



VIEW OF CAMPUS.



MAIN BUILDING.

CATALOGUE

OF THE

OFFICERS, STUDIES, AND STUDENTS

OF THE

STATE COLLEGE OF KENTUCKY,

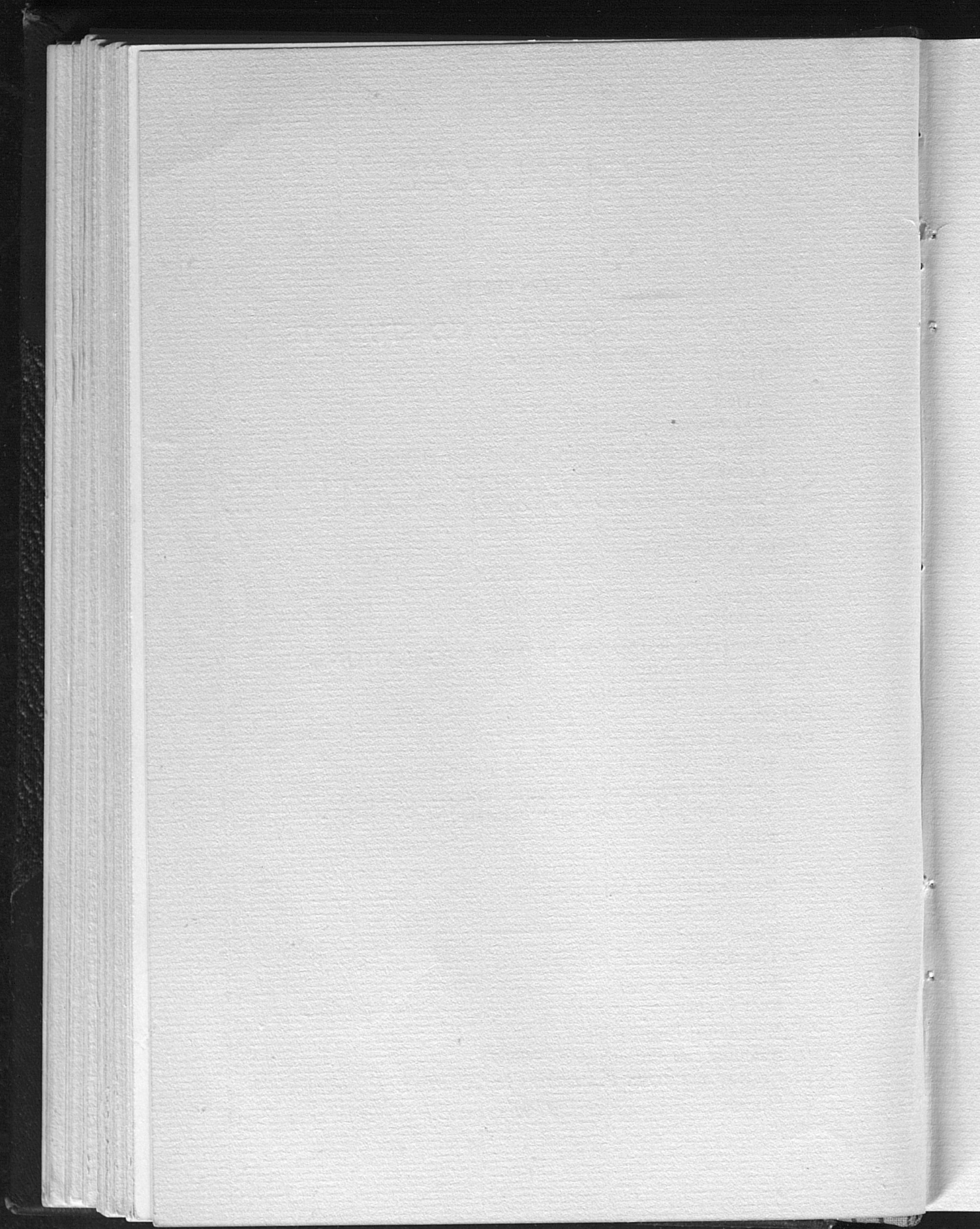
LEXINGTON,

TOGETHER WITH THE REGULATIONS,

FOR THE

SESSION ENDING JUNE 3, 1897.

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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 the 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Kentucky University continued till 1878, when the act of 1865, making it one of the Colleges of said University, was repealed, and a Commission was appointed to recommend to the Legislature of 1879-80 a plan of organization for an institution, including an Agricultural and Mechanical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 this city, and thirty thousand dollars in 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 of 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 will, from time to time, be opened as the means placed at the disposal of the Trustees allow, will, it is hoped, in the not distant future, do a great work in advancing the educational interests of Kentucky. Being entirely undenominational in its character it 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, will, it is believed, enable 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.

LEADING OBJECT.

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 in life." To the departments contemplated in the act, a Normal School has been added by the State and an Experiment Station by the United States.

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.

The number of students annually enrolled in the Normal School has exceeded expectation. As they come from all parts of the State, and many of them return well prepared for the profession of teaching, they must greatly promote the efficiency of our common schools generally, and demonstrate the wisdom of the General Assembly in providing an inexpensive Normal School, centrally located and easy of access, to keep the State always supplied with well-trained teachers.

THE KENTUCKY EXPERIMENT STATION.

This Department of the State College originated in a resolution of the Executive Committee of the Board of Trustees, adopted 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 and a similar Station in every other State were each endowed by Congress with an annual appropriation of \$15,000.

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 any of our people that seek profit from either of those prime sources of wealth—the soil, the flock, or the herd.

Results of experiments have been published in six reports and fifty-three 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 more than 11,000 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 seven capable scientists always employed and in correspondence with other stations, The Ken-

tucky Experiment Station is not only an important adjunct of 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 Agricultural and Mechanical College of Kentucky is established in the old City Park grounds of the City of Lexington, given to the Commonwealth for this purpose. The site is elevated, and commands a good view of the city and surrounding country.

Lexington is now the most important railroad center in Kentucky, being in immediate communication with Louisville, Cincinnati, Maysville, Chattanooga, and with more than seventy counties in the Commonwealth. The long-established reputation of the city for refinement and culture renders it attractive as a seat of learning, and the large body of fertile country adjacent, known as the "Blue Grass Region," with its splendid stock farms, affords unsurpassed advantages to the student of agriculture who desires to make himself familiar with the best breeds of horses, cattle, sheep, and swine in America.

GROUNDS.

The campus of the College consists of fifty-two acres of land, located within the corporate limits of Lexington. The South Limestone Street electric car line extends along the greater part of its western border, giving 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 more desirable native plants, with a view to testing their adaptability to cultivation, and to give 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, is devoted to the field sports of 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 forty-eight and a

half 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 college building 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 Faculty meet, 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 and by the society rooms of the students.

The Station building is a handsome structure, well planned for the object for which it is made. It is seventy feet in length by 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, and 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. The basement is occupied in part by the Station and in part by the College. The next floor above is devoted to office and laboratory work of the Station, while the upper floor accommodates the College work in Chemistry.

The building devoted to Mechanical Engineering covers altogether an area of about 20,000 feet, is constructed of stone and pressed brick, and is well furnished with modern conveniences for work in this branch of engineering.

Two large brick dormitories on the campus afford boarding conveniences for 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.

On the Experiment Farm are a brick dwelling occupied by the Director of the Station, and the usual farm buildings for the care of tools, the protection of stock, and the like.

BOARD OF TRUSTEES.

HIS EXCELLENCY GOVERNOR WILLIAM O. BRADLEY,
CHAIRMAN EX-OFFICIO.

PRESIDENT JAMES K. PATTERSON,
MEMBER EX-OFFICIO.

TERM EXPIRES JANUARY, 1898.

HON. R. A. SPURR.....Pine Grove.....Fayette County.
DAVID H. JAMES, ESQ.....Lexington.....Fayette County.
JUDGE THOMAS H. HINES.....Frankfort.....Franklin County.
JUDGE ROBERT RIDDELL.....Irvine.....Estill County.
GEORGE V. GREEN, ESQ.....Hopkinsville.....Christian County.

TERM EXPIRES JANUARY, 1900.

GEN. D. C. BUELL.....Paradise.....Muhlenberg County.
J. C. FLOURNOY, ESQ.....Fulton.....Fulton County.
HON. J. T. GATHRIGHT.....Louisville.....Jefferson County.
HON. A. P. GOODING.....Mayslick.....Mason County.
HON. W. F. PEAK.....Bedford.....Trimble County.

TERM EXPIRES JANUARY, 1902.

GEN. E. H. HOBSON.....Greensburg.....Green County.
JOHN G. MATTHEWS, ESQ.....Barboursville.....Knox County.
HON. HART BOSWELL.....Lexington.....Fayette County.
JOHN B. KENNEDY, ESQ.....Paris.....Bourbon County.
CAPT. THOMAS TODD.....Shelbyville.....Shelby County.

V. E. MUNCY,
Secretary.

EXECUTIVE COMMITTEE.

JUDGE THOMAS H. HINES,
Chairman.

HON. R. A. SPURR.
DAVID H. JAMES, ESQ.
HON. J. T. GATHRIGHT.
JUDGE ROBERT RIDDELL.

V. E. MUNCY,
Secretary.

FACULTY.

(In the order of appointment.)

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

JOHN SHACKLEFORD, A. M., *Vice-President,*
Professor of English and Logic.

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

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

WALTER KENNEDY PATTERSON, A. M.,
Principal of the Academy.

JOSEPH HOEING KASTLE, PH. D.,
Professor of Chemistry.

RURIC NEVILLE ROARK, PH. D.,
Principal of the Normal School.

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

FREDERIC PAUL ANDERSON, M. E.,
Professor of Mechanical Engineering.

JAMES POYNTZ NELSON, C. E., M. E.,
Professor of Civil Engineering.

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

ARTHUR MCQUISTON MILLER, A. M.,
Professor of Geology and Zoölogy.

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

SAMUEL MILLER SWIGERT, CAPT. 2D CAV., U. S. A.,
Commandant and Professor of Military Science.

PAUL WERNICKE,
Professor of Modern Languages.

INSTRUCTORS.

JOHN LEWIS LOGAN, A. B.,

First Assistant in the Academy.

JOHN WESLEY NEWMAN, B. S.,

Assistant in the Normal School.

ROBERT LEE BLANTON, M. LIT.,

Assistant in Greek and Latin.

JOSEPH MORTON DAVIS, A. B., B. S.,

Second Assistant in the Academy.

VICTOR EMANUEL MUNCY, B. S.,

Third Assistant in the Academy.

JAMES HENRY WELLS, M. E.,

Assistant in Mechanical Engineering.

JAMES RICHARD JOHNSON, B. M. E.,

Assistant in Shop-work and Drawing.

ERNEST FRANK BROWN, A. B.,

Instructor in Elocution.

WILLIAM JOHN KEARNEY, B. M. E.,

Laboratory Assistant in Experimental Engineering.

OTHER OFFICERS.

MISS LUCY BERRY BLACKBURN,

Monitress.

JAMES GARRARD WHITE,

Business Manager.

JOSEPH WILLIAM PRYOR, M. D.,

Surgeon of the Battalion.

MISS MARY HODGES,

Stenographer.

VICTOR EMANUEL MUNCY,

Secretary of the Faculty.

THE KENTUCKY EXPERIMENT STATION.

BOARD OF CONTROL.

HON. A. P. GOODING, *Chairman*..... Mason County.
HON. HART BOSWELL..... Fayette County.
JOHN B. KENNEDY, ESQ..... Bourbon County.
PRESIDENT JAMES K. PATTERSON, *Ex-officio*..... Lexington.
DIRECTOR M. A. SCOVELL, *Ex-officio* Lexington.

OFFICERS OF THE STATION.

MELVILLE AMASA SCOVELL,
Director.

ALFRED MEREDITH PETER,
First Chemist.

HENRY ERNEST CURTIS,
Second Chemist.

HARRISON GARMAN,
Entomologist and Botanist.

CLARENCE WENTWORTH MATHEWS,
Horticulturist.

VICTOR EMANUEL MUNCY,
Meteorologist.

MISS ALICE McDOWELL SHELBY,
Stenographer.

DR. RICHARD JAMES SPURR,
Superintendent of Field Experiments.

JOSEPH NELSON HARPER,
Dairyman.

DEPARTMENTS.

The studies of the State College are distributed into fifteen Departments, each in charge of a responsible head, the heads constituting the Faculty. Chronologically the Departments 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, or the Normal School.
- XI. Civil Engineering.
- XII. Mechanical Engineering.
- XIII. Anatomy and Physiology.
- XIV. Geology and Zoölogy.
- XV. Physics.

COURSES OF STUDY.

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

PRESIDENT PATTERSON.

The course of instruction in this Department includes an outline of Ancient, Mediæval, 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 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 Janet in Morals. 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 BOTANY, HORTICULTURE, AND AGRICULTURE.

PROFESSOR MATHEWS.

This Department occupies rooms for class instruction on the basement floor of the Experiment Station building. The main room or general laboratory is suitably equipped with the customary furnishings of laboratory tables, water and gas fixtures, charts, 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 (20 x 50 feet), giving an opportunity for the continuous study of living plants throughout the winter months and for experimental work in plant physiology.

The herbarium contains a nearly complete representation of the flora of Kentucky, with a considerable number of foreign exchanges. It was primarily due to the efforts of 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 historical 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 and horticultural works of reference, and these, as well as the best current literature upon these subjects, are freely available to students during college hours.

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

The Horticultural Department of the Station (which is also under the charge of the Professor of Botany and Horticulture) 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 feet of glass, in addition to hot-beds and cold frames outside. These houses are run to their full capacity 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 these with numerous varieties of annual and perennial flowering plants give the pupil a good opportunity to study ornamental horticulture.

In the distinctively agricultural studies the operations of the farm department of the Experiment Station furnish an excellent opportunity for the study of the effects of various fertilizers, varieties of wheat, corn, and other field crops, and the many problems of dairying.

In order to give special attention to dairy experiments a building has recently been erected upon the Station Farm, and fully equipped with the most modern appliances for the care of milk and the manufacture of butter and cheese.

All these facilities for the experiment work of the Station, while primarily designed for that purpose, can not fail to be of the greatest value as object lessons in connection with the studies of this department.

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

I. INTRODUCTORY BOTANY.

This study is required of all Sophomores in the General Scientific, Agricultural, Biological, Chemical, and Normal courses. Beginning in September, the subject is pursued through the entire college year, and for all students is a prerequisite for admission to subsequent courses in botany.

The work of the year comprises a general survey of the plant world, 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.

The laboratory method is the form of instruction principally used, and from the very beginning of his work the pupil is directed to a study of plants themselves, using the text-book as an

aid to correct his mistakes and to enlarge his field of view. The student 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 vegetable cell and its various modifications, together with types of the lower forms of plant life, proceeding from the simpler to the more complex, until at the beginning of the second half year the ferns are reached. From this time until the close of the year the student is given practice in the description and determination of species of ferns, grasses, and other flowering plants, in addition to a study of their structures.

In the course of the year class excursions are arranged to the Kentucky River and other points of botanical interest—sometimes in connection with the other departments of natural history,—for the purpose of collecting and studying the interesting flora of these various localities.

Text-books: Bessey's Botany in the first, and Gray's Field, Forest, and Garden Botany in the second term.

II. HISTOLOGY, AND (III.) PLANT PHYSIOLOGY.

These two studies are designed to form a continuous course running through the Junior year, and are required of all Juniors in the Agricultural and Biological courses.

In Histology the student is given instruction and training in the methods of preparing vegetable tissues for microscopic study, and is encouraged to make a large number of permanent slides, which he can retain for his own future use.

Text-book: Dudley and Thomas' Manual of Plant Histology.

The study of the tissues and organs of the plant under the microscope gives the pupil a preliminary knowledge which is important for the proper understanding of the functions of these plant parts, or Plant Physiology, which immediately follows Histology. This requires two afternoons of each week in the Spring term for laboratory experiments, in which the pupil follows McDougal's Manual of Plant Physiology, and is expected in addition to do considerable collateral reading.

In both of these studies constant references are made to such standard works as Strasburger's Practical Botany; the text-books on Plant Physiology of Goodale, Sachs, and Vines; De Bary's Comparative Anatomy of the Phanerogams and Ferns; Behren's Guide to the Microscope in Botany, etc.

IV. CRYPTOGAMIC BOTANY.

Required of Juniors in the Biological course. Like the preceding subject, this study is arranged primarily as a laboratory course. It embraces the study of representatives, so far as practicable, of each of the lower classes of plants.

Works of reference: Bennett and Murray's Cryptogamic Botany; De Bary's Fungi, Mycetozoa, and Bacteria; Goebel's Outlines of Classification and Special Morphology; the Manuals of Bacteriology of Sternberg and others; Wolle's Algae, etc.; Lesquereux and James' Mosses; Underwood's Ferns and their Allies; Atkinson's Biology of Ferns, etc.

V. ECONOMIC BOTANY.

This study is required of Seniors in the Agricultural Course, and is for the first half of the term parallel in part with the preceding study, being concerned with injurious Fungi and methods of combating them. The remainder of the term is occupied with the study of the botany of cultivated plants, particular attention being given to the grasses.

VI. SPECIAL ADVANCED BOTANY.

Provision is here made for Seniors in the Biological Course to pursue some advanced line of study, assigned with reference to their individual tastes and requirements, and is intended to be a continuation of some special subject commenced in the earlier part of their course.

VII. 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, and the canning factory, all of which are well represented 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 all these processes.

VIII. GENERAL AGRICULTURE.

Required of Juniors and Seniors in the Agricultural Course.

The subject is taught by means of text-books and lectures, and illustrated by the work of the farm, garden, and greenhouse, all of which are fully equipped. The first term is devoted to soils, their origin, character, and cultivation; draining and irrigation, fertilizers, farm economy, etc. The second term is occupied with the subject of breeds of stock, the principles of breeding and feeding, and milk, as to its production, and the manufacture of the various dairy products.

For the study of stock-breeding and kindred subjects the location of the College is exceptionally favorable, being situated in the center of the far-famed Bluegrass region of Kentucky, with its numerous herds of high-bred cattle and horses. In the entire work of this course material aid is rendered the student by the important experiments of the State Experiment Station, which are at all times available for observation and study.

THE COURSE IN AGRICULTURE.

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 general and agricultural chemistry, general zoölogy and entomology, botany, horticulture,

geology, general agriculture, veterinary science, wood-work, and forging.

In addition to these subjects, the student devotes considerable time to the work of other Departments, including a year each in English and mathematics, courses in drawing, French and German, physiology, physics, and political economy.

THE SHORT (WINTER) COURSE IN AGRICULTURE.

In this course an opportunity has recently 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 will begin in January, immediately after the Christmas recess, and will continue for eight 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 material 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 advantage 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, or preferably somewhat older, to fully profit by this course.

To residents of Kentucky instruction in this course will be free, the only expenses 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 expenses of a student during his entire eight 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 SHACKLEFORD.

FRESHMAN CLASS.

First Term—English Prose and Poetry; interpretations of masterpieces of English Prose and Poetry; written essays, read in class and corrected.

Second Term—Studies in English Literature.

Each pupil is required to commit to memory and recite in class selections from the great English poets and prose writers, including parts of Shakespeare's Julius Cæsar and the Merchant of Venice; Bacon's Essays on Studies and Friendship; Milton's L'Allegro and Il Penseroso and extracts from the Areopagitica; Bunyan's Golden City; Dryden's Alexander's Feast; Gray's Elegy; parts of Goldsmith's Deserted Village; passages from Burke's speech on the Spirit of Liberty in the American Colonies; Burns' Cotter's Saturday Night; Wordsworth's Intimations of Immortality; Coleridge's Hymn to Mont Blanc; the closing passages of Webster's speech in reply to Hayne; Byron's Prisoner of Chillon; Shelly's Ode to the Skylark; Bryant's Thanatopsis; Emerson's Essay on Compensation; Longfellow's Keramos; Holmes' Deacon's Masterpiece; Tennyson's Ulysses; De Finibus, by Thackeray; The Vision of Sir Launfal, by Lowell.

Text-book: Swinton's Studies in English Literature.

SOPHOMORE CLASS.

First Term—History of English Literature; class reading from Bacon, Burke, Milton, Shakespeare, and other great English writers.

Text-books: Pancoast's Representative English Literature and Hudson's Annotated English Classics.

Second Term—Advanced Rhetoric; lectures on the Elements of Criticism.

Text-books: Genung's Rhetoric; Minto's Manual of English Prose Literature.

JUNIOR CLASS.

First Term—The Science of Logic; lectures on Pure Logic, in which Stoicheiology and Methodology are explained and illustrated; explanations and illustrations of the Analytics of Aristotle and the New Analytic of Sir Wm. Hamilton; exercises in Figure, Mood, and Reduction; lectures on Fallacies and the Sources of Error; lectures on Inductive and Analogical Reasoning; lectures on Evidence.

Text-book: Jevons' Logic.

Second Term—Anglo-Saxon and Early English.

Text-book: Corson's Anglo-Saxon and Early English.

IV. DEPARTMENT OF MILITARY SCIENCE.

CAPTAIN SWIGERT.

Instruction in this Department is both practical and theoretical.

The Practical course embraces the U. S. Drill Regulation for Infantry, including the schools of the soldier, company, and battalion in close and extended order; ceremonies; so much of the Artillery Drill Regulations as pertains to the manual of the piece and mechanical maneuvers; signaling with flag and heliograph; guard duty and minor tactics.

Theoretical instruction embraces recitations in U. S. Drill Regulations for Infantry and Artillery; instruction in the preparation of reports and returns pertaining to a company; lectures on organization and administration of the United States Army, and general principles governing in the Art of War.

All students are required to take this course, and proficiency in it is as requisite for graduation as in any other Department.

Students must provide themselves with the regulation uniform of cadet gray cloth, which can be purchased for about fifteen dollars. No other outer dress, excepting an overcoat, shall be worn on any occasion. From this rule students may, however, be exempt when laboring in the field or in the shops.

V. DEPARTMENT OF CHEMISTRY.

PROFESSOR KASTLE.

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 done more probably than any other man to develop the abundant mineral resources of the State. The Department remained in the hands of Dr. Peter until 1887, when he resigned. Dr. E. A. Von Schweinitz was then appointed to the vacancy. He held the position during the collegiate year 1887-1888, whereupon the present incumbent was appointed. For many years the chemical laboratories and lecture-room occupied the eastern part of the main College building. In September, 1889, however, the Experiment Station building having been completed, the apparatus and equipment were moved from the laboratories in the main building to more suitable and beautiful rooms on the second floor of the Experiment Station building. The lecture room and the laboratories, qualitative and quantitative, of the Chemical Department are exceedingly 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 three very large working tables, each of which can easily accommodate ten students. The quantitative laboratory is also well equipped with tables, hoods, water, gas, electricity, etc., 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. Besides the laboratories and lecture-room, there are several other small rooms on the same floor set aside for the use of the Chemical Department:—an instructor's office, a balance-room and a store-room.

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 exceedingly delicate balances for analytical work; a grand model Bunsen & Kirchoff spectroscope; platinum appa-

tus; a complete outfit for electro-plating; vapor density apparatus; a glass model ice-machine, etc. These of course 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 to readily enable the student to obtain at first hand a good working knowledge of chemical science.

COURSE IN CHEMISTRY.

The Chemical Course has lately been established with the view to preparing the student for life-work in the Science of Chemistry, and also with the view to fitting him for the study of medicine and kindred professions. To the accomplishment of this purpose the following course of study, extending over four years, has been adopted:

STUDIES REQUIRED.

The first year is devoted to the study of English, Mathematics, Algebra, Plane Geometry and Trigonometry, French, and Physiology.

The second year to Mathematics, Solid and Analytical Geometry, German, Chemistry, Botany, and Physics.

The third year to Chemistry, theoretical and laboratory practice, English, Geology, French and German, and Calculus.

The fourth year to Chemistry—advanced general reading, laboratory practice and original investigation, Economic Geology, History and Political Economy, Mental Philosophy, Logic, and Zoölogy.

THE TRAINING IN CHEMISTRY PROPER.

The study in Chemistry proper, as outlined in the above, is sufficient in its scope to bring the student in close contact with the great fundamental truths of the Science, and to make him enthusiastic and capable in his profession.

The course in General Chemistry, extending through the second five months of the second year, consists of lectures, laboratory work, and recitations five times weekly on the non-metals and their compounds and the simpler laws of medical change. The lectures are abundantly illustrated by suitable and instructive experiments; the laboratory work is carefully directed,

and the student receives every possible encouragement to do excellent work.

In the third year the study of Chemistry is resumed with laboratory work and Theoretical Chemistry. The study of Theoretical Chemistry, consisting of lectures, recitations, and readings five times weekly during the first half 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 of in the lectures or upon such other topics as may be assigned by the instructor. 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 countries will there be kept on file. The broadening influences of such a course can scarcely be overestimated, and students who complete it satisfactorily will find themselves, in some measure at least, 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 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 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 to pursue, together with the preparation of a thesis embodying the results of this special work. The object of such an arrangement is to perfect him in that particular branch of the science for which he shows a liking or a particular talent. In this connection it may be well to state that facilities are offered for special work along the following lines: Pure Chemistry, Organic Chemistry, Agricultural Chemistry, general analytical work, and special analytical work on fertilizers, iron and steel and fuels.

CHEMISTRY REQUIRED IN OTHER COURSES.

Instruction in chemistry in other courses of study, such as the Scientific, Classical, etc., is designed to meet their special needs in this direction.

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 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 the 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 the students in this department. Instruction in chemistry in this course extends over a period of ten months; five 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.

For students in Civil Engineering a course in Elementary Chemistry has been provided, extending over five months.

For the benefit of students of Agriculture a special course in Agricultural Chemistry has been arranged, the general aim of which is to acquaint the student with the chemistry of those elements which enter into the composition of plants, and which are essential to their life and growth. A study of the composition of the soil, air, and water, and their several relations to the plant as sources of plant food, forms a large and important part of this work. Also the chemistry of tillage, irrigation, and rota-

tion of crops, and the composition and value of commercial fertilizers and manures.

The instruction in Chemistry is also adapted as fully as possible to the needs of students in Biology. Instruction in this branch extends over ten months, 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 living things, animal and vegetable.

VI. DEPARTMENT OF MATHEMATICS AND ASTRONOMY.

PROFESSOR WHITE.

A thorough knowledge of Arithmetic and of Algebra through quadratic equations, as presented in Wentworth's Higher Algebra, is required for admission to the Freshman class.

FRESHMAN YEAR.

First Term—Wentworth's Geometry, Books I-V.

Second Term—Wentworth's Higher Algebra, Chapters XXII-XXIV; Wentworth's Trigonometry.

SOPHOMORE YEAR.

First Term—Wentworth's Solid Geometry and Conic Sections.

Second Term—Bowser's Analytical Geometry.

JUNIOR YEAR.

Bowser's Differential and Integral Calculus.

Required of students in Civil and Mechanical Engineering.

SENIOR YEAR.

Young's Elements of Astronomy.

In this class the aim is to give to the students a knowledge, as accurate and as extensive as the time will allow, of the phenomena of the heavenly bodies and of their probable condition and history. No effort will be spared to make the study of this branch of science interesting and instructive.

VII. DEPARTMENT OF MODERN LANGUAGES.

PROFESSOR WERNICKE.

1. German.

FIRST SESSION.

First Term—C. Thomas' German Grammar; oral exercises.*Second Term*—Grimm's Märchen; Ballads.

SECOND SESSION.

First Term—Hoffman's Historische Erzählungen; Schiller's Maria Stuart; Harris' German Composition.*Second Term*—Schiller's Lied von der Glocke; Lessing's Nathan der Weise; an essay on a quotation from Schiller's Glocke.

THIRD SESSION.

(Optional)—Dippold's Scientific German Reader; conversational exercises; Bernhard's Literaturgeschichte.

2. French.

FIRST SESSION.

First Term—Whitney's Grammar, Part I, to the irregular verbs; Whitney's Introductory French Reader, Part I.*Second Term*—Le Conscriit de 1813; irregular verbs.

SECOND SESSION.

First Term—Whitney's Grammar, Part II; Luquiens' Places and Peoples; some of Lafontaine's Fables committed to memory.*Second Term*—Syntax continued; Scribe, Bertrand et Raton, Verre d'eau; Corneille's Cid; Molière's Avare; Racine's Athalie, etc.

THIRD SESSION.

(Optional)—Duval, Histoire de la Littérature Française; selections from modern French literature.

3. Spanish.

First Term—Edgren's Spanish Grammar; Eco de Madrid.*Second Term*—Knapp's Spanish Readings.

4. Italian.

First Term—Edgren's Grammar, Pellico's Le Mie Prigioni.*Second Term*—Edgren's Composition; Goldoni's Comedies.

VIII. DEPARTMENT OF GREEK AND LATIN.

PROFESSOR NEVILLE.

1. Latin.

FIRST SESSION.

Bingham's Latin Grammar—the study involving a daily exercise in inflection and in translation from and into Latin on the blackboard; Gradatim (194 Latin stories), or Viri Romæ.

SECOND SESSION.

Five books of Cæsar, or two books of Cæsar and twelve lives of Nepos; six orations of Cicero; Daniell's New Latin Composition; Bennett's Grammar; Sallust's Catiline or Cicero de Senectute.

THIRD SESSION.

Livy, Books I. and XXI.; six books of Virgil; a play of Terence, or thirty letters of Pliny; the first forty exercises of Arnold's Latin Prose Composition.

FOURTH SESSION.

Horace, except a part of the Epodes and Satires; the second forty exercises of Arnold; Tacitus, Germania and Agricola; the I., III., VII., VIII., and X. Satires of Juvenal, or, instead of the VII. and VIII., an essay of Seneca; Wilkins' Sketch of Latin Literature.

2. Greek.

FIRST SESSION.

White's Beginner's Greek Book, with a daily exercise in inflection and in translation from and into Greek on the blackboard.

SECOND SESSION.

Five books of the Anabasis; six of the Iliad; exercises in Greek syntax.

THIRD SESSION.

Keep's Selections from Herodotus; Plato's Apology and Crito; six orations of Demosthenes; dialogues of Lucian.

FOURTH SESSION.

Two books of Thucydides; three Greek dramas (Prometheus, Medea, Œdipus Rex); Jebb's Sketch of Greek Literature.

IX. THE ACADEMY.

This will be described after the Collegiate Departments.

X. THE NORMAL SCHOOL.

PROFESSOR ROARK.

Although organized as a Department of the College co-ordinate with the other departments, yet the Department of Pedagogy is more properly a school in itself, made so by the necessities of the Public School system of the State. Therefore, in addition to offering full work in Pedagogy (Educational Psychology and its applications in School Economy and Educational Methods), this Department also provides academic instruction for teachers who desire to fit themselves for higher grades of work. In administering the Department, the real needs and limitations of the average Public School teacher are kept constantly in view, and the elevation of the common schools of the State is the basic principle of the work.

The teacher must be possessed of three things in addition to an upright and sterling character and a healthy body. These three things are: (1) An adequate knowledge of what he proposes to teach; (2) skill in teaching—knowledge of how to teach; (3) some broad and liberal culture wherewith to illuminate his work and increase its value. These three things it is the business of the Teacher's Training School to give.

1. *An adequate knowledge of the branches to be taught.*—The giving of this knowledge is academic work primarily. But this academic instruction should be given with the fact constantly in view that "The student will teach as he is taught, rather than as he is taught to teach." The instruction in Arithmetic, Physiology, Grammar, etc., is designed to illustrate to the teacher-pupils in the various classes the latest and best methods of teaching these subjects.

2. *Skill in teaching—the knowledge how to teach.*—This can be acquired best by successful practice, but there is a science as well as an art of teaching. Teaching must not be wholly empirical. There are fundamental principles upon which all true teaching rests, and the purpose here is to fix these principles in

the minds of the pupils. It is the carrying out of these principles, their successful and practical application, that lifts the work of the teacher to the dignity of a profession. It is the direct inculcation of these principles and the practical drill in their application that distinguish the Teacher's Training School from all other schools. The Teacher's Training School should work in the faith that teaching is the highest profession, and the atmosphere of such a school should be filled with the professional spirit.

Since the principles of the science of education rest on the activities and processes of the growing mind, special attention is given to Educational Psychology. A study of this subject is followed by a thorough drill in School Management and the most rational and effective Educational Methods. The principles of management and methods are constantly presented in their relations to the principles of Psychology. Finally, the student is introduced to the history of his profession abroad and at home. The course in Pedagogy proper, then, consists of Educational Psychology, Management in Education, Method in Education, and the History of Education.

3. *Some broad and liberal culture.*—He who knows only the subjects he has to teach, and something of how to teach them, is not yet a teacher. He must know as much more as he can; must have some knowledge of subjects higher than the branches he will be called on to teach, and different from them. Human knowledge is so interrelated that otherwise he can not have the copiousness of illustration necessary to make the simplest and commonest facts as clear as they should be. The *relations* of facts must be taught—hence the growing need of liberal culture, a widened horizon for the teacher.

The courses offered in this department are believed to be such as will meet the requirements above set forth, and also satisfy the practical needs of the educational system of the State.

COURSES IN PEDAGOGY.

The *Professional Course* leading to the degree of B. Ped. (Bachelor of Pedagogy) is intended to cultivate the professional spirit, to give a general education, and to fully equip those who complete it for teaching successfully in any grade of public school, or in any academy or college.

The *State Diploma Course* is arranged to enable those teachers who have the age (24 years), and experience (2 years in this State), required by the school law, and who already hold a State certificate, or are otherwise properly qualified for taking the course, to prepare by one year's work to pass successfully the examination for State Diploma.

The *State Certificate Course* is open to those who have the legal qualifications of age (21 years), and experience (2 years), and who hold first class, or high grade second class, county certificates, or are otherwise prepared to undertake the work of this course. The aim is to fit such students to take successfully the examination for State certificate. The time required is five months, *beginning in mid-winter*.

The *County Certificate Course* is designed to prepare teachers for the county schools of the State. Preparation for properly passing the county examination may be made in one year or in five months, according to the previous preparation of the matriculate. Since by far the larger number of those who take this course enter it after the Holidays, the second term is divided into two terms of ten weeks each, and thus teachers can review all the common branches during the second half year.

It will be seen upon reference to the schedule, page 62, that *Drill Work in Forensics, i. e.*, in essay writing, speaking and debating, is an important feature of the Normal School. Ability to express fluently and correctly is of the utmost value to the teacher, and can be gained only by constant practice. The Forensic Drills will occur once a week, with special exercises once or twice each term.

The *Pedagogy Drill* will occur daily during the last quarter of each year, and is intended to give valuable training in the Science of Teaching.

The *Preparatory Course* is provided for in the Academy, and fits the student to enter the full Professional Course of the Normal Department.

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 Roark's Psychology in Education, Brooks' Normal Methods, White's and Baldwin's School Management, and Painter's and Williams' History of Education. In the State

Diploma and State Certificate courses, besides these books, Kellogg's English Literature also is used. In the County Certificate Course the books used are Ray's Arithmetics, Wentworth's Higher Algebra, Peterman's Civil Government, Chittenden's Elements of English Composition, Butler's Geography, Holbrook's Complete Grammar, Eggleston's History of the United States, Kinkead's History of Kentucky, Martin's Human Body (smaller edition), and Roberts' Rules of Order.

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 92, Section 15, School Law of 1894,) 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 92. They do *not* receive mileage unless they remain in school during 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.

CALENDAR.

The First Term opens September 9, 1897.

The Second Term opens January 24, 1898.

The First Review Term of 10 weeks opens January 24, 1898.

The Second Review Term of 10 weeks opens March 28, 1898.

Students should enter as early in the term as possible.

XI. DEPARTMENT OF CIVIL ENGINEERING.

PROFESSOR NELSON.

The course in Civil Engineering is planned so as to acquaint the students with those subjects the knowledge of which is 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 its professional uses, but also for an educational purpose, so that the graduates of the Department of Civil Engineering may be prepared for work other than that in their profession. 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.

I. FRESHMAN YEAR.

During the first year, the student is occupied largely with subjects that are preparatory to the technical branches of the course. English Literature and the elements of Algebra, Plane Geometry, and Trigonometry are completed. In the latter half of this year Plane Surveying is begun, and is taught chiefly by work in the field. The results of this field work are treated in the drawing-room as may be necessary. The early practical work consists of measuring areas, dividing land, triangulation to ascertain distances both horizontal and vertical, the careful measurement of base lines and the use of stadia, plane table, transit, compass, level, rods, chains, and tapes. The adjustments of the instruments are practiced, so that the student who completes successfully the work of this year, has mastered the simpler problems of surveying and other field work sufficiently to be prepared for employment as a leveler or transit-man in a field-corps, and as an assistant in making calculations which depend on the use of trigonometrical functions and formulæ. Thacher's Slide Rule and the simpler forms of such aids to rapid computations are used whenever they facilitate work.

Students in other departments than that of Civil Engineering can enter the class in surveying when prepared to do so, since such work is done chiefly in the afternoon. Thus they can learn to handle those problems in Plane Surveying which relate to the dimensions, area, and division of land.

Throughout this year, Draughting is practiced for the purpose of mastering the use of the instruments and of learning the art of accurate and skillful drawing and neat lettering. Some work is done in projectional and perspective drawing, both in plain

lines and in colors. Field work is platted. Studies are made of standard structural drawings, and some simple structures are designed.

Text-books: Merriman and Brooks' Hand-Book for Surveyors, with references to the texts of Davies, Gillespie, Hodgman, and to Webb's Engineering Instruments; Mahan's Drawing.

II. SOPHOMORE YEAR.

The Mathematical Course is pursued through Analytical Geometry. The subjects of Chemistry and Physics are studied. Descriptive Geometry is taught so as to train the student to handle problems in projections, intersections, tangencies, and developments of surfaces. Practical application is made to work in shades, shadows, and perspective drawings.

In Railway Location attention is paid to the proper location, construction, and equipment of Railways. Actual Surveys are made, and the necessary maps, profiles, and cross-sections are prepared by the students. The quantities of excavation and embankment are then calculated, so that a knowledge of such practical work is acquired. The subject of Highway Construction is studied, embracing especially the pavements and streets of cities.

The study of structures is begun, and the graphical method of ascertaining stresses in the members of roof-trusses and simple bridges is practiced. Structures of this kind are designed, and the dimensions of their details are determined.

In the field the use of the various instruments is practiced. In the drawing-room standard designs of structures of railway appliances are studied, and original designs of these are made.

The completion of this year's course prepares a student to act as assistant in the field-work of railway location and construction, and as an efficient draughtsman in office-work. It acquaints him with the beginnings of structural designing and dimensioning, and enables him to handle intelligently problems in the stability of roofs and bridges.

Text-books: Searles' Field Book; Greene's Roof Trusses; and references to other authorities.

III. JUNIOR YEAR.

The Calculus and Spherical Trigonometry are studied. The economics of railway location are examined. Attention is paid to the subjects of yards, stations, signals, brakes, etc., and to the administration of the several departments of a railway. The yards in Lexington offer an excellent opportunity for students to observe the practical use of appliances. The graphical method of making time-cards is illustrated with the cognate matter of train rules and train dispatching.

The Theory of Mechanics is studied analytically after the methods of the Calculus. In Practical or Applied Mechanics the strength of materials is discussed theoretically, and practical illustrations are made by the use of the fine testing machines in the Mechanical Laboratory. Here the students learn to ascertain for themselves the proper constants for the various formulæ, and are taught the principles of inspection.

Electricity and Magnetism occupy the student during a part of the second half of the year, so that he may get a knowledge of questions relating to the proper construction and handling of electric railways.

Advanced Surveying, and methods of finding latitude, longitude, time, and azimuth are included in this year's work, and in this connection the elements of Spherical Trigonometry and their application to Practical Astronomy are studied.

The subject of the strength and stability of structures forms a large part of this year's course, and is studied both analytically and graphically, and the results are applied especially to the designing of bridges and arches.

Field-work is practiced, and work in drawing-room includes the preparation of designs for structures and the making of topographical maps, and the study of the various map projections.

In Masonry and Stereotomy the properties of materials used in stone structures are discussed, with especial attention to cements. Students use the cement-testing machine in this connection. The stability of walls and arches is studied. The method of shaping stones for such structures and of laying out such work is taught, with practice in cutting forms in plaster of Paris.

In the Mechanical Laboratory, the students work with the several testing machines, where they study the behavior of specimens of steel, iron, wood, and other substances, under various strains.

Those who complete this year's work are fitted to fill engagements in some of the higher branches of the profession, where they can serve with efficiency as assistants in conducting important surveys, and in the erection of structures both in the field and in the office. They are prepared to inspect material.

Text-books: Patton's Civil Engineering; Johnson's Surveying; Baker's Instruments; Greene's Graphics; Merriman's Mechanics; Bowser's Mechanics; DuBois's Strains in Framed Structures; Bovey's Framed Structures; Baker's Masonry; Lectures on Railways, and references to other authorities with which the library of the Department is supplied.

IV. SENIOR YEAR.

The study of History and Political Economy is pursued during the year under the direction of the President of the College.

Much time is now devoted to the study in detail of bridges and other structures. Plans, specifications, and working drawing of designs by students are prepared, and standard specimens of work of this kind, kindly contributed to the College by the best bridge companies and other builders, are carefully discussed.

The work in the drawing-room is conducted as nearly as possible after the manner followed in well-ordered engineers' offices. The student learns to use the drawing-board as the constant means of reducing his investigations to a practical form.

The subjects of Hydraulic Engineering and Sanitation are studied with a view to their application to the varied and growing demands of municipalities and to the regimen of streams. The principles of hydraulics and the laws of hydrostatics and of the flow of water are taught both theoretically, and so far as possible, practically. Sanitation is studied with reference to the proper disposal of sewage, and to the drainage of cities, and questions affecting the health of the public are examined.

Methods of Geodetic Surveying, with the application of the principles of least squares, are studied and practiced, including a short examination of the figure of the earth.

Economic Geology in its relation to building materials occupies the student during the latter half of this year.

A short course in Mining is given, including methods of drainage, ventilation, lighting, handling of ore, and construction of entrances.

The student applying for graduation devotes a large part of the latter half of this year to the extended study of some assigned problem in engineering which serves as his thesis.

During the whole of this year the opportunity is given for specialized work in some one or more of the several branches of Civil Engineering, while at the same time the general educational value of the course is cared for, so that the graduates may not only be fitted for skillful work as civil engineers, but also prepared to meet the varied demands made upon educated men.

Text-books: Merriman's Hydraulics; Bovey's Hydraulics; DuBois's Framed Structures; Johnson's Framed Structures; Bovey's Theory of Structures; Gore's Geodesy; Merriman's Least Squares; Callon's Lectures on Mining; Bowie's Hydraulic Mining.

Graduates in this course receive the degree of Bachelor of Civil Engineering (B. C. E.). They are ready for the practice of their profession in the branches elected by them, depending for their ultimate success on their subsequent devotion to and peculiar fitness for their calling, and on their zealous pursuit of the studies begun in this course.

The Department is supplied with transit, level, plane table, solar attachment for transit, compass, chains, rods, and delicately adjusted tapes for accurate base-line measurements. The drawing-room contains the finer and more costly instruments, while each student purchases for his own use the ordinary ones. Perishable drawing-material is supplied by the Department without extra charge. The library of this Department and that of the Department of Mechanical Engineering are combined, and under proper regulations the students have free access to standard text-books and to leading periodicals.

POST-GRADUATE COURSE AND DEGREE.

For the post-graduate degree of Master of Civil Engineering (C. E.) the requirements are indicated on page 63.

XII. DEPARTMENT OF MECHANICAL ENGINEERING.

PROFESSOR ANDERSON.

EQUIPMENT AND FACILITIES.

This department was organized August, 1891, and is now one of the most completely equipped in the College. Mechanical Hall contains a floor area of about 20,000 square feet, is constructed of stone and pressed brick, and is well furnished with modern conveniences for work in Mechanical Engineering. The building contains three recitation rooms, two drawing-rooms, three offices, a wood and pattern shop, two boiler rooms, washroom, tool room, engine room, two machine shops, blacksmith shop, foundry, and two large rooms devoted to experimental engineering. A first-class technical library is at the disposal of all students in Engineering. The equipment of the different rooms is briefly described below:

The drawing-rooms contain drawing-tables, drawing-boards, curves, scales, T-squares, and other special drawing apparatus, to accommodate one hundred students.

The engine-room contains a 10-inch by 24-inch Hamilton-Corliss non-condensing engine, which supplies the motive power for all the work-shops.

The wood-shop contains twenty benches, each with a complete set of wood-working tools, thirteen wood-turning lathes, each with a complete set of turning-chisels, band-sawing machine, universal wood-worker, wood-trimmer, fret saw, double circular saw, and grindstone.

The foundry contains a 30-inch cupola furnace, with a capacity of a ton of metal per hour, a brass furnace, twelve complete sets of moulders' tools, twelve benches; also, ladles, clamps, core-room, core-oven, pattern-rack, and the tools used in a practical foundry.

The blacksmith shop contains a 10-inch steel pressure blower, twelve forges, twelve anvils, three blacksmith vises, an emery grinder, and twelve complete sets of blacksmith tools, for carrying on all kinds of iron and steel forging; a power spring-hammer, designed and built by the students, forms part of the equipment of the blacksmith shop.

The machine-shop contains six lathes, one milling machine, one self-feed drill, one hand-feed drill, one planer, one shaper, one tool-grinder, one dry emery grinder, one wet emery grinder, one universal grinding machine, two sensitive drills, and twelve iron vises and benches for vise work in metal.

The tool-room is equipped with a fine assortment of superior tools for work in iron, steel, brass, and wood, and contains such stock and supplies as may be used in constructions in the mechanical laboratories named above.

The wash-room contains lockers for one hundred students, and is supplied with marble basins.

The boiler-houses contain, respectively, a fifty-one horse-power Babcock and Wilcox water-tube boiler, a Dean Bros.' No. 3 steam-pump, and a fifty-five horse-power tubular boiler, and a Davidson No. 3 steam-pump.

The Experimental Laboratory is the best equipped in the South, and besides being well supplied with steam-engine indicators, planimeters, steam-gauges, pyrometers, reducing motions, scales for measuring, micrometer and vernier calipers, thermometers, calorimeters, sieves, cement samplers, scales for weighing, extensometers, water-meters, etc., it contains a thirty-five horse-power Westinghouse compound engine, a forty horse-power cross compound throttling engine, a twenty-five horse-power automatic cut-off engine, a ten horse-power Corliss engine, a thirty-five horse-power Buffalo automatic cut-off engine, a 10 kilo-watt Crocker-Wheeler dynamo, an $8\frac{1}{2}$ kilo-watt Edison dynamo, a 9 kilo-watt General Electric Company multipolar dynamo, a $3\frac{1}{2}$ kilo-watt electric motor, a $\frac{3}{4}$ kilo-watt electric motor, a Brackett-cradle dynamometer, several Prony brakes, a 1,000 pound United States Standard cement testing machine, and a 100,000 pound Riehle testing machine. The equipment of the Laboratory is such that any problem relative to Steam and Electrical Engineering may be discussed practically.

COURSE OF STUDY.

The training given in this course, both practical and theoretical, is intended to prepare young men for positions of responsibility and trust in mechanical engineering work. The practical work extends over a period of two years and includes the most

important principles and operations in bench work in wood, wood turning, pattern making, foundry work, iron and steel forging, and hand and machine work in metal.

The theoretical work during the first two years consists of a thorough training in English, Chemistry, Mathematics, Physics, and Drawing; and during the last two years the fundamental principles of boiler, machine, and engine design are taken up. By a careful solution of practical problems the student becomes familiar with the process carried on by the operators and designers of successful machine plants.

The course in Mechanical Engineering involves three separate lines of work:

1. *Mechanical engineering*, the object of which is to give that training necessary to fit men to be operators and designers of steam machinery.
2. *Chemical engineering*, intended especially to give the knowledge requisite for the successful operation of iron and steel plants and the analysis of iron, steel, coals, and refractory substances.
3. *Electrical engineering*, in which the theory, design, building, and operation of dynamos and motors are predominant.

During the Freshman and Sophomore years the work for all students in the Mechanical Engineering Course is identical, but during the Junior and Senior years a student is granted the privilege of electing one of the three lines of work indicated above.

The course of study in Mechanical Engineering, extending over a period of four years, leads to the Degree B. M. E. (Bachelor of Mechanical Engineering). The advanced Degree of Mechanical Engineer may be obtained by resident students in one year after taking the degree of B. M. E. from the State College of Kentucky or any other institution of equal requirements, they having successfully carried on work laid down, passed a satisfactory examination, and presented an acceptable thesis. The advanced degree may also be taken in three years after obtaining the degree of B. M. E., provided the student has been engaged during the period of three years in practical engineering work, passes a satisfactory examination at the College and presents an acceptable thesis.

FRESHMAN YEAR.

Technical Instruction—Twenty-six weeks, three hours per week. (a) Recitations, 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, moulding, and casting.

Mechanical Drawing—Twenty-six weeks, six hours a week, and ten weeks, ten hours a week. This drawing includes free-hand sketches, drawing from copies and models, using parts of machines in the Mechanical Laboratories as models.

Shopwork—Thirty-six weeks, twelve hours a week. (a) Bench-work in wood, including exercises in the following operations: Planing, sawing, rabbeting, plowing, notching, splicing, mortising, tenoning, dovetailing, framing, paneling, and the general use of carpenters' tools. (b) Wood turning, involving the various principles of lathe-work in wood. (c) Pattern-making, which gives the student discipline in the construction of patterns for foundry work. (d) Foundry work, including the various operations of moulding, core-making, and the melting of iron and brass.

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

Algebra—Twelve weeks, five hours per week.

Geometry—Seventeen weeks, five hours per week.

Trigonometry—Nineteen weeks, five hours per week.

SOPHOMORE YEAR.

Technical Instruction—Sixteen weeks, one hour per week. (a) Lectures on the handling of iron and steel in forging, and the methods of tempering and annealing steel. (b) Lectures on modern machine-shop practice.

Mechanical Drawing—Sixteen weeks, four hours per week; thirty-six weeks, five hours per week. (a) Drawing the parts of machines and complete machines to scale. (b) Exercises in tinting and shading.

Shopwork—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.

Physics—Seventeen weeks, ten hours per week.

Solid Geometry—Seventeen weeks, five hours per week.

Analytical Geometry—Nineteen weeks, five hours per week.

Chemistry—Nineteen weeks, five hours per week.

JUNIOR YEAR.

Kinematics—Seventeen weeks, five hours per week. Under this head are studied the velocity ratios in various motions, construction of gears, cams, quick return motions, straight line motions, epicyclic trains, parallel motions, and the manner of designing trains of mechanism.

Mechanical Drawing—Thirty-six weeks, six hours per week. The work done during the year consists in the design of machines to do certain specific work, and the making of detail drawings of machines used in actual construction in the laboratories.

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.

Chemical Laboratory—Seventeen weeks, six hours per week.

Analytical Mechanics—Nineteen weeks, five hours per week.

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

Heat—Seventeen weeks, five hours per week.

Physical Laboratory—Seventeen weeks, six hours per week.

Chemistry—Twenty-four weeks, five hours per week.

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

SENIOR YEAR.

Thermodynamics—Twenty-six weeks, six 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—Seventeen weeks, five hours per week. A study of the various commercial steam boilers, consumption of fuel, incrustation, determining the horse-power of boilers, boiler tests, the design of boilers for efficiency and economy, and the methods of power transmission.

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

Mechanical Drawing—Seventeen weeks, ten hours per week. This consists in working out practical designs of boilers and steam-engine valves.

Engine and Machine Designing—Fifteen weeks, five hours per week. A study of the modern methods of designing engines and machines for strength as well as motion.

Experimental Engineering—Fifteen weeks, ten hours per week. Includes a study of the steam-engine indicator, making engine, boiler, belt, and materials for constructing tests.

Political Economy—Fifteen weeks, five hours per week.

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

Dynamo-Electric Machinery—Nineteen weeks, five 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 term of the Senior Year is given to the preparing of this thesis. The subjects for theses are assigned to students by the Professor of Mechanical Engineering, and the completed theses are kept on file with the college records, that they may serve as a reference for future investigators.

XIII. DEPARTMENT OF ANATOMY AND PHYSIOLOGY.

PROFESSOR PRYOR.

Anatomy, Physiology, and Hygiene are taught to students of the Classical, Scientific, Biological, Chemical, and Normal courses, extending throughout both terms of the Freshman year.

At the beginning of the second term a special class is organized for the benefit of Normal students. A thorough working knowledge of these branches is taught by means of lectures, demonstrations, and recitations.

This department is well provided with the apparatus necessary to illustrate the work of the student. The equipment includes papier-mache manikin, and models (Auzoux) of eye, ear, larynx, etc., skeletons, charts, microscopes, a new projecting lantern of the latest pattern, a full set of anatomical and histological lantern slides, a Thoma-Zeiss Haemacytometer, Marey's Sphygmograph, modified by Mahomed, etc.

New apparatus is purchased each year, and with the addition of a Physiological Laboratory, nothing more could be desired.

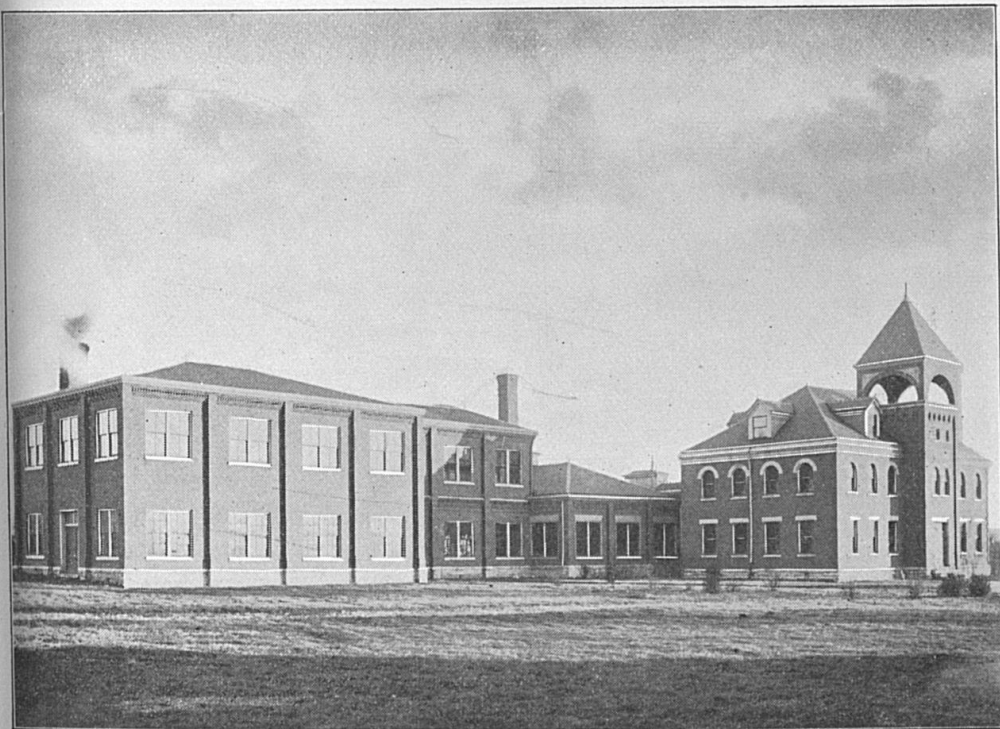
The studies of this Department, in conjunction with those in other branches of Biology and Chemistry, serve as an admirable preparation for students who intend to enter upon a professional life, and this remark applies with special force to those who are to devote themselves to the study of medicine. Special arrangements have been made with leading medical colleges whereby certificates of proficiency issued from this Department will be duly accredited by them. This, in some instances, will be equivalent to one full year's study at a medical college, and will be accepted as such. To prospective students of medicine, therefore, this department offers inducements seldom afforded in educational institutions.

Text-books: Huxley and Youmans' Physiology and Hygiene; Martin's Human Body; Martin's Briefer Course, and Shafer's Essentials of Histology.

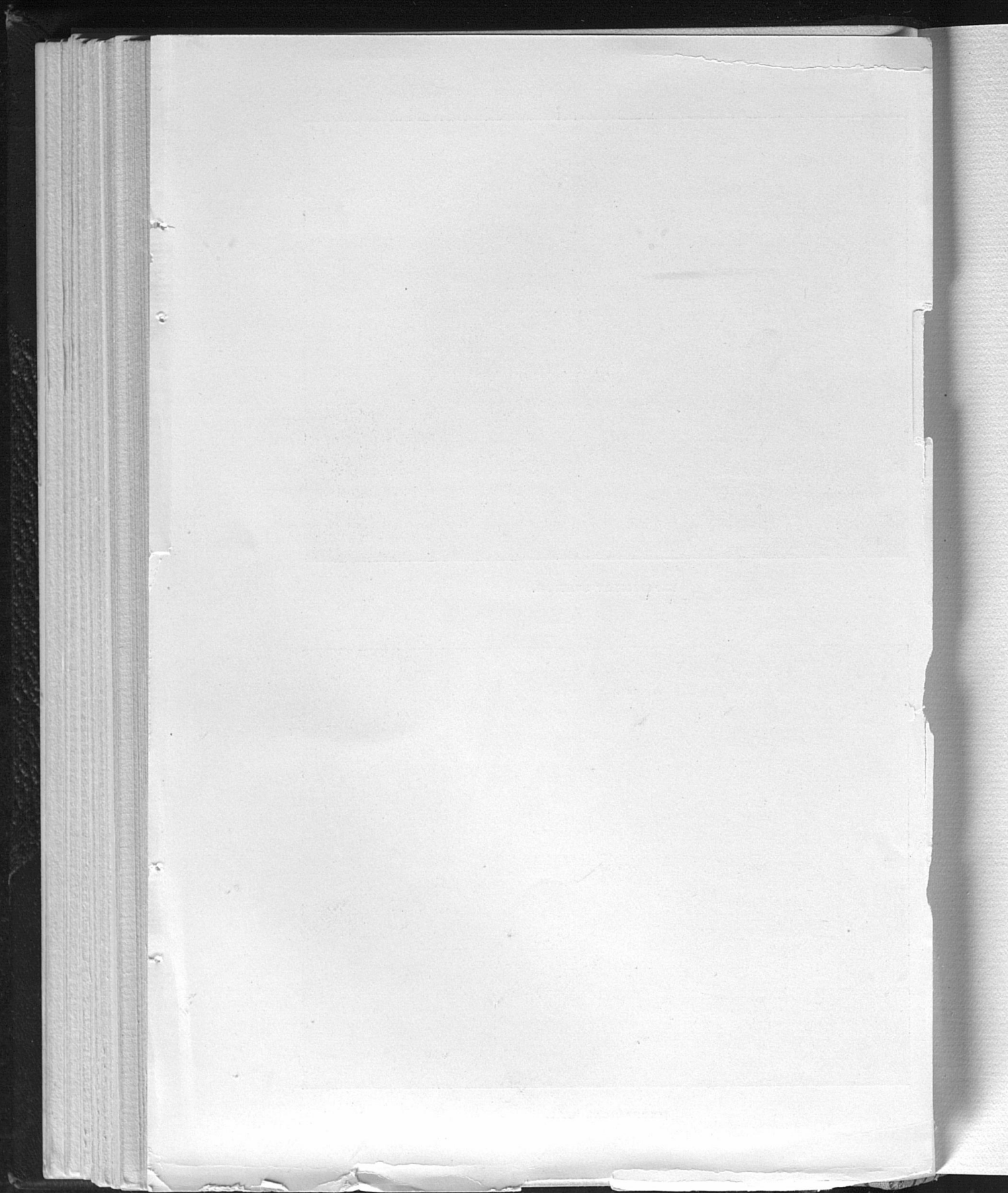
For reference only: Gray's Anatomy, Kirke's Hand-book of Physiology, and Foster's Physiology.



EXPERIMENT STATION.



MECHANICAL HALL.



XIV. DEPARTMENT OF GEOLOGY AND ZOÖLOGY.

PROFESSOR MILLER.

EQUIPMENT AND FACILITIES.

This department occupies rooms in two buildings.

The Geological Room in the main building is fitted up with cases and laboratory tables. The former are filled with a classified collection of fossils and minerals illustrative of both general and local geology. The collection of fossils from different portions of the State is especially complete. Besides a department library of geological literature, containing nearly perfect sets of Reports of both this and neighboring States, and the valuable publications of the U. S. Geological Survey, a very full set of geological maps, charts, models, lantern slides, and photographic illustrations, the result of many years' accumulation, are available for purposes of instruction.

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 preëminently an out-door 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.

The Zoölogical Laboratory in the basement of the Experiment Station is 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 paraffine baths for work in microscopy; a selection of Ward's

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.

A. GEOLOGY.

The exact time in a student's course at which the different subjects comprehended under this general title are studied, varies somewhat for the different courses; but the order of succession is as follows: 1. Palæontology, 2. Mineralogy, 3. Advanced Geology. Besides these, in which what follows is intimately based upon what precedes, are three self-contained studies: 4. Physiography, 5. A Shorter Course in Geology, and 6. Economic Geology.

I. PALÆONTOLOGY.

Second Term—Required of Juniors in the Biological, Scientific, and Bachelor of Pedagogy courses. 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. Much of the work involves the use of artificial keys for determination similar to those used in Botany and Zoölogy. Special attention is paid to the 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.

Second Term—This study follows Palæontology, with which it shares the time of the term. Required of the same students as the Palæontology. The object of this study is to render the student familiar with the composition and physical characteristics of those common minerals and rocks likely to come under his notice, as well in the ordinary round of every-day observation as

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 in the Biological, Scientific, and Bachelor of Pedagogy courses, and open to all others who may have elected to take the Palæontology and Mineralogy, which precede. 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 at doing original work. Kentucky, with its large amount of territory practically unexplored geologically, offers an especially fine field to young geologists.

Text-book: LeConte's Elements.

IV. PHYSIOGRAPHY.

First Term—Required of students in the Classical Course. Normal students have the option between this and the Shorter Course in Geology, unless they are candidates for the degree of B. Ped., in which case they take the same Geology as matriculates in the Scientific Course.

The object of this study is to give the student a somewhat comprehensive view of the earth and its inhabitants. Facts and theories in Physics, Biology, Geology, and Astronomy are enlarged upon at greater length than is usual in studies commonly included under the name of Physical Geography. Physiography is especially adapted to those who are preparing to teach, and to those in the Classical Department who, without having the time to devote to technical details, still desire some knowledge of those broad facts and principles of science which is essential to all who would lay claim to a liberal education.

Text-book: Mill's Realm of Nature.

V. SHORTER COURSE IN GEOLOGY.

This has been introduced in response to a special demand from the Normal Department for a course in Geology that would be at once short and self-contained. It is in the nature of an optional

study. Classes in it may be organized at the special request of not less than ten persons, who shall agree upon a suitable hour for meeting.

Text-book: LeConte's Compend, accompanied by lectures.

VI. ECONOMIC GEOLOGY.

Second Term—Required of all Seniors in the Chemical, Civil Engineering, and Agricultural Departments.

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 or 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 five lectures on the Relation of Geology to Agriculture will be given in connection with the new Short Course in Agriculture, instituted by recent action of the Board of Trustees.

B. ZOÖLOGY.

Under this title are comprehended the following branches:

1. Systematic Zoölogy, 2. Laboratory Zoölogy, 3. Osteology,
4. Embryology, 5. Economic Entomology.

I. SYSTEMATIC ZOÖLOGY.

First Term—Required of Juniors in the Scientific and Bachelor of Pedagogy, and of Sophomores in the Biological and Agricultural courses.

A general presentation of the subject is here attempted. The general principles governing Taxonomy are laid down and the

different sub-kingdoms taken up and studied in detail. The practical work is limited to that which can be satisfactorily accomplished in daily exercises of one hour each. Much of it consists of demonstrations by the instructor of the chief external features of the animal as well as of such internal features as can be presented in this brief space of time. Accompanying this instruction, which is given chiefly by lectures and demonstrations, the student is expected to gain facility in the determination of species through the use of natural and artificial "keys," as, for instance: Jordan's Manual of the Vertebrates of the United States, and Miss Warner's Butterflies of Kentucky. A copy of each of these is loaned to the student as a part of the laboratory equipment. In this way, the powers of scientific observation and discrimination are trained. Finally 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 the same students as have completed the Systematic Zoölogy of the first term, with the exception of the matriculates in the Chemical course. They take only the first term's work. The nature and scope of the work here is best described under the term "Animal Morphology." In the exercise of one hour and a half devoted to this subject five times a week, both the macroscopic and microscopic anatomy of animals is studied by the most approved modern methods and appliances. To each student is assigned a table with the use of a full line of apparatus and re-agents, for which no charge is made, with the exception of that for a set of dissecting instruments and for breakage. The object of this course is the acquisition by the student, first, of a thorough knowledge of the comparative anatomy of leading types; secondly, of skill in anatomical dissection and microscopical manipulation. Knowledge of this kind, obtained as it is by the direct examination of living

and dead tissue, as well as by the actual hardening, staining, sectioning, and mounting of the latter for microscopical investigation, will be found especially valuable to persons who intend to study medicine.

The instruction is given chiefly by means of lectures and printed or dictated directions for the practical work.

III. OSTEOLOGY.

First Term—Required of Juniors in the Biological and Agricultural courses. Five hours a week are given to the comparative study of the Vertebrate skeleton—chiefly that of the Mammalia. For this purpose a selected collection of Ward type skeletons are used.

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

IV. EMBRYOLOGY.

Second Term—Required of Juniors in the Biological course. Three afternoons 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.

IV. ECONOMIC ENTOMOLOGY.

First Term—This study is laid down for Seniors in the Biological and Agricultural courses.

The Entomological work is made a separate feature because of its economic importance. It is estimated by our best entomologists and statisticians that we lose annually in this country from the depredations of injurious insects not less than \$100,000,000. If this be so, it is highly important that a knowledge of insects and their habits should be disseminated among the people, and is especially important in Kentucky, where the leading industry is agriculture. It has been urged that a reduction of a crop to the extent of one fourth or one half of its value by insects should be regarded as a tax of twenty-five or fifty per cent on its full value. Such a tax is collected year after year, often without any attempt at resistance. It is the purpose of the Entomological work at the College to place in the hands of the students who expect to make farming their occupation such means of defense against loss as

are known to those who have given the matter study. The Department is especially well provided for in this direction, having the benefit of the work done at the Experimental Station, and having access to the collections, apparatus and library, accumulated for Station work. The collection now contains examples of most of the injurious insects which are found in the United States, and is constantly being enlarged. The Station is well supplied with breeding cages for use in studying the habits and life histories of insects, so that students who wish to do so have an opportunity to observe for themselves the various stages presented by a developing insect, and may see it in many cases actually engaged in its destructive work. An Insectary recently added to our facilities gives us increased opportunity in the field of investigation.

By special arrangement the instruction in this branch is under the charge of the Entomologist of the Station, Professor Garman.

XV. DEPARTMENT OF PHYSICS.

PROFESSOR PENCE.

EQUIPMENT AND FACILITIES.

The Department of Physics occupies two adjacent rooms on the east side, and in the basement of the Main College Building. The lecture room is eighteen feet by forty-four feet, and will comfortably seat fifty or more students. It has the necessary lecture table, with gas, water, and drainage, and is arranged to be used at pleasure as a dark room. The laboratory is twenty-four feet by thirty feet. It is well furnished with cases for apparatus, tables, water, instruments for use in experimentation, and has twenty-four spaces at the tables for individual work, each with gas and drawers. This department is well equipped with apparatus, nearly all of which is new. The rooms are the best fitted and furnished in the building.

COURSE OF STUDY.

The study of Physics is begun in the last year of the Academy. One hour per day for five months is given to recitations, and to a series of experiments by the instructor, illustrating the subject-matter of the text.

Text-book: Gage's Introduction to Physical Science.

The work in the College proper begins in the Sophomore year, during the first term of which there are lectures, fully illustrated by experiments, with recitations one hour daily. This course embraces the subjects of Molar, Molecular, and Ether Dynamics, treating of the General Properties of Matter, Sound, Heat, Light, Electricity and Magnetism, and is intended to give the student a general knowledge of Physical Phenomena and of Physical Laws, and to prepare him for the practical work which accompanies and follows the course.

Text-book: Gage's Principles of Physics.

The students in Engineering work in the physical laboratory one hour daily during this term, experimenting in the subjects of the lecture course.

During the second term of the Sophomore year students in the other courses work in the laboratory one and one-half hours daily. Gage's Laboratory Manual and Note-Book is used.

The work of the Junior year is specialized. Heat is studied one hour daily during the first term, some of the subjects being Thermometry, Expansion of Solids, Liquids and Gases, Calorimetry, Fusion and Vaporization, Hygrometry, Radiation, Convection, Conduction, etc. A portion of the time is given to experimentation in the laboratory.

Text-book: Cumming's Heat.

One hour daily is given to the study of Electricity and Magnetism during the second term of this year. The principal subjects studied are Frictional Electricity, Magnetism, Current Electricity, Electrostatics, Electromagnetics, Measurements of Currents, Thermo-Electricity, Heat and Power and Light from Electric Currents, Inductance, Dynamos and Transformers, Telegraphy, Telephony, Electric Radiations and Electric Waves. Work is done in the Laboratory. The Department has a fine lot of electrical apparatus.

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

Much importance is attached to all work in the laboratory. Each student is furnished with the necessary apparatus, and must keep a systematic account of all his experiments, giving data and results of each. The work is both qualitative and quantitative.

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 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.).

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 examination 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.

Students that complete a part of the courses in a satisfactory manner may, in attestation of the fact, receive Certificates of Proficiency.

GROUPING OF COURSES FOR DEGREES.

I. COURSES FOR THE DEGREE OF B. S.,

WITHOUT MAJOR STUDY.

History, Political Economy, and Metaphysics, . .	President Patterson.
Botany,	Professor Mathews.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
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,	Ass't Professor Wells.

For the Degree of M. S., either 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. (Gen. Course.)

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN YEAR.	English.	Plane Geom.	Drawing.	Physiology.	Drill.	
	English.	Plane Trigonom.	Algebra.	Physiology.	Drill.	
SOPHOMORE YEAR.	Solid Geom.	German.	Physics.		Drill.	Botany. (Laboratory.)
	Analytic Geom.	German.	Botany.	Chemistry.	Drill.	Physics. (Laboratory.)
JUNIOR YEAR.	Zoölogy.	English.	French.	German.	Drill.	Chemistry. (Laboratory.)
	Geology. (Palæontology and Mineralogy).	English.	French.	German.	Drill.	Zoölogy. (Laboratory.)
SENIOR YEAR.		History.	Mental Philosophy.		Drill.	Geology. (General.)
		History. Polit. Economy.	Logic.	Astronomy.	Drill.	

II. COURSES FOR THE DEGREE OF B. S.,

MAJOR STUDY, CHEMISTRY.

History, Political Economy, and Metaphysics, . . .	President Patterson.
Botany,	Professor Mathews.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics,	Professor White, Dean.
The French and German Languages,	Professor Wernicke.
Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Physics,	Professor Pence.

For the Degree of M. S., either Chemistry, Biology, Geology, Mathematics, or Physics may be selected as major study; and minors will be assigned from Biology, Chemistry, Geology, Mathematics, Physics, English Literature, History, Political Economy, Mental Science, French and German.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (Maj. Chem.)

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	2:30 TO 4 P. M.
FRESHMAN YEAR.	English.	Geometry.	French.	Physiology.	Drill.	
	English.	Trigonometry.	Algebra.	Physiology.	Drill.	
SOPHOMORE YEAR.	Solid Geometry.	German.	Physics.		Drill.	Botany. (Laboratory.)
	Analytical Geometry.	German.	Botany.	Chemistry.	Drill.	Physics. (Laboratory.)
JUNIOR YEAR.	Zoölogy.	English.	Calculus.	German.	Drill.	Chemistry. (Laboratory.)
	Theoretical Chemistry.	English.	French.	German.	Drill.	Chemistry. (Laboratory.)
SENIOR YEAR.		History.	Mental Philosophy.	General Chemical Reading.	Drill.	Chemistry. (Laboratory.)
		Political Economy.	Logic.	Economic Geology.	Drill.	Chemistry. (Thesis.)

III. COURSES FOR THE DEGREE OF B. S.,

MAJOR STUDY, BIOLOGY.

History, Political Economy, and Metaphysics, . .	President Patterson.
Botany,	Professor Mathews.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics,	Professor White, Dean.
The French and German Languages,	Professor Wernicke.
Entomology,	Professor Garman.
Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Physics,	Professor Pence.
Drawing,	Ass't Professor Wells.

For the Degree of M. S., either Chemistry, Biology, Geology, Mathematics, or Physics may be selected as major study; and minors will be assigned from Biology, Chemistry, Geology, Mathematics, Physics, English Literature, History, Political Economy, Mental Science, French and German.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. S. (Maj. Biol.)

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN YEAR.	English.	Geometry.	Drawing.	Physiology.	Drill.	
	English.	Trigonometry.	Algebra.	Physiology.	Drill.	
SOPHOMORE YEAR.	Zoölogy.	German.	Physics.		Drill.	Botany.
		German.	Botany.	Chemistry.	Drill.	Zoölogy.
JUNIOR YEAR.	Plant Histology.	Osteology.	French.	German.	Drill.	Cryptogamic Botany.
	Geology (Palæontology and Mineralogy.)		French.	German.	Drill.	Embryology. Plant Physiology.
SENIOR YEAR.	Entomology.	History.	Mental Philosophy.		Drill.	General Geology.
	Botany (Special Work.)	Political Economy.	Logic.	Astronomy.	Drill.	Thesis.

IV. COURSES FOR THE DEGREE OF A. B.,

MAJOR STUDIES, GREEK AND LATIN.

History, Political Economy, and Metaphysics, . . .	President Patterson.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics and Astronomy,	Professor White.
The French and German Languages,	Professor Wernicke.
The Greek and Latin Languages,	Professor Neville, Dean. Asst. Prof. Blanton.
Physiology,	Professor Pryor.
Physiography,	Professor Miller.

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

SCHEDULE OF STUDIES FOR THE DEGREE OF A. B.

FIRST HOUR.		SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN YEAR.	English.	Greek or German.	Physiology.	Latin.	Drill.	
	English.	Greek or German.	Algebra.	Latin.	Drill.	
SOPHOMORE YEAR.	Latin.	Plane Geometry.	Greek.	Elective Study.	Drill.	
	Latin.	Plane Trigonometry.	Greek.	Chemistry.	Drill.	
JUNIOR YEAR.	Solid Geometry.	English.	French.	Greek or German.	Drill.	
	Analytical Geometry.	English.	French.	Greek or German.	Drill.	
SENIOR YEAR.	French.	History.	Mental Philosophy.	Physiography.	Drill.	
	French.	Political Economy.	Logic.	Astronomy.	Drill.	

V. COURSES FOR THE DEGREE OF B.PED.

MAJOR STUDY, PEDAGOGY.

History, Political Economy, and Metaphysics,	President Patterson.
Botany and Horticulture,	Professor Mathews.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics and Astronomy,	Professor White.
The Greek and Latin Languages,	Professor Neville.
Pedagogy,	Professor Roark, Dean. Asst. Prof. Newman.
Anatomy and Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Physics,	Professor Pence.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. PED.

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN YEAR.	English Literature.	Plane Geometry.	Drawing.	Physiology.	Drill.	
	English Literature.	Plane Trigonometry.	Algebra.	Physiology.	Drill.	
SOPHOMORE YEAR.	Solid Geometry.	Cicero.	Physics.		Drill.	Botany. (Laboratory.)
	Analytical Geometry.	Virgil.	Botany.	Chemistry.	Drill.	Physics. (Laboratory.)
JUNIOR YEAR.	Zoölogy.		Horace.		Drill.	Chemistry. (Laboratory.)
	Geology. (Palæontology, Mineralogy.)	Advanced Latin.	Educational Psychology.		Drill.	Zoölogy. (Laboratory.)
SENIOR YEAR.		History.	Mental Philosophy.	School Economy Methods.	Drill.	Geology. (General.)
	School Economy, History of Education.	History, Political Economy	Logic, Astronomy, Moral Philosophy.	Astronomy.	Drill.	

SCHEDULE OF STUDIES FOR THE STATE DIPLOMA.

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AT OTHER HOURS.
ONE YEAR.	Latin.	Plane Geometry.	Psychology.	Physics.	Drill.	Forensics.
	English Literature.	Advanced Arithmetic.	Advanced Algebra.	Latin.	Drill.	Forensics, Pedagogy.

SCHEDULE OF STUDIES FOR THE COUNTY CERTIFICATE.

FIVE MONTHS.	Arithmetic or Grammar.	Geography or Composition.	Civics or Orthography.	U. S. History.	Drill.	Forensics.
	Arithmetic or Composition.	Higher Arithmetic or Grammar.	Geography or Physiology.	Civics.	Drill.	Forensics.
TEN WEEKS.	Ky. History or Grammar.	Higher Arithmetic or Composition.	Geography or Physiology.	U. S. History.	Drill.	Forensics, Pedagogy.

SCHEDULE OF STUDIES FOR THE STATE CERTIFICATE.

SECOND FIVE MONTHS.	English Literature.	Higher Arithmetic.	Psychology.	Algebra.	Drill.	Forensics, Pedagogy.
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VI. COURSES FOR THE DEGREE OF B. C. E.,

MAJOR STUDY, CIVIL ENGINEERING.

History and Political Economy,	President Patterson.
The English Language and Literature,	Professor Shackleford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics and Astronomy,	Professor White.
Civil Engineering,	Professor Nelson, Dean.
Mechanical Engineering,	Professor Anderson.
Geology,	Professor Miller.
Physics,	Professor Pence.
Descriptive Geometry,	Asst. Prof. Wells.

For the Degree of C. E., either Railways, Structures, Regimen of Streams, Canals and Water Power, Municipal or Mining Engineering, Sanitation, Topographical, Geodetic, and Hydrographical Surveys, 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.

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN YEAR.	English.	Plane Geometry.	Draughting.	Draughting.	Drill.	Fieldwork Draughting.
	English.	Plane Trigonometry.	Plane Surveying.	Topographical Drawing.	Drill.	Fieldwork Draughting.
SOPHOMORE YEAR.	Solid Geometry, Algebra.	Railway Location.	Physics.	Physical Laboratory.	Drill.	Fieldwork Draughting.
	Analytical Geometry.	Descriptive Geometry.	Structural Designs.	Chemistry.	Drill.	Fieldwork Draughting.
JUNIOR YEAR.	Railways, Other Highways.	Graphical Statics.	Calculus.	Advanced Surveying, Spher. Trigonom.	Drill.	Structural Draughting.
	Electricity, Magnetism.	Strength of Materials.	Theory of Structures.	Analytical Mechanics.	Drill.	Architectural Draughting.
SENIOR YEAR.	Bridges and Structures.	History.	Hydraulic Engineering, Architecture.	Sanitary Engineering, Architecture.	Drill.	Designing Structures.
	Stereotomy, Mining.	Political Economy.	Geodesy, Least Squares.	Economic Geology.	Drill.	Thesis.

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

MAJOR STUDY, MECHANICAL ENGINEERING.

History and Political Economy,	President Patterson.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics,	Professor White.
Mechanical Engineering,	Professor Anderson, Dean. Asst. Prof. Wells.
Physics,	Professor Pence.
Shopwork and Drawing,	Instructor Johnson.
Experimental Engineering,	Assistant Kearney.

For the Degree of M. E., either 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.

VIII. COURSES FOR THE DEGREE OF B. AGR.,

MAJOR STUDIES, BOTANY, HORTICULTURE, AND AGRICULTURE.

History, Political Economy, and Metaphysics, . . .	President Patterson.
Agriculture, Horticulture, and Botany,	Professor Mathews.
The English Language and Literature,	Professor Shackelford.
Military Science,	Captain Swigert.
Chemistry,	Professor Kastle.
Mathematics and Astronomy,	Professor White.
The French and German Languages,	Professor Wernicke.
Entomology,	Professor Garman.
Anatomy and Physiology,	Professor Pryor.
Geology and Zoölogy,	Professor Miller.
Mechanical Engineering,	Professor Anderson.
Physics,	Professor Pence.
Drawing,	Asst. Prof. Wells.

For the Degree of M. Agr., either Agricultural Chemistry, Horticulture, Entomology, Economic Botany or Veterinary Science may be selected as major study; and minors will be assigned from Agricultural Chemistry, Horticulture, Entomology, Zoölogy, Geology, Botany, and Veterinary Science.

SCHEDULE OF STUDIES FOR THE DEGREE OF B. AGR.

	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	AFTERNOON.
FRESHMAN YEAR.	English.	Geometry.	Drawing.	Physiology.	Drill.	
	English.	Trigonometry.	Algebra.	Physiology.	Drill.	Woodwork, Forging.
SOPHOMORE YEAR.	Zoölogy.	German.	Physics.		Drill.	Botany. (Laboratory.)
		German.	Botany.	Chemistry.	Drill.	Zoölogy. (Laboratory.)
JUNIOR YEAR.	Plant Histology.	Osteology.	French.	German.	Drill.	Chemistry. (Laboratory.)
	Agricultural Chemistry.	Soils, Draining, Fertilizers.	French.	German.	Drill.	Plant Physiology, Horticulture.
SENIOR YEAR.	Entomology.	Stock Breeding, Feeding, Dairying.		Horticulture.	Drill.	Economic Botany.
		Political Economy.		Economic Geology.	Drill.	Thesis.

THE ACADEMY.

W. K. PATTERSON,
PRINCIPAL.

J. LEWIS LOGAN,
J. MORTON DAVIS,
V. E. MUNCY,
ASSISTANTS.

COURSES OF STUDY.

I. SCIENTIFIC, AGRICULTURAL, AND ENGINEERING COURSE.

First Year — Arithmetic, Robinson's Complete; Algebra, Wentworth's Higher, to Chapter XI; Political and Descriptive Geography, Butler's Complete; History of the United States, Eggleston; English Grammar, Patterson's Advanced.

Second Year — Arithmetical Problems, Robinson; Algebra, Wentworth's Higher, to Chapter XXII; Elementary Physics, Gage; Physical Geography, Tarr; General History, Anderson; Rhetoric, Williams; Synonyms, Graham.

II. CLASSICAL AND NORMAL COURSE.

First Year — Latin Grammar, McCabe's Bingham; Viri Romae or Scudder's Gradatim; White's Beginner's Greek Book, or Gleason and Atherton's First Greek Book; Arithmetic, Robinson's Complete; Algebra, Wentworth's Higher, to Chapter XI; English Grammar, Patterson's Advanced.

Second Year — Latin Grammar continued; Cæsar, Kelsey; Greek Grammar continued; Gleason's Gate to the Anabasis; Xenophon's Anabasis, Kelsey; Arithmetical Problems, Robinson; Algebra, Wentworth's Higher, to Chapter XXII; Elementary Physics, Gage; Rhetoric, Williams; Synonyms, Graham.

SCHEDULE OF STUDIES IN THE ACADEMY.

SCIENTIFIC, AGRICULTURAL, AND ENGINEERING.					
FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.	SIXTH HOUR.
FIRST YEAR.	English Grammar.	Geography.	Arithmetic.	Algebra.	Drill.
	English Grammar.	History.	Arithmetic.	Algebra.	Drill.
SECOND YEAR.	Rhetoric.	Algebra.	Physical Geography.	Arithmetic.	Drill.
	Rhetoric Synonyms.	Algebra.	History.	Physics.	Drill.
CLASSICAL AND NORMAL.					
FIRST YEAR.	English Grammar.	Latin Grammar.	Arithmetic.	Algebra.	Drill.
	Greek Grammar.	Latin Grammar.	Arithmetic.	Algebra.	Drill.
SECOND YEAR.	Rhetoric.	Algebra.	Latin Reader.	Physics.	Greek Reader.
	Rhetoric Synonyms.	Algebra.	Cæsar.	Arithmetic.	Anabasis.

NOTE—Greek is for classical students only.

The Academy is under the immediate direction and management of a Principal and three Assistants, all of whom are experienced professional teachers.

The pupils 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, such as chapel, drill, etc., the preparation of their lessons being made elsewhere.

The courses of instruction 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 course of study prescribed by the State Board of Education for the common schools and the Freshman Class of the College.

Applicants for admission to the Academy, if county appointees, must be at least fourteen years of age, and must be provided with credentials of scholarship from the County Superintendent. They must also pass a satisfactory examination in spelling, reading, writing, arithmetic, history of the United States, English grammar and geography, in order to be admitted.

Other applicants must be at least fifteen years of age, and must have completed the common school course prescribed by the State Board of Education. They must pass a satisfactory examination in spelling, reading, writing, arithmetic to percentage, English grammar through syntax, and geography, in order to be admitted. Applicants from the city will be required to pass an examination on all the subjects embraced in the first year's Scientific Course in the Academy. 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 which 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 EXAMINATION.

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 examina-

tion papers are submitted as a sample. It is not to be understood that these are the questions on which the pupils will be examined, but that they indicate the 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.

$$\text{Simplify } 2\frac{1}{4} \times \frac{10\frac{3}{4} - 4\frac{1}{2}}{6\frac{3}{8} \times 7\frac{2}{3}} \div \frac{3\frac{5}{11}}{1\frac{2}{5} + 9\frac{1}{11}}$$

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-board?

If a train at the rate of $\frac{5}{13}$ of a mile per minute takes $3\frac{1}{4}$ hours to reach a station, how long will it take at the rate of $\frac{7}{15}$ of a mile per minute?

A and B can do a piece of work in $2\frac{1}{2}$ days, A and C in $3\frac{1}{3}$ days, B and C in $4\frac{1}{4}$. Required the time in which all these 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 $3\frac{1}{8}$ feet long, 3 inches wide, $2\frac{3}{4}$ inches thick weighs 93 pounds, what will be the weight of a bar $3\frac{3}{8}$ feet long, 4 inches wide, and $2\frac{1}{4}$ inches thick?

II. ENGLISH GRAMMAR.

Name, define, and give examples of all 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? the French? the English?
- Give a concise description of the settlement of Plymouth, Jamestown, New York City, and their distinctive characteristic.
- 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.

STUDENT ORGANIZATIONS.

THE UNION LITERARY SOCIETY.

This, the oldest of the four 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 main building, 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 named at the suggestion of Gov. Knott 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 George W. Crum, of Louisville.

THE PHILOSOPHIAN SOCIETY.

The Philosopher Society, formed by the young women of the College in 1882 for literary improvement and social pleasure, offers, besides the usual weekly meetings, a public entertainment consisting of declamations, essays, criticisms, and orations.

THE MECHANICAL 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.

THE BIOLOGICAL SOCIETY.

This was the first Scientific Society organized in the institution. For a time it was composed chiefly of members of the Faculty and of the staff of the Experiment Station. Recently it has been reorganized and placed under the management of students, still retaining, however, the larger part of the original members.

The objects of the Society are the cultivation of an interest in Natural History and the stimulation of a spirit of original research. The exercises at the monthly meetings consist of essays and discussions.

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. Denison, Texas.

1871.

HARDING, ENOCH, B. S. Ft. Worth, Texas.

1874.

CARSWELL, ROBERT EMMETT, B. S. Decatur, Texas.

DEAN, JOHN ALLEN, B. S. Owensboro.

HARDIN, THOMAS ROLLINS, B. S., Fort Jesup, La.

SMITH, EDWARD EVERETT, B. S. Atlanta, Ga.

1875.

BROWN, EDGAR THOMAS, B. S. Wichita, Kansas.

1877.

FLOETE, FRANKLIN, B. S. Spencer, Iowa.

WARD, BALLARD PRESTON, B. S. Speedwell, Va.

1878.

COLE, MOSES SALVADOR, B. S. Rivas, Nicaragua.

*MACKIE, MAHLON, B. S.

1879.

BLAKELY, CHARLES GRAHAM, B. S. Topeka, Kansas.

HAYS, NAPOLEON BONEPARTE, B. S. Pineville.

PERRY, CALEB SYKES, B. S. Winfield, Kansas.

WRIGHT, HENRY MOSES, B. S. Rome, Georgia.

1880.

CRAWFORD, JAMES, B. S. Lexie, Tennessee.

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. Lexington.

*Deceased.

1882.

BERRY, GEORGE G., B. S. Lexington.
 DE ROODE, LOUIS KUINDERS, A. B. Louisville.
 PATTERSON, JOHN LETCHER, A. B. Louisville.
 RODGERS, EDWARD LEE, A. B. Cincinnati, Ohio.
 SHACKLEFORD, JOHN ARMSTRONG, A. B. Tacoma, Wash.
 STOLL, JOHN WILLIAM, A. B. Lexington.

1883.

*KING, WILLIAM ELIJAH, B. S.
 TAYLOR, JAMES W., A. B. St. Louis, Mo.

1884.

EUBANKS, BURTON PENDERGAST, B. S. Ft. Worth, Texas.
 GRAVES, CLARENCE SCOTT, B. S. Lexington.
 *JONES, HENRY CLAY, B. S. Lexington.
 KASTLE, JOSEPH HOEING, B. S. Lexington.
 RAMSEY, RUSSELL THOMAS, B. S. London.
 RILEY, OTIS VIOLETTE, B. S. Pineville.

1885.

DE ROODE, RUDOLPH JOHN JULIUS, B. S. New York, N. Y.
 GESS, GEORGE THOMAS, B. S. Lexington.
 GORDON, J. CRITTENDEN, B. S. Pleasureville.
 LAMBUTH, WILLIAM DAVID, A. B. Seattle, Washington.
 SCOTT, JAMES RUSSELL, B. S. Lexington.
 THORNBURY, WILLIAM GARLAND, B. S. New York, N. Y.

1886.

MORGAN, THOMAS HUNT, B. S. Bryn Mawr, Pa.
 PREWITT, ROBERT LEE, A. B. Walnut Hill.
 PREWITT, WILLIAM C., A. B. Ft. Worth, Texas.

1887.

HIFNER, KEARNEY LEE, B. S. South Elkhorn.
 SHACKLEFORD, THOMAS WHEATLEY, A. B. Superior, Wis.

1888.

BARTLETT, FREDERICK VINCENT, B. S. Lexington.
 BRYAN, GEORGE GIST, B. S. Lexington.
 CURTIS, HENRY ERNEST, B. S. Lexington.
 GUNN, BELLE CLEMENT, B. S. Springfield, Ohio.
 PAYNE, ROBERT TREAT, B. S. Athens.

1889.

ELLERSHAW, EDWARD, A. B. Digby, Nova Scotia.
 FRAZER, HUGH MILLER, B. S. Lexington.
 *PATTERSON, WILLIAM ANDREW, B. S. Lexington.
 PREWITT, ANNIE GIST, B. S. Walnut Hill.
 WALKER, ROBERT BERNIE, B. S. Lexington.

*Deceased.

1890.

ANDERSON, RICHARD THOMAS, JR., B. S. Lexington.
 BAKER, ANNIE JANE, B. S. Lexington.
 BROCK, CHARLES ROBERT, B. S. London.
 FORSTON, KEENE RICHARDS, B. S. Indianapolis.
 GUNN, JOHN WESLEY, C. E. Lexington.
 HOEING, CHARLES, A. B. Lexington.
 WILSON, MARGARET AGNES, B. S. Chicago, Ill.
 YATES, JAMES ANDERSON, B. S. Williamsburg.

1891.

BERRY, HENRY SKILLMAN, B. S. Lexington.
 CLARDY, U. L., B. S. Newstead.
 MUNCY, VICTOR EMANUEL, B. S. Lexington.
 WALLIS, WILLIAM RUSSELL, C. E. Lexington.
 WARNER, B. CALLIE, B. S. Lexington.

1892.

COX, ARTHUR MELVILLE, A. B. Cynthiaana.
 ELKIN, FIELDING CLAY, B. S. Lexington.
 HUNT, IRENE LEONORA, B. S. Lexington.
 MAXEY, JOHN GEE, A. B. Tompkinsville.
 PAGE, WILLIAM SEABURY, C. E. McMillin, Wash.
 POTTINGER, SAMUEL LANCASTER, A. B. Louisville.
 *REYNOLDS, FRANK CRAIG, C. E.
 SCOVELL, FRANK ELMER, C. E. Rosehill, Ill.
 SHAW, HIRAM, JR., B. S. Lexington.
 SHELBY, ISAAC PRATHER, C. E. Lexington.
 SOUTHGATE, BUTLER TURPIN, A. B. Lexington.

1893.

ADAMS, KATHERINE INNES, A. B. Lexington.
 BRYAN, JOHN IRWIN, B. S.; B. M. E., '95. San Francisco, Cal.
 COURTNEY, EDMUND, B. Ped. Louisville.
 GUNN, HENRY MARTIN, B. S. Lexington.
 HOBODY, WILLIAM COTT, B. S. New York, N. Y.
 JOHNSON, JAMES RICHARD, B. M. E. Lexington.
 MCFARLIN, JOHN WILLIAM, B. S. Winchester.
 RAILEY, MORTON SANDERS, C. E. Washington, D. C.
 ROBERTS, DANIEL STILLWELL, B. Ped. Ekron.
 SMITH, DENNY PERRYMAN, B. S. Cadiz.
 SPEYER, ROSA, B. S. Lexington.
 WARE, CORA E., B. Ped. Pineville, La.
 WHITE, MILFORD, C. E. Ottawa, Kan.
 WILLIS, BENJAMIN GRANT, B. S. Lexington.

1894.

AULICK, EDWIN CHESTERFIELD, A. B. Frankfort.
 BRADSHAW, GEORGE DICKIE, B. Ped. Winchester.
 BRAND, EDWARD, A. B. Cynthiaana.
 CURTIS, CARLTON COLEMAN, B. S. Lexington.
 FAIG, JOHN THEODORE, B. M. E. Ann Arbor, Mich.

GARRED, ULYSSES ANDERSON, B. M. E. Chicago, Ill.
 GRIFFING, EMMA ROSETTA, B. S. Lexington.
 HAYS, JAMES MORRISON, A. B. Barboursville.
 HUGHES, LEONARD SAMUEL, B. S. Frankfort.
 JONES, MATTISON BOYD, A. B. Williamsburg.
 KEISER, BENJAMIN CHRISTOPHER, B. S. Chicago, Ill.
 KROESING, LILLIE, B. S. Lexington.
 NEWTON, NATHAN ALEXANDER, B. M. E. Lexington.
 NORMAN, ALBERT CLIFT, B. M. E. Savannah, Ga.
 OOTS, NINA PEARL, B. S. Lexington.
 SHELBY, KATHERINE, B. S. Lexington.
 SLEDD, DORA, B. Ped. Lexington.
 TRIGG, WILLIAM CLAY, C. E. Pushmataha, Miss.
 WARNER, HATTIE HOCKER, B. S. LaFollette, Tenn.

1895.

ATKINS, MARY LYONS, B. S. Lexington.
 BUSH, HENRY SKILLMAN, B. S. Lexington.
 DIDLAKE, MARY LEGRAND, B. S. Lexington.
 DOWNING, JOSEPH MILTON, B. M. E. Lexington.
 FAULKNER, JOHN VICK, C. E. Hampton.
 FITZHUGH, LUCY STUART, A. B. Lexington.
 FOSTER, NETTIE BELLE, B. S. Lexington.
 KING, ELIZABETH WHITTINGTON, A. B. Lexington.
 LEWIS, THOMAS STONE, A. B. Louisville.
 MCCONATHY, JAMES ASA, B. S. Kirtlevington.
 MCCAUGHLIFFE, MARY CATHERINE, B. S. Lexington.
 MURRILL, PAUL INGOLD, B. S. Ann Arbor, Mich.
 NEWMAN, ROBERTA, B. S. Muir.
 REYNOLDS, NELLIE ANNA, B. S. Lexington.
 STOLL, RICHARD CHARLES, A. B. Lexington.
 WEAVER, RUFUS LEE, B. S. Ann Arbor, Mich.
 WILMOTT, JOHN WEBB, A. B. Lexington.
 WOODS, JOHN JOSEPH, A. B. Cynthiana.

1896.

ALFORD, SMITH EDISON, A. B. Lexington.
 CARNAHAN, JAMES WILLIAM, A. B. Manchester.
 CASE, DANIEL MORRIS, B. M. E. Lexington.
 DAVIDSON, HARRY ADOLPH, C. E. Louisville.
 DEAN, THOMAS ROLAND, A. B. Little Hickman.
 DUCK, ALICE, B. S. Lexington.
 DUNLAP, JOHN JENNINGS, A. B. Independence.
 KERRICK, FELIX, A. B. Hardinsburg.
 LYLE, JOEL IRVIN, B. M. E. Ludlow.
 MCDOWELL, EDWARD CAMPBELL, B. M. E. Cynthiana.
 ORMAN, HENRY, B. M. E. Danville.
 TRIGG, JOHN HENRY, B. S. New Columbus.
 WOODS, JOHN WESLEY, A. B. Webbville.

1897.

ALLEN, WILLIAM RAYMOND, A. B. Lexington.
 ANDERSON, HENRY CLAY, B. M. E. Seven Guns.
 ATKINS, ANTOINETTE THORNTON, B. S. Lexington.
 BLESSING, GEORGE FREDERICK, B. M. E. Carrollton.
 BULLOCK, SAMUEL ARCHIBALD, B. M. E. Lexington.
 CASSIDY, ELIZABETH, B. S. Lexington.
 CLARKE, MARY EVA, B. S. Lexington.
 COLLIER, WILLIAM HENRY, B. M. E. Hooktown.
 DEBOW, SAMUEL CARRUTHERS, B. M. E. Hickman.
 DOWNING, GEORGE CRUTCHER, B. Ped. Frankfort.
 DUCK, BERKLEY WILSON, B. M. E. Lexington.
 DUNCAN, WILLIAM ADOLPHUS, B. M. E. Franklin.
 FRAZER, JOSEPH CHRISTIE, B. S. Fayette County.
 GEARY, JOHN THOMAS, B. S. Lexington.
 GORDON, ROBERT LEE, A. B. Fayette County.
 GUNN, CLARA BROOKE, B. S. Lexington.
 HALEY, JOHN THOMAS, B. S. Fayette County.
 HENDREN, JAMES HARRY, B. S. Speedwell.
 HICKS, ARTHUR LEE, A. B. Danleyton.
 KELLY, THOMAS CONWAY, B. M. E. Georgetown.
 MCHARGUE, BARBARA SUSAN, B. S. Boreing.
 MORGAN, GEORGE MATT, B. S. Pineville.
 POPE, ROBERT LEE, A. B. Barboursville.
 SCOTT, JOHN, A. B. Lexington.
 SEARCY, LULU, B. Ped. Lexington.
 SIMRALL, JAMES ORLANDO HARRISON, A. B. Lexington.
 WARNER, LOGAN HOCKER, B. S. LaFollette, Tenn.
 WHITE, MARTHA RIPPERDAN, B. S. Lexington.

MILITARY DEPARTMENT.

ROSTER.

S. M. SWIGERT, CAPTAIN SECOND CAVALRY, U. S. ARMY,
Commandant.

CADET BATTALION.

STAFF.

FIRST LIEUT. AND ADJT., G. F. BLESSING.	SERGT. MAJ., B. W. DUCK.
FIRST LIEUT. AND QR. MAST., S. C. DEBOW.	QR. MAST. SERGT., G. G. BROCK.
CHIEF TRUMPETER, A. S. REESE.	TRUMPETER, C. W. McELROY.
COMMISSARY SERGT., T. G. ROACH.	CORP. SIG. DEPT., E. H. BAKER.

INFANTRY.

A COMPANY.	B COMPANY.	C COMPANY.	D COMPANY.
CAPTAIN.	CAPTAIN.	CAPTAIN.	CAPTAIN.
J. T. GEARY.	H. C. ANDERSON.	J. D. TURNER.	J. C. FRAZER.
FIRST LIEUT.	FIRST LIEUT.	FIRST LIEUT.	FIRST LIEUT.
R. E. WARREN.	W. J. CAHILL.	W. A. DUNCAN.	J. T. HALEY.
SECOND LIEUT.	SECOND LIEUT.	SECOND LIEUT.	SECOND LIEUT.
W. R. ALLEN.	W. H. SCHERFFIUS.	W. H. DAVIS.	S. A. BULLOCK.
SERGEANTS.	SERGEANTS.	SERGEANTS.	SERGEANTS.
T. S. HAMILTON.	J. O. H. SIMRALL.	W. T. DAVIS.	L. B. BROCK.
H. N. DAVIS.	E. C. LOEVENHART.	T. C. KELLY.	R. L. GORDON.
J. SCOTT.	J. MORROW.	T. W. SCHOLTZ.	G. C. DOWNING.
F. D. BULLOCK.	W. T. CARPENTER.	T. L. CAMPBELL.	J. B. JOHNSON.
C. W. WOOLLEY.	W. L. BRONAUGH.	C. C. JETT.	C. REISCH.
CORPORALS.	CORPORALS.	CORPORALS.	CORPORALS.
M. E. JOHNSTON.	R. F. SEVERS.	S. A. GLASS.	L. B. ALLEN.
W. J. GRINSTEAD.	A. L. HICKS.	R. K. MADDOCKS.	E. E. TANNER.
H. A. HOEING.	F. P. FARLEY.	R. J. THOMPSON.	A. S. KIDD.
J. A. VANORSDEL.	W. L. BROCK.	G. ROBERTS.	B. W. YOUNG.
F. W. GREEN.	C. REED.	T. E. MARTIN.	C. J. CORNETT.
C. W. BRADLEY.	J. M. GRAVES.	F. K. COOPER.	D. P. SCOTT.

ARTILLERY.

CAPTAIN.
G. M. MORGAN.

FIRST LIEUT.
V. H. DENNY.

SERGEANTS.
J. S. JOHNSON.
J. R. VINSON.

CORPORALS.
A. J. ASHER.
C. L. STRAUSS.

POST-GRADUATES.

- ✓ Alford, Smith Edison.....ClassicalLexington.
 Beatty, Wallace Appleton.....ChemicalLexington.
 Didlake, Mary LeGrande.....Biological.Lexington.
 Faig, John TheodoreMech. Eng.....Ann Arbor, Mich.
 Kemper, Graham HawesChemicalLexington.
 King, Elizabeth Whittington.....ClassicalLexington.
 Sweeney, William OglesbyChemicalLexington.

UNDERGRADUATES.

SENIORS.

- ✓ Allen, William Raymond.....ClassicalLexington.
 ✓ Anderson, Henry Clay.....Mech. Eng.....Seven Guns.
 ✓ Atkins, Antoinette ThorntonScientificLexington.
 ✓ Blessing, George FrederickMech. Eng.....Carrollton.
 ✓ Bullock, Samuel ArchibaldMech. Eng.....Lexington.
 ✓ Cassidy, ElizabethScientificLexington.
 ✓ Clarke, Mary Eva.....ScientificLexington.
 ✓ Collier, William HenryMech. Eng.....Hooktown.
 ✓ DeBow, Samuel CarruthersMech. Eng.....Hickman.
 ✓ Downing, George Crutcher.....NormalFrankfort.
 ✓ Duck, Berkley WilsonMech. Eng.....Lexington.
 ✓ Duncan, William AdolphusMech. Eng.....Franklin.
 ✓ Frazer, Joseph ChristieScientificLexington.
 ✓ Geary, John Thomas.....ScientificLexington.
 ✓ Gordon, Robert Lee.....ClassicalLexington.
 ✓ Gunn, Clara Brooke.....ScientificLexington.
 ✓ Haley, John ThomasScientificLexington.
 ✓ Hendren, James Harry.....ScientificSpeedwell.
 ✓ Hicks, Arthur LeeClassicalDanleyton.
 ✓ Kelly, Thomas ConwayMech. Eng.....Georgetown.
 McHargue, Barbara SusanScientificBoreing.
 Morgan, George MattScientificPineville.
 Pope, Robert LeeClassicalBarboursville.
 Roberts, Daniel StillwellClassicalEkron.
 Scott, JohnClassicalLexington.
 Searcy, LuluNormalLexington.
 Simrall, James Orlando Harrison.....ClassicalLexington.
 Turner, Job DarbinNormalMinnie.
 Warner, Logan Hocker.....ScientificLa Follette, Tenn.
 ✓ White, Martha RippordanScientificLexington.

1896-97

JUNIORS.

Anderson, Victor Vance.....	Classical	Barboursville.
Bonnyman, James Joseph	Civ. Eng.	Lexington.
Brock, George Green.....	Classical	Bush.
✓ Brock, La Fayette Breckinridge ..	Scientific.....	Lexington.
Cahill, William James	Mech. Eng.	Lexington.
Campbell, Thomas Luther.....	Classical	Clinton.
Carpenter, William Thomas	Mech. Eng.	Lexington.
Davis, Horace Newton.....	Civ. Eng.	Lexington.
Denny, Van Hamilton	Classical	Lexington.
✓ Farley, Frank Burton	Classical	Flat Lick.
Green, Frank Whitney	Mech. Eng.	Louisville.
Gunn, John Tevis.....	Classical	Lexington.
Gunn, Lucian Brooke	Mech. Eng.	Lexington.
Hamilton, Robert Browning.....	Agricultural.....	Lexington.
✓ Hamilton, Thomas Smith.....	Mech. Eng.	Lexington.
Hiatt, Walter Saunders	Scientific	Lexington.
Johnson, Jack Stublefield.....	Classical	Muir.
✓ King, Margaret Isadore	Classical	Lexington.
King, Thomas Edward	Classical	Cynthiana.
✓ Loevenhart, Arthur Solomon.....	Scientific	Lexington.
✓ Loevenhart, Edgar Charles	Mech. Eng.	Lexington.
✓ Lucas, Ida West.....	Classical	Lexington.
McElroy, Courtney Watts	Civ. Eng.	Morganfield.
Roach, Thomas Gideon	Scientific	Fulton.
✓ Smith, Sidney Allen.....	Classical	Lexington.
✓ Straus, Charles Louis.....	Mech. Eng.	Lexington.
Terry, Lila Beatrice.....	Classical	Paris.
Trosper, Henderson Taylor.....	Classical	London.
Ward, Paul Sterling	Mech. Eng.	Cynthiana.

SOPHOMORES.

✓ Allen, Leonard Barnes.....	Civ. Eng.	Lexington.
Brock, Walter Lucas	Classical	London.
Bronaugh, William Logan	Mech. Eng.	Lexington.
Bullock, Frederick Dabney	Mech. Eng.	Lexington.
Bullock, Joseph Hunt.....	Scientific	Lexington.
Copland, Alexander Chisholm	Civ. Eng.	Lexington.
Davis, Joseph Henry	Mech. Eng.	Little Rock, Mo.
Davis, Walter Hendricks.....	Scientific	Jacksonville.
Davis, William Tilden	Scientific	Jacksonville.
Farrell, Annie	Classical	Paris.
Graves, Leila May	Scientific	Lexington.
Grinstead, Wren Jones.....	Classical	Salem, Neb.
Hamilton, Hiram Edward	Agricultural.....	Edmonton.

Hill, Mathew Edgar	Classical	Knoxville, Tenn.
Holbrook, Martha Taylor	Scientific	Owenton.
✓ Horton, Minnie Leigh	Classical	Camargo.
✓ Hughes, James William	Mech. Eng.	Corydon.
✓ Jett, Carter Coleman	Mech. Eng.	Jett.
Johnson, John Bockover	Mech. Eng.	Lexington.
Johnston, Marius Early	Scientific	Lexington.
Johnston, Phillip Preston	Mech. Eng.	Lexington.
McGovern, Hugh Edward	Classical	Lexington.
✓ Maddocks, Roydon Keith	Civ. Eng.	Carrollton.
Mosley, Norval Wesley	Classical	Whitesville.
Newman, Herbert	Scientific	Gamaliel.
✓ Sasser, William Henry	Scientific	London.
✓ Scherffius, William Henry	Scientific	Lynnville.
✓ Scholtz, Theodore Walter	Mech. Eng.	Louisville.
Scott, Daniel Price	Classical	Lexington.
Searcy, Jeanette	Scientific	Lexington.
Shaw, Henry Pleasants	Classical	Lexington.
Sugg, Willis Herbert	Classical	Clinton.
✓ Vance, Arthur John	Mech. Eng.	Springfield.
Vinson, John Robert	Civ. Eng.	Cadiz.
Walsh, Robert Christie	Classical	Lexington.
Ward, Ashley Fatherly	Mech. Eng.	Cynthiana.
✓ Warren, Richard Evans	Classical	Donerail.
✓ Willmott, Jennie Walker	Scientific	Lexington.
Wootton, William Beverly	Scientific	Oak Grove.
✓ Young, Bradley Woodruff	Scientific	Cincinnati, Ohio.
Young, Menon	Classical	Baldwin.

FRESHMEN.

Alford, Perry	Classical	Lexington.
Allen, Robert Milton	Classical	Faywood.
Baker, Edwin Harvey	Classical	Limaburgh.
Blakeman, Claude Norman	Civ. Eng.	Smith's Grove.
✓ Bowden, Mary Willa	Classical	Paris.
Bradley, Charles Walter	Mech. Eng.	Lexington.
Bronston, Thomas Hughes	Classical	Lexington.
Bryan, Volney Hewitt	Scientific	Lexington.
Burnett, James Caldwell	Classical	Shelbyville.
Butler, Frances Victor	Classical	Paris.
Butner, Ellen Eliza	Normal	Wilde.
Caldwell, William Hardin	Classical	Shelbyville.
Chambers, David Lee	Classical	Clinton.
Copland, George Forbes	Mech. Eng.	Lexington.
✓ Cornett, Charles George	Normal	Bush.
Cox, Jennie	Classical	Mt. Sterling.

1896-97

	Crook, Overton Cassius.....	Classical	Kingston.
	Cunningham, Blanche	Scientific	Lexington.
✓	Darling, Lewis Andrew	Mech. Eng.....	Carrollton.
	Davis, Edgar.....	Mech. Eng.....	Hampton.
✓	Daugherty, Frank.....	Mech. Eng.....	Paris.
	Deering, David	Classical	Lexington.
	Ellis, Vera Todd.....	Scientific	Lexington.
✓	Ewell, George Watkins	Classical	London.
	Faulkner, Reuben Alexander	Normal	Hampton.
	Forman, Thomas Vernon.....	Classical	Lexington.
	Guedry, Theodore Elbert.....	Normal	Ekron.
	Gore, Mary Ella.....	Normal	Carlisle.
✓	Graves, James Madison.....	Mech. Eng.....	Lexington.
	Halcomb, George William.....	Mech. Eng.....	Franklin.
	Helm, Herschel Horace.....	Mech. Eng.....	Morgantown.
✓	Hestand, John Emerson.....	Scientific	Edmonton.
	Hodges, Mary Laura	Classical	Lexington.
✓	Hoeing, Howard Aubrey.....	Mech. Eng.....	Lexington.
	Hornsey, Lida Pratt	Scientific	Lexington.
	Hostetter, Jacob Henry	Scientific	Lexington.
✓	Hundley, Leslie	Scientific	Curdyville.
	Jemison, William Grayson	Mech. Eng.....	Eminence.
	Johnson, Ishmael	Normal	Stanton.
✓	Johnston, John Pellam.....	Mech. Eng.....	Lexington.
✓	Jones, Thomas Almon	Classical	Russell.
	Kidd, Asa Steel.....	Mech. Eng.....	Cincinnati, O.
	Kidd, Major Philip.....	Classical	Lexington.
	Lloyd, Cora.	Scientific	Lexington.
	Loyd, Ernest Thornton	Mech. Eng.....	Lexington.
	March, William Steel.....	Civ. Eng.	Paris.
✓	Marks, Samuel Blackburn.....	Scientific	Versailles.
	Martin, Thomas Ellis	Normal	Minnie.
	Matlack, Margaret Antonia.....	Scientific	Lexington.
	Matlack, William Lynn.....	Mech. Eng.....	Lexington.
	Millar, Carrie Virginia.....	Scientific	Lexington.
✓	Morrow, Joseph	Normal	Rankin.
	Naive, Edna Earl.....	Scientific	Lexington.
✓	Neal, Mary Eliza	Classical	Paris.
	Noon, Anna Dean.....	Scientific	Lexington.
✓	Nichols, T. A.....	Mech. Eng.....	Lexington.
	Newgent, Mary Edna.....	Scientific	Fulton.
✓	Pennington, William Lee.....	Normal	Sandy Hook.
	Perkins, Maud Belle.....	Scientific	Middlesboro.
✓	Peyton, Nellie Evans.....	Scientific	Lexington.
✓	Reese, Asbury Stamper.....	Mech. Eng.....	Trenton.
	Reisch, Charles.....	Classical	Louisville.
✓	Roberts, George	Normal	Burnside.

✓ Sams, James Robert	Normal	Cayce.
Sasser, George Washington	Classical	London.
✓ Saunders, Cary Blackburn	Mech. Eng.	New Castle.
✓ Scrugham, James Graves	Mech. Eng.	Lexington.
Scott, George	Scientific	Lexington.
Scott, Louis Allen	Mech. Eng.	Lexington.
Sharon, John Albatus	Normal	Mt. Auburn.
Shelby, Willie Irvine	Mech. Eng.	Lexington.
✓ Simpson, Eugene Erwin	Classical	Lexington.
✓ Smith, Albert Elias	Scientific	Owensboro.
✓ Smith, Joshua Soule, Jr.	Mech. Eng.	Lexington.
Sneed, John Boswell	Mech. Eng.	Middlesboro.
✓ Spears, Randa Lou	Scientific	Muir.
Stewart, Wallace Agnes	Scientific	Chambers.
Tanner, Ollie May	Scientific	Lexington.
Taylor, James Edgar	Normal	Morganfield.
Throckmorton, James Withers	Classical	Cynthiana.
✓ Walsh, Robert Christie	Classical	Lexington.
West, Perry	Mech. Eng.	Nicholasville.
Wilkie, Amelia	Normal	Lexington.
Wilson, Madge Jeanette	Normal	Waco.
Wilson, Samuel Elmore	Normal	Franklin.
Woolley, Charles Wickliffe	Scientific	Lexington.

UNCLASSIFIED.

Dinwiddie, Joseph		Litchfield.
Kempster, James William Hickley	Mech. Eng.	So. Tacoma, Wash.
Martin, Pierce		Humphrey.
Meadows, Andrew Jackson	Classical	Williamsburg.
Welty, Ira Carlton	Classical	Colo, Iowa.
Wilson, Henry Clay	Classical	Mt. Olivet.

NORMAL STUDENTS.

FOR THE STATE CERTIFICATE.

Ballard, Thomas Emerson	Holy Cross.
Campbell, Eliza	Cullen.
Cartwright, Ethelind	Albany.
Cartwright, Nina Beatrice	Albany.
Coram, Catherine	Berry's Ferry.
Conrad, Hattie Clay	Sherman.
Daly, Delia Burbank	Pleasant Ridge.
Greer, Katie	Madisonville.
Hatfield, Ulysses Grant	Jabez.
Herrick, Nellie	Paris.
Ingram, Moses Randall	Ingram.
Jackson, John Hunt	New Columbus.
McComis, Samuel J. Tilden	Louisa.
McDowell, Charles Bates	Grundy.
Montgomery, Fields M.	Columbia.
*Nunn, Joseph Sylvester	Edmonton.
Pedigo, Mary Elizabeth	Edmonton.
Saylor, Josiah Clarke	Cubage.
Sharon, George	Mt. Olivet.
Smoot, Nellie B.	Fallis.
Tomlinson, Lizzie	Bryantsville.
True, John Walter	Porter.
Vaughan, George Washington	Clay City.
Waring, Edward Taylor	Lynn.
Williams, Robert Lee	Golden Pond.

FOR THE COUNTY CERTIFICATE.

Allen, Ida	Lexington.
Barnes, Rinda Ethel	Gose.
Bishop, Grayde	Madisonville.
Blackard, Mollie	Loradale.
Brough, John Coleman	Milford.
Cassell, Jennie Neil	Lexington.
Chambers, Charles Howard	Cedar Grove.
Chrisman, Sallie	Steubenville.
Christian, Mary Martha	Rankin.

*Deceased.

Coleman, William Ellis.....	Milford.
Davis, Arthur Gabriel.....	Hampton.
Fish, Clarence B.....	Biddle.
Fox, Edith May.....	Indian Fields.
Franks, John Denton.....	Bardwell.
Freeman, Ida Alice.....	Russell Cave.
Garner, George Perkeins.....	Humphrey.
Glaze, Earl Lee.....	Chilesburg.
Gore, Mamie.....	Carlisle.
Gore, Jennie Pickett.....	Carlisle.
Griffing, Orie Eunice.....	Lexington.
Harris, Claude Elmer.....	Independence.
Hayre, John Carrigan.....	Manchester.
Hays, Annie Katherine.....	Lexington.
Herndon, Everlee.....	Lexington.
Horton, Alice Josephine.....	Camargo.
Hostetter, Maggie Belle.....	Lexington.
Houtchens, Nannie.....	Chaplin.
Hubbard, Eugene.....	Beechville.
Huff, Jasper Newton.....	Confluence.
Huffhines, Seaf.....	Rapids.
Johnson, John Boyd.....	Williamsburg.
Lancaster, Joseph Robert.....	Josephine.
McMurtry, William Cassius Goodloe.....	Lancaster.
Mann, James Herbert.....	Edmonton.
Mitchell, Everett Lonney.....	Worthville.
Mitchell, Maud May.....	East Hickman.
Nave, Willie Pearl.....	Lexington.
Payne, Claude Bryant.....	Paynes Depot.
Perkins, Maud Ann.....	Chilesburg.
Phelps, Commodore Vander.....	
Powell, Stella Verdine.....	Lexington.
Rankin, Flora Emma.....	Rankin.
Ruble, Myrtle Fletcher.....	Buena Vista.
Smith, Christopher.....	Hopper.
Smoot, Pearl.....	Fallis.
Stevenson, Mary Jane.....	Hedges.
Stevenson, Otie Lucile.....	Dodge.
Tadlock, Verner Lee.....	Danville.
Taylor, Burgin.....	Richmond.
Thompson, Samuel Charles.....	New Haven.
Townsend, Aaron Arthur.....	Hickman.
Vaughan, Samuel Patterson.....	Clay City.
Whitlock, Alma.....	Baldwin.
Whitlock, Eddie.....	Kirksville.

THE ACADEMY.

SECOND YEAR STUDENTS.

Asher, Andrew Jackson.....	Wasioto.
Barclay, George LaRue	Stephensport.
Billingsley, Harriet Evans	Lexington.
*Blaydes, William Pingree	Bagdad.
Brownfield, Harris Watts	Buffalo.
✓ Caldwell, James Shipp.....	Paducah.
✓ Elliott, John Milward	Lexington.
Fairchild, Jackson Dillion.....	Lexington.
*Farrell, Annie	Paris.
Finneran, Thomas Francis	Paynes Depot.
✓ Forman, Leila Ellen	Lexington.
✓ *Glass, Seth Amnon	Georgetown.
*Grinstead, Wren Jones	Salem, Neb.
Hamilton, Archie Logan	Kirklevington.
✓ Hannah, Edna May.....	Lexington.
✓ Harbison, Lucia Caldwell	Lexington.
✓ Hogg, Samuel Tilden	Booneville.
✓ Keller, George Nelson	Louisville.
✓ King, John Gilbert	Lexington.
✓ Land, Alice Wilson	Lexington.
✓ Lyle, Cornelius Railey	Lexington.
McDanell, Henry Pryor.....	Warsaw.
Manning, Lawrence Warren.....	Manchester.
✓ Martin, Louis Wynne	Lexington.
O'Mahony, Katherine Marie.....	Lexington.
✓ *Ragan, Leonidas	Shearer Valley.
*Reed, Cecil.....	Benton.
*Reisch, Charles	Louisville.
✓ Richmond, Thomas Logan	Germantown, Tenn.
Scott, Nellie Dumont.....	Lexington.
✕ Severs, Roscoe Frymire	Henderson.
Sigler, William Albert	Cuba, Tenn.
Slade, D. D.	Lexington.
Staples, James Henry	Lexington.
Tanner, Ernest Estill.....	Greendale.
Thomson, Robert Johnson	Frost.
Van Orsdel, James Arthur	Lexington.
*Webb, William Snyder	Greendale.
Wheat, Dorothy Johnson.....	Lexington.
Williams, Ella Campbell.....	Chilesburg.
Willim, James Frazer	Valley.
Willim, John	Valley.

*Had two classes in the College.

FIRST YEAR STUDENTS.

Allen, William Emmett	Bridgeport.
Atkins, Bessie Ryland	Lexington.
Attersall, Charles Frank	Winchester.
Barr, Thomas James	Lebanon.
Blackford, William Woods	Nicholasville.
Caddell, George Hudson	Hollyhill.
Carlisle, James John	Harrodsburg.
Combs, James Horton	Lexington.
Copland, Jeanie Robertson	Lexington.
Coyne, Elizabeth Cecilia	Lexington.
Darnall, Shelby	Lexington.
Elwell, John William	New Hartford, Ia.
Gibson, James Syer	Dayton.
Gillispie, Jesse Forest	Plum.
Gorham, Eugene Boswell	Lexington.
Graves, Lottie Clovis	Hickman.
Griffing, William Stevens	Lexington.
Hogg, William Pryse	Booneville.
Johnson, Simeon Brownlow	Chavies.
McMullin, Henry	Hickman.
McVean, Donald Grant	Grants Bend.
Mattingley, Walter Hill	Louisville.
May, Elizabeth Woodward	Lexington.
May, William Lewis	Lexington.
Morris, Henry Raymond	Morgan.
Muir, John Wilgus	Chilesburg.
Nave, James Andrew	Nicholasville.
O'Rear, Harrison	Gilead.
Payne, Walter Schaffer	Paynes Depot.
Peak, Harry Douglas	Bedford.
Reid, John Thomas	Normandy.
Rose, Lida Houston	Lexington.
Sellers, Wallace Johnson	Brannon.
Shearer, Richard Francis	Gapcreek.
Smith, Roger Hanson	Fort Spring.
Stackhouse, Clifford Carr	Greendale.
Swope, Armstead Milner	East Hickman.
Tandy, Clarke Howell	Hopkinsville.
Taylor, Annie Florence	Lexington.
Taulbee, Joseph Fulton	Whiteoak.
Threlkeld, William Thomas	Morganfield.
Warnock, Thomas Edwin	Chilesburg.
West, George Jasper	Union Mills.
Wheat, Oma Bell	Lexington.
Wheeler, Mabel Hart	Lexington.
Woodford, Earl Thomas	Pine Grove.
Woodford, Leon Catesby	Pine Grove.

SHORT COURSE IN AGRICULTURE.

Atkinson, Thomas Hughes	Flatcreek.
Bosworth, Ben Thomas	Fort Spring.
Vogt, John Leon	Louisville.

REGULATIONS.

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 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 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 such class standing as will enable him to pass the final examination at the end of the year.

8th. He must maintain a good character and maintain such class standing as the regulations require.

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 moneys intended for the use of the students should be deposited with the Commandant.

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

Tuition free,	\$000 00
Matriculation free,	000 00
Room rent free,	000 00
Use of furniture in room,	2 50
Washing, about,	10 00
Uniform,	19 00
Board, 38 weeks, at \$2.25 per week,	85 00
Books, about,	8 00
Total,	<u>\$124 50</u>

Each room must be provided by each occupant thereof, *at his own expense*, with a good mattress, three comforts or blankets, one pillow, three pillow-slips, four sheets, looking-glass, blacking-brush, hair-brush, clothes-broom or brush. Some of these articles may be brought from home by the student.

For students who are not supplied with appointments from the Legislative Representative Districts of the Commonwealth, and who board in private families, the necessary expenses will be as follows:

Tuition fee,	\$15 00
Matriculation fee,	5 00
Board and lodging, 38 weeks, at \$3.50 to \$4 per week,	133 00 to \$152 00
Washing,	10 00
Uniform,	19 00
Books and stationery,	10 00
Total,	<u>\$192 00 to \$201 00</u>

Those who occupy rooms in the dormitory pay \$6.50 each (yearly) for the use of a room and its furniture. A standing deposit of \$5 is required from each student, which deposit is refunded when his connection with the College is terminated, less the amount which may be assessed against him for damages done to the buildings, furniture, or premises. All damages, injuries, defacements, etc., which rooms and furniture in the dormitory sustain during occupancy will be charged to the occupant thereof. All injuries, damages, defacements, etc., which the halls and dining-room sustain will, unless specifically traced, be charged to the occupants of the respective sections collectively.

BOARDING.

For the accommodation of students sent as beneficiaries of Legislative Representative Districts of the State, rooms for one hundred and forty students are provided in the dormitories. To these, good substantial board is furnished at \$2.25 per week, payable weekly in advance; but no student under seventeen years of age will be permitted to room in the dormitories unless all of his classes shall be in one of the regular collegiate courses. Good boarding, with fuel, lights, and furnished room, can be obtained in private families at rates varying from \$3.50 to \$4 per week.

The students who board in the dormitories are, for business purposes, organized at the beginning of the collegiate year under a Chairman and Secretary of their own choice, whose successors are elected on the first Tuesday of each term, and who serve for one term. At the business meeting, held on Tuesday night of each week, the weekly dues, \$2.25, are paid. The boarding department is managed by a Board consisting of the President of the College, the Commandant, a Treasurer, who is a member of the Faculty, and into whose hands all the weekly dues are placed when collected, a Steward, and the Chairman and Secretary selected by the students. It will thus be seen that the boarding department has no official connection with the College authorities. The College, as such, does not board the students, and is in no sense responsible for any debts created by the boarding department. Three members of the Faculty, in their individual capacity, assist in the management of its funds.

No provision is made for women in the dormitories.

BENEFICIARIES.

Each Legislative Representative District is allowed to send, on competitive examination, *one properly prepared student* each year, to this College, free of charge for 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 1893-4 one appointee in the College, for the session of 1894-5 two appointees, for the session of 1895-6 three appointees, for the session of 1896-7 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 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 in 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 change of classification is allowed during the session.

LOCAL EXAMINATIONS.

The Trustees of the State College, at their meeting in June, 1895, endorsed the "Local Entrance Examination Plan" now established by other colleges in other States. This is done for the purpose of placing all parts of the State on an equality as regards entrance to the College proper.

The examination here proposed is in no sense a substitute for the "County Appointee Examination," but may, if the appointee is qualified to enter the College proper, be made supplementary

to that, determining his status as regards the classes there. But this examination is not limited to the appointees. It may be taken by any one desiring to try for entrance into any class in the College not lower than freshman.

It is proposed to hold these "Local Entrance Examinations" in June in districts somewhat remote from Lexington, as well as in Lexington itself. The questions will be prepared at the College and sent out under the care of some member of the Faculty (or other properly constituted agent) who, after conducting the examination, will in most cases send the papers back to the Examination Committee at the College to be passed upon.

The Lexington examination for the session of 1896-7 will be held in the Main Building of the State College, June 9th and 10th, beginning at 9 A. M. each day.

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 where the heads of these schools have complied with certain conditions.

Further than this the Faculty will recommend to the Board of Trustees that an annual award of a free scholarship be made 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.

- †Ashland, J. G. Crabbe, Superintendent.
- †Bellevue, J. M. N. Downes, Superintendent.
- †Carlisle, W. F. Ramey, Superintendent.
- †Catlettsburg, J. B. Leech, Superintendent.
- †Corydon, C. E. Dudley, Superintendent.
- †Covington, John Morris, Superintendent.
- †Cynthiana, C. A. Leonard, Superintendent.
- †Dayton, R. M. Mitchell, Superintendent.
- †Flemingsburg, J. T. Leahy, Superintendent.

- † Frankfort, McHenry Rhoads, Superintendent.
- † Harrodsburg, C. W. Bell, Superintendent.
- † Hopkinsville, Livingston McCartney, Superintendent.
- † Lawrenceburg, H. V. Bell, Superintendent.
- Lexington, Rogers Clay, Superintendent.
- † Johnson High School, W. K. Shelby, Principal.
- † Dudley High School, Col. Graves, Principal.
- Louisville, E. H. Mark, Superintendent.
- † Female High School, W. H. Bartholomew, Principal.
- † Male High School, R. P. Halleck, Principal.
- Manual Training High School, H. G. Brownell, Principal. To
Soph. M. E. Course.
- † Marion, Charles Evans, Superintendent.
- † Maysville Male High School, G. E. Hutchins, Principal.
- † Maysville Female High School, Miss Fanny I. Gordon, Principal.
- † Middlesboro, C. H. Gordinier, Superintendent.
- § Mt. Sterling, Mrs. N. K. Hibler, Principal.
- † Newport, John Burk, Superintendent.
- † Nicholasville, R. G. Lowry, Superintendent.
- † Paducah, Geo. O. McBroom, Superintendent.
- † Paris, E. W. Weaver, Superintendent.
- † Smithland, Miss Martha Grassham, Principal.
- † Somerset, Alfred Livingston, Superintendent.
- † Winchester, R. M. Shipp, Superintendent.

PRIVATE ACADEMIES AND HIGH SCHOOLS.

- † Cynthiana, Smith's Classical School, N. F. Smith, Principal.
- † Franklin, Training School, McCutchen and Finn, Principals.
- † Henderson, Henderson High School, W. B. Tharp, Principal.
- † Lexington, Lexington Preparatory School, T. B. Threlkeld, Principal.
- § Lexington, Private School, Miss Ela M. Williams, Principal.
- † Lexington, Alleghan Academy, A. N. Gordon, Principal.
- † Louisville, St. Xavier's College, Bro. James, Principal.
- † Owenton, Owenton High School, H. C. Smith, Principal.
- † Paris, Boy's School, Prof. William Yerkes, Principal.
- † Versailles, Rose Hill Seminary, Miss Gillie Crenshaw, Principal.
- † Williamsburg, Williamsburg Institute, J. N. Prestridge, President.
- † Williamsburg, Williamsburg Academy, Prof. Stevens, Principal.

† Accredited to Freshman (or higher class by special certificate).
 ‡ Accredited on subjects covered by certificates of proficiency.
 § Accredited to Freshman (Elementary Physics excepted).

The lack of uniformity that still obtains with reference to High School Courses of Study in this State renders it difficult to indicate here the exact degree of credit that should be accorded these, where they are equivalent to something higher than the first year in college. It seems advisable, therefore, simply to accredit all alike to Freshmen, and provide for higher classification of the student by special certificate, should that be necessary.

An application from a Superintendent or Principal, requesting that his school be placed in a list with the above, should be accompanied by a report or catalogue of the school, giving the course of study. In case the latter is specific and the completion of it required for graduation, it may be accredited as a whole; otherwise each student's proficiency will be accredited in subjects covered by certificates from the Principal.

The sciences taught in the preparatory schools are accredited as such, not as substitutes for the subjects pursued in the college under the same name.

STUDENT 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 applications 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 been long connected with the College and is well qualified for her duties.

CALENDAR FOR 1897-8.

1897.

Entrance Examinations beginSept. 6th.
First Term begins.....Thursday, Sept. 9th.
Thanksgiving.....Thursday, Nov. 25th.
Board of Trustees meet.....Tuesday, Dec. 14th.
Christmas Holidays beginWednesday, Dec. 22d, 12 M.

1898.

College duties resumed.....Monday Jan. 3d, 8:30 A. M.
Second Term Begins.....Monday, Jan. 24th.
Washington's Birthday.....Tuesday, Feb. 22d.
Union Literary Society contest.....Tuesday, Feb. 22d.
Patterson Society contestSaturday, March 26th.
Senior Examinations begin.....Monday, May 9th.
General Examinations begin.....Monday, May 16th.
Board of Trustees meet.....Tuesday, May 31st.
Class DayWednesday, June 1st.
Alumni Banquet.....Wednesday, June 1st.
Commencement.....Thursday, June 2d.

COLLEGE DIRECTORY.

RESIDENCE.	COLLEGE QUARTERS.
ANDERSON, F. PAUL, . . . 69 Kentucky Ave., . . .	Mechanical Hall.
AUBREY, THOMAS, . . . 243 S. Limestone St., . . .	College Boiler Room.
BLACKBURN, MRS. LUCY B. Central Ave.,	No. 14, 1st Floor Main Building.
BLANTON, R. L., 50 W. Second St.,	No. 13, 1st Floor Main Building.
CURTIS, H. E., 126 S. Upper St.,	Chem'l Lab., 1st Floor Station Bldg.
DAVIS, J. M., 122 S. Limestone St., . . .	No. 1, Basement Main Building.
DICKER, JOS., 26 Virginia Ave.,	Mechanical Hall.
GARMAN, H., 424 S. Limestone St., . . .	1st Floor and Basement Station Bldg.
HARPER, J. N., S. Limestone St.,	Experiment Farm.
HODGES, MISS MARY, . . . 95 N. Upper St.,	No. 10, 1st Floor Main Building.
JOHNSON, J. R., 236 E. Maxwell St.,	Wood Shop, Mechanical Hall.
KASTLE, J. H., S. Limestone St.,	2d Floor Station Building.
KEARNEY, W. J., 95 S. Limestone St., . . .	Ex. Lab., Mechanical Hall.
LOGAN, J. L., 217 N. Broadway,	No. 2, Basement Main Building.
MATHEWS, C. W., 410 S. Limestone St., . . .	Basement Station Building.
MILLER, A. M., 124 S. Broadway,	No. 16, Main Bldg. & Bas'm't St. Bldg.
MILLIGAN, R. A., 492 S. Limestone St., . . .	Mechanical Hall.
MUNCY, V. E., 116 E. Maxwell St., . . .	No. 10, 1st Floor Main Building.
MURRAY, JAMES, 428 S. Limestone St., . . .	College Conservatory.
NEVILLE, J. H., 218 W. Main St.,	No. 21, 3d Floor Main Building.
NELSON, J. P., 40 Barr St.,	2d Floor Mechanical Hall.
NEWMAN, J. W., 124 S. Broadway,	No. 8, 1st Floor Main Building.
PATTERSON, J. K., Brick Dwlg. on Campus, . . .	No. 12, 1st Floor Main Building.
PATTERSON, W. K., Brick Dwlg. on Campus, . . .	No. 17, 2d Floor Main Building.
PENCE, M. L., 108 Marino St.,	Nos. 5 and 7, Basement Main Building.
PETER, A. M., 236 E. Maxwell St., . . .	Chem'l Lab., 1st Floor Station Bldg.
PRYOR, J. W., 73 W. Third St.,	No. 9, 1st Floor Main Building.
ROARK, R. N., 420 S. Limestone St., . . .	No. 11, 1st Floor Main Building.
SAUNDERS, JAMES E., . . . 14 Virginia Ave.,	Mechanical Hall.
SCOVELL, M. A., Experiment Farm,	Office, 1st Floor Station Building.
SHACKLEFORD, JOHN, . . . 71 Woodland Ave.,	No. 19, 2d Floor Main Building.
SPURR, R. J., 97 S. Broadway,	Experiment Farm.
SHELBY, MISS A. M., . . . 70 Ashland Ave.,	Office, 1st Floor Station Building.
SWIGERT, S. M., Cottage on Campus,	No. 5, Main Building.
WELLS, J. H., 107 E. Maxwell St., . . .	2d Floor Mechanical Hall.
WERNICKE, PAUL, 107 E. Maxwell St., . . .	No. 20, 2d Floor Main Building.
WHITE, J. G., 140 E. Maxwell St., . . .	No. 15, 1st Floor Main Building.