiology.	<i>English.</i>	Drill.	
	2	Latin.	Greek. German.	Physics.	Chemistry.	Drill.	
	3	Latin.	Greek. German.	Physics.	Chemistry.	Drill.	Botany.
JUNIOR.	1	Analyt. Geom.	<i>English.</i>	Greek. Latin.	French.	Drill.	<i>Anglo-Saxon.</i>
	2	Analyt. Geom. (Optional.)	<i>English.</i>	Greek. Latin.	French.	Drill.	Zoölogy. <i>Anglo-Saxon.</i>
	3	Analyt. Geom. (Optional.)	<i>English.</i>	Greek. Latin.	French.	Drill.	<i>Anglo-Saxon.</i>
SENIOR.	1	French or Latin. Sanskrit or Hebrew.	History.	Logic.	Geology.	Drill.	<i>Anglo-Saxon.</i>
	2	French or Latin. Sanskrit or Hebrew.	History.	Metaphysics.	<i>Comp. Philol.</i>	Drill.	<i>Anglo-Saxon.</i>
	3	French or Latin. Sanskrit or Hebrew.	Polit. Econ.	Moral Philos.	<i>Comp. Philol.</i>	Drill.	<i>Thesis.</i>

III. COURSES FOR THE DEGREE OF B. PED.

History, Political Economy, and Metaphysics, ..	President Patterson.
Botany and Horticulture,	Professor Mathews.
The English Language and Literature.....	Professor Mackenzie.
Military Science,	Lieutenant Burt.
Chemistry,	Professor Palmer.
Mathematics and Astronomy,	Professor White.
Latin Language.....	Professor Neville.
German,	Professor Wernicke.
Pedagogy,	Professor M. White, Dean, Ass't Professor Noe.
Anatomy and Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Physics,	Professor Pence.

In case the student is prepared, on entering, to read Cicero, he must take German, First Year, third hour, and Second Year, second hour. Otherwise he must take Latin the First Year, and English the Second Year.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. PED.

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German or Latin.		Drill.	Drawing.
	2	English.	Solid Geometry.	German or Latin.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German or Latin.	Physiology.	Drill.	Gen. Botany.
SOPHOMORE.	1	Analyt. Geom.	German or English.	Physics.	English.	Drill.	Gen. Botany.
	2	Analyt. Geom.	German or English.	Gen. Botany.	Chemistry.	Drill.	Physics.
	3	Analyt. Geom.	German or English.	Gen. Pedagogy.	Chemistry.	Drill.	Physics.
JUNIOR.	1	Zoölogy.	Educat. Psychol.	Logic.	Cicero.	Drill.	Chemistry.
	2	Palæontology.	City School Problems.	Adv. Psychology.	Livy.	Drill.	Professional Reading.
	3	Mineralogy.	Educat. Economy.		Livy.	Drill.	
SENIOR.	1	Virgil.	History.	Educational Method.	Astronomy.	Drill.	Gen. Geol.
	2	Virgil.	History.	Metaphysics.	Hist. Educat.	Drill.	Obs. Work in Pedagogy.
	3	Cicero. Terence.	Polit. Economy.	Mor. Philosophy.	Astronomy.	Drill.	Thesis.

IV. COURSES FOR THE DEGREE OF B. M. E.

History and Political Economy,.....	President Patterson,
The English Language and Literature,	Professor Mackenzie.
Military Science,	Lieutenant Burt.
Chemistry,	Professor Palmer.
Mathematics,	Professor White.
	Ass't Professor Davis,
Mechanical Engineering,.....	Professor Anderson, Dean
Machine Design,	Professor Faig.
Electrical Engineering,	Ass't Professor Wilson.
Physics,	Professor Pence.
Shopwork and Drawing,	Instructor Nollau.
Experimental Engineering,	Professor Anderson.
Surveying, Graphic Statics, and Hydraulics	Professor Brooks.

For the Degree of M. E., Steam Engineering, Electrical Engineering, Chemical Engineering, Experimental Engineering, or Machine Designing may be selected as major study; and minor studies will be assigned from Steam Engineering, Electrical Engineering, Chemical Engineering, Experimental Engineering, Machine Designing, Mechanical Laboratory Work, Mathematics, Physics, Chemistry, Mental Science, Political Science, English, and Modern Languages.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. M. E.

YEAR	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.	SATURDAY.
FRESHMAN.	English.	Trigonometry.	Model and Object Drawing	Woodwork. Machine Design	Drill.	Shop Woodwork Bench, Lathe.	Shop Woodwork Bench, Lathe.
	English.	Solid Geometry	Physics.	Pattern-Making Foundry Draw.	Drill.	Pattern-Making Foundry	Pattern-Making
	English.	Algebra.	Physics.	Mech. Drawing.	Drill.	Pattern-Making Foundry.	Pattern-Making
SOPHOMORE.	Analyt. Geom.	Surveying.	Chemistry.	Physical Lab.	Drill.	Iron and Steel Forging.	Iron and Steel Forging.
	Analyt. Geom.	Electricity. Magnetism.	Metallurgy.	Descr. Geom.	Drill.	Machine Work	Descr. Geom. Drawing.
	Analyt. Geom.	Electricity. Magnetism.	Calculus.	Descr. Geom.	Drill.	Machine Work Surveying.	Descr. Geom. Drawing.
JUNIOR.	Elementary Electricity.	Mechanics of Materials.	Calculus.	Kinematics Theory of Machine Design.	Drill.	Kinemat. Draw. Machine Design	Kinemat. Draw.
	Electrical Design.	Analytic Mechanics.	Calculus.	Dyn. Electric. Machinery.	Drill.	Chemical Laboratory.	Machine Design
	Dynamo and Motor Design.	Graph. Statics.	Analytic Mechanics.	Dyn. Elec. Mach. Theory of Machine Design.	Drill.	Machine Design Electric Lab.	Machine Design Electric. Lab.
SENIOR.	Thermodynam. Hydraulics.	History.	Altern Currents Dyna. Mot. Des.	Valve Gears. Steam Boilers.	Library.	Valve Design. Electrical Lab.	Steam Lab.
	Altern. Currents Power Plant.	History.	Steam Engine. Design.	Dynamometers Pumps.	Library.	Valve Design. Dyna. Mot. Des.	Steam Lab.
	Thesis.	Polit. Econ.	Photography	Thesis.	Library.	Thesis.	Thesis.

V. COURSES FOR THE DEGREE OF B. C. E.

History and Political Economy,.....	President Patterson.
The English Language and Literature,	Professor Mackenzie.
Military Science,	Lieutenant Burt.
Mathematics and Astronomy,	Professor White.
Chemistry,	Professor Palmer.
Civil Engineering,	Professor Brooks, Dean.
Geology,	Professor Miller.
Physics,	Professor Pence.
Analytical Mechanics,	Professor Faig.
Descriptive Geometry,	Ass't Professor Davis.
Mechanical Drawing,	Instructor Nollan.

For the Degree of C. E., Railways, Structures, Water Power, Municipal or Mining Engineering, Sanitation; Topographical, Geodetic, or Architectural Engineering may be selected as major study; and minors will be assigned from Mathematics, Astronomy, Mechanical Engineering, Geology, Chemistry, Physics, Political Economy, English, French, and German.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. C. E.

YEAR	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.	SATURDAY.
FRESHMAN.	English.	Trigonometry.	Drawing.	Mech. Drawing.	Drill.	Drawing.	Drawing.
	English.	Solid Geom.	Physics.	Mech. Drawing.	Drill.	Drawing.	Drawing.
	English.	Algebra.	Physics.	Mech. Drawing.	Drill.	Drawing.	Drawing.
SOPHOMORE.	Analyt. Geom.	Surveying.	Chemistry.	Drawing.	Drill.	Physical Lab.	Drawing.
	Analyt. Geom.	Electricity. Magnetism.	Metallurgy.	Descr. Geom.	Drill.	Drawing.	Descr. Geom.
	Analyt. Geom.	Electricity. Magnetism.	Calculus.	Descr. Geom.	Drill.	Surveying. Mapping.	Surveying. Mapping.
	Design.	Strength of Materials.	Calculus.	Elec. Dyn. Mach. Roofs, Bridges	Drill.	Topog. Survey. Mapping.	Topog. Mapping.
JUNIOR.	Roofs. Bridges.	Analytical Mechanics.	Calculus.	Stone Cutting	Drill.	Chem. Lab.	Drawing.
	Roofs. Bridges	Graph. Statics.	Anal. Mechan.	R. R. Survey.	Drill.	R. R. Survey.	R. R. Survey.
	Hydraulics. Geodesy.	History.	Bridge Design.	Astronomy. Construction. Geod. Survey.	Drill.	Geod. Survey. Cement Tests.	Surveying.
SENIOR.	Roofs, Bridges, Power Plants.	History.	Sanitary Engineering.	Econ. Geol.	Drill.	Chem. Lab.	Design.
	Drawing.	Polit. Econ.	Design.	Astronomy.	Drill.	Thesis.	Thesis.

VI. COURSES FOR THE DEGREE OF B. AGR.

History, Political Economy, and Metaphysics.....	President Patterson.
Botany and Horticulture.....	Professor Mathews, Dean
The English Language and Literature.....	Professor Mackenzie.
Military Science.....	Lieutenant Burt.
Chemistry,	Professor Palmer.
Mathematics and Astronomy.....	Professor White.
The French and German Languages.....	Professor Wernicke.
Entomology.....	Instructor McCann.
Anatomy and Physiology.....	Professor Pryor.
Geology and Zoölogy.....	Professor Miller.
Physics.....	Professor Pence.
Agriculture and Animal Husbandry	Professor Hooper.
Drawing.....	Instructor Webb.

For the Degree of M. Agr., General Agriculture, Animal Husbandry, Agricultural Chemistry, Horticulture, Entomology, or Economic Botany may be selected as major study; and minors will be assigned from the studies above or from Zoölogy, Geology or Botany.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. AGR.

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN.	1	English.	Trigonometry.	German.		Drill.	Drawing.
	2	English.	Solid Geometry.	German.	Physiology.	Drill.	Drawing.
	3	English.	Algebra.	German.	Physiology.	Drill.	Entr. Botany.
SOPHOMORE.	1	Zoölogy.	German.	Physics.	English.	Drill.	General Botany.
	2		German.	General Botany.	Chemistry.	Drill.	Zoölogy.
	3	Mineralogy.	German.	Syst. Botany.	Chemistry.	Drill.	Zoölogy.
JUNIOR.	1	Soils; Drainage. Forage Crops.	Plant Histology.	Economic Botany.	French.	Drill.	Chemistry (Lab.)
	2	Entomology.	Horticulture. Cereal Crops.	Study of Breeds. Dairying.	French.	Drill.	Horticulture. Dairying.
	3	Entomology. Horticulture.	Plant Physiology.	Economic Botany.	French.	Drill.	Woodworking. Horticulture.
SENIOR.	1	Agricultural Reading.	History.	Logic.	Vet. Science. Adv. Judging.		Animal Husbandry.
	2	Animal Feeding.	History.	Metaphysics.	Economic Geology.		Thesis.
	3	Breeding and Management.	Polit. Economy.	Mor. Philosophy.	Astronomy.		Rural Architecture Thesis.

SCHEDULE OF STUDIES FOR THE TWO YEARS' COURSE IN AGRICULTURE.

YEAR	TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FIRST YEAR.	1	English.	Trigonometry.		Physiology.	Drill.	Gen. Botany.
	2	English.	Solid Geometry.	Gen. Botany.	Chemistry.	Drill.	Zoölogy.
	3	English.		System. Botany.	Chemistry.	Drill.	Zoölogy.
SECOND YEAR.	1	Soils; Drainage. Forage Crops.	Plant Histology.	Econom Botany.	Vet Science. Advanced Judging.	Drill.	Animal Husbandry.
	2	Entomology.	Cereal Crops. Horticulture.	Dairying. Study of Breeds.	Economic Geology.	Drill.	Horticulture. Field Work. Dairying.
	3	Horticulture. Entomology.	Plant Physiology.	Econom. Botany.	Astronomy.	Drill.	Rural Architecture

VII. COURSES FOR THE DEGREE OF B. E. M.

History and Political Economy,	President Patterson.
Mining Engineering, Ore Dressing,	Professor Norwood, Dean
The English Language and Literature,	Professor Mackenzie.
Military Science,	Lieutenant Burt.
Mathematics,	Professor White.
Surveying and Hydraulics,	Professor Brooks.
Mechanical Engineering,	Professor Anderson.
Geology and Mineralogy,	Professor Miller.
Chemistry and Metallurgy,	Professor Palmer.
Physics,	Professor Pence.
Analytical Mechanics,	Professor Faig.
Electrical Engineering,	Ass't Professor Wilson.
Descriptive Geometry,	Ass't Professor Davis.
Shopwork and Drawing,	Instructor Nollau.
	Assistant Ham.

For the degree of E. M., Metallurgy, Ore Dressing, Milling, Coal Mining, Mine Engineering, Mine Plant, Mine Development, or Deep 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, English, French and German.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. E. M.

YEAR	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.	SATURDAY.
FRESHMAN.	English.	Plane Trigon.	Drawing.	Woodwork, Mech. Drawing.	Drill.	Shop Woodwork Bench, Lathe.	Shop Woodwork Bench, Lathe.
	English.	Solid Geometry	Physics.	Mech. Drawing.	Drill.	Drawing.	Drawing.
	English.	Algebra.	Physics.	Mech. Drawing.	Drill.	Drawing.	Drawing.
SOPHOMORE.	Analyt. Geom.	Surveying.	Chemistry.	Geology.	Drill.	Physical Lab.	Iron and Steel Forging.
	Analyt. Geom.	Electricity. Magnetism.	Metallurgy.	Descr. Geom.	Drill.	Drawing.	Descr. Geom. Drawing.
	Analyt. Geom.	Electricity. Magnetism.	Calculus.	Descr. Geom.	Drill.	Surveying Mapping.	Surveying. Mapping.
JUNIOR.	Electric Engineering.	Mechanics of Materials.	Calculus.	Mining 1, 2.	Drill.	Chemistry of Metals.	Surveying. Mapping.
	Mining 3.	Analytic Mechanics.	Calculus.	Dyn. Electric Machinery.	Drill.	Metallurgy Assaying.	Assaying.
	Mineralogy.	Mining 3.	Analytic Mechanics.	Dyn. Electric Machinery.	Drill.	Quant. Analysis.	Surveying.
SENIOR.	Hydraulics. Steam Engine. Compressed Air.	History.	Mining 7.	Steam Boilers.	Drill.	Mining 4. Mining 5.	Mine Survey 6.
	Altern. Currents Power Plants.	History.	Mining 7. Mining 8.	Econ. Geology.	Drill.	Mining 4, 5.	Mine Plant Design.
	Mine Plant Design.	Polit. Econ.	Mining 8. Mining 9. Mining 10.	Design. Thesis.	Drill.	Design. Thesis.	Thesis.

THE NORMAL SCHOOL.

MILFORD WHITE,
PRINCIPAL.

JAMES THOMAS COTTON NOE,
JOSEPH WILLIAM PRYOR,
JOSEPH EVANS WARREN,
ASSISTANTS.

The Normal School prepares teachers for service in the rural schools and elementary graded schools of the State. It comprises three courses, corresponding to the three classes of certificates named in the School Law, viz.: State Diploma, State Certificate, and County Certificate.

The State Diploma Course is made up of all the common school subjects and, in addition, Higher Arithmetic, Algebra, Plane Geometry, Elementary Physics, Elementary Latin, and Psychology. The State Diploma is a life certificate.

The State Certificate Course comprises, besides the common school branches, the advanced subjects of Higher Arithmetic, Algebra, English and American Literature, and Psychology. The State Certificate is valid for eight years, in all parts of the State, and is renewable for another eight years.

The County Certificate Course is made up of the common school subjects in which applicants for a county certificate must be examined.

Other branches will, it is now expected, be provided for in 1906, and thereafter. These branches will be Penmanship, Freehand Drawing, Vocal Music, and Nature Study. Of these, only Penmanship is required in most schools of the State; but it will not be many years until the others also will be required. In fact, Drawing, Vocal Music, and Elementary Science are now demanded in not a few graded schools. The Normal School of the State College aims not only to prepare teachers to meet the bare requirements of the law, but also to fit them both to create and to satisfy a popular demand for the teaching of all the subjects of the best modern elementary curriculum.

Capable students in either of the lower courses, may, with the consent of the Dean, take advanced branches in the State Diploma Courses.

General Pedagogy—Theory and Practice—constitutes a special feature of each course throughout each term of the year. This class is a purely professional one, in which all questions pertaining to the organization, management, and teaching of elementary schools are fully discussed. Participation in the work of this class is vital to the best success of the teacher.

Forensics, a thorough training in the practice of public speaking is a special advantage offered by the Normal School. The whole school is

placed in sections sufficiently small to enable each student to get the benefit that comes from frequent practice in forensics. The work is in charge of the Dean.

City examinations are provided for in the several courses above named. Many city school boards in the State accept the State Certificate. In other cases, a course preparatory to a special examination can be made up out of the regular courses described in the preceding paragraphs.

County Superintendents and Examiners. Although the Normal School has not heretofore had proper facilities for especially fitting County Superintendents and County Examiners for their distinctive work, yet fifteen per cent. of the present County Superintendents in the State have been prepared here for their examination for eligibility, and for the more successful discharge of their official duties. Very many County Examiners have also had their preparation in the Normal School.

It is intended to offer in the session of 1905-06, and thereafter, special courses for those who desire to prepare for service as County Superintendents. These courses will comprise, in addition to the required academic studies, special instruction in Psychology, General Pedagogy, and in School Law.

Text Books: In the Professional Course the text-books are those used in the same branches in the other four years' courses of the College. In the work in Pedagogy the books used are Halleck's Psychology, Roark's Method in Education, White's and Baldwin's School Management, and Seeley's History of Education. In the County Certificate Course the books used are Dubb's Arithmetic, Peterman's Civil Government, Chittenden's Elements of English Composition, Natural Advanced Geography, Holbrook's Complete Grammar, Montgomery's History of the United States, Kinkead's History of Kentucky, Martin's Human Body (smaller edition), Roberts' Rules of Order, and Roark's General Outline of Pedagogy. In the State Diploma and State Certificate Courses, besides these books, Wentworth's Higher Algebra, Johnson's History of English and American Literature, and Blaisdell's First Steps with English and American Authors also are used.

APPOINTMENTS.

Each legislative district of the State is entitled to send to the Normal School every year four properly appointed students, of either sex. Appointments are made by the County Superintendents (see page 129, Section 14, 15, and 16, School Law of 1900) between the first day of July and the thirty-first day of December. Appointments should be certified to the President of the State College as soon as they are made. Appointees secure all the advantages indicated on page —. They do *not* receive mileage unless they remain in school the *full collegiate year*.

Appointments to the Normal School are good for one year. Those who are ready to enter the Freshman Class of the full four years' Professional Course should see that their appointments are made for the *College* and not for the Normal School. Appointments made for that course as a college course are good for four years.

TEACHERS' CERTIFICATES.

By act of the General Assembly approved March 21, 1906,

1. A Bachelor of Pedagogy of the State College is authorized, without certificate, to teach in the public schools of the State during life, unless he or she shall cease to teach for five consecutive years.

2. The Trustees of the College may also by certificate authorize students to teach, if they have completed a course of study in the Normal Department of the College equivalent to that required by the State Board of Examiners for a State Diploma.

3. The Trustees of the College may also by certificate authorize students to teach during two years, if they have completed a course of study in the Normal Department equivalent to that required by the State Board of Examiners for a State Certificate.

4. Teachers authorized by certificate to teach in the public schools of the State, if they attend the Summer School of the Normal Department of the State College four weeks or more, are not required to attend any Teachers' Institute during that school year.

CALENDAR.

The First Term will open Thursday, September 13th, 1906.

The Second Term will open Wednesday, January 2nd, 1907.

The Third Term will open Monday, March 11th, 1907.

Students should enter as early in the Term as possible.

SCHEDULE FOR THE STATE DIPLOMA.

TERM	FIRST HOUR.	SECOND HOUR	THIRD HOUR	FOURTH HOUR.	FIFTH HOUR.
1	Latin.	Pedagogy.	Physics.	Algebra.	Drill.
2	Literature.	Psychology.	Higher Arithmetic.	Plane Geometry.	Drill.
3	Literature.	Algebra.	Higher Arithmetic.	Plane Geometry.	Drill.

SCHEDULE FOR THE STATE CERTIFICATE.

TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR
1	Literature.	Pedagogy.	Higher Arithmetic.	Algebra.	Drill.
2	Literature.	Psychology.	Higher Arithmetic.	Algebra.	Drill.

SCHEDULE FOR THE COUNTY CERTIFICATE.

TERM	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.
1	Grammar.	Arithmetic.	U. S. History. Physiology.	Geography.	Drill.
2	Grammar. Civics.	Arithmetic. Pedagogy.	Geography. Physiology.	Composition.	Drill.
3	Grammar. Composition.	Arithmetic. Geography.	Civics. Physiology. Pedagogy.	U. S. History.	Drill.

SCHOOL OF PHYSICAL CULTURE.

I. DEPARTMENT FOR YOUNG WOMEN.

MRS. FLORENCE OFFUTT STOUT,

Physical Director for Women.

Upon the completion of the handsomely equipped gymnasium in January, 1902, the Department of Scientific Physical Education for Women was organized under the present Director. To direct with intelligence demands an intimate knowledge of such sciences as bear, directly or indirectly, upon the mind and body, as for instance, Biology, Physiology, Anatomy, Psychology, Physics, Anthropometry, Orthopedics, First Aid, Special Medical Courses, and the theory of German and Swedish gymnastics. The Director is one of the three women in the Commonwealth who hold diplomas from the leading training-schools of America.

DEPARTMENTAL AIMS.

The aims of Physical Education are four:—1. To stimulate the functioning of all bodily organs. 2. To train the muscles so that curves may displace angles and grace banish awkwardness. 3. To arouse the mind to superior alertness. 4. To develop character.

GYMNASTICS.

A scientific lesson is composed of four parts:—Military Tactics, Free Gymnastics, Apparatus Work, Artistic Gymnastics or Gilbert Dancing. Both systems of gymnastics, German and Swedish, are taught.

Students are required to do two hours' work each week in the gymnasium and requested to supplement this by home training. The only girls excused from the work are the seniors, and those who submit the written certificate of a physician.

SWIMMING.

The swimming school for women is the only one of the kind in the South and it was organized one year ago. It opens after the Annual Gymnastic and Swimming Tournament on April 21st, and is remarkably popular. Swimming is the best exercise for perfecting the muscles in general, especially those of the neck, chest, and shoulders.

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. Girls 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 U. S. 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 girls such suppleness and endurance that their fame is more than local.

Girls who have had one year's training in the gymnasium or have played the game before are permitted to practise for a place on the team. Fortunately we have always had excellent coaches.

II. DEPARTMENT FOR YOUNG MEN.

W. WALTER H. MUSTAINE,
Director.

H. H. DOWNING,
J. S. CROSTHWAITE,
Assistants.

Orandum est ut sit mens sana in corpore sano.—Juvenal.

The objects sought in this school are: 1. Health of body and mind through physical exercise. 2. The development of strength and graceful movement. 3. The prevention and correction of physical deformities. 4. The correction of functional disorders. 5. The fortification of the body against bad hereditary tendencies.

Every student is carefully examined and the proper exercise prescribed.

COURSES OF EXERCISE.

FIRST YEAR—1. Swedish gymnastics. 2. Simple movements with dumb-bells. 3. Practice with wands. 4. Exercises with Indian clubs. 5. Work with elementary apparatus. 6. Light work on running-track. 7. Games.

SECOND YEAR—1. Free gymnastics. 2. More advanced co-ordinations with Indian clubs. 3. Apparatus work. 4. Rythmical leg movements. 5. Work on running-track. 6. Advanced movements with dumb-bells, combined with leg movements. 7. Games.

THIRD YEAR—1. Advanced Indian club drill. 2. Advanced apparatus work. 3. Advanced co-ordinating leg movements. 4. Barbell drill for the entire body.

Two lessons a week throughout the courses are required of all students. Students are promoted according to merit.

The work of this school is done in the Gymnasium, which is supplied with all needed appliances, including lockers, baths, and a swimming-pool.

During the second and third years lectures are delivered on the laws of health, on pride of physique, on the neglect of health. Ten lectures are delivered to Normal students on physical education, corrective gymnastics for public school children, physical training as viewed by the physiologist, the psychologist and the sociologist.

SCHOOL OF DOMESTIC SCIENCE.

MISS ISABELLA W. MARSHALL,
Instructor.

The Department of Domestic Science was established by the Board of Trustees in December 1905. Miss Isabella W. Marshall was placed in charge, who, with the advice and aid of Dr. Chase Palmer, Professor of Chemistry in the College, made proper installation of the Department early in 1906. Miss Marshall is a graduate of the State College of Kentucky and has taken special work in Columbia College, New York, and in Chicago, in order to prepare herself for the intelligent management of a Department such as this.

Though late in the collegiate year, a good beginning has been made. The first class numbers about forty young women. Attendance is optional. It is probable, however, that before long the subjects taught in this Department will be made part of one or more courses leading to a degree. The Department will embrace Physiology, Pathology and Hygiene, the chemical constituents of food, their preparation, digestibility and assimilation; ventilation, household therapeutics, household management and all that relates to well regulated living. The Department will be equipped with all the apparatus that is needed to make instruction effective. The quarters set apart for its present use are in Patterson Hall, commodious, well lighted and supplied with the necessary culinary apparatus. Additions will be made from time to time as required. This is a new departure in the collegiate training of young women in Kentucky, but one which no doubt will help to brighten many a home in the Commonwealth.

THE ACADEMY.

WALTER KENNEDY PATTERSON,
PRINCIPAL.

JAMES FRANKLIN SANDEFUR,
RICHARD EVANS WARREN,
LEWIS NELSON TAYLOR,
ASSISTANTS.

COURSES OF STUDY.

I. SCIENTIFIC.

FIRST YEAR—Arithmetic, Wells' Academic; Algebra, Wells' Essentials, to Chapter XVII; Political and Descriptive Geography, Butler's Complete; History of the United States, Eggleston; English Grammar, Patterson's Advanced.

SECOND YEAR—Algebra, Wells' Higher, to Chapter XXVIII; Plane Geometry, Beman and Smith; Physical Geography, Tarr; General History, Myers' revised edition; Rhetoric, Genung; Synonyms, Crabb.

II. CLASSICAL.

FIRST YEAR—Latin Grammar, Smiley and Storke; Viri Romæ or Scudder's Gradatim or D'Ooge's Easy Latin; White's Beginner's Greek Book; Arithmetic, Wells' Academic; Algebra, Wells' Essentials to Chapter XVI; English Grammar, Patterson's Advanced.

SECOND YEAR—Latin Grammar, continued; Nepos, Cæsar; Daniell's New Latin Composition; Greek Grammar, continued; Jacobs' Greek Reader; Xenophon's Anabasis; Algebra, Wells' Higher, to Chapter XXVIII; Plane Geometry, Beman and Smith; Rhetoric, Genung; Synonyms, Crabb.

FIRST YEAR—Coleridge's *Ancient Mariner*, in class, and Scott's *Ivanhoe*, parallel.

SECOND YEAR—Shakespeare's *Macbeth*, Macaulay's Essay on Addison, Addison's *Sir Roger de Coverley* Papers, Tennyson's *Princess*, Milton's *Lycidas*, in class; George Eliot's *Silas Marner*, parallel.

SCHEDULE OF STUDIES IN THE ACADEMY.

SCIENTIFIC.					
YEAR	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR. AFTERNOON.
FIRST YEAR.	English Grammar.	Geography.	Arithmetic.	Algebra.	Drill. Gymnastics.
	English Grammar	History.	Arithmetic.	Algebra.	Drill. Gymnastics.
SECOND YEAR	Rhetoric.	Algebra.	Physical Geography.	Geometry.	Drill. Gymnastics.
	Rhetoric Synonyms.	Algebra.	History.	Geometry.	Drill. Gymnastics.
CLASSICAL.					
FIRST YEAR.	English Grammar	Latin Grammar.	Arithmetic.	Algebra.	Drill. Gymnastics.
	English Grammar.	Latin Grammar.	Arithmetic.	Algebra.	Drill. Gymnastics.
SECOND YEAR	Rhetoric.	Algebra.	Viri Romae. Nepos.	Geometry.	Drill. Gymnastics.
	Rhetoric. Synonyms.	Algebra.	Cæsar. Latin Composition.	Geometry.	Drill. Gymnastics.
					Greek Grammar
					Greek Grammar
					Greek Reader.
					Anabasis.

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 College. Their attendance at the College is required only during the hours of recitation and other prescribed College 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 are intended to supply the necessary training intermediate between the Freshman class of the College and the course of study prescribed by the State Board of Education for the common schools.

Every applicant, to be admitted to the Academy, is required to pass a satisfactory examination in Spelling, Reading, Writing, Geography, History of the United States, English Grammar, and Arithmetic.

County appointees must present Certificates of Appointment, made on actual examination held in pursuance of law by a County Board of Examiners, duly appointed for that purpose by the County Superintendent.

Applicants from the public schools of Lexington must present certificates from the School Board setting forth that they have completed the eighth-grade studies.

Other applicants must present certificates from their County Superintendent, or from the Principal of their High School, setting forth that they 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 year will be required to pass a satisfactory examination on the work already gone over by the classes they propose to enter.

Students matriculating in the Academy will be required to pursue one of its prescribed courses of study, and will not be permitted to take any work outside of this course except on the recommendation of the Principal.

ENTRANCE EXAMINATIONS.

These will be held as follows: Tuesday, Sept. 11th, 1906, on English Grammar, Rhetoric, and Greek Grammar; Wednesday, Sept. 12th, on Political and Descriptive Geography, U. S. History, Latin Grammar, and Second Year Algebra; Thursday, Sept. 13th, on Arithmetic, Physical Geography, General History, and Second Year Latin; Friday, Sept. 14th, on First Year Latin, Algebra, Geometry, and Second Year Greek.

Examinations to begin at 8 a. m. and close at 12 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 College. 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 and the least common multiple of 899 and 961.

$$\text{Simplify } 2\frac{1}{4} \times \frac{10\frac{3}{4} - 4\frac{11}{12}}{6\frac{3}{16} \times 7\frac{2}{3}} \div \frac{3\frac{5}{11}}{1\frac{2}{3} + 9\frac{1}{11}}$$

Find the number of bushels that will fill a bin 8.5 feet long, 4.5 feet wide, 3.5 feet deep. The longitude of Rome is $12^{\circ} 27' 14''$ east; the longitude of Chicago is $87^{\circ} 35'$ west; find the difference in time between the two places.

What will be the cost of plastering the walls and ceiling of a room 24 feet 4 inches long, 20 feet wide and 12 feet 6 inches high, at 27 cents per square yard, if 20 square yards be deducted for doors, windows, and base boards?

If a train at the rate of $\frac{1}{3}$ of a mile per minute takes $3\frac{1}{2}$ hours to reach a station, how long will it take at the rate of $\frac{1}{4}$ of a mile per minute?

A and B can do a piece of work in $2\frac{1}{2}$ days, and A and C in $3\frac{1}{2}$ days, B and C in 4 days. Required the time in which all three working together can do the work, and in which each can do the work alone.

A farmer sowed 5 bushels, 1 peck, 1 quart of seed, and harvested from it 103 bushels, 3 pecks, 5 quarts. How much did he raise from a bushel of seed?

Reduce 9 square chains, 11.25 square rods, to the decimal of an acre.

If a bar of iron $3\frac{1}{2}$ feet long, 3 inches wide, $2\frac{1}{4}$ inches thick weighs 93 pounds, what will be the weight of a bar $3\frac{3}{4}$ feet long, 4 inches wide, and $2\frac{1}{2}$ inches thick?

II. ENGLISH GRAMMAR.

Name, define, and give examples of, all the parts of speech.

Define a phrase, a clause, and give examples of each.

What are the only verbs that can be in the passive voice? Why?

Write a complex sentence containing a noun clause; one containing an adjective clause; one containing an adverbial clause.

Analyze the following sentence, and parse all the words in full:

"The soldiers of the Tenth Legion, wearied by their long march and exhausted from want of food, were unable to resist the onset of the enemy."

III. GEOGRAPHY.

What are the circles of the earth?

What are the meridians?

Define latitude and longitude.

What two meridians bound the hemispheres?

Define the two principal forms of government.

Bound North America and describe its political divisions.

Why is the climate of Western Europe different from that of America in the same latitudes?

Describe the mountains, principal rivers and lakes of Asia.

Describe the natural routes of commerce.

IV. HISTORY.

What section of the United States was first explored by the Spanish? French? English?

Give a concise description of the settlement of Plymouth, Jamestown, New York City, and name their distinctive characteristics.

Define Charter, Proprietary, and Royal government as applied to the colonies, and name the colonies that were under each of these forms of government.

Name the three principal causes of the Revolutionary War.

What was the main cause of the War of 1812?

What caused the Mexican War?

Give the leading political differences between the North and the South at the opening of the Civil War.

Name the three departments of the Government under the Constitution, and define the duties of each.

ASSOCIATIONS.

THE UNION LITERARY SOCIETY.

This, the oldest of the literary associations connected with The State College, 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 22d 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 College, 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, 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 College, 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 either course 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 College.

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.

ALUMNI.

1869.

Munson, William Benjamin, B. S., Denison, Texas.

1870.

Munson, Thomas, Volney, B. S., M. S., '83, Denison, Texas.

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, Ruston, La.

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., Speedwell, 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, Frankfort.

Perry, Caleb Sykes, B. S., Indianapolis, Ind.

Wright, Henry Moses, B. S., Alton Park, Tenn.

1880.

*Crawford, James, B. S., Lexie, Tenn.

Peter, Alfred Meredith, B. S., 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 G., B. S., Lexington.

De Roode, Louis Kuinders, A. B., A. M., '86, .. New York.

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.

Stoll, John William, A. B., Lexington.

*Deceased.

1883.

- *King, William Elijah, B. S., Nelson County.
 Taylor, James W., A. B., New Castle.

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., Washington, D. C.
 Ramsey, Russell Thomas, B. S., Denver, Col.
 Riley, Otis Violette, B. S., Pineville.

1885.

- De Roode, 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 C., A. B., Fort Worth, Texas.

1887.

- Hifner, Kearney Lee, B. S., Lexington.
 Shackelford, Thomas Wheatley, A. B., New York.

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., Athens.

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, Robert Bernie, B. S., St. Louis, Mo.

1890.

- Anderson, Richard Thomas, Jr., B. S., Lexington.
 Baker, Annie Jane, B. S., Lexington.
 Brock, Charles Robert, B. S., Denver, Col.
 Forston, Keene Richards, B. S., Nicholasville.
 Gunn, John Wesley, C. E., Lexington.

*Deceased.

Hoeing, Charles, A. B., Rochester, N. Y.
 Wilson, Margaret Agnes, B. S., Deadwood, Col.
 Yates, James Anderson, B. S., Ottawa, Kansas.

1891.

Berry, Henry Skillman, B. S., Lexington.
 Clardy, U. L., B. S., Goodwill, S. D.
 Muncy, Victor Emanuel B. S., Cincinnati, O.
 Wallis, William Russell, C. E., Friars's Point, Miss.
 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., 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, Jr., B. S., Chicago, Ill.
 Shelby, Isaac Prather, C. E., Arkansas
 Southgate, Butler Turpin, A. B., Lexington.

1893.

Adams, Katherine Innis, A. B., Albuquerque, N. Mex.
 Bryan, John Irwin, B. S., B. M. E., '95..... Boston, Mass.
 Courtney, Edmond, B. Ped., Neave.
 Gunn, Henry Martin, B. S., Mt. Sterling.
 Hobdy, William Cott, B. S., Honolulu, H. I.
 Johnson, James Richard, B. M. E., Reno, Nev.
 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, Leipzig, Germ.
 Ware, Cora E., B. Ped., Pineville, Ky.
 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..... East Lake, Ala.
 Curtis, Carlton Coleman, B. S., Babylon, N. Y.
 Faig, John Theodore, M. E., Lexington.
 Garred, Ulysses Anderson, B. M. E., Anaconda, Mont.
 *Griffing, Emma Rosetta, B. S., Lexington.

*Deceased.

Hays, James Morrison, A. B., ..	Barbourville.
Hughes, Leonard Samuel, B. S.,	Manila, P. I.
Jones, Mattison Boyd, A. B.,	Los Angeles, Cal.
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.,	Savannah, Ga.
Oots, Nina Pearl, B. S., ..	Richmond.
Shelby, Katherine, B. S.,	Lexington.
Sledd, Dora, B. Ped.,	Chicago, Ill.
Trigg, William Clay, C. E.,	Ullin, Ill.
Warner, Hattie Hocker, B. S.,	Honolulu, H. I.

1895.

Atkins, Mary Lyons, B. S.,	Lexington.
Barker, Lanis Spurgeon, B. S.,	Ocala, Fla.
Bush, Henry Skillman, B. S.,	Lexington.
Didlake, Mary LeGrand, B. S., M. S.,	Lexington.
Downing, Joseph Milton, B. M. E.,	Jackson, Tenn.
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., '96,	Ft Wayne, Ind.
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, I. T.
Woods, John Joseph, A. B.,	Lexington.

1896.

Alford, Smith Edison, A. B.,	Ellwood, Pa.
Carnahan, James Williams, A. B.,	Toledo, O.
Case, Daniel Morris, B. M. E.,	Georgetown.
Davidson, Harry Adolph, C. E.,	Louisville.
Dean, Thomas Roland, A. B.,	S. McAlister, I. T.
Duck, Alice, B. S.,	Lexington.
Dunlap, John Jennings, A. B.,	Lancaster.
Kerrick, Felix, A. B., A. M., '01,	Louisville.
Lyle, Joseph Irvin, B. M. E., M. E., '02,	New York.
McDowell, Edward Campbell, B. M. E.,	Jackson, Tenn.
Orman, Henry, B. M. E.,	Danville.
Trigg, John Henry, B. S.,	New Columbus.
Woods, John Wesley, A. B.,	Ashland.

1897.

Allen, William Raymond, A. B.,	Chetocah, I. T.
Anderson, Henry Clay, B. M. E.,	Ann Arbor, Mich.
*Atkins, Antoinette Thornton, B. S.,	Lexington.
Blessing, George Frederick, B. M. E., M. E.,	Reno, Nevada.
Bullock, Samuel Archibald, B. M. E., M. E.,	Berwick, Pa.
Cassidy, Elizabeth, B. S.,	Lexington
Clarke, Mary Eva, B. S.,	Lexington.
Collier, William Henry, B. M. E.,	Jackson, Tenn.
DeBow, Samuel Carruthers, B. M. E.,	Jackson, Tenn.
Downing, George Crutcher, B. Ped., M. S.,	Frankfort.
Duck, Berkley Wilson, B. M. E.,	Indianapolis, Ind.
Duncan, William Adolphus, B. M. E.,	Nashville, Tenn.
Frazer, Joseph Christie, B. S.,	Baltimore, Md.
Geary, John Thomas, B. S.,	U. S. Army.
Gordon, Robert Lee, A. B., A. M., '98,	St. Louis, Mo.
Gunn, Clara Brooke, B. S.,	Lexington.
*Haley, John Thomas, B. S.,	Fayette County.
Hendren, James Harry, B. S.,	Speedwell.
Hicks, Arthur Lee, A. B.,	Ashland.
Kelly, Thomas Conway, B. M. E.,	Milwaukee, Wis.
McHargue, Barbara Susan, B. S.,	London.
Morgan, George Matt, B. S.,	Cincinnati, Ohio.
Pope, Robert Lee, A. B.,	Williamsburg.
Scott, John, A. B.,	San Antonio, Texas.
Searcy, Lula, B. Ped.,	Lexington.
Simrall, James Orlando Harrison, A. B.,	Lexington.
Warner, Logan Hocker, B. S.,	LaFollette, Tenn.
White, Martha Ripperdan, B. S., M. S.,	Lexington.

1898.

Brock, George Green, A. B., M. S., '99,	London.
Brock, Lafayette Richardson, B. S.,	Lexington.
Cahill, William James David, B. M. E.,	Lexington.
Campbell, Thomas Luther, A. B.,	Memphis, Tenn.
Carpenter, William Thomas, B. M. E.,	Vallejo, Cal.
Farley, Frank Preston, A. B.,	Flatlick.
Hammock, David William, B. S.,	Cane Creek.
Hamilton, Thomas Smith, B. M. E.,	Louisville.
Johnson, Jack Stubblefield, A. B.,	Muir.
King, Margaret Isadore, A. B.,	Lexington.
Loevenhart, Arthur Solomon, B. S., M. S., '99,	Baltimore, Md.
Loevenhart, Edgar Charles, B. M. E.,	Chicago, Ill.
Lucas, Ida West, A. B.,	Ellwood, Pa.
Straus, Charles Louis, B. M. E., M. E., '99,	Lexington.

*Deceased.

Terry, Lila Beatrice, A. B.,Paris.
 Trooper, Henderson Taylor, A. B.,London.
 Turner, Job Darbin, B. Ped.,Lexington.
 Ward, Paul Sterling, B. M. E.,Cincinnati.
 Wilson, Henry Clay, A. B.,Cynthiana.

1899.

Allen, Leonard Barnes, B. C. E.,Whitehouse.
 Brock, Walter Lucas, A. B.,London.
 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,Nicholasville.
 Copland, Alexander Chisholm, B. C. E.,Lexington.
 Cox, Jane Bramblett, A. B.,Brewton, Ala.
 Davidson, Joseph Ernest, B. C. E.,Louisville.
 Graves, Leila May, B. S.,Lexington.
 Grinstead, Wrenn Jones, A. B.,Adelaide, Australia.
 Horton, Minnie Leigh, A. B.,Camargo.
 Hughes, James William, B. M. E.,Quincy, Mont.
 Jett, Carter Coleman, B. M. E.,Alleghany, Pa.
 Johnston, Philip Preston, B. M. E.,Lexington.
 Maddocks, Roydon Keith, B. C. E.,Wehrum, Pa.
 Marks, Samuel Blackburn, B. S.,Versailles.
 Morrow, Joseph, B. Ped.,Rankin.
 Roberts, George, B. Ped., M. S.,Berkeley, Cal.
 Scherffius, William Henry, B. S.,Lexington.
 Scholtz, Theodore Walter, B. M. E.,East Pittsburg, Pa.
 Simpson, Eugene Erwin, A. B., A. M., B. M. E.,Lexington.
 Smith, Sidney Allen, A. B.,Louisville.
 Vance, Arthur John, B. M. E.,Cleveland, Ohio.
 Warren, Richard Evans, A. B.,Lexington.
 Willmott, Jennie Walker, B. S.,Cleveland, Ohio.
 Young, Bradley Woodruff, B. S.,Cincinnati, Ohio.

1900.

Allen, Robert McDowell, A. B.,Lexington.
 Bowden, Mary Willa, A. B.,Paris.
 Brock, David Morris, B. C. E.,Norfolk, Miss.
 Cornett, Charles George, B. Ped.,Pineville, Oregon.
 Cox, Lula May, B. S.,Lexington.
 Darling, Lewis Andrew, B. M. E.,Palo Alto, Cal.
 Frankel, Leon Kaufman, B. M. E., M. E., '02,Lexington.
 Graham, James Hiram, C. E.,Knoxville, Tenn.
 Graves, James Madison, B. M. E., M. E., '01,Pittsburg, Pa.
 Gunn, John Tevis, A. B., A. M., '01,Lafayette, Ind.
 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., Louisville.
 Musselman, Joseph Franklin, B. M. E., M. E., '04, ... Louisville.
 Neal, Mary Eliza, A. B., Paris.
 Nichols, Thomas Ashbrook, B. M. E., Pittsburg, Penn.
 Peyton, Nellie Evans, B. S., Lexington.
 *Ragan, Leonidas, A. B., Shearer Valley.
 Reed, Jewett Villeroy, B. S., Louisville.
 *Rieser, Eugene Feist, B. M. E., Louisville.
 Scrugham, James Graves, B. M. E., Reno, Nev.
 Smith, Albert Elias, B. S., Owensboro.
 Smith, Joshua Soule, B. M. E., Lexington.
 Spears, Miranda Louise, B. S., Santa Rosa, N. Mex.
 Wilson, James Buckley, B. M. E., Louisville.

1901.

Bassett, Henry Preston, B. S., M. S., '02, Cynthiana.
 Bewlay, Harry, B. M. E., Chicago, Ill.
 *Blessing, Charles Albert, B. M. E., Buffalo, N. Y.
 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, Chicago, Ill.
 Dabney, Albert Smith, A. B., Cadiz.
 Daugherty, Frank, B. M. E., Pittsburg, Penn.
 Ellis, Nicholas Henry, B. Ped., Faywood.
 Gilbert, John Whittington, B. S., Lawrenceburg.
 Gordon, Mary Logan, A. B., Eminence.
 Hailey, George Hereford, B. C. E., Springfield, Ill.
 Hardin, Calvin Evans, B. S., Sibley, La.
 *Humphrey, Claude Loecher, B. M. E., Lexington.
 Hunt, Robert Bruce, B. M. E., St. Augustine, Fla.
 Johnson, William Piatt, B. Ped., Fredericktown, Mo.
 Jones, Leila Eleanor, B. Ped., Eminence.
 Kaufman, Philip Levy, B. M. E., Chicago, Ill.
 Klein, Garnet Rosel, B. M. E., Beloit, Wis.
 Lary, Allen Pettit, B. S., Lexington.
 Lewis, Charles Dickens, B. Ped., Berea.
 Luten, Drew William, A. B., Cayce.
 Marshall, Albert Ross, B. S., M. S., '02, Lexington.
 Milburn, Frank William, B. M. E., M. E., '04, Nashville, Tenn.
 Deceased.

Moore, Thomas Brent, A. B.,	Lexington.
Offutt, Jimmie Morrison, B. S., M. S., '04,	Louisville.
Pennington, William Lee, B. Ped.,	Sandyhook.
Perkins, Wade Hampton, B. C. E.,	Nashville, Tenn.
Rankin, Flora Emma, A. B.,	Rankin.
Richmond, Thomas Logan, B. Agr.,	Manila, P. I.
Seibert, Frank Thomas, B. M. E.,	Philadelphia, Pa.
Sharon, John Albertus, B. Ped.,	Paris.
Shedd, Oliver March, B. S., M. S., '04,	Lexington.
Taylor, Gibson Walker, A. B.,	Troy, Mo.
Treas, Charles, B. C. E.,	McComb City, Miss.
Webb, William Snyder, B. S., M. S., '02,	Wewoka, I. T.
West, Perry, B. M. E., M. E., '04,	Louisville.
Williams, Ella Campbell, B. S., M. S., '02,	Chilesburg.

1902

Barr, Thomas James, B. M. E.,	Clay City.
Berry, Jesse Cecil, B. Ped.,	Clintonville.
Boulware, Lemuel Ford, A. B.,	Campbellsburg.
Bowling, Willette Lee, B. M. E.,	New York.
Campbell, Walter Gilbert, A. B.,	Lexington.
Clay, Mathew Martin, B. C. E.,	Lexington.
Cox, Spencer Foster, B. M. E.,	Philadelphia, Pa.
Crider, Albert Foster, A. B., M. S., '03,	Marion.
Ditto, Leola, B. Ped.,	Pleasureville.
Donan, Daniel Cummins, B. Ped.,	Hardyville.
Doyle, Chester Lawrence, B. M. E.,	Chicago, Ill.
Dunn, Oswald Thorp, B. C. E., C. E., '03,	New Orleans, La.
Evans, Edwin Clinton, B. M. E.,	London, Eng.
Ewell, George Watkins, A. B.,	U. S. Army.
Frazee, George Burbridge, B. M. E.,	Steven's Point, Wis.
Gaither, Morton Williams, B. M. E.,	Harrodsburg.
Grady, Clyde, A. B., A. M., '03,	Smith's Mills.
Hart, William Frederick, B. C. E.,	St. Louis, Mo.
Hatfield, Ulysses Grant, B. Ped.,	Jabez.
Haynes, Robert, B. Ped.,	Robards.
Hoeing, Howard Aubrey, B. M. E.,	Cincinnati, Ohio.
Hoeing, Wallace, B. M. E.,	Louisville.
Hughes, William Neal, B. C. E.,	Louisville.
Humphrey, Hubert Lee, B. M. E.,	Cleveland, Ohio.
Jackson, John Hunt, B. Ped.,	New Columbus.
Jett, Charles Mills, B. M. E.,	Alleghany, Pa.
Jones, Theodore Tolman, A. B., A. M., '03,	Lexington.
Kehoe, John Hickey, B. M. E.,	Cynthiana.
Lawhorn, Jesse Sherman, B. Ped.,	Paris.
Lyne, William, B. M. E.,	Chicago, Ill.
Maddox, David Campbell, A. B.,	Hickman.

Martin, Lewis Wynn, B. M. E.,	St. Louis, Mo.
Mason, Glenn Frank, B. S., M. S., '03,	Pittsburg, Pa.
McDonald, Samuel Gilbert, B. Agr.	Chicago, Ill.
Moorman, Robert Emmett, B. C. E.,	Phoenixville, Pa.
Pulverman, William Edward, B. M. E.,	Philadelphia, Pa.
Smith, Chester Martin, B. M. E.,	Buffalo, N. Y.
Smith, Orville Francis, B. C. E.,	Phoenixville, Pa.
Stoner, John Lee, B. C. E.,	Pikeville.
Sumner, Herman, B. M. E.,	Chicago, Ill.
Taylor, Flemin Coffee, B. M. E.,	Chicago, Ill.
Taylor, Lewis Nelson, B. S.,	Science Hill.
Threlkeld, Lal Duncan, A. B.,	Salem.
Uppington, George Rout, B. M. E.,	Philadelphia, Pa.
Warnock, Thomas Edwin, B. M. E., M. E., '03,	Chicago, Ill.
Williams, Cora, B. Ped.,	Bellevue.
Wilson, Richard Napoleon, B. M. E.,	Dayton, Ohio.

1903.

Austin, Mary Wickliffe, A. B.,	Paris.
Barkley, George LaRue, B. M. E.,	Springfield, Ill.
Bradley, Homer Theodore, B. M. E.,	Falmouth.
Brown, John Edwin, B. Agr.,	Shelbyville.
Bullock, Barry, A. B.,	Lexington.
Chorn, Sarah Marshall, A. B.,	Lexington.
Cutler, Thomas Henry, B. M. E.,	Springfield, Ill.
Ellis, Richard Washington, B. M. E.,	Boston, Mass.
Elvove, Elias, B. S.,	Washington, D. C.
Evans, Frederick Huston, B. M. E.,	Ironton, Ohio.
Finneran, James Cornelius, B. M. E.,	Beloit, Wis.
Finneran, Thomas Francis, B. C. E.,	Midway
Gaither, Edward Basil, B. M. E.,	Mexico.
Galloway, Clarence Albert, A. B.,	Owenton.
Hamilton, Lloyd Logan, B. M. E.,	Chicago, Ill.
Hancock, Mason Wallace, A. B.,	Columbia.
Heaton, Herman Creel, B. M. E.,	Cincinnati, Ohio.
Higgins, Lucy Joseph, A. B.,	Louisville.
Hutchings, John Bacon, B. C. E.,	Louisville.
Kelly, Edward Owen Guerrant, B. S., M. S., '04,	Lexington.
Lancaster, John Ralph, B. M. E.,	Cleveland, Ohio.
Lyle, Cornelius Railey, B. M. E.,	New York.
Marks, William Mathews, B. M. E.,	Versailles.
Marshall, Isabella West, A. B.,	Lexington.
McKee, Neal Trimble, B. M. E.,	Cleveland, Ohio.
McLaughlin, Marguerite, A. B.,	Lexington.
Miller, Mina Garrard, B. S.,	Elkton.
Naive, Miriam Wynter, B. S.,	Lexington.

Norvell, Lucy Hargis, A. B.,	Carlisle.
Peckinpugh, Charles Leon, B. C. E.,	Louisville.
Pence, Alice Courtney, B. S., M. S., '04,	Lexington.
Perrine, Charles Duke, B. M. E.,	Maysville.
Rand, Edward, B. M. E.,	Beloit, Wis.
Render, Fannie, A. B.,	Hartford.
Rice, Guy Wickliffe, B. C. E.,	Lexington.
Sadler, Reuben Batson, B. S., M. S., '04,	Wilmore.
Shannon, Bernardette, A. B.,	Lexington.
Spencer, Howell Mason, B. M. E.,	San Francisco, Cal.
Sprake, Eleanor Hedges, A. B.,	Paris.
*Tandy, Clarke Howell, A. B.,	Oxford, Eng.
Thomas, Smith Riley, B. M. E.,	Beloit, Wis.
Thompson, John James, B. M. E.,	Cincinnati.
Vogt, John Henry Leon, B. M. E.,	Indianapolis, Ind.
Whitfield, Nellie Herbert, B. S., M. S., '04,	Lexington.
Whittinghill, Jackson Pate, B. S.,	Glendene.
Whittinghill, Roscoe Timoleon, B. Ped.,	Clarksville, Tenn.
Wurtele, Edward Conrad, A. B.,	Louisville.

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.,	Midway.
Buford, Nancy Bell, A. B.,	New Castle.
Butner, Robert Clarke, B. M. E.,	Lexington.
Clo, J. Harry, B. S.,	Science Hill.
Coleman, Harry Raymond, B. Ped.,	Latonia.
Crutchfield, William Boulden, A. B.,	Lexington.
Denny, Samuel Alfred, B. S.,	Madisonville.
Dowling, Edward Thomas, B. M. E.,	Lexington.
Doyle, Martin Augustus, B. M. E.,	Paris.
Dyer, Orville Kirk, B. M. E.,	De Koven.
Freeman, William Edwin, B. M. E.,	Lexington.
Fry, Henry Skillman, B. M. E.,	Lexington.
Gardner, James Henry, B. S.,	Sonora.
Gary, William Edward, B. S.,	Pembroke.
Gilliland, Eugene, B. M. E.,	Chenault.
Gilmore, Charles Robert, B. S.,	Valley Oak.
Gordon, Amos Alvin, B. C. E.,	Owensboro.
Grey, William David, B. C. E.,	Louisville.
Gullion, Carroll Hanks, B. M. E.,	New Castle.
Harding, George Othniel, B. C. E.,	Campbellsville.
Hart, Benjamin Robert, B. S.,	Pisgah.

*First Kentucky holder of Rhodes Scholarship.

Hart, Margaret Rebecca, A. B.,	Pisgah.
Hedges, Fleming Dillard, A. B.,	Walton.
Hoagland, Roy Chan, B. S.,	New Castle.
House, Beverly Pryor, A. B.,	Manchester.
Howard, Styles Ironton, B. M. E.,	Rockvale.
Hunter, Patrick Owen, B. M. E.,	Glendean.
Jaeger, Helen Louise, A. B.,	Los Angeles, Cal.
Jenkins, Alexander Lewis, B. M. E.,	Bloomfield.
Johnson, Frank Yarbrough, B. M. E.,	Atlanta, Ga.
Johnston, Hampton Wallace, B. M. E.,	Lebanon.
Kelly, Walter Pearson, B. S.,	Hickory Flat.
Lewis, Joseph Graham, B. C. E.,	Oakland.
Madara, Helen Glenn, A. B.,	Lexington.
Maguire, Mary Josephine, B. S.,	Lexington.
Matlick, Charles Aloysius, B. M. E.,	Lexington.
Matthews, John Eve, B. M. E.,	Barbourville.
McCann, Sue Dobyns, B. S.,	Lexington.
McCauley, James Simeon, B. M. E.,	Versailles.
McCaw, Eloise Chesley Hance, B. S.,	Pisgah.
Monson, Bessie Lee, B. Ped.,	Shady Nook.
Montgomery, Francis Joseph, A. B.,	Lexington.
Nollau, Louis Edward, B. M. E.,	Louisville.
Payne, William Campbell, B. S.,	Lexington.
Peratt, Charles Oscar, A. B.,	Hilltop.
Pickles, George Wellington, B. C. E.,	Richmond.
Porch, Madison B., B. S.,	Somerset.
Puckett, Honer, B. C. E.,	Tonievile.
Ramey, Emerson Everett, B. M. E.,	Carlisle.
Renz, Gertrude, B. S.,	Louisville.
Rice, Heber Holbrook, B. S.,	Cambridge, Mass.
Sandefur, James Franklin, A. B.,	Henderson.
Schneider, Frederic Lewis, B. C. E.,	Louisville.
Schultz, Elmer Wilkerson, A. B.,	Lexington.
Shelby, John Craig, A. B.,	Cambridge, Mass.
Shobe, William Merritt, B. Agr.,	Oakland.
Smedley, Sarah Cleveland, A. B.,	Ft. Spring.
Smith, Claude Robert, B. S.,	Elizabethtown.
Smith, Thomas Marshall, B. S.,	Hooktown.
Stackhouse, Clifton Carr, B. M. E.,	Lexington.
St. John, Claire Porter, B. M. E.,	Brooklyn, N. Y.
Thurman, Zella Mae, B. S.,	Somerset.
Tucker, Nannie Susan, A. B.,	Washington.
Vaughn, Earl Cleveland, A. B.,	Smithville.
Warder, William Henry, B. C. E.,	Glasgow.
Ware, Cornelius, B. Ped.,	Pulaski.

Wilkie, Margaret Donald Erskine, B. S., Lexington.
 Wilson, George Hancock, B. S., Lexington.
 Wurtele, Henry Joseph, B. C. E., Louisville.

1905.

Adamson, Keith Frazee, B. M. E., Milwaukee, Wis.
 Akin, Allison, B. M. E., Chicago, Ill.
 Amoss, Harold Lindsay, B. S., Washington, D. C.
 Baumgarten, Louis Erwin, B. M. E., Chicago, Ill.
 Bickel, Charles Alfred, B. M. E., Norwood, O.
 Brashear, Sue Ashbrook, A. B., Cynthiana.
 Bryan, Ruth Mitchell, A. B., Lexington.
 *Burt, Wilson Bryant, B. C. E., Lexington.
 Campbell, Marion, B. S., Louisville.
 Cline, Edgar Allen, B. M. E., Philadelphia, Pa.
 Coons, Joseph Morrison, B. C. E., Jeffersonville, Ind.
 Darnall, Frank Kendrick, B. M. E., Wilkinsburg, Pa.
 Dodd, Minnie Lee, B. S., Louisville.
 Drake, Jimmie, A. B., Bristow, Ind. Ter.
 Edwards, Harry Griswell, B. M. E., Schenectady, N. Y.
 Eubank, Walter Pendleton, B. C. E., Cave City.
 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., Lexington.
 Haynes, Chastain Wilson, B. S., Marion.
 Ingels, Howard Payne, B. M. E., Berwick, Pa.
 Johnston, Fayette, B. M. E., Lexington.
 Kelly, William Cobb, B. C. E., Bloomington, Ill.
 Kroell, Oscar R., B. E. M., Lexington.
 Layson, William George, B. M. E., Indianapolis, Ind.
 Morris, Stewart Minor, B. M. E., Berwick, Pa.
 Murphey, Ernest James, A. B., Pembroke.
 Murrell, Artemus Delig, B. M. E., Beloit, Wis.
 Ogg, Grace Truman, A. B., Mt. Sterling.
 Owens, Charles Beland, B. M. E., Berwick, Pa.
 Payne, William Johnson, B. M. E., Georgetown.
 Pierce, Claude Stone, A. B., Pulaski.
 Pope, Henry B., B. E. M., Lexington.
 Powell, Max West, B. M. E., Beloit, Wis.
 Prather, Harry Logan, B. M. E., Reno, Nev.
 Ransom, Edward Rogers, B. Agr., Ransom.
 Roberts, Virgil Dick, B. M. E., Talbotton, Ga.
 Rogers, Anna Gist, A. B., Lexington.
 Schoene, William J., B. Agr., Geneva, N. Y.
 Scholtz, Herman Frederick, B. C. E., Louisville.

*From U. S. Military Academy, 1898.

Shipp, Joel Fithian, B. M. E.,	Norwood, O.
Sprake, James Breckinridge, B. M. E.,	Pittsburg, Pa.
Stiles, Elijah V. Bland, B. C. E.,	Hodgensville.
Thomas Bennett, B. M. E.,	Lexington.
Tomlinson, Hugh Joseph, B. M. E.,	Wilkinsburg, Pa.
Tye, Rachel, A. B.,	Polleyton.
Urmston, Henry Howard, B. M. E.,	Jackson, Tenn.
Wallis, Charles Reese, B. M. E.,	Norwood, Mass.
Walsh, Robert Bright, A. B.,	Heidelberg, Ger.
Wathen, Sallyneill, B. S.,	Louisville.
Weaver, Walter Simeon, B. Agr.,	Bronson.
Webb, Elzie, B. C. E.,	Covington.
Werness, Inga Marie, B. S.,	Louisville.
West, Howard Murphy, B. M. E.,	Nicholasville.
Woerner, Emma Josephine, B. S.,	Louisville.
Wood, Hugh Nelson, B. C. E.,	Lexington.
Woosley, Herman, B. Agr.,	Lexington.
Wright, Charles Roy, B. C. E.,	Stanford.

MILITARY DEPARTMENT.

FIRST LIEUT. W. B. BURTT, FIFTH U. S. INFANTRY,
Commandant.

ROSTER OF THE CADET BATTALION.*Staff.*

ADJUTANT.
G. Edgar.

QUARTERMASTER.
T. M. Sprague.

Non-Commissioned Staff.

SERGEANT-MAJOR.
T. R. Bryant.

QUARTERMASTER-SERGEANT.
C. C. Kelly.

COLOR-SERGEANTS.
B. McClelland, A. G. Yankey.

BAND.

CHIEF MUSICIAN.
Ummethun.
PRINC. MUSICIAN.
Clary.
DRUM MAJOR.
Cross.

SERGEANTS.
King.
Edwards.
Taylor.

CORPORALS.
McGarvey.
Taylor.
Wells.
Hamilton.
Blumenthal.

BATTERY.

CAPTAIN.
Paullin.
FIRST. LIEUT.
Kirby.
SEC. LIEUT.
Brewer.

SERGEANTS.
Adair.
McFerran.
Cornelison.
CORPORALS.
Mathews.
Lisle.

INFANTRY.**A COMPANY.**

CAPTAIN.
Branson.
FIRST LIEUT.
Allen.
SEC. LIEUT.
Yager.
FIRST SERG.
Kirk.
SERGEANTS.
Browning.
Bowlds.
Herring.
McPherron.

B COMPANY.

CAPTAIN.
Arnsperger.
FIRST LIEUT.
Spears.
SEC. LIEUT.
Battaile.
FIRST SERG.
Sims.
SERGEANTS.
Alden.
Bean.
Bell.
Orr.

C COMPANY.

CAPTAIN.
Donan.
FIRST LIEUT.
Acker.
SEC. LIEUT.
Vogt.
FIRST SERG.
Bogard.
SERGEANTS.
Green.
Elam.
Poynter.
Powell.

D COMPANY.

CAPTAIN.
Steele.
FIRST LIEUT.
FIRST LIEUT.
SEC. LIEUT.
Craig.
FIRST SERG.
Downing.
SERGEANTS.
Fishback.
Wilkes.
Wilhoit.
South.
Watson.

E COMPANY.

CAPTAIN.
Schoene.
FIRST LIEUT.
Estill.
SEC. LIEUT.
Nichols.
FIRST SERG.
McCutcheon.
SERGEANTS.
Earle.
Swartz.
Kiesel.
Clay.
Roswell.

CORPORALS.

Bowden.
Chisholm.
Holland.
Howerton.
Hudgins.

CORPORALS.

Alcorn.
Barbee.
Crosthwaite.
Garvin.
Riggs.
Grannis.

CORPORALS.

Penrod.
Mosby.
Barr.
Bennett, C.
Greathouse.

CORPORALS.

Wilmot.
Stackhouse.
Shelby, W.
Bennett, B.
Bennett, E.
Coons.

CORPORALS.

Ellis.
Simmons.
Wallace.
Worthington
Ryan.

POST-GRADUATES.

Anderson, Henry Clay, B. M. E.,	Ann Arbor, Mich.
Barkley, George La Rue, B. M. E.,	Springfield, Ill.
Bewlay, Henry, B. M. E.,	Chicago, Ill.
Bryan, John Irwin, B. M. E.,	Pensacola, Fla.
Burt, Wilson Bryant, B. C. E.,	Lexington.
Carpenter, William Thomas, B. M. E.,	San Diego, Cal.
Cox, Spencer Foster, B. M. E.,	Philadelphia, Pa.
Daugherty, Frank, B. M. E.,	Philadelphia, Pa.
Duncan, William Adolphus, B. M. E.,	Philippine Islands.
Ellis, Richard Washington, B. M. E.,	New York City.
Evans, Frederick Huston, B. M. E.,	Peoria, Ill.
Frazer, George Burbridge, B. M. E.,	Louisville.
Harper, Joseph Nelson, B. S.,	Clemson Col, S. C.
Jett, Charles Mills, B. M. E.,	Lansing, Mich.
Kelly, Thomas Conway, B. M. E.,	Cincinnati, O.
McDowell, Edward Campbell, B. M. E.,	Berwick, Pa.
McKee, Neal Trimble, B. M. E.,	Cleveland, O.
Nichols, Thomas Ashbrook, B. M. E.,	Pittsburg, Pa.
Paddison, George Lucas, A. B.,	Burgau, N. C.
Perrine, Charles Duke, B. M. E.,	Swissvale, Pa.
Pope, Henry B., B. E. M.,	Louisville.
Rand, Edward, B. M. E.,	New York City.
Scrugham, James Graves, B. M. E.,	Reno, Nev.
Simpson, Eugene Erwin, B. M. E.,	Lexington.
Smith, Joshua Soule, B. M. E.,	New York City.
Sweeny, Mary E., A. B.,	Lexington.
Taylor, Lewis Nelson, B. S.,	Science Hill.
Vogt, John Henry Leon, B. M. E.,	Stearns.

UNDERGRADUATES.

SENIORS.

Allen, David Hugh	Mech. Eng.	Edna, Tex.
Atkins, Presley Thornton	Classical	Lexington.
Baxter, William Jefferson	Classical	Logana.
Bogard, Frank	Mech. Eng.	Woodburn, Or.
Brown, Llewellyn Chauncey	Mech. Eng.	Harrodsburg.
Bryan, Daniel Boone	Mech. Eng.	Lexington.
Cartwright, Coleman Clyde	Civ. Eng.	Louisville.
Chinn, Alexander Julian	Mech. Eng.	Frankfort.
Clo, Nelson Lewis	Mech. Eng.	Science Hill.
Darling, Henry Bosworth	Mech. Eng.	Carrollton.
Daugherty, Garrard	Scientific	Paris.
Downing, William Franklin	Mech. Eng.	Lexington.
Dragoo, Robert Estill	Mech. Eng.	Lexington.

Du Valle, Rankin Powers	Civ. Eng.....	Stamping Ground.
Edmonds, George Peck	Mech. Eng	Lebanon.
Freeman, Thomas Willmott	Mech. Eng	Duckers.
Goggin, Bessie Engleman	Scientific	Somerset.
Gough, Achilles Calloway	Mech. Eng	Benton.
Gregory, Mary Cottell	Classical	Louisville.
Hamilton, James Clay	Mech. Eng.....	Uniontown.
Hedges, Charles Cleveland	Scientific	Burlington.
Hopgood, Roy Caldwell.....	Mech. Eng.	Morganfield.
Hopson, Katharine Temple	Classical	Lexington.
Hutchcraft, Lucy Keller	Classical	Lexington.
Jones, Sadocie Connellee	Agriculture	Porter.
Kelly, Edward Patrick	Classical	Hawesville.
Kemper, William Priest	Civ. Eng.	Millersburg.
Lancaster, Charles Prentice	Civ. Eng	Paris.
Lancaster, John Wilbur	Normal	Georgetown.
Letton, James Harvey	Civ. Eng	Paris.
Lewis, Alexander Thornton	Mech. Eng	Frankfort.
Magee, Wallace Hopkins	Mech. Eng	Louisville.
Mahan, Fred Coyt	Mech. Eng	Hyattsville.
Mahoney, Margaret Elizabeth	Scientific	Bedford.
McClelland, Byron	Scientific	Walnut Hill.
McCulloch, Eugenia Susan	Scientific	Louisville.
McDowell, Omar	Mech. Eng	Mt. Olivet.
McHargue, James Spencer.....	Scientific	Boreing.
McPherson, Charles Jarrett	Mech. Eng	Hopkinsville.
Montgomery, George Carter	Mech. Eng.....	Liberty.
Moore, Henry Ray	Mech. Eng.....	Lebanon.
Newman, James Cleveland	Mech. Eng	Lexington.
Nisbet, James Clarence	Civ. Eng	Madisonville.
Nunnelley, Eva May	Classical	Lexington.
Rankin, French Warder.....	Mech. Eng.....	Cynthiana.
Read, Henry English	Mech. Eng.....	Hodgensville.
Riefkin, Philip	Mech. Eng.....	Newport.
Robinson, Herman Clayton.....	Mech. Eng.....	Georgetown.
Rogers, James Dell	Civ. Eng	Louisville.
Scott, Henry Skillman	Mech. Eng.....	Bement, Ill.
Scott, Mary Estill	Scientific	Richmond.
Scrugham, Mary	Classical	Lexington.
Sellman, Frank Raymond	Mech. Eng	Nicholasville.
Smith, Maxwell Waide	Civ. Eng.....	Hot Springs, Ark.
Stevens, Harold Edwin	Agriculture	Pruett.
Taylor, Hugh Wilbur	Agriculture	Lewisport.
Terrill, Robert Craig	Civ. Eng.....	Bedford.
Trice, John Buckner	Mech. Eng	Hopkinsville.
Volkman, Alice	Classical	Louisville.

Wallis, Anna	Classical.....	Lexington.
Warren, Joseph Evans	Scientific	Lexington.
Weir, Fanny	Classical.....	Louisville.
Wendt, Wiley	Civ. Eng	Newport.
Whitlock, Albert Newton.....	Classical	Richmond.
Wiley, Rodman.....	Civ. Eng	White Sulphur.
Wilkie, Florence	Classical.....	Lexington.
Wilkie, Margaret Donald Erskine.....	Classical	Lexington.
Wilson, Horace Hildebrand	Mech. Eng.....	Lexington.

JUNIORS.

Acker, Robert Lewis	Civ. Eng.....	Paducah.
Alexander, Josie.....	Classical.....	Paris.
Allan, John Griffin	Civ. Eng.....	Owensboro.
Ammerman, John Rogers.....	Mech. Eng.....	Cynthiana.
Arnsperger, Rodes	Scientific	Lexington.
Baer, Stanley T.....	Civ. Eng	Louisville.
Bagby, Mary Logan.....	Classical.....	Danville.
Barker, Maxwell Sharp.....	Mech. Eng.....	Louisville.
Bogges, Louis Sterling.....	Civ. Eng.....	Lawrenceburg.
Branson, Dom Pedro	Agriculture	Dye.
Brown, William Waters	Civ. Eng.....	Shelbyville.
Carmody, Catherine Gertrude.....	Classical.....	Mt. Sterling.
Carse, Robert Allen	Mech. Eng.....	Richmond.
Coleman, Samuel Boin	Civ. Eng.....	Elkton.
Crafton, Milton Cooksie.....	Civ. Eng.....	Henderson.
Craig, Berwick Stanley.....	Mech. Eng.....	Versailles.
Cram, Ambrose Byrd.....	Civ. Eng.....	Morgan.
Crawley, Alice.....	Classical.....	Louisville.
Crenshaw, Anne Scott.....	Classical.....	Versailles.
Denham, Ernest Myers	Civ. Eng.....	Williamsburg.
Dodd, Daniel Jackson	Civ. Eng.....	Lexington.
Donan, Arthur Liston.....	Civ. Eng.....	Three Springs.
Dowling, Anna	Classical.....	Louisville.
Durham, William Humphrey.....	Normal.....	Humphrey.
Edgar, Graham.....	Scientific.....	Paris.
Estill, David Chenault.....	Mech. Eng.....	Farmdale.
Farrell, Walter Agustus.....	Mech. Eng.....	Dayton.
Fish, Clarence Beauchamp.....	Normal.....	Lexington.
Gilbert, Lillian C.....	Classical	Lexington.
Gordon, Flora McPheeters.....	Classical.....	Frankfort.
Grunwell, Paul Clifton.....	Mech. Eng.....	Centreville.
Hamilton, William Shacklette.....	Classical	Brandenburg.
Hart, Robert Singleton.....	Classical	Pisgah.
Hermann, Joseph George.....	Civ. Eng.....	Newport.
Hillenmeyer, Louis Edward.....	Agriculture	Lexington.

Howard, Guylie Benton.....	Mech. Eng.....	Rockvale.
Karsner, Albert Sharkey.....	Civ. Eng.....	Lexington.
Kelley, Richard Henry	Civ. Eng.....	Fulton.
Kirby, Augustus Montillmon.	Classical.....	Baker.
Kornfeld, Louise Maria.....	Scientific.....	Louisville.
Lawson, Fayette Hewitt.....	Mech. Eng.....	Shively.
Lazarus, Goldye Theo.....	Scientific	Louisville.
Lewis, Leo Logan.....	Mech. Eng.....	Lexington.
Lewis, Viola Cosby.....	Classical.....	Louisville.
Lockridge, Mary Andrew	Classical	Mt. Sterling.
Maddocks, Florence May.....	Scientific	Carrollton.
Madison, James Talbot.....	Civ. Eng.....	Cynthiana.
Mahan, Charles Alfred.....	Agricultural	Lancaster.
McClelland, Thomas Brown.....	Classical	Lexington.
McKinney, Walter.....	Mech. Eng... ..	Mt. Salem.
Nicholas, Evelyn Van Meter.....	Classical.....	Lexington.
Nicholls, William Durrett	Agricultural	Bloomfield.
Nunnelley, James Robert.....	Mech. Eng	Lexington.
Ott, Thomas Foreman	Scientific	Lexington.
Parrish, Charles Swift.....	Classical.....	Lexington.
Paullin, Frank Chester.....	Civ. Eng	Springfield, Ill.
Piper, Mary Hammond	Classical.....	Lexington.
Rankin, Fred Jones	Mech. Eng.....	Rankin.
Rees, Elijah Latham.....	Civ. Eng	Lexington.
Rule, Perrin	Mech. Eng.....	Falmouth.
Scherffius, Benjamin Franklin	Agricultural	Lynnville.
Schoene, Charles Edgar	Mech. Eng.....	Henderson.
Shannon, Philip Francis	Civ. Eng.....	Lexington.
Spears, Howell Davis	Scientific.....	Lexington.
Sprague, Joseph Mills	Mech. Eng	Caseyville.
Stigers, James Francis	Civ. Eng.....	Frankfort.
Stiles, Mildred.....	Classical.....	Lexington.
Stone, Francis Marion	Mech. Eng	Flemingsburg.
Strachan, George Morris.....	Civ. Eng.....	Louisville.
Sumner, Gordon	Civ. Eng.....	Greenville.
Thomas, John William.....	Mech. Eng.....	Georgetown.
Thorne, James Webstein	Mech. Eng	Louisville.
Towery, Beverly Todd	Classical.....	Marion.
Vandercook, Ralph	Civ. Eng	Springfield, Ill.
Wallis, Elizabeth Ward	Scientific	Lexington.
Webster, Margaret Butler	Classical.....	Louisville.
Woodward, William Deane	Civ. Eng.....	Beaver Dam.
Yager, John Joel.....	Mech. Eng.....	Leitchfield.

SOPHOMORES.

Adair, George Stolworthy ..	Mech. Eng.	Paris.
Alden, William Oliver	Civ. Eng.	Petersburg.
Allen, Lutie Darnall	Classical	Lexington.
Babbage, Arthur Wallace	Classical	Cloverport.
Battaile, James Frank.....	Mech. Eng.	Lexington.
Bean, Louis Vimont	Civ. Eng.	Lexington.
Beaumont, Arthur Bishop	Scientific	Mayfield.
Becker, Theodore Henry	Scientific	Louisville.
Bell, Benjamin Duncan	Mech. Eng.	Nicholasville.
Bennett, Benjamin Warfield	Mech. Eng.	Lexington.
Blessing, Paul Nestle	Mech. Eng.	Carrollton.
Bogard, George Taylor	Mech. Eng.	Golden Pond.
Bowden, Aberdeen Orlando.....	Classical	Sedalia.
Bowlds, Fleming	Scientific	Philpot.
Brewer, Bruce Elder	Agricultural	Williamstown.
Brewer, Leo	Classical	Mayfield.
Brockman, George Fred.....	Min. Eng.	Louisville.
Browning, John Keith	Mech. Eng.	Maysville.
Bryant, Thomson Ripley	Agricultural	Eminence.
Buchanan, Allie Stout	Mech. Eng.	Payne's Depot.
Buckner, Ella Simpson.....	Classical	Lexington.
Buckner, Garrett Davis.....	Scientific	Lexington.
Carmody, John Paul	Mech. Eng.	Mt. Sterling.
Carter, Sara McEachin	Classical	Lexington.
Clary, Howe Boyd	Mech. Eng.	Moorefield.
Clay, James Thomas	Mech. Eng.	Paris.
Clay, Roby Wornall	Min. Eng.	Lexington.
Conway, Clarence Dexter	Civ. Eng.	Millersburg.
Cornelison, Hubert LeGrand	Mech. Eng.	Richmond.
Crowder, Margaret Lee	Classical	Sinal.
Curtis, James Stewart.....	Mech. Eng.	Lexington.
Dabney, Sidney Vaughn.....	Civ. Eng.	Paducah.
Daugherty, Helen Lucile	Classical	Paris.
Denham, Newton Randolph.....	Min. Eng.	Williamsburg.
Dodson, Walter Cleveland.....	Normal	Monticello.
Douglas, Ernest Thompson.....	Mech. Eng.	Owenton.
Downing, Harry Hardesty	Civ. Eng.	Lexington.
Earle, Irbie Benjamin.....	Civ. Eng.	Madisonville.
Elam, Arthur Matthew	Mech. Eng.	Ashland.
Elliott, Nannie Porter	Scientific	Somerset.
Feland, Faris Robinson	Classical	Lawrenceburg.
Fried, Sienna Kathryn.....	Scientific	Lexington.
Galloway, Clinton Robert	Mech. Eng.	Falmouth.
Gilbert, James William.....	Mech. Eng.	Owensboro.
Graham, Frank Heber	Mech. Eng.	Bowling Green.

Grannis, James Kidwell.....	Civ. Eng.....	Flemingsburg.
Green, Warren Thornton.....	Mech. Eng.....	English.
Guerrant, Russell Hamilton.....	Mech. Eng.....	Wilmore.
Hamilton, William Perry Browning.....	Mech. Eng.....	Lexington.
Hanna, Aline Guthrie.....	Classical.....	Lexington.
Hartfield, Rosalie Amelia.....	Normal.....	Henderson.
Heenan, Joseph Harper.....	Scientific.....	West Point.
Herring, Henry Lemuel.....	Mech. Eng.....	Oakville.
Holland, Reuben Miller.....	Classical.....	Whitesville.
Howerton, Thomas McCluskey.....	Civ. Eng.....	Shelbyville.
Hudson, William Edward.....	Civ. Eng.....	Godfrey.
Humphrey, Robert Andrus.....	Mech. Eng.....	Lexington.
Hutchcraft, David Keller.....	Mech. Eng.....	Lexington.
Jewell, John Berry.....	Classical.....	Lexington.
Johnson, Betsey Herndon.....	Classical.....	Muir.
Johnson, Mary Smith.....	Classical.....	Muir.
Kelley, Cott C.....	Civ. Eng.....	Hickory Flat.
Kiesel, Walter Christian.....	Mech. Eng.....	Carrollton.
Kirk, Estill.....	Civ. Eng.....	Philpot.
Kirk, Maurice Cushman.....	Mech. Eng.....	Maysville.
Manning, George Madison.....	Classical.....	Manchester.
Martin, Grace Lee.....	Classical.....	Lexington.
Martin, Sadie Spears.....	Classical.....	Visalia.
Mathers, Albert Marion.....	Mech. Eng.....	Carlisle.
Mathews, William Chamberlain.....	Mech. Eng.....	Mayslick.
McCauley, Joseph Muir.....	Mech. Eng.....	Morganfield.
McCorkle, Graham King.....	Mech. Eng.....	Eminence.
McCutcheon, Jesse Robert.....	Mech. Eng.....	Beattyville.
McFerran, Warren Viley.....	Mech. Eng.....	Versailles.
McGarvey, Henry Earl.....	Classical.....	Lexington.
McPherson, Robert Lee.....	Scientific.....	McGuffey.
Melton, James Leslie.....	Civ. Eng.....	Marion.
Metzler, Daniel.....	Mech. Eng.....	Louisville.
Oldham, Edwin Bronston.....	Mech. Eng.....	Lexington.
Orr, Thomas James.....	Mech. Eng.....	Princeton.
Pence, Christina.....	Classical.....	Lexington.
Penn, John Buford.....	Civ. Eng.....	Georgetown.
Penrod, Alphon.....	Mech. Eng.....	Lexington.
Pogue, Laythom Joel.....	Mech. Eng.....	Mayslick.
Porter, Colton Alexander.....	Mech. Eng.....	Louisville.
Powell, Jeremiah Harrison.....	Classical.....	Richmond.
Poynter, Arthnr Lawrence.....	Mech. Eng.....	Royce, Tex.
Preston, William.....	Classical.....	Lexington.
Purnell, Mary Agnes.....	Scientific.....	Lexington.
Rardon, Jack Rickaby.....	Mech. Eng.....	Newport.
Rice, Clayton Jefferson.....	Civ. Eng.....	Greenville.

Rodes, Joseph Waller, Jr.....	Civ. Eng.....	Lexington.
Rodes, William, Jr.....	Scientific.....	Lexington.
Roswell, Charles Miller.....	Mech. Eng.....	Sparta.
Sampson, Reid Johnson.....	Min. Eng.....	Middlesboro.
Samuel, Robert Lovell.....	Mech. Eng.....	Maysville.
Scearce, George Gwyn.....	Scientific.....	Frankfort.
Schultz, Henry Jacob.....	Mech. Eng.....	Louisville.
Scott, Robert Dumont.....	Civ. Eng.....	Lexington.
Shanklin, Shelby.....	Classical.....	Lexington.
Shelby, William Washington.....	Min. Eng.....	Henderson.
Sims, Robert Lee.....	Mech. Eng.....	Lexington, Mo.
Smith, Milton Sears.....	Mech. Eng.....	Nicholasville.
Speyer, Harry Aaron.....	Scientific.....	Kansas City.
Steele, Arthur Winslow.....	Mech. Eng.....	Yarnallton.
Steinert, Louise Franzman.....	Scientific.....	Versailles.
Stoll, John William.....	Scientific.....	Lexington.
Stone, Neville Earl.....	Civ. Eng.....	Hopkinsville.
Swartz, Guy Taylor.....	Mech. Eng.....	Carlisle.
Swearingen, William Roy.....	Civ. Eng.....	Paris.
Sweeny, Sunshine.....	Classical.....	Lexington.
Taylor, Guy Baker.....	Scientific.....	Lexington.
Townsend, Hal Eubank.....	Mech. Eng.....	Bowling Green.
Turner, John McLeod.....	Civ. Eng.....	Monkton, Md.
Veal, Grey Roscoe.....	Mech. Eng.....	Sedalia.
Vogt, Frank Sherman.....	Civ. Eng.....	Louisville.
Walker, Madie Lee.....	Classical.....	Lexington.
Warren, Joseph Evans.....	Mech. Eng.....	Donerail.
Watson, James Saffel.....	Civ. Eng.....	Lexington.
Wells, Emery.....	Civ. Eng.....	Lexington.
Wilhoite, Azra Lytle.....	Mech. Eng.....	Utica.
Wilkes, Francis Marshall.....	Mech. Eng.....	Washington.
Wilson, James Morrison.....	Civ. Eng.....	Louisville.
Wilson, Robert Clyde.....	Mech. Eng.....	Lexington.
Yates, Howard Clifford.....	Classical.....	Covington.
Young, Ralph Gray.....	Civ. Eng.....	Covington.

FRESHMEN.

Akers, Mary Elizabeth.....	Classical.....	Lexington
Akers, Susan Gray.....	Classical.....	Lexington.
Alcorn, John Griffin Carlisle.....	Civ. Eng.....	Hustonville.
Alexander, William Jasper.....	Classical.....	Owenton.
Allison, Leon Metcalfe.....	Mech. Eng.....	Head Quarters.
Ballard, Joseph Hogan.....	Mech. Eng.....	Bryantsville.
Barbee, George Read.....	Civ. Eng.....	Lexington.
Barbee, Richard Carroll.....	Civ. Eng.....	Lexington.
Barr, Edgar Wallace.....	Mech. Eng.....	Bowling Green.

Beach, Charles.....	Mech. Eng.....	Beattyville.
Bell, Thomas C.....	Mech. Eng.....	Harrodsburg.
Bennett, Edgar.....	Mech. Eng.....	Basin Springs.
Black, Marion.....	Classical.....	Hartford.
Blumenthal, Philip.....	Scientific.....	Lexington.
Boales, Maxwell Ellis.....	Mech. Eng.....	Hopkinsville.
Bright, Robert M.....	Scientific.....	Lexington.
Byars, David Owen.....	Civ. Eng.....	Simpsonville.
Cabrera, Pedro Rafael.....	Agricultural.....	Managua, Nic.
Cannon, Harry Sharp.....	Classical.....	Nicholasville.
Carpenter, Hubert Craig.....	Mech. Eng.....	Stanford.
Carroll, Tarlton Combs.....	Classical.....	Louisville.
Caudill, Stephen E.....	Civ. Eng.....	Whitesburg.
Cawood, Frank Finley.....	Civ. Eng.....	Harlan.
Chapman, Glenn K.....	Civ. Eng.....	Owensboro.
Chinn, Aubyn.....	Classical.....	Frankfort.
Chisholm, Otha Balfour.....	Classical.....	Acton.
Coons, John W.....	Civ. Eng.....	Mt. Sterling.
Creekmore, Ross Addison.....	Scientific.....	Lexington.
Cross, Philip Byrnes.....	Civ. Eng.....	Los Angeles, Cal.
Crosthwaite, John Scarce.....	Classical.....	Lexington.
Daugherty, Samuel Fred.....	Mech. Eng.....	Maysville.
Davis, Harry Arnold.....	Normal.....	Maysville.
Dean, Willis Johnson.....	Civ. Eng.....	Owensboro.
Doss, George Force.....	Mech. Eng.....	Shelbyville.
Dufour, Thomas Perry.....	Civ. Eng.....	Carrollton.
Duncan, James William.....	Civ. Eng.....	
Edwards, Kenneth Scott.....	Mech. Eng.....	Ludlow.
Eifort, Harry.....	Mech. Eng.....	Ashland.
Elliott, Alvin Clarence.....	Scientific.....	Humphrey.
Ellis, Cecil Byrne.....	Classical.....	Treacy.
Fields, Melvin Green.....	Civ. Eng.....	Lexington.
Fishback, James Morgan.....	Mech. Eng.....	Pine Grove.
Garman, Frederick.....	Scientific.....	Lexington.
Garrett, Robert.....	Classical.....	Ft. Garrett.
Garvin, Cecil Clement.....	Civ. Eng.....	Olive Hill.
Gilbert, James William.....	Mech. Eng.....	Owensboro.
Goodwin, William Ingram.....	Scientific.....	Lexington.
Greathouse, William Wesley.....	Agricultural.....	Versailles.
Haff, Robert Schuyler.....	Civ. Eng.....	Frankfort.
Haley, Thomas Lander.....	Mech. Eng.....	Clintonville.
Hamilton, Alexander Phillips.....	Mech. Eng.....	Uniontown.
Hardesty, Lizzie Belle.....	Scientific.....	Muir.
Hart, Lucy Thomas.....	Classical.....	Winchester.
Haynes, Clyde Givens.....	Mech. Eng.....	Morganfield.
Holliday, Ben Louis.....	Mech. Eng.....	Carlisle.

Hopgood, John Allen.....	Mech. Eng.....	Morganfield,
Hord, Winn Estill.....	Scientific.....	Maysville.
Horine, Ernest England.....	Mech. Eng.....	Nicholasville.
Hudgins, Thomas.....	Mech. Eng.....	Olive Hill.
Hurt, Maxey E.....	Civ. Eng.....	Russellville.
Irvine, Oscar W.....	Scientific.....	Greenville.
Jackson, Samuel Texas.....	Classical.....	Clinton.
Johns, Charles Ashley..	Mech. Eng.....	Lexington.
Karrick, Claude R.....	Mech. Eng.....	Cynthiana.
Kaufman, Sara Rachel.....	Scientific.....	Lexington.
Keeney, Arden Belknap.....	Mech. Eng.....	Middlesboro.
King, Abner William.....	Mech. Eng.....	Bardstown.
Lee, Wallace Caplinger.....	Classical.....	Campbellsburg.
Lisle, Andrew.....	Civ. Eng.....	Richmond.
Logan, Emmett.....	Agricultural.....	Bowling Green.
Luten, Inez Ware.....	Classical.....	Cayce.
Magruder, Orion.....	Mech. Eng.....	Utica.
Marks, Louis.....	Mech. Eng.....	Versailles.
Marshall, Eleanor Peace.....	Scientific.....	Frankfort.
Martin, James Edward.....	Agricultural.....	Versailles.
McAlister, George Matthew.....	Classical.....	Lexington.
McDowell, William Cochran.....	Civ. Eng.....	Lexington.
McMillan, Robert Raymond.....	Mech. Eng.....	Paris.
McNamara, William Ignatius.....	Mech. Eng.....	Lexington.
Manville, Felix Arthur.....	Mech. Eng.....	Hounea, La.
Montgomery, Philip O'Bryan.....	Mech. Eng.....	Elizabethtown.
Moore, Virgil Yandel.....	Classical.....	Marion.
Murphy, William B.....	Civ. Eng.....	Owensboro.
Neblett, Patrick Henry.....	Classical.....	Turner's Station.
Neighbors, Jesse Thomas.....	Mech. Eng.....	Glendale.
Oberdorfer, Henrietta.....	Classical.....	Paris.
Orem, Eugene B.....	Min. Eng.....	Campbellsburg.
Orem, Virgil Campbell.....	Agricultural.....	Campbellsburg.
Powell, Frank Congleton.....	Mech. Eng.....	Carlisle.
Power, Henry Carroll.....	Mech. Eng.....	Flemingsburg.
Proctor, Bennet McCreary.....	Mech. Eng.....	Lexington.
Rankin, Harry Lee.....	Mech. Eng.....	Harrodsburg.
Rapier, Stephen A.....	Civ. Eng.....	Bardstown.
Rice, Harvey Jefferson.....	Mech. Eng.....	Maysville.
Riedel, Gustavus.....	Mech. Eng.....	Holt.
Robinson, Benjamin F.....	Civ. Eng.....	Lexington.
Rodes, Mary McEachin.....	Classical.....	Lexington.
Ryan, Charles Obie.....	Classical.....	Monticello.
Sanders, Hugh Berkley.....	Scientific.....	Kirkwood.
Sayers, Warner.....	Mech. Eng.....	Erlanger.
Scherffius, Frederick Fanon.....	Agricultural.....	Lynnville.

Schultz, Oscar Lewis	Civ. Eng	Hartford.
Scott, George Thomas.....	Agricultural	Earle's.
Scott, Louis Pelot.....	Scientific	Carlisle.
Sellman, Robert Jesse	Mech. Eng	Nicholasville.
Shemwell, Allen Henry	Civ. Eng	Birdsville.
Shryock, William Mason	Civ. Eng	Lexington.
Silva, Albert De Vera	Mech. Eng	Newport.
Simmons, James McCreary	Scientific	Richmond.
Slicer, Amos.....	Mech. Eng	Paris.
Smarr, Roy Whitaker	Civ. Eng	Brooksville.
Smith, Arthur Irvin	Agricultural	Campbellsburg.
Smith, George Kendall.....	Agricultural	Lewisport.
Spradling, Marvin Clyde	Classical	Berry.
Stackhouse, William Owsley.....	Classical	Lexington.
Stivers, Mattie Huffman.....	Classical	Paris
Stout, Benjamin Stewart	Civ. Eng	Owensboro.
Talbott, Daniel Cline	Mech. Eng	Middletown.
Taylor, Harry E.....	Min. Eng.....	
Taylor, Humphrey Ward	Mech. Eng.....	Washington.
Taylor, Newton Stout.....	Mech. Eng.....	Carrollton.
Thrasher, Marion.....	Civ. Eng	Hawesville.
Thurman, Allen Guy	Mech. Eng.....	Mt. Washington.
Trice, Walter Graham	Agricultural	Hopkinsville.
Ummethun, Albert Howard	Mech. Eng	Frankfort.
Vaughan, Frank	Min. Eng.....	
Waddell, Benjamin Lee.....	Classical.....	Somerset.
Wall, William Harrison	Classical.....	Cayce.
Wallace, Leonard DeLong.....	Classical	Lexington.
Waller, William John	Mech. Eng.....	Morganfield.
Wells, Charles D	Civ. Eng	Bardstown.
White, Charles.....	Mech. Eng	Warsaw.
Williams, Byron Demetrius.....	Mech. Eng	Crofton.
Wilson, Benjamin Dunbar.....	Scientific. .	Lexington.
Worthington, Elmer Francis.....	Agricultural	Morgan.
Yankey, Andrew George.....	Civ. Eng.....	Springfield.

NOT CLASSIFIED.

Bird, James Robert	Agricultural	Shelbyville.
Boone, Samuel Hiram.....	Agricultural	Wolf Creek.
Celsor, Edward	Agricultural	Fountain Run.
Greene, Robert Scott.....	Agricultural	Falls of Rough.

NORMAL STUDENTS.

FOR THE STATE DIPLOMA.

✓ Baker, James McD.....	Tyrone	Anderson.
Bewlay, Willard.....	Lexington... ..	Fayette.
Coons, Lester.....	Lexington.....	Fayette.
Crawford, Tarleton.....	Lynn Grove.....	Calloway.
✓ Edwards, Richard.....	Murray	Calloway.
Kirk, Theodore Tilton.....	Owensboro	Daviess.
Maddox, Robert Lee.....	Mayfield	Graves.
Million, Jackson.....	Richmond.....	Madison.
Patrick, Wellington.....	Salysersville.....	Magoffin.
Park, Sue Embry	Richmond.....	Madison.
Reiter, Wilhelm.....	Fredonia	Ohio.
✓ Spears, Clarence Louis.....	Mayfield.....	Graves.
Stiles, Imogen.....	Chicago	Cook, Ills.
Wathen, Benedict.....	Morganfield	Union.

FOR THE STATE CERTIFICATE.

✓ Adcock, Lois Elizabeth.....	Hopkinsville.....	Christian.
Alexander, Leslie.....	Benton	Marshall.
Anderson, Charles Breckinridge.....	Dudley.....	Rockcastle.
Bowlds, Clarence.....	Philpot.....	Daviess.
Brown, Ira	Humphrey.....	Casey.
Congleton, Beulah	Lexington.....	Fayette.
Conley, Nellie Ray.....	Louisa	Lawrence.
Eastwood, George.....	Hanson.....	Hopkins.
Elliot, Rhoda	Humphrey.....	Casey.
Florence, David Vanhook.....	Cynthiana.....	Harrison.
Franz, Jessie	Greenup.....	Greenup.
Goodwin, Irma Graves.....	Cerulean	Trigg.
Goodwin, Docia Baker.....	Cerulean	Trigg.
Goins, Charles	Manchester.....	Clay.
Gunnell, Leona Erie.....	Louisa	Lawrence.
Hamilton, Lucien	Edmonton	Metcalf.
✓ Harrod, Hallie Corinne.....	Frankfort.....	Franklin.
Hazelrigg, Herbert Eben.....	Masonville.....	Daviess.
Hoagland, Joseph.....	Clear Run.....	Ohio.
✓ Hooge, Anna.....	McHenry.....	Ohio.
✓ Hoover, Margaret Ola.....	Friedaland.....	Ohio.
✓ Holbrook, John Pendleton.....	Livia.....	McLean.
Houchell, Francis Marion.....	Manchester.....	Clay.
Hubbard, Alpha.....	Hubbard	Metcalf.
✓ Hughes, Bessie	Edenton.....	Clark.
✓ Ison, Eliza.....	Bryantville	Garrard.
✓ Jackson, Lora Dean.....	Greenup.....	Greenup.

Johnson, Emma	Paintsville	Johnson.
Johnson, William W.....	Holland	Allen.
Johnson, Reed Spenser.....	Pikeville ..	Pike.
Johnston, Carroll.....	Greenup.....	Greenup.
Lewis, James Otis.....	Stanley.....	Daviess.
McDaniel, Oscar Pearl.....	Ewing.....	Fleming.
Mitchell, Lottie Lee.....	Nicholasville	Jessamine.
Monroe, Lillian Alice.....	Rockport	Ohio. *
O'Brien, Janet	Louisa	Lawrence.
Pence, Homer Lee	Marksbury	Garrard.
Perkins, William Lee.....	West Liberty	Morgan.
Peratt, William.....	Sapp	Fleming.
Pope, Susie Marian	Springfield	Washington.
Rader, Roy Edward	Annville	Jackson.
Reynolds, Wayne Stanley	Fordsville	Ohio.
Rice, Herman	Chambers	Hancock.
Roberts, Sue Clark.....	Owenton	Owen.
Robertson, Isaac William.....	Smithland	Livingston.
Robertson, Thomas Marion.....	Smithland	Livingston.
Shultz, William Claude.....	Narrows	Ohio.
Shuff, Jesse.....	Georgetown	Scott.
Skeens, Jimison	Louisa	Lawrence.
Sievers, William	Nancy.....	Pulaski.
Smithson, Elizabeth.....	Hopkinsville.....	Christian.
Smith, David Hill, Jr.....	Harlan	Harlan.
Stewart, Oscar	Select	Ohio.
Stivers, Orville	Buechel	Jefferson.
Turner, Chester Field.....	Glasgow	Barren.
Watkins, Rena	New Castle ..	Henry.
Watkins, Maude	New Castle	Henry.
Webb, Erle Benton.....	Willard.....	Carter.
Whittaker, Jesse Campbell	Hazard	Perry.
Wilson, Meek Boyd.....	Linnville	Graves.

FOR THE COUNTY CERTIFICATE.

Akin, Paris Benjamin.....	Burlington	Boone.
Austin, James	Louisa.	Lawrence.
Baird, David.....	Henderson.....	Henderson.
Baker, Hodge Pomeroy.....	Cadiz.....	Trigg.
Ballard, Linda	Mt. Vernon.....	Rockcastle.
Bogie, Ina Prather.....	Irvine.....	Estill.
Bonta, Margie	Springfield	Washington.
Bowman, Harriet Elizabeth.....	Porter.....	Scott.
Buchanan, Archibald	Frenchburg.....	Menifee.
Burchfield, James.....	Pineville	Bell.
Campbell Stephen.....	Booneville.....	Owsley.

Chipman, Batta	Williamstown	Grant.
Connella, Adelaide	Buechel	Jefferson.
Cunningham, Eleanor	Cadiz	Trigg.
Dickerson, Eugene	Beattyville	Lee.
Dixon, Robert Lee	Hyden	Leslie.
Dixon, Bristow Boyd	Hyden	Leslie.
Douglas, Matilda	Richmond	Madison.
Edwards, Benjamin Franklin	College Hill	Madison.
Eversole, Elijah	Manchester	Clay.
Ford, Jennie Lee	Georgetown	Scott.
Garrett, Eugene	Booneville	Owsley.
Glass, James Howard	Lexington	Fayette.
Hill, Harry Swift	Paris	Bourbon.
Hopper, Lucy	Cadiz	Trigg.
Houchell, Chester Arthur	Manchester	Clay.
Hutchison, Lyle	Nepton	Fleming.
Jackson, Inez	Greenup	Greenup.
Jones, James Black	Harlan	Harlan.
Kirk, Herschell	Owensboro	Daviess.
Laswell, Jack Moore	Orlando	Rockcastle.
Lewis, George	Tannery	Lewis.
Liddell, Bethia	New Castle	Henry.
Luton, Albert	Golden Pond	Trigg.
Meece, Thomas	Colo.	Pulaski.
Moreland, Owen	Georgetown	Scott.
Palmer, Hollie	Henderson	Henderson.
Pennington, Emma	Mt. Vernon	Rockcastle.
Pope, John Miller	Harlan	Harlan.
Regenbogen, Emile	Hebron	Boone.
Rudd, Regina	Springfield	Washington.
Sandusky, Nellie	Monticello	Wayne.
Scott, Ernest	Greenville	Muhlenberg.
Sheldon, Frederic	Louisville	Jefferson.
Sievers, Fred	Waterloo	Pulaski.
Simpson, John Sidney	Williamstown	Grant.
Smith, Maggie	Harrodsburg	Mercer.
Smith, Albert Lee	Guston	Meade.
Stambaugh, Francis	Paintsville	Johnson.
Suttles, John	Frankfort	Franklin.
Utley, Zena	Dalton	Caldwell.
Weddle, Herbert Cain	Waterloo	Pulaski.
West, Maud Ann	Miller's Creek	Estill.
Wooton, Felix	Hyden	Leslie.
Wooton, Dennis	Hyden	Leslie.

ACADEMY STUDENTS.

FIRST YEAR STUDENTS.

Alexander, Jay	Wheatley.
Baker, Milton Ramsey	Lexington.
Barrows, Willard Dante	Dixon.
Bird, Robert Arthur	DeMossville.
Bitterman, Clifford	Lexington.
Brooks, Essie Stanley	Bryantsville.
Clark, Laurence Hamilton	Lexington.
Clarke, Richard Bate	Chicago, Ill.
Clugston, William George	Lexington.
Cole, Charles	Pittsburg.
D'Anna, Hugh Severio	Lexington.
Donahue, James Franklin	Lexington.
Downing, Virgil Leonard	Lexington.
Eastin, Eckford Preston	Lexington.
Eastin, Eugene Augustine	Lexington.
Eversole, William Pearl	Hyden.
Ferguson, Lillian Terry	LeCentre.
Ferguson, Ruth	Guthrie.
Fleming, Jackson James	Birdsville.
Francis, Louis Paul	Red Ash.
Goodwin, George Early	Lexington.
Harn, Walter Abraham	Flemingsburg.
Hodges, Grover Cleveland	Pineville.
Hood, David Campbell	Jersey City, N. J.
Howell, Don Carlos	Austerlitz.
Huston, Edward Clifford	Lexington.
Jones, Martha	Manchester.
Kinthead, Shelby	Lexington.
Lake, Oscar Noel	Lexington.
Lewis, William Henry	Hyden.
Lisle, Rufus	Louisville.
Locke, Isaac Newton	Frankfort.
McDyer, William Lewis	Cattlettsburg.
McMillan, Robert Raymond	Paris.
McNeil, John Charles	Pittsburg.
Marshall, Sarah Rossetter	Lexington.
Martin, Allen	Lexington.
Martin, Virginia Pearl	Lexington.
Moffett, Cecil James	Cattlettsburg.
Muir, Chester Stewart	Lexington.
Nunnolley, Charles Middleton	Greendale.
Nunnolley, Samuel Phillip	Lexington.
O'Neill, Martin Pearce	Lexington.

Pendergrass, George Washington	Beattyville.
Pittman, Arthur Davy	Fulton.
Pittman, Ernest Edgar	Fulton.
Price, William Preston	Nicholasville.
Sayre, James	Lexington.
Scherffius, Cleveland Hendricks	Lynville.
Shannon, William James	Lexington.
Sharp, Ella Bell	Lexington.
Short, Thompson Bailey	Butte, Mont.
Swope, William Morgan	Lexington.
Talbutt, Allene	Lexington.
Thomson, Lucy Wheeler	Lexington.
Wallace, William Abithal	Cerulean.
Webb, James	Pittsburg.
Webb, Richard Spurr	Lexington.
Wheeler, Arthur Maguire	Beattyville.
Wickliffe, Edwin Nelson, Jr	Lexington.
Willmott, Curtis Simeon	Lexington.
Wilson, Homer	Lexington.
Yates, John McChord	Kingston.
Young, William Hewitt	Livermore.

SECOND YEAR STUDENTS.

Alves, Thomas Davis	Henderson.
Atkins, Robert Ryland	Lexington.
Barker, Richard McLean	Keysburg.
Barnes, Herbert Caldwell	Ft. Thomas.
Blain, James Hart	Williamstown.
Bodkin, Jesse Thomas	Bardwell.
Bowman, Charles Francis	Lexington.
Brown, Robert Harold	Warsaw.
Cox, William Floyd	Harlan C. H.
Cram, Royalston Haywood	Morgan.
Duncan, James William, Jr	Burlington.
Dunn, Thomas English	Marcellus.
Erdman, William Kenney	Lexington.
Estill, Daniel Scheffer	Lexington.
Finley, Joseph Buford	Georgetown.
Glass, Rhoda Virginia	Lexington.
Greathouse, Joseph Felix	Versailles.
Harrison, Erbie Lee	Glasgow.
Harrison, Thomas Whitney	Lexington.
Hart, George Denny	Cleveland.
Hill, Hubert McDonald	Lenoxburg.
Hudson, Halcomb	Lexington.
Hughes, James Melvin	Lexington.

Jacobs, Silas.....	Brooksville.
Johnson, Walker Edward.....	Waverly.
Lary, Benjamin Curtis	Clintonville.
Miller, Cyril.....	Golden Pond.
Miller, Humphrey	New Hope.
Milligan, Vincent Bartlett.....	Lexington.
Mills, Grover Cleveland	Kenton.
Mitchell, Joseph Gay	Paris.
Mosby, William Eugene.....	Bardwell.
Norton, James William.....	Carlisle.
O'Day, Thomas Michael Joseph.....	Lexington.
Parrish, Harvey Douglas... ..	Richmond.
Pryse, John Stanley.....	Beattyville.
Reid, Eleanora	Edmonton.
Riggs, Schulty.....	Calhoun.
Slade, Theodore	Lexington.
Smith, Guy Warren	Muir.
Smith, Hal Walker	Henderson.
Snyder, Milton Kirkwood	Lexington.
Staples, Frederick William	Lexington.
Taylor, Carroll Gholson.....	Lexington.
Tuttle, James Newton	Spears.
Vaughn, Esther Rose	Shelbyville.
Wall, Frank Pearce	Cayce.
Wallis, Nell Virginia	Lexington.
Webb, Edgar Hedger	Sadieville.
Winston, Algernon Sidney, Jr.....	Sturgis.

STUDENTS OF THE SUMMER SCHOOLS.

I. IN THE NORMAL SCHOOL.

Adams, Meda.....	Covington	Kenton.
Alcorn, Nora	Greenwood	Pulaski.
Baird, Lewis.....	Sadieville	Harrison.
Ball, Mrs. Anna Frazee.....	Maysville.....	Mason.
Bartley, Patty	Hopkinsville.....	Christian.
Behr, Sophia.....	Danville	Boyle.
Bowlds, Angilene ..	Heath.....	McCracken.
Braden, Emily.....	Hopkinsville	Christian.
Brasher, Lillian.....	Hopkinsville.....	Christian.
Bryson, Flora.....	Stanford.....	Lincoln.
Crabbe, Mary.....	Eminence.....	Henry.
Damon, Myrtle.....	Pleasant Valley	Nicholas.
Davis, Mrs. M. C.....	Dexter.....	Calloway.
Garman, Fred.....	Lexington.....	Fayette.
Gibson, Florida.....	Yarnallton	Fayette.

Hannah, Ethel.....	Cynthiana.....	Harrison.
Hoskins, Mary	Hoskinston.....	Leslie.
Kirk, Theodore Tilton.....	Owensboro.....	Daviess.
Lockhart, Reba.....	Ft. Thomas.....	Campbell.
McWhorter, Sallie.....	Crab Orchard.....	Lincoln.
Metcalfe, Margaret.....	Covington	Kenton.
Mitchell, Mrs. T. F.....	Nicholasville.....	Jessamine.
Moore, Blanche.....	Paducah.....	McCracken.
Moore, Alice	Lexington.....	Fayette.
Moxley, Kate.....	Mt. Sterling.....	Montgomery.
Page, Jennie	Lexington.....	Fayette.
Phillips, Mrs. H. D	Stanford.....	Lincoln.
Reeves, J. L.....	LaGrange	Oldham.
Rich, Rena.....	Covington.....	Kenton.
Riedel, Gus.....	Holt.....	Breckinridge.
Scott, Frank Powell.....	Greenville.....	Muhlenberg.
Silcox, Maude.....	Harrodsburg.....	Mercer.
Thomas, John	Winchester.....	Clark.
Wilkie, Margaret Donald.....	Lexington.....	Fayette.
Yancey, Manie	Mayslick.....	Mason.

II. IN MECHANIC ARTS.

Barrow, Asa Carrington.....	Carrollton.
Brewer, Franklin G.....	Eminence.
Edwards, Kenneth Scott.....	Ludlow.
Horine, Ernest England.....	Nicholasville.
Kesheimer, Peter F.....	Lexington.
Muncy, Victor Emanuel.....	Cincinnati.
Oblinger, Leron Ivan.....	Perrysburg, O.
Pruyne, Watson Elmore.....	Baraboo, Wis.
Raney, Murray.....	Carrollton.
Sayers, Warner Paul.....	Erlanger.
Smith, Alfred Ernest.....	Guston.
Trice, John Buckner.....	Hopkinsville.
Welsh, Samuel Payton.....	Nicholasville.

III. IN PHYSICS.

Barker, M. S.....	Louisville.
Humphrey, R. A.....	Lexington.
McNamara, W. J.....	Lexington.
Prentiss, G. D.....	Lexington.
Veal, G. R.....	Sedalia.
Thomas, J. E.....	Adelaide, Aus.
Wilson, J. H.....	College Hill.

IV. IN CHEMISTRY.

Bryson, Flora.....	Stanford.
Luten, Drew W.....	Cayce.
McClellan, Mary C.....	Lexington.

V. IN LIBERAL ARTS.

Alexander, Josie.....	Paris.
Arnsperger, Richard.....	Lexington.
Baker, Leslie William.....	Adelaide, Aus.
Barker, Maxwell Sharp.....	Louisville.
Becker, Theodore Henry.....	Louisville.
Bennett, Clarence Smason.....	Narrows.
Bennett, Edgar.....	Irvington.*
Blumenthal, Philip.....	Lexington.
Bogard, Frank.....	Golden Pond.
Bowden, Aberdeen Orlando.....	Sedalia.
Brewer, Franklin G.....	Eminence.
Bruner, Jacob Franklin.....	Whitesville.
Cabrera, Peter Rafael.....	Managua, Nic.
Chappell, Alvin Elwood.....	Louisville.
Clay, Roby Wornall.....	Lexington.
Coleman, Samuel Boin.....	Elkton.
Coons, William Lester.....	Lexington.
Crabb, Mary Belle.....	Eminence.
Creekmore, Ross Addison.....	Lexington.
Crawley, William Abraham.....	Lexington.
Dean, Willis Johnson.....	Owensboro.
Dunn, Thomas English.....	Marcellus.
Elam, Arthur Matthew.....	Ashland.
Fish, Clarence Beauchamp.....	Lexington.
Garman, Fred.....	Lexington.
Gillis, Ezra L.....	Minerva.
Hall, George Whitfield.....	Lexington.
Hall, James Flannigan.....	Lexington.
Hargett, Anderson J.....	Augusta.
Horine, Ernest England.....	Nicholasville.
Howard, Guylie Benton.....	Rockvale.
Humphrey, Robert Andrew.....	Lexington.
Johns, Charles Ashley.....	Lexington.
Kaufman, Sara Rachel.....	Lexington.
Kingsbury, Horace Edmond John.....	Sydney, Aus.
Lewis, Alexander Thornton.....	Frankfort.
Mahan, Charles Alfred.....	Lancaster.
Mahoney, Elizabeth.....	Lexington.
Martin, Grace Lee.....	Lexington.
Mastin, James Edward.....	Faywood.
Mathews, Dowdy Ray.....	Hazel Hurst, Ga.
McAlister, George Matthew.....	Lexington.
McCallum, Donald Campbell.....	Victoria, Aus.
McCallum, William Cecil.....	Victoria, Aus.

McDowell, William Cochran	Lexington.
McHargue, James Spencer	Boreing.
Morton, Stella Belle	Lexington.
Newman, James Cleveland	Lexington.
Prentiss, George Derwood	Lexington.
Rector, Alley	Nowata, I. T.
Robinson, Benjamin Franklin	Lexington.
Sanders, Hugh Berkley	Kirkwood.
Scherffius, Frederick Fanon	Lynnville.
Scrugham, Mary	Lexington.
Sharp Mary	Lexington.
Shemwell, Henry Allen	Birdsville.
Spencer, Gayle	Lexington.
Speyer, Harry Aaron	Kansas City, Mo.
Stackhouse, William Owsley	Lexington.
Staples, Frederick William	Lexington.
Thomas, James Edward	Adelaide, Aus.
Wallace, Daniel Frank	Lexington.
Wallis, Anna	Lexington.
Wells, Emery	Lexington.
Wilson, James Hardin	College Hill.
Wilson, Benjamin Dunbar	Lexington.
Worthington, Elmer Francis	Morgan.
Yankey, Andrew George	Springfield.
Yates, Howard Clifford	Covington.
Wickersham, John Thomas	Lebanon Junc.

SUMMARY.

Collegiate Students.	Scien- tific	Class- ical.	Civ. Eng.	Mech. Eng.	Min. Eng.	Nor. mal.	Agri. cult.	Class. Totals.
Post Graduates	2	1	1	22	1		1	28
Seniors	9	13	11	30		1	3	67
Juniors	8	21	23	20		2	5	79
Sophomores	15	25	24	53	5	2	2	126
Freshmen	15	27	29	50	3	1	12	137
Department Totals	49	87	88	175	9	6	23	437
Collegiate students								437
Students not classified								4
Normal students								130
Students of the Academy								114
Students of the Summer Schools								128
Whole number								813

The number for 1905-1906 is greater by 81 than that of any former session.

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 Agricultural and Mechanical College of Kentucky, a county appointee is entitled to have his traveling expenses from his home to the College and return paid by the College 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.

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

3d. He must present himself for matriculation within one week after the beginning of the fall term of the collegiate 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 College for ten consecutive months, or one collegiate year.

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

8th. He must sign a declaration at the end of the collegiate year that he has not knowingly violated any of the regulations involving his moral character as a student, nor been a party directly or indirectly to the injury of property on the College grounds or in the College buildings.

If at the end of the collegiate year the foregoing conditions have been complied with, the President of the College shall certify the fact to the Treasurer of the College, 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.

COLLEGE EXPENSES.

The necessary expenses of a student while at College 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 students should be deposited with the Commandant.

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
Use of furniture.....	2 50
Washing, about.....	10 00
Uniform.....	16 00
Books, about.....	10 00
Total.....	\$ 38 50

Board in clubs, \$2 per week ; in families, \$3 to \$4. For students not county appointees the necessary expenses are :

Tuition for Mechanical, Civil, Electrical and Mining Engineering.....	\$40 00
Tuition for Classical, Scientific and Normal School Courses,...	25 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 who occupy rooms in dormitories make a deposit of \$5 to cover damage done during their occupancy. This is refunded at the close of the year, less the amount of damage assessed against the depositor.

Board and lodging are provided in Patterson Hall for young women, at \$3 per week, they furnishing their own bed clothes and towels. This handsome three-story building, a fourth of a mile from the college, can accommodate 125 students.

DIPLOMA.

By order of the Board of Trustees a fee of \$5 will hereafter be charged for each diploma issued by the College.

FREE TUITION, BENEFICIARIES.

Each Legislative Representative District is allowed to send, on competitive examination, *one properly prepared student* each year to this college, free of charge of tuition.

[A Statement for the guidance of County Superintendents : 1. If the county forms one or more than one Legislative Representative District, each district is entitled to keep four students in the College and four in the Normal School free of tuition.

2. If a Legislative Representative District embraces more than one county, each county is entitled to keep four students in the College and four in the Normal School free of tuition.]

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 College. One appointment is made each year.

Appointments are made by the County Superintendent between the first day of June and the first day of August of each year. Appointments when made should be immediately certified to the President of the College.

Appointments for the College proper, viz., the Agricultural, Mechanical Engineering, Civil Engineering, Scientific, Classical, and Normal Collegiate courses, 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.

It follows from the above that a county which makes its appointments regularly according to law will have for the session of 1901-2 one appointment to the College; for the session of 1902-3 two appointees; for the session of 1903-4 three appointees; for the session of 1904-5 four appointees. When the first appointee completes his course, or ceases to be a student, another appointee takes his place. When the quota of a county is full it will have at least four appointees in regular attendance.

Each appointee is required to pass an entrance examination at the College 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 college on payment of fees, but no one who is not an appointee receives traveling expenses or is exempt from the payment of fees.

APPOINTEES TO THE NORMAL COURSE.

The law makes provision for the appointment of four teachers, or persons preparing to teach, each year. Appointments may be made and certified to the President of the College between the first day of July and the thirty-first day of December of each year.

Appointments to the Normal School are tenable for one year.

Applicants for appointments are examined by a Board of Examiners appointed by the County Superintendent on subjects transmitted by the Faculty, viz.: upon Arithmetic, English Grammar, United States History, and Geography. They should not be less than seventeen years of age. They are also required to pass an entrance examination at the College. They must likewise bring certificates of good moral character.

Matriculates of the Normal Department will be required to sign an obligation to teach in the common schools of Kentucky for as many months as they receive free tuition.

SPECIAL COURSES OF STUDY.

Special courses of study are not provided for in the Academy, the Normal School, or the College proper; provided, however, that persons who have passed the age of twenty-four years, the limit below which appointments as beneficiaries under the law must be made, may under certain conditions be allowed to pursue selected studies without matriculating in one of the regular courses of the College.

CHANGE OF CLASSIFICATION.

No student shall be allowed to change his or her course of study from one department of the College to another, until he or she shall have completed and passed a satisfactory examination on each subject hitherto studied in the department of which he or she is a matriculate; and no change of courses shall be permitted during the current year.

ACCREDITED SCHOOLS.

Schools, whether public or private, may be accredited in accordance with a resolution of the Faculty providing that graduates of these may be exempted from entrance examinations to the College when the heads of these schools have complied with certain conditions.

Further, the Board of Trustees have made an annual award of a free scholarship to the pupil in each accredited school who has completed the certified course with the highest class standing. This scholarship entitles the recipient to free tuition. If, in addition, the holder of a scholarship obtains the "County Appointment," he is entitled to free room in one of the dormitories and free traveling expenses.

A revised list of these schools is appended :

PUBLIC HIGH SCHOOLS.

<i>Schools.</i>	<i>Superintendents.</i>	<i>Schools.</i>	<i>Superintendents.</i>
Ashland	J. C. Crabbe.	Lexington.....	M. A. Cassidy.
Augusta	J. R. Sterrett.	Louisville	E. H. Marks.
Bellevue.....	J. Maddox.	Female H. S.....	W. H. Bartholomew, Pr.
Carlisle.....	W. F. Ramey.	Male H. S.....	R. P. Halleck, Pr.
Carrollton	J. W. Taylor.	Manual Tr. H. S.,...	E. P. Chapin, Pr.
Catlettsburg	M. P. Helm.	Ludlow	F. Appel.
Corydon.....	B. Hamlet.	Marion	C. Evans.*
Covington	C. Merry.	Mayslick	W. M. Chandler.
Cynthiana	C. A. Leonard.	Maysville.....	O. S. Clinger.
Dayton.....		Middlesboro	M. O. Winfrey.
Dixon	S. G. Boyd.	Midway	T. Hendricks.
Elizabethtown	E. E. Olcott.	Morganfield	A. C. Burton.
Elkton	H. L. Trimble.	Mt. Sterling	H. M. Gunn.
Eminence	J. C. Gordon.	Newport.....	John Burk.
Falmouth	E. B. Buffington.	Nicholasville	R. G. Lowery.
Finchville,.....	B. A. Logan.	Orange, N. J.....	W. M. Swingle.
Flemingsburg	T. A. Luman.	Owensboro	McH. Rhoads.
Frankfort	H. Crockett.	Owenton	W. E. Williams.
Fulton	J. C. Cheek.	Paducah.....	C. M. Lieb.
Greenup.....	G. W. Chapman.	Paris	J. A. Sharon.
Harrodsburg	C. W. Bell.	Pembroke	C. E. Dudley.
Henderson	L. McCartney.	Richmond	W. H. Brock.
Hickman	A. R. Boone.	Somerset	J. P. W. Brouse,
Hopkinsville	J. B. Taylor.	Versailles	W. F. Pate.
Horse Cave	M. E. Wood.	West Point.....	Miss R. Thurman.
Kenilworth, Ill.....	E. Manlay.	Williamstown	W. G. Welborn.
Lancaster	J. E. Mannix.	Winchester.....	R. M. Shipp.
Lawrenceburg	H. V. Bell.		

PRIVATE HIGH SCHOOLS.

Auburn, Auburn Seminary, C. B. Bates, Principal.
 Bagdad, Shelby Institute, Misses Scarce, Principals.
 Bardstown, Nelson Normal High School, E. H. Crawford, Principal.
 Campbellsburg High School, J. W. Percy, Principal.
 Covington Rugby School, K. T. Morris, Superintendent.
 Cynthiana Classical School, Mr. Selin, Principal.
 Danville, Va. Military Institute, Campbell and Snider, Principals.
 Elkton, Vanderbilt Training School, J. H. Harrison, Principal.
 Fulton, Carr Institute, T. N. Wells, Principal.
 Harrodsburg Academy, W. W. Ensminger, Principal.
 Hartford College and Business Institute, L. N. Grey, President.
 Hazel Green Academy, W. H. Cord, President.
 Hodgenville, Kenyon College, J. C. Pirtle, President.
 Hopkinsville, South Kentucky College, A. C. Kuykendall, President.
 Jetts Academy, Mrs. Mary Crutcher, Principal.
 Knoxville, (Tenn.), Baker-Himel School, N. H. Pittman, Principal.
 Leitchfield, High School and Business Institute, W. C. Losey, Principal.
 Lexington, Private School, Miss Ella Williams, Principal.
 Lexington, Private School, Miss Lucy S. Collier, Principal.
 Louisville, St. Xavier's College, Bro. James, Principal.
 Louisville, University School, W. H. Tharp, Head Master.
 Louisville, School for Boys, Davenport and Patterson, Principals.

Louisville, Semple College Institute, Miss Anna J. Hamilton, Principal.
 Maysville, Private School, Miss F. I. Gordon, Principal.
 Middleburg, Normal College, J. S. Lawhorn, Principal.
 Millersburg, Military Institute, C. M. Best, Principal.
 Mt. Sterling, Goodwin's High School, M. J. Goodwin, Principal.
 Newport, Notre Dame Academy, Mother Maria, Principal.
 Nicholasville, School for Boys, T. B. Threlkeld, Principal.
 Richmond, Madison Institute, ———— Principal.
 Russell Springs Academy, U. G. Hatfield, Principal.
 Stanford, Male and Female Academy, O. B. Fallis, Principal.
 Versailles, Training School, W. O. Vaught, Principal.
 Versailles, Margaret Hall, Miss Hogeboom, Principal.
 Williamsburg, Institute, Dr. E. E. Ward, President.
 Williamsburg, Academy, Prof. Hill, Principal.

Upon application, printed forms will be sent to the heads of schools who may desire to have them placed in the list of the accredited schools. These forms are to be filled out with an announcement of the courses of study and mailed to the Chairman of the Committee on Accredited Schools at the State College.

Only pupils from duly accredited schools will be admitted to the College without examination, and *they* must present a certificate from their superintendent or principal and it must bear the signature of the President of the State College.

Every pupil who completes an accredited course is entitled to a certificate attesting the fact, and heads of schools in the foregoing list will oblige the College Committee on Accredited Schools by sending promptly their recommendations for certificates and scholarships.

German.—After September 1, 1907, one year of German will be required for admission to the Freshman class of all courses in the State College. A second year will be added later.

MANUAL LABOR.

The work necessary for carrying on the agricultural and horticultural operations of the College 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 College is that of Agricultural Colleges generally—that compensated labor is not remunerative to the College.

The College 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 College 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.

CERTIFICATES OF CHARACTER.

All applicants for admission into any class of the College or Academy must bring satisfactory testimonials of good moral character.

THE MONITRESS.

The young women who attend the College have assigned for their exclusive use a large and well-appointed study-room. 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 College and is well qualified for her duties.

ENLISTMENT OF CADETS.

By a resolution of the Faculty, approved by the Board of Trustees, no cadet of the State College is allowed to enlist in the State Guards.

RULES OF CLASSIFICATION.

1. No student shall be considered as belonging to a given class, unless he takes at least three studies selected in that class or in a higher.
2. No student shall pass into a higher class while he has to make up studies required of him in the preceding year.
3. Students may be permitted, by the Deans of their courses and the Professors with whom they take their major studies, to register for studies not more than one year in advance of their classification

CALENDAR.**1906.**

Summer Schools open	from June 11th to Aug. 17th.
Entrance Examinations begin	Monday, Sept. 10th.
First Term begins	Thursday, Sept. 13th.
Thanksgiving	Thursday, Nov. 29th.
Board of Trustees meet.	Tuesday, Dec. 11th.
Christmas Holidays begin ...	Friday, Dec. 21st.

1907.

Second Term begins	Wednesday, Jan. 2d.
Second Term of Academy begins	Monday, Jan. 21st.
Washington's Birthday	Friday, Feb. 22nd.
Union Society Contest	Friday, Feb. 22nd.
Third Term begins	Monday, March 11th.
Patterson Society Contest	Tuesday, March 26th.
Final Examinations begin	Monday, May 27th.
Board of Trustees meet.	Tuesday, June 4th.
Class Day	Wednesday, June 5th.
Alumni Banquet	Wednesday, June 5th.
Commencement	Thursday, June 6th.

THE STATE COLLEGE SUMMER SCHOOLS.

FOURTH SESSION.

1906.

These five schools, which offer more than thirty courses of instruction through text-books, lectures, and the best laboratories in the State, afford teachers, college students and those who are preparing for college, a rare opportunity for inexpensive study.

I. THE SCHOOL OF TEACHERS.

PROFESSORS M. WHITE, NOE, PRYOR, PENCE AND WEBB.

The Fourth Session will open Monday, June 11th, and continue six weeks.

The work is specially designed to prepare teachers for examination for the County Certificate, the State Certificate, and the State Diploma. It embraces also Free-hand Drawing and Nature Study.

By act of the late General Assembly, teachers who attend this School four weeks or more are not required to attend any Teachers' Institute the same year. Certificates of attendance are issued.

A single fee of \$6 is required at registration. No rebate is allowed for absence.

Women have elegant rooms in Patterson Hall *free* and board for \$3 a week. Men have rooms in the College dormitories *free*. Board can be had near the College for \$2 or \$3 a week. All students furnish their towels and bedding and men their mattresses. Total expense for six weeks from \$18 to \$24, laundry and books not included.

For further information apply to—

MILFORD WHITE,
Lexington, Kentucky.

II. THE SCHOOL OF PHYSICS

PROFESSOR PENCE.

Courses Offered—1. Theoretical Physics, embracing the Properties of Matter, Mechanics, Sound, Heat, Light, Electricity and Magnetism, with experiments, lectures and recitations one hour daily. Text-book, Gage's Elements of Physics. 2. In the Physical Laboratory, the work being that given in Gage's Physical Experiments, and requiring from three to five hours daily. Students in Course 1 may also take Course 2, and those in either course should have a good knowledge of Arithmetic and Elementary Algebra, and some knowledge of Plane Geometry and Plane Trigonometry. The work is designed to shorten or lighten the work in the College, and credit is given for it. Students properly prepared may undertake more advanced work corresponding to that of the Junior or the Senior class.

3. A course in X-ray work is offered to Physicians and others who may wish to operate X-ray machinery and do work in X-ray photography, with practice in photographing fractures, dislocations, necrosis, stone in the bladder or kidney, gall stones, bullets or other foreign bodies.

Time, three weeks; fee \$25. Fee for Course 1, \$10; for Course 2, \$12; for both, \$20.

The Department of Physics is supplied with all necessary apparatus, including a first-class X-ray outfit. Students have opportunity to learn something of X-rays, radium and wireless telegraphy.

The courses will extend from June 18th to July 29th. Correspondence solicited.

III. THE SCHOOL OF PHYSIOLOGY.

DR. PRYOR.

The Course in Physiology, consisting of lectures, demonstrations and laboratory exercises, is intended to illustrate the fundamental laws of physiology and the phenomena on which they are based. The subjects to be considered are: Muscle, its appearance, histology, chemical composition and physiology; Haemodynamics, the circulation of the blood and lymph; Normal Haematology, clinical examination of the blood and blood corpuscles; the anatomy and physiology of the eye and ear.

Credit is given in the College for work done in the school.

The course will begin June 11th and end July 10th. Fee, \$10.

IV. THE SCHOOL OF LIBERAL ARTS.

PROFESSORS DAVIS AND JONES.

The session extends from June 11th to August 17th.

The purpose of this school is to help students—

1. Remove conditions from their work in the College.
2. Even up work neglected through irregular classification.
3. Shorten or lighten their work in the College.
4. Prepare for the entrance examination in September.
5. Review their studies in accredited schools.

The instruction embraces—

1. The College courses in Mathematics, Astronomy, English, Greek, Latin, French, German, Spanish, History, and Anglo-Saxon.
2. The Academy courses in all the subjects preparatory to either year of the Academy or the Freshman class of the College.

Last summer instruction was given in all these subjects, and more than four-fifths of our students passed.

Students prepared for any college or university.

Fee for each subject, in advance, \$7.50

For bulletin of information address—

J. MORTON DAVIS or T. T. JONES, Lexington, Ky.

V. THE SCHOOL OF MECHANIC ARTS.

PROFESSORS ANDERSON AND FAIG.

Instruction will be given specially in Mechanical Drawing, Steam Engineering, Applied Electricity, Machine Design, Materials of Construction, Transmission of Force, and Shop Work.

The courses are designed for Machinists, Carpenters, Metal Workers, Engineers, Firemen, Superintendents of Electric Light Plants or of public buildings having power plants, artisans of all classes, and especially for young men who intend to take up engineering, or for high-school and other students who may wish to shorten or to lighten the work of the four years' course in college.

Students admitted without an examination.

The session begins June 11th and ends August 17th. Fee, \$25.

For full information address the Registrar,

JOHN T. FAIG, Lexington, Ky.

Summer schools, as auxiliaries of the universities and the larger colleges, have proved to be so serviceable and popular that provision for them, on a scale more and more ample, is made from year to year. At the great and wealthy Columbia University, of New York, for example, seventy-five professors and their assistants announce courses of study in as many different subjects for their present summer session. In the rush and hurry of American life and amid the insane pursuit of money, which engages so many of the American people, economy of time is becoming all the while more and more a vital matter, and the summer school is one of the indispensable devices for saving time. Many a dull or lazy student who has failed in his final examinations at College, may, by a few weeks of hard study in the Summer School, make good his deficiencies, go on with his class and avoid a year at College; many another student may, in the same way, ensure his admission to College in September; and still others may by anticipation greatly lighten the work of the over-loaded curriculum. Teachers especially, and others who cannot attend the College, find much compensation in the Summer School.

The earnest and able professors who take part in the Summer Session of the State College will be seconded in every way by the authorities in their efforts to make the Summer Schools still more profitable and successful.

COLLEGE DIRECTORY.

RESIDENCE.	COLLEGE QUARTERS.
Allen, Robert M.....609 S. Limestone.....	Experiment Station.
Anderson, F. Paul.....147 Kentucky Avenue.....	Mechanical Hall.
Averitt, Saxe D.....129 E. Maxwell.....	Experiment Station.
Blackburn, Mrs. Lucy B.....630 Central Avenue.....	14, First Floor, College.
Brooks, John P.....231 N. Broadway.....	Second Floor, Mech. Hall.
Burt, Wilson B.....Patterson Hall.....	Gymnasium.
Curtis, Henry E.....116 E. Maxwell.....	Experiment Station.
Davis, J. Morton.....20 Park Place.....	1, Basement, College.
Dean, Robert H.....222 Arlington Avenue.....	Weather Bureau, College.
Dicker, Joseph.....28 Virginia Avenue.....	Mechanical Hall.
Didlake, Miss Mary L.....481 E. Main.....	Experiment Station.
Faig, John T.....750 W. Main.....	Mechanical Hall.
Frazer, D. C.....401 W. Maxwell.....	13, First Floor, College.
Garman, Harrison.....638 S. Limestone.....	Experiment Station.
Hooper, John J.....609 S. Limestone.....	First Floor, Science Hall.
Jones, Theodore T.....600 S. Rose.....	20, Third Floor, College.
King, Miss Margaret I.....225 S. Limestone.....	10, First Floor, College.
Kinthead, Miss Elizabeth.....243 W. Second.....	Chapel.
LaBach, James O.....Y. M. C. A. Building.....	Experiment Station.
Liston, Miss Lillie.....Patterson Hall.....	Experiment Station.
Mackenzie, A. St. Clair.....Reed Hotel.....	19, Second Floor, College.
Mathews, Clarence W.....660 S. Limestone.....	First Floor, Science Hall.
Miller, Arthur M.....609 S. Limestone.....	First Floor, Science Hall.
Milligan, Richard A.....492 S. Limestone.....	Mechanical Hall, rear.
Mustaine, W. W. H.....327 S. Limestone.....	Gymnasium, First Floor.
Neville, John H.....722 W. Main.....	21, Third Floor, College.
Noe, James T. C.....211 W. Maxwell.....	11, First Floor, College.
Norwood, Charles J.....339 Aylesford Place.....	Science Hall, Third Floor.
Paddison, George L.....609 S. Limestone.....	Chemical Hall.
Palmer, Dr. Chase.....455 Walnut.....	Chemical Hall.
Patterson, James K.....President's House.....	12, First Floor, College.
Patterson, Walter K.....President's House.....	17, Second Floor, College.
Pence, Merry Lewis.....108 Merino.....	5, Basement, College.
Peter, Alfred M.....268 E. Maxwell.....	Experiment Station.
Pryor, Joseph W.....408 W. Third.....	Science Hall, Second Floor.
Scherffius, William H.....149 Washington Avenue.....	Experiment Station.
Scovell, Melville A.....College Farm.....	Experiment Station.
Shedd, Oliver M.....450 S. Broadway.....	Experiment Station.
Spillman, Asher G.....347 S. Mill.....	Second Floor, Science Hall.
Stout, Mrs. Florence Offutt.....Versailles.....	Second Floor, Gymnasium.
Turner, Job D.....267 S. Limestone.....	Experiment Station.
Wallis, Mrs. Caroline E.....	Patterson Hall.
Warren, Richard E.....219 S. Limestone.....	22, Third Floor, College.
Wernicke, Paul.....609 S. Limestone.....	18, Second Floor, College.
White, James G.....158 E. Maxwell.....	15, First Floor, College.
White, Miss Martha R.....158 E. Maxwell.....	1, Basement, College.
White, Milford.....119 Washington Avenue.....	9, First Floor, College.
Wilson, Alexander M.....609 S. Limestone.....	Mechanical Hall.

APPENDIX.

Statistics of Higher Education in the United States for 1903-1904.

(From the report of the National Commissioner of Education).

Number of Colleges, Universities and Schools of Technology.....	501
Number of their students (86,006 men; 32,023 women)	118,029
In classical courses.....	52,131
In other general culture courses.....	13,009
In general science.....	9,640
In commerce.....	1,537
In agriculture.....	2,106
In mechanical engineering.....	6,894
In civil engineering.....	6,118
In electrical engineering.....	4,389
In chemical engineering.....	694
In mining engineering.....	2,374
In textile engineering.....	95
In sanitary engineering.....	31
In architecture.....	542
In household economy.....	691
Admitted to A. B. (5,902 men; 3,372 women).....	9,274
Admitted to B. S. (3,238 men; 437 women).....	3,675
Admitted to A. M. (1,010 men; 279 women).....	1,289
Admitted to M. S. (143 men; 28 women).....	171
Varieties of degrees conferred.....	48
Number of pupils in secondary schools.....	822,235
In Latin.....	369,329
In Greek.....	18,447
In French.....	82,418
In German.....	140,302
In algebra.....	415,644
In geometry.....	201,813
In trigonometry.....	16,675
In astronomy.....	14,205
In physics.....	117,533
In chemistry.....	52,347
In physical geography.....	157,160
In geology.....	20,626
In physiology.....	166,229
In psychology.....	15,083
In rhetoric.....	333,028
In English literature.....	354,125
In history (not of U. S.).....	289,904
In civics.....	136,866
In the classical courses.....	46,990
In scientific courses.....	35,821

AMOUNTS GIVEN BY STATES AND TERRITORIES TO LAND-GRANT COLLEGES AND UNIVERSITIES AS AID AND FOR ADDITIONAL EQUIPMENTS IN 1904.

(The assessments are from the World Almanac, the other figures from the U. S. Bureau of Education).

	Assessed Wealth of State or Ter- ritory.	For Aid.	For Equipment.		Assessed Wealth of State or Ter- ritory.	For Aid.	For Equipment.
Alabama.....	\$ 344,224,221	\$ 29,821	\$ 20,415	Montana	\$ 209,912,340	\$ 28,000	\$ 30,000
Arizona	45,317,837	56,398	35,828	Nebraska	304,470,961	282,250	68,500
Arkansas	249,779,108	81,371	36,000	Nevada	28,301,252	15,207	7,123
California	1,550,511,671	567,746	57,843	New Hampshire	225,082,628	17,500	11,242
Colorado	405,000,000	75,416	53,274	New Mexico	42,617,848	13,456	10,010
Florida	96,686,954	46,863	24,776	North Carolina	433,687,809	27,500	8,675
Idaho	75,281,087	21,500	28,546	North Dakota	117,204,485	29,178	3,243
Illinois	1,053,050,979	626,200	161,195	Ohio	2,113,806,168	353,497	163,252
Indiana	1,300,445,139	147,701	103,400	Oklahoma	188,058,281	36,595	9,714
Iowa	559,272,799	221,086	123,716	Oregon	210,331,854	25,115	10,566
Kansas	378,335,401	152,202	83,515	South Carolina	173,206,733	132,537	47,927
Kentucky	644,489,090	44,830	53,131	South Dakota	1,139,022,730	75,000	49,670
Louisiana	301,215,222	33,825	34,809	Texas	1,139,022,730	210,500	64,700
Maine	352,228,897	55,000	41,800	Utah (½ val.)	40,663,004	66,731	192,348
Maryland	643,812,408	61,000	52,750	Virginia	423,842,686	112,500	102,500
Michigan	1,529,969,350	100,000	169,460	Washington	328,542,525	67,500	20,179
Minnesota	871,270,822	350,353	49,729	West Virginia	275,275,935	146,927	29,432
Mississippi	222,847,525	154,458	11,350	Wisconsin	1,384,580,755	471,500	71,867
Missouri	1,377,997,201	397,544	11,350	Wyoming	48,826,940	26,266	25,845

Remarkable showings: Arizona, \$92,226; Arkansas, \$117,271; California, \$625,589; Colorado, \$128,684; Florida, \$71,639; Illinois, \$787,395; Iowa, \$344,796; Minnesota, \$519,813; Nebraska, \$350,750; South Carolina, \$180,364; Utah, \$259,579; Virginia, \$215,000; West Virginia, \$176,359; Wisconsin, \$543,397 (in 1905, \$558,000). Most remarkable of all: Utah, with less than 300,000 inhabitants and an assessment of \$139,485,487 in 1905, gave to her Agricultural College \$140,500, and to her University \$261,000, each for two years.

III. GERMANY AND EDUCATION.

The power of education has never been shown so impressively as in the sudden and stupendous development of the limited resources of the German Empire since 1871.

I. Natural Resources.—1. An area of 208,788 square miles (Texas has 265,780; that is, Texas is larger than Iowa (56,025) and the German Empire together.) 2. A good climate, but with little variety. 3. A soil mostly poor (65 per cent. of it cultivated.) 4. No great mineral wealth except in coal, lignite, iron, common and potassic salt, with much zinc and considerable copper, lead and silver. 5. Only 300 miles of ocean coast with 3 harbors; 830 miles of Baltic coast with 6 harbors. 6. Nine navigable river systems, none of them being large except the Elbe, which is less than the Ohio, and the Rhine, which alone has always water enough for a good navigable river.

II. Added Resources.—1. About 59,000,000 of a vigorous, industrious, knowledge-seeking and knowledge-applying race (280 to the square mile). 2. Thirty two cities of more than 100,000 inhabitants each, and fifteen of more than 200,000. 3. The largest and finest army in the world (606,000 men in peace, 3,000,000 in war). 4. A navy third in size and possibly second in efficiency. 5. A merchant marine (in 1901) of 3,883 vessels in the ocean service, and 22,564 in the coasting and inland trade, some of Germany's 1390 ocean liners being among the biggest, fastest, finest ships that cross the seas, and home-built. 6. A commerce second to Great Britain's alone (exports in 1901, \$1,094,663,610; imports, \$1,372,413,910). 7. The best consular service and the best commercial schools to prepare young men in languages and otherwise for foreign trade. 8. Manufactures "unparalleled among the nations, and mostly due to advanced technical education", and embracing, in forms of the highest excellence, nearly all the products needed for the use of man. 9. In 1900, 36,270 miles of railways, and 1519 miles of canals. 10. Agriculture and stock-breeding, to which however much less attention is devoted since (in 1871) the Germans turned to commerce, manufactures and ship-building. 11. Forestry. The forests covering a fourth of the surface, and being under State protection and scientific culture, yield a large annual revenue, the forests and public domain of Prussia yielding a yearly average of \$20,000,000. 12. The production of books, books on nearly every imaginable subject and in many languages, Germany producing in 1904, 28,378 works (France, 12,139; Great Britain, 8,334; and the United States, 8,291). 13. The crowning glory of Germany, the chief source of her growth and power, her schools of all grades, conceded by intelligent educators everywhere to be the best in the world: 59,300 common schools, or about 1,000 to every million of people, with compulsory attendance of pupils, and reducing the average illiteracy of the Empire to less than $\frac{1}{4}$ of one per cent. (Brandenburg, a part of Prussia, having no illiterates and the Kingdom of Wuerttemberg none); numerous schools of all grades for girls and young women; (in 1901) 1108 secondary schools, (corresponding to American colleges,) in which, as nowhere else, the foundation is laid for classical knowledge and culture and for a knowledge of all the branches of science; 21 universities of world-wide fame, attracting † students from all the lands of civilized men (more than 5500 foreign students in 1902), universities in which knowledge is diffused by teaching and increased by research; 457 normal schools; hundreds of agricultural and forestry schools; 9 great polytechnic schools of the highest order, attended by thousands of foreign students (by more than 4,000 in 1902); and finally, as the consum-

mation of German effort for the application and the extension of science, the Imperial Testing Office, in new and magnificent buildings near Berlin, with many laboratories and experts, for testing, at small expense to manufacturers and inventors, materials, machinery and processes in all the branches of industrial art. In that Testing Office German thoroughness has provided all facilities and appliances for every kind of scientific experimentation and research.—Amazing results for a small country of meager resources.—EDUCATION!

"To-day in industrial production Germany stands in the front rank of the nations, and in the applications of science she clearly leads them all."—H. S. Pritchett, President of the Massachusetts Institute of Technology.

* At Brockhaus's, Leipzig, in 1868, I was told that they printed books in 33 languages.

† The University of Berlin had, in 1904, 13,782 students.

IV. KENTUCKY AND EDUCATION.

In 1900, Kentucky had 12.8 illiterates in each 1000 white persons of 10 years or more, a percentage greater than that of any other State except Tennessee, the Carolinas, Alabama and Louisiana, and 18 times as great as that of the German Empire. But our inferiority to Germany in education is immeasurably greater than this difference of mere illiteracy implies, for even the best educated portions of the American people have relatively few men of great learning or knowledge, while the Germans have many, far more in fact than any other people ever had.

"De l'audace, et encore de l'audace, et toujours de l'audace!" cried Danton at a crisis in the French Revolution. "Schools, and again schools, and always schools" should, in *our* crisis, be the incessant demand of every Kentuckian, man or woman, who desires the supreme welfare of the State; who is ashamed that Kentucky continues to be disgraced by ignorance, and by its concomitants, poverty, lawlessness, vice and crime; and who would have the State to stand in knowledge not, as now, sixth from the bottom of the roll of States, but near the top, as the peer of the proudest and most enlightened of her sister commonwealths.

Kentucky needs 1500 first-rate common schools, 200 first-rate high schools, and, to crown all, a university as good as Virginia's or Missouri's, as good as Michigan's or Wisconsin's, and she cannot have the lowest of these classes of schools without both the others, for the State that neglects higher education necessarily makes poor provision for lower. And these sorely needed schools will be the result, not of occasional and spasmodic effort but of slow and steady evolution. All the conferences and conventions, all the speeches and resolutions from now till the crack of doom will avail little unless they are followed up with persistent appeals to the people, by tongue and pen, county by county, and man by man, till Kentuckians learn the lesson taught by Germans, and that lesson is that the path to true national grandeur lies through great knowledge faithfully applied, and moreover that the income from education vastly exceeds the outlay for it.

N.