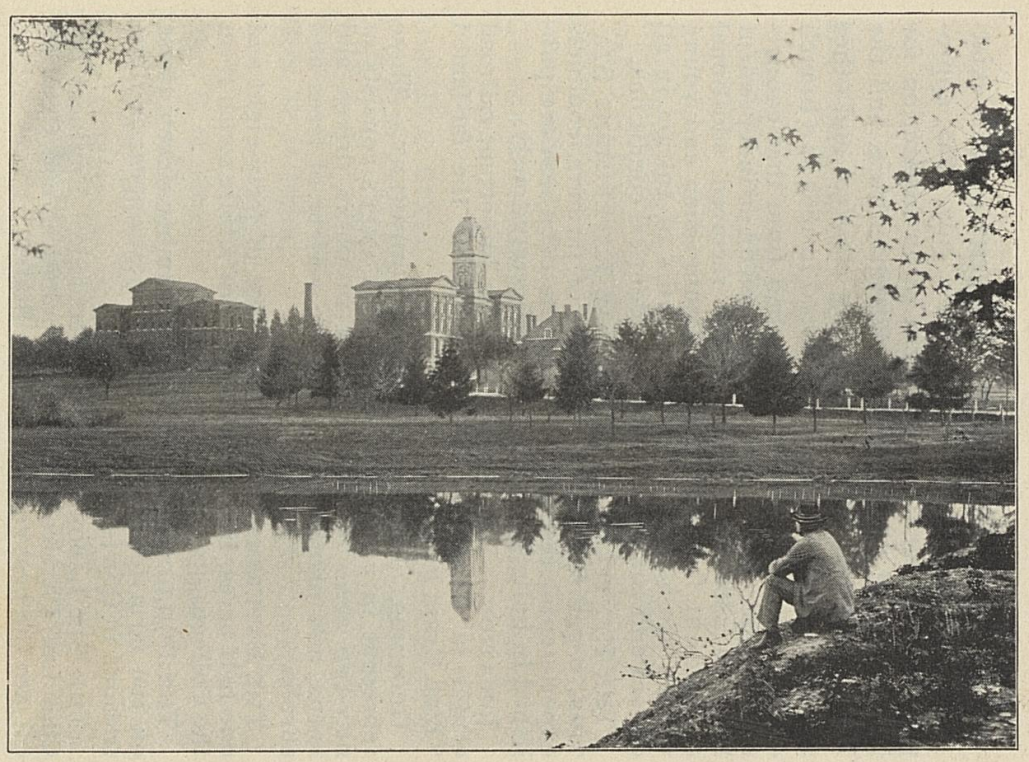
BRIEF ANNOUNCEMENT

STATE COLLEGE OF KENTUCKY

1897-98



VIEW OF CAMPUS.

THE STATE COLLEGE OF KENTUCKY owes its existence to an act of Congress, July, 1862, appropriating land for the endowment of an institution for instruction in "Military Science, Agriculture, and the Mechanic Arts," without excluding classical and other scientific studies. It was organized in 1865 as a branch of Kentucky University; detached from that connection in 1878; reorganized and placed on an independent basis in 1880, at which time it received additional endowment from the State. Young men and young women are admitted to the benefits of tuition in all classes and courses of study on identical conditions.

THE KENTUCKY AGRICULTURAL EXPERIMENT STATION, organized in the interest of farmers, conducts experimental research, the results of which are published in bulletins and distributed gratuitously.

LOCATION.—Lexington, the most important railroad center in Kentucky, in the heart of the far-famed "Blue Grass Region."

GROUNDS, BUILDINGS, AND EQUIPMENT.—These represent in value $450,000. THE CAMPUS consists of fifty-two acres of land, laid out in walks, drives, and lawns, and planted with a choice variety of trees and shrubs.

THE EXPERIMENT STATION FARM, of forty-eight and one-half acres, lies three-quarters of a mile south from the College.

THE BUILDINGS on the campus number eleven, those on the farm four. The most of these appear as illustrations in this issue.

THE SIX LABORATORIES—Mechanical Engineering, Chemical, Physical, Botanical, Zoological, and Geological, are the best equipped in the State.

Board of Trustees.

Chairman Ex officio.

HIS EXCELLENCY GOVERNOR WM. O. BRADLEY.

PRESIDENT JAMES K. PATTERSON, *Ex officio.*

Term Expires January, 1898.

HON. R. A. SPURR, ... Fayette County.
DAVID H. JAMES, ESQ., ... Fayette County.
JUDGE THOMAS H. HINES, ... Franklin County.
JUDGE ROBERT RIDDELL, ... Estill County.
GEORGE V. GREEN, ESQ., . . . Christian County.

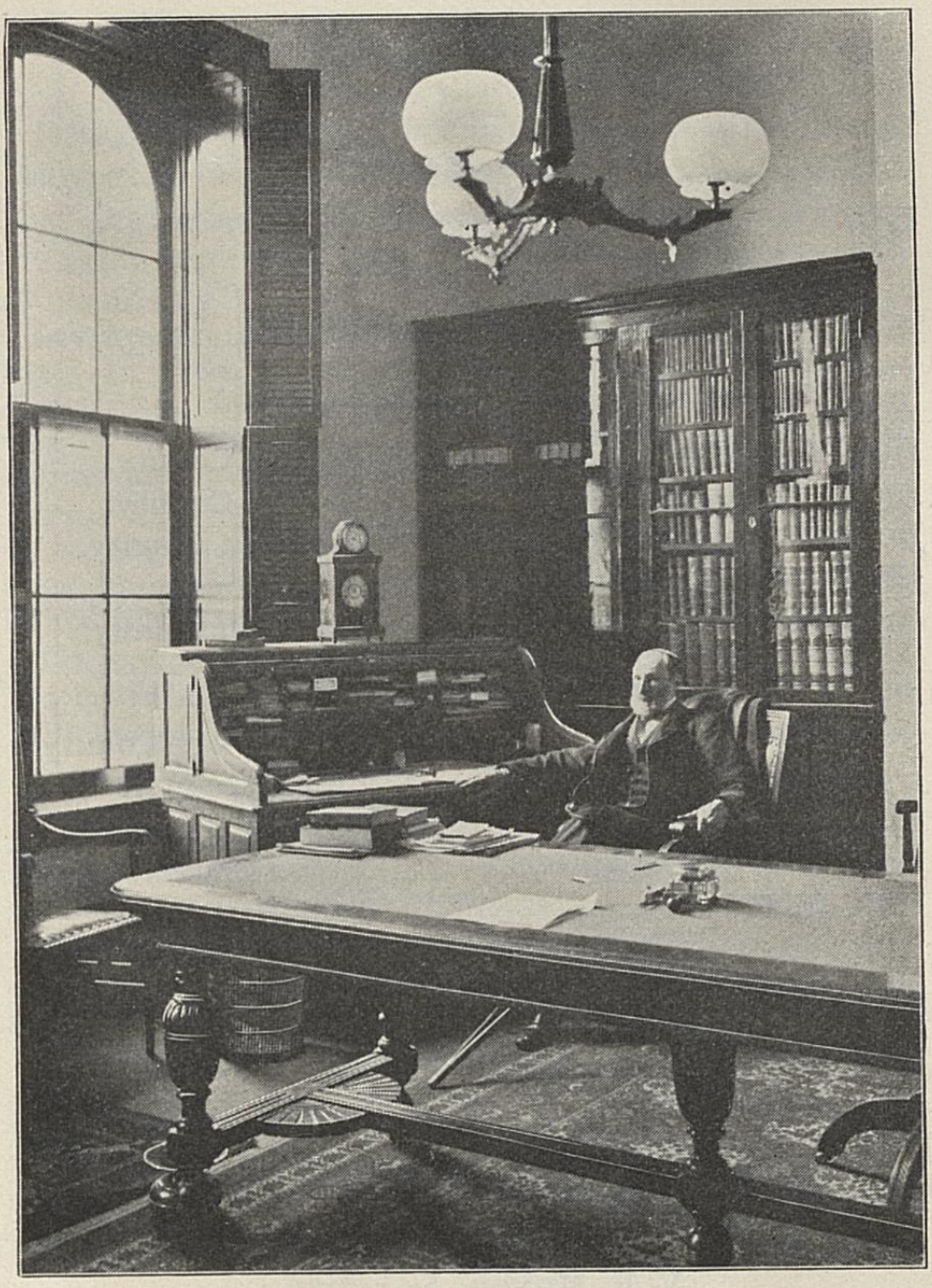
Term Expires January, 1900.

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

Term Expires January, 1902.

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

V. E. MUNCY, *Secretary.*



PRESIDENT JAS. K. PATTERSON.

Faculty.

(In the order of appointment.)

JAS. K. PATTERSON, Ph. D., President,
History, Political Economy, and Metaphysics.

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

JAS. G. WHITE, A. M. (Business Agent),
Mathematics and Astronomy.

J. H. NEVILLE, A. M.,
Greek and Latin.

W. K. PATTERSON, A. M.,
Principal of the Academy.

J. H. KASTLE, Ph. D.,
Chemistry.

R. N. ROARK, A. B.,
Principal of the Normal School.

J. W. PRYOR, M. D.,
Anatomy and Physiology.

F. PAUL ANDERSON, M. E.,
Mechanical Engineering.

J. P. NELSON, C. E.,
Civil Engineering.

C. W. MATHEWS, B. S.,
Agriculture, Horticulture, and Botany.

A. M. MILLER, A. M.,
Geology and Zoology,

M. L. PENCE, M. S.,
Physics.

S. M. SWIGERT, Captain 2d Cavalry, U. S. A.,
Commandant.

PAUL WERNICKE,
French, German, and Spanish.

Instructors.

J. L. LOGAN, A. B.,
First Assistant in Academy.

J. W. NEWMAN, B. S.,
Assistant in Normal School.

R. L. BLANTON, M. Lit.,
Assistant in Greek and Latin.

J. M. DAVIS, A. B., B. S.,
Second Assistant in Academy.

V. E. MUNCY, B. S.,
Third Assistant in Academy.

JAS. H. WELLS, M. E.,
Assistant in Mechanical Engineering.

J. R. JOHNSON, B. M. E.,
Assistant in Shop-Work and Drawing.

E. F. BROWN, A. B.,
Instructor in Elocution.

W. J. KEARNEY, B. M. E.,
Assistant in Experimental Engineering Laboratory.

Monitress.

MRS. LUCY B. BLACKBURN.

Kentucky Agricultural Experiment Station.

Board of Control.

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

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.

JOSEPH NELSON HARPER,
Dairyman.

Departments and Courses of Study.

The studies of the State College are distributed into fifteen departments, each in charge of a responsible head, the heads constituting the faculty. These departments, with their related Courses of Study, may be grouped as follows:

ARTS.....
- I. History, Political Economy, and Metaphysics.
- II. The English Language and Literature.
- III. The Greek and Latin Languages.
- IV. The French and German Languages.
- The Classical Course.

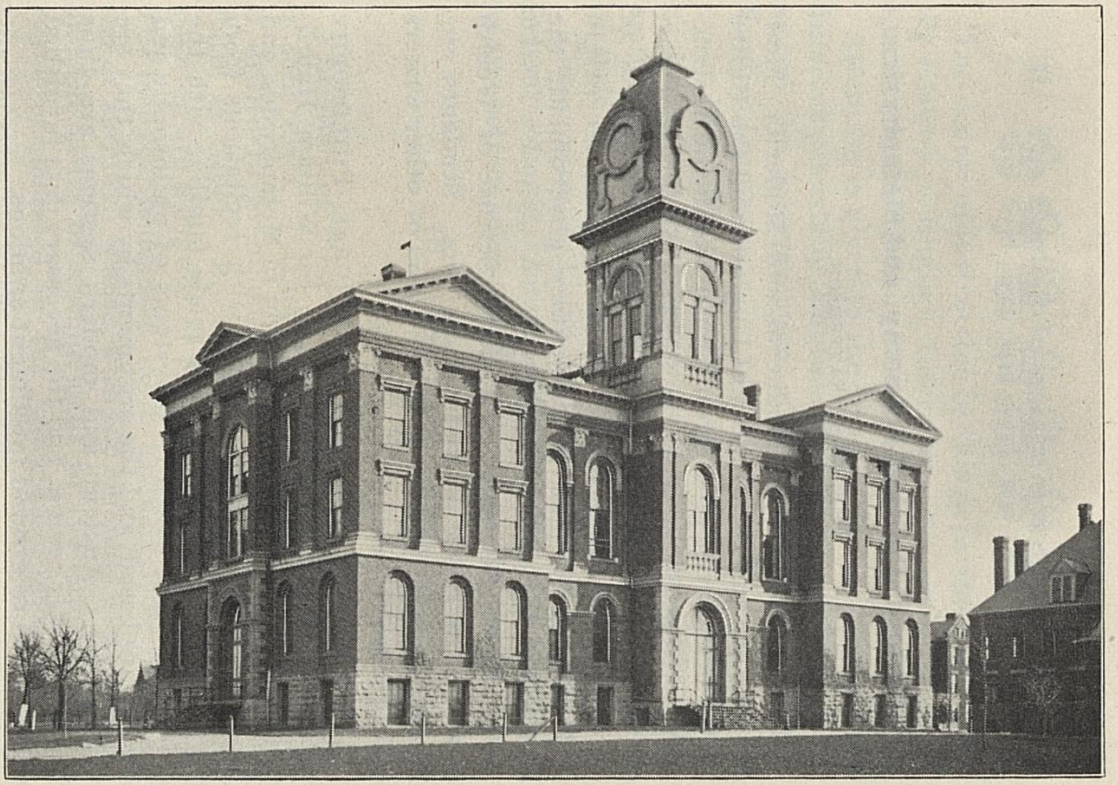
SCIENCE.....
- V. Mathematics and Astronomy.
- VI. Physics.
- VII. Chemistry.
- VIII. Anatomy and Physiology.
- IX. Geology and Zoology.
- X. Botany, Horticulture, and Agriculture.
- The Scientific Courses.
- The Agricultural Course.

ENGINEERING.
- XI. Mechanical Engineering.
- The Mechanical Engineering Course.
- XII. Civil Engineering.
- The Civil Engineering Course.

XIII. The Normal School.
The Normal Course.

XIV. The Academy.

XV. Military Science.



MAIN BUILDING.

I. History, Political Economy, and Metaphysics.

PRESIDENT PATTERSON.

HISTORY.—(Ancient, Mediæval, and Modern.) Modern History and the History of England and the United States occupy the most prominent place in the instruction. 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.

POLITICAL ECONOMY.—Walker's Science of Wealth is made the basis of instruction here. Students are, however, made familiar with the views of other writers and the doctrines of rival schools.

The Study of MENTAL AND MORAL PHILOSOPHY extends through the Senior Year. Sir William Hamilton is made 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. The English Language and Literature.

PROF. SHACKLEFORD.

The course of instruction in this department includes the History of English Literature, Studies in English Literature, Rhetoric and Composition, and Logic.

Attention is given to the characteristic features of the different periods of English and American Literature, and to the interpretation of the masterpieces of the English Language.

The Principles of Rhetoric are illustrated by copious citations from great authors, and thus the study of literature is combined with the study of the philosophy of style.

The course in Logic includes both deductive and inductive Logic. An exposition is given of Logic, both as an abstract science and as an art of discovery.

III. Greek and Latin.

PROF. NEVILLE.

ASSISTANT, BLANTON.

The study of these languages extends over a period of four years. During the first three years the student is drilled in grammar, and translation from and into Latin or Greek. Blackboard exercises in Prose Composition are a feature of the work in this department. The last year is devoted more exclusively to the reading of authors. These, with the amounts read of each and the order of arrangement in the course, will be found enumerated in the fuller description given to this department in the catalogue.

CHAPEL.

IV. German, French, and Spanish.

PROF. WERNICKE.

In GERMAN AND FRENCH the work extends over a period of two years, with a third year optional, and consists chiefly of oral and written exercises in grammar and translation. A feature of the third-year German is the "conversational exercises." French literature constitutes the subject of the third-year French.

The study of SPANISH and ITALIAN is pursued one year as an optional course.

For fuller information in regard to the work of this department see catalogue.

The studies in the foregoing four departments constitute in the main

The Classical Course.

PROF. NEVILLE, DEAN.

MAJOR STUDIES.— Greek and Latin.

MINORS.--History, Political Economy, Mental Science, English, French, German, Mathematics, Astronomy, Physiology, Physiography, Chemistry, Military Science.

This course leads to the degree of A. B. The post-graduate course in the classics leading to the corresponding Master's Degree is described in the catalogue.

The prominence given to scientific studies in the curriculum of the State College has not been secured by curtailing the work in the classics. Rather has it

been brought about by *specialization*, resulting in making the different courses more *self-contained*. Therefore, the course just outlined as leading to the degree of A. B. in the State College, is probably more purely "classical" than that leading to the same degree in colleges where the sciences receive less consideration than they do here.

V. Mathematics and Astronomy.

PROF. WHITE.

A thorough knowledge of Arithmetic and of Algebra, through Quadratics, is required for admission to the Freshman Class.

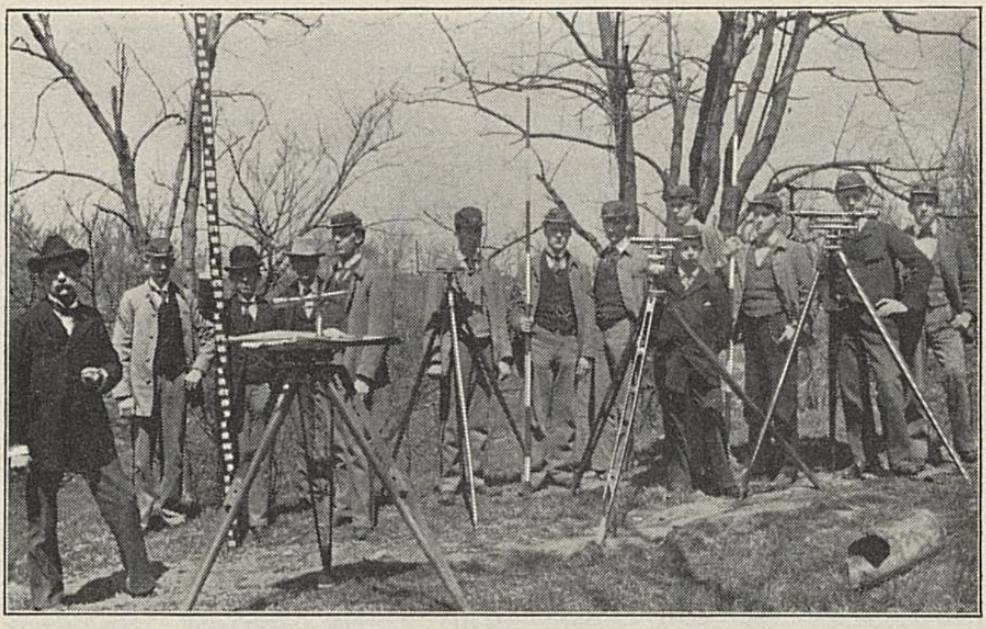
GEOMETRY is studied during the first term of Freshman Year. Five books are completed.

ALGEBRA AND PLANE TRIGONOMETRY are studied simultaneously during the second term, one hour a day being given to each.

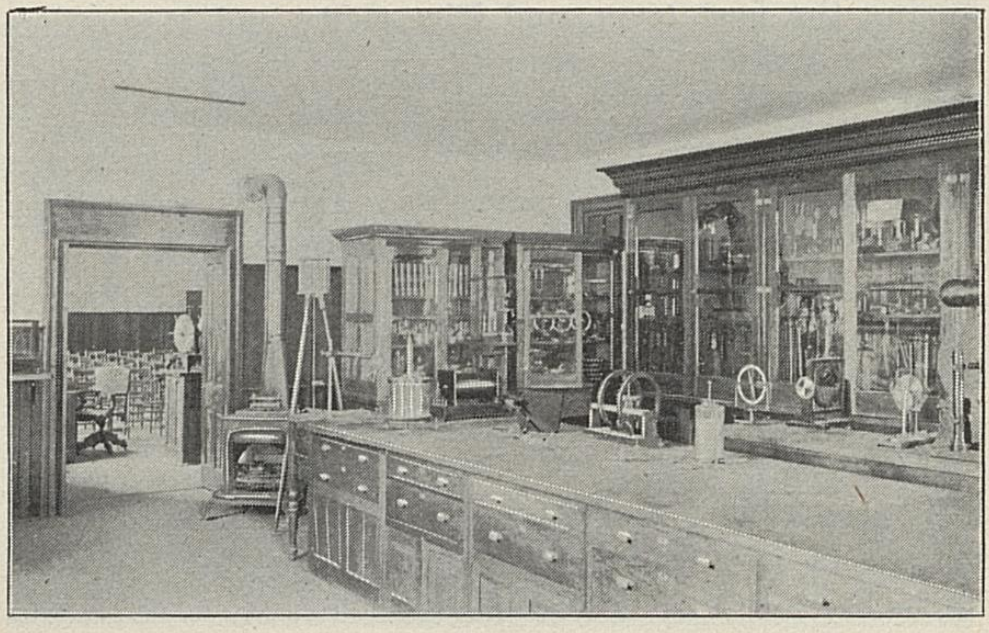
SOLID GEOMETRY AND CONIC SECTIONS are studied in the first term of the Sophomore Year, and the second term is devoted to ANALYTICAL GEOMETRY.

THE DIFFERENTIAL AND INTEGRAL CALCULUS is studied during the first term of the Junior Year.

ASTRONOMY is pursued during the second term of the Senior Year. The object of the instruction is to give the student a knowledge, as extensive as the time will permit, of the phenomena of the heavenly bodies, and of their probable condition and history.



CIVIL ENGINEERING.



PHYSICS.

VI. Physics.

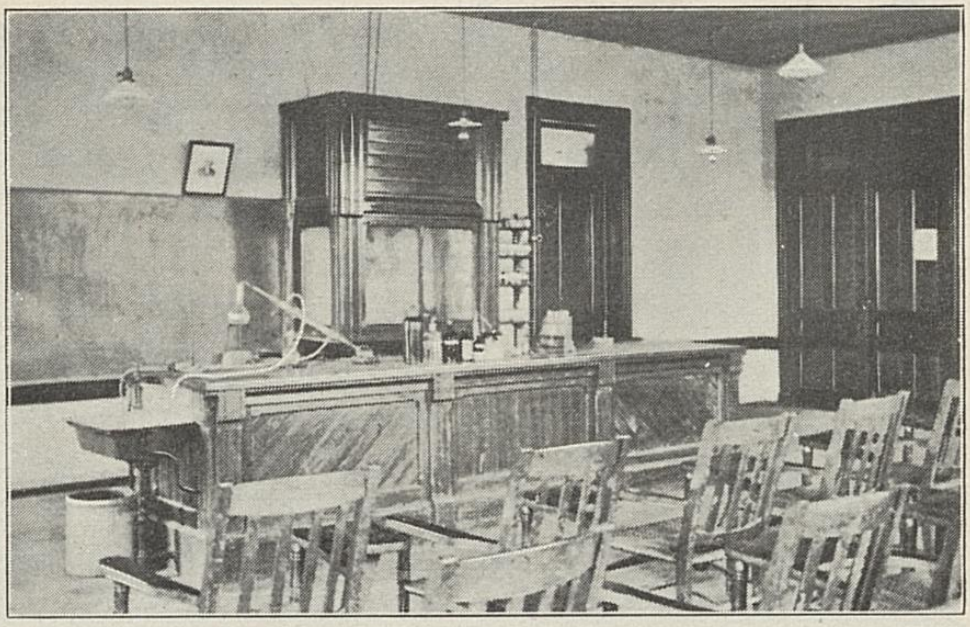
PROF. PENCE.

The study of Physics is begun in the last year of the Academy, with an elementary course of five months. The instruction is by text-book and experiments.

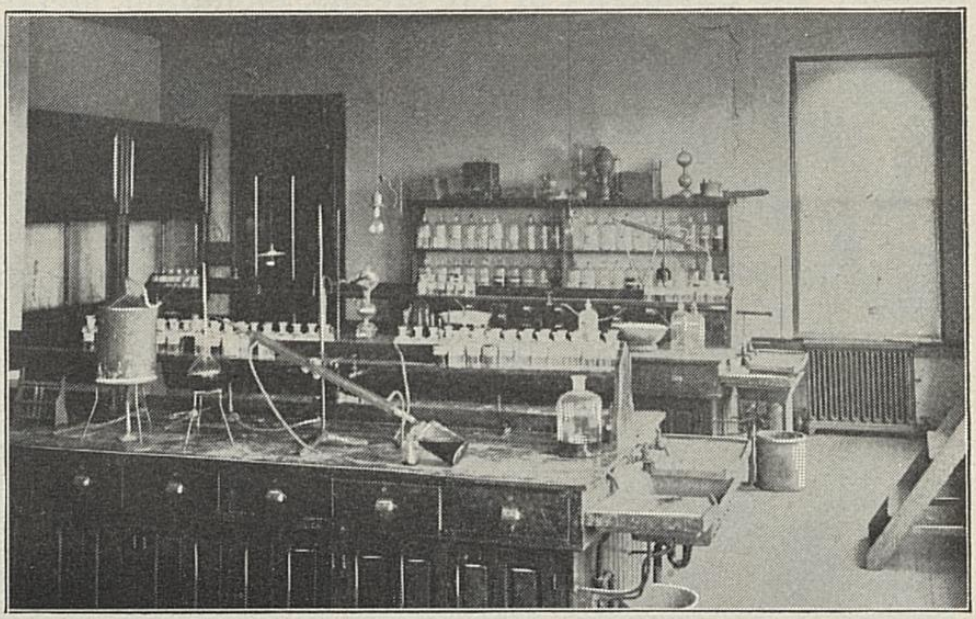
The collegiate work in Physics, beginning with the Sophomore year, consists of lectures, fully illustrated by experiments, with recitations treating of the General Properties of Matter, Sound, Heat, Light, Electricity, and Magnetism; and is intended to give the student a general knowledge of physical phenomena and physical laws, and to prepare him for the practical work which accompanies and follows this course. Work in the laboratory occupies one hour daily during the first term, and one and one-half hours the second term.

In the Junior Year Heat is studied one hour daily during the first term, and Electricity and Magnetism one hour daily the second term. A portion of each term is spent in the laboratory. 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.

The Department of Physics occupies two adjacent rooms in the Main College Building. The lecture room, seating fifty or more students, has table with gas, water, and is arranged to be used at pleasure as a dark room. The laboratory 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.



LECTURE ROOM — DEPARTMENT OF CHEMISTRY.



LABORATORY — DEPARTMENT OF CHEMISTRY.

This department is well equipped with apparatus, nearly all of which is new. It has especially a fine lot of electrical instruments, including an outfit for experimentation with the Roentgen rays.

VII. Chemistry.

PROF. KASTLE.

Chemistry is one of the essential studies in each of the several courses of study leading to the Bachelor's Degree. Instruction in this science consists of lectures, recitations, and laboratory practice on the chemical elements, and their more important compounds and the laws of chemical change. Opportunities are offered by the department for instruction in the following branches of the science: The Chemistry of the Non-metals; the Chemistry of the Metals, including Metallurgy; Qualitative and Quantitative Analysis; the History of Chemistry; Theoretical and Physical Chemistry, and Organic Chemistry.

These studies are pursued during the Sophomore, Junior, and Senior Years.

The equipment of the Chemical Department is such as to offer excellent facilities for practical work in Chemistry. The chemical lecture room, together with the two laboratories, an instructor's office and store room are located on the second floor of the Experiment Station building. The lecture room is commodious, and conveniently arranged for class-room work. The laboratories are well equipped with working tables,

GEOLOGY.

ZOÖLOGY.

hoods, water, gas, electricity, chemicals, and general chemical appliances and apparatus, and will accommodate about forty-five students. An excellent chemical library is at the disposal of students pursuing advanced studies in Chemistry.

VIII. Anatomy, Physiology, and Hygiene.

PROF. PRYOR.

These studies are taught to students in the Classical, Scientific, Biological, Chemical, and Normal Courses throughout both terms of the Freshman Year. Instruction is given by means of text-books, lectures, and demonstrations. For purposes of illustration this department is well provided with the necessary equipment in the way of manikin, models of the eye, ear, larynx, etc., skeletons, microscopes, charts, projecting lantern, and lantern slides.

The studies of this department, in conjunction with those in Chemistry and Biology, serve as an admirable preparation for the *study of medicine;* and special arrangement has been made with leading medical schools, whereby certificates of proficiency issued from this department, and covering the subjects taught in it, will be duly accredited by such schools.

IX. Geology and Zoology.

PROF. MILLER.

Most of the instruction in these subjects is given to Juniors and Seniors in the various scientific courses.

ZOOLOGY.

The five branches of this subject are each half-year studies. These, in the order they are designed to be pursued, are:

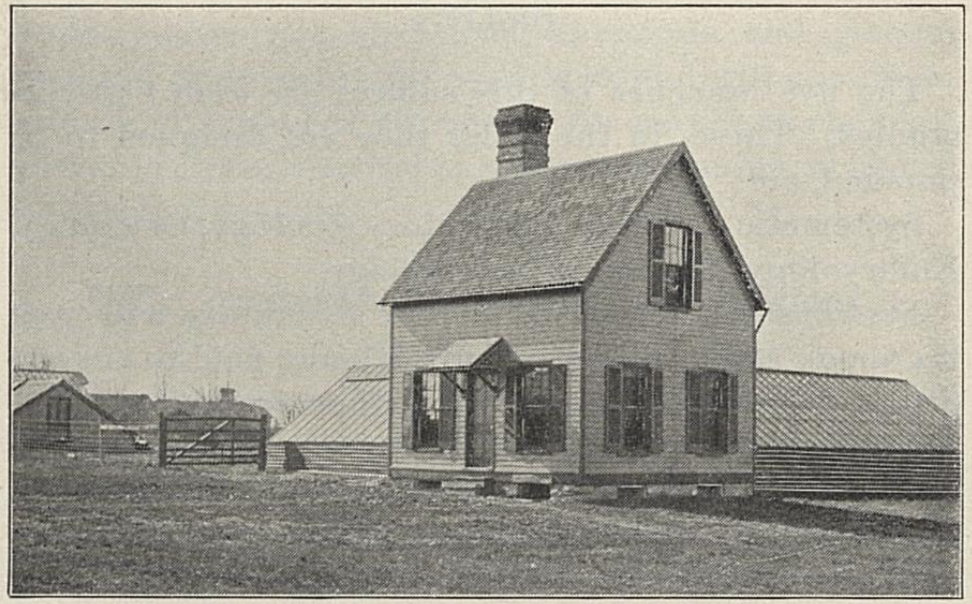
Systematic Zoology, Laboratory Zoology, Osteology, Embryology, Economic Entomology.

Systematic Zoology is a part laboratory and part text-book study, special attention being paid to classification. Considerable practice is given in species determination. A text-book is used to present the speculative and philosophical side of Biology. The *Laboratory Zoology* affords practice in dissection and preparation of tissues for microscopical examination. The *Osteology* involves a comparative study of the vertebrate skeleton, particularly that of the mammalia. The *Embryology* is a practical study of vertebrate development, as illustrated in the frog and chick. The *Economic Entomology* is a study of the habits and life histories of injurious insects. Prof. Garman, Entomologist of the Station, has charge of the instruction in this subject.

GEOLOGY.

As in Zoology, so here, five subjects are taught. These are: Physiography, Paleontology, Mineralogy, General Geology, Economic Geology.

The *Physiography*, or advanced Physical Geography, is a senior study for students in the Classical Course. The *Paleontology* is a study of Ancient life-forms,



GREEN HOUSE.

BOTANY.

chiefly with reference to their zoological affinities. The *Mineralogy* is descriptive and determinative, special attention being directed to the physical characteristics of minerals. Some Lithology is introduced. Paleontology and Mineralogy together make up a half year's study, and is a prerequisite to the study of *General* or *Advanced Geology* of the Senior Year in the Scientific, Biological, and Bachelor of Pedagogy courses. This is chiefly Structural and Historical Geology, and is taught by text-book, supplemented by lectures. The *Economic Geology* is for the Chemical, Agricultural, and Civil Engineering students. The practical side of Geology receives chief consideration here. Instruction by text-book and lectures, as in preceding.

The Geological Room in the Main Building, and the Zoological Laboratory in the basement of the Experiment Station Building are each well equipped with collections, charts, lantern slides, libraries, and the special apparatus and reagents necessary for the prosecution of laboratory work by the student. Field work is encouraged by local trips and excursions to the Kentucky River and the mountains. This is particularly a feature in the geological instruction.

X. Botany, Horticulture, and Agriculture.

PROF. MATHEWS.

BOTANY.

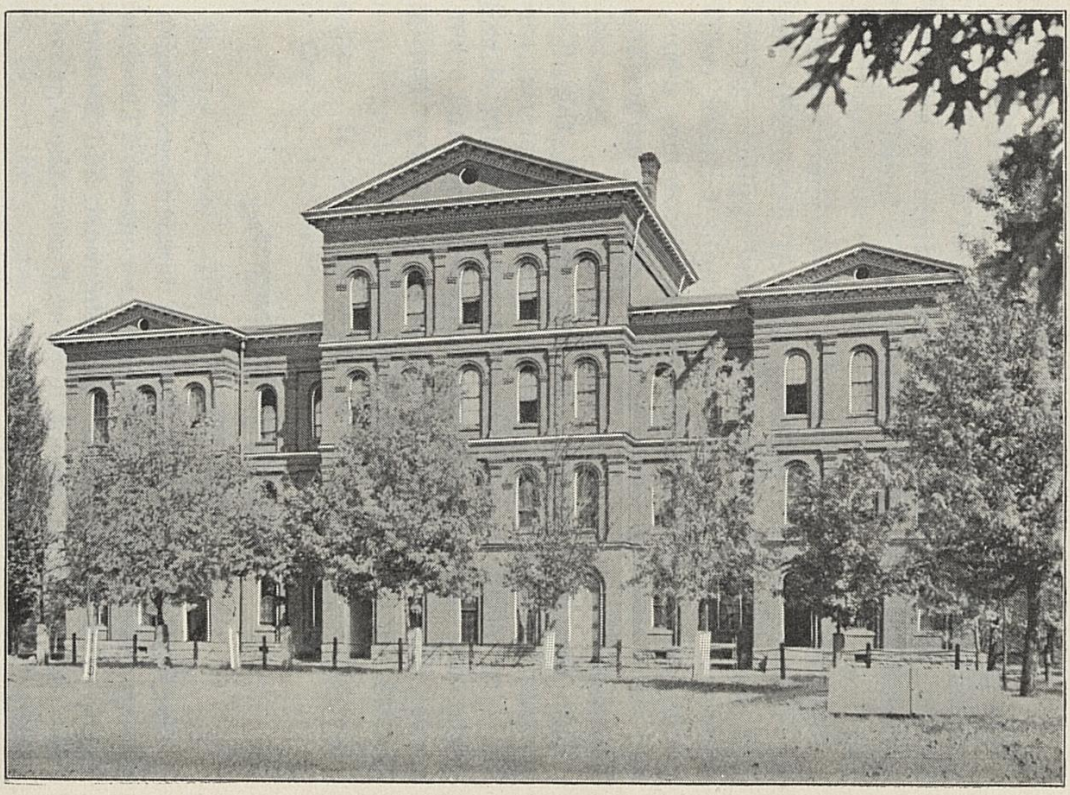
The instruction in the six branches of this subject is distributed through the last three years of several

courses, and involves both laboratory practice and use of text-book.

INTRODUCTORY BOTANY is a full Sophomore study in the General Scientific, Agriculture, Biological, Chemical, and Normal Courses. The order of increasing complexity of plant organization is the order of treatment followed in the presentation of this subject. The *Histology* and *Plant Physiology* is pursued as a continuous study through the Junior Year of the Agricultural and Biological Courses, and involves the preparation of vegetable tissues, their study under the microscope, and the conduct of laboratory experiments upon the activities of growing plants. The *Cryptogamic Botany*, a required study of Juniors in the Biological Course, embraces the study of representatives of the lower classes of plants. In the *Economic Botany*, required of Seniors in the Agricultural Course during the first half of the year, a study is made of injurious fungi and the botany of cultivated plants. The *Special Advanced Botany*, consisting of some advanced line of botanical study assigned with special reference to the individual tastes and requirements of the student, is pursued during the last half of the Senior Year in the Biological Course, and may furnish a subject for a thesis.

HORTICULTURE.

In this study, pursued in the Agricultural Course during the second term of Junior and the first term of Senior Year, the time is divided between lectures, recitations, and actual practice in horticultural operations.



OLD DORMITORY.

The general subject of Agriculture is taught to Juniors and Seniors in the regular Agricultural Course. It embraces a study of such topics as soils, draining, and irrigation, fertilizers, farm economy, stock breeding, and dairying.

The Botanical Laboratory, in the basement of the Experiment Station Building, is well fitted with the customary laboratory furnishings and appliances, consisting of tables, gas, and electric-light fixtures, compound, and dissecting microscopes, microtomes, ovens, and sterilizing apparatus, balances, reagents, herbarium, botanical library, etc.

The two greenhouses, the Campus, and the Experiment Station Farm afford abundant material for botanical study and opportunity for horticultural experiment. Excursions to the Kentucky River and other points of botanical interest give the student opportunity of studying the wild flora of the State.

The Scientific Courses.

PROF. WHITE, DEAN.

The studies of the preceding six departments furnish majors and leading minors for four courses. Three of these — the General Scientific, Chemical, and Biological — lead to the degree of B. S., and one — the Agricultural — to the degree of B. Agr.

THE GENERAL SCIENTIFIC COURSE.

MAJOR STUDY.—Mathematics.

MINORS.—History, Political Economy, Metaphysics, English, French, German, Astronomy, Chemistry, Anatomy and Physiology, Geology, Zoology, Botany, Physics, Drawing, Military Science.

The next three courses are, until the end of the Sophomore Year, almost the same as the General Scientific Course. After that time they afford opportunities of specialization.

THE CHEMICAL COURSE.

MAJOR STUDY.—Chemistry.

MINORS.—History, Political Economy, Metaphysics, English, Mathematics, French, German, Anatomy and Physiology, Economic Geology, Systematic Zoology, Botany, Physics, Military Science.

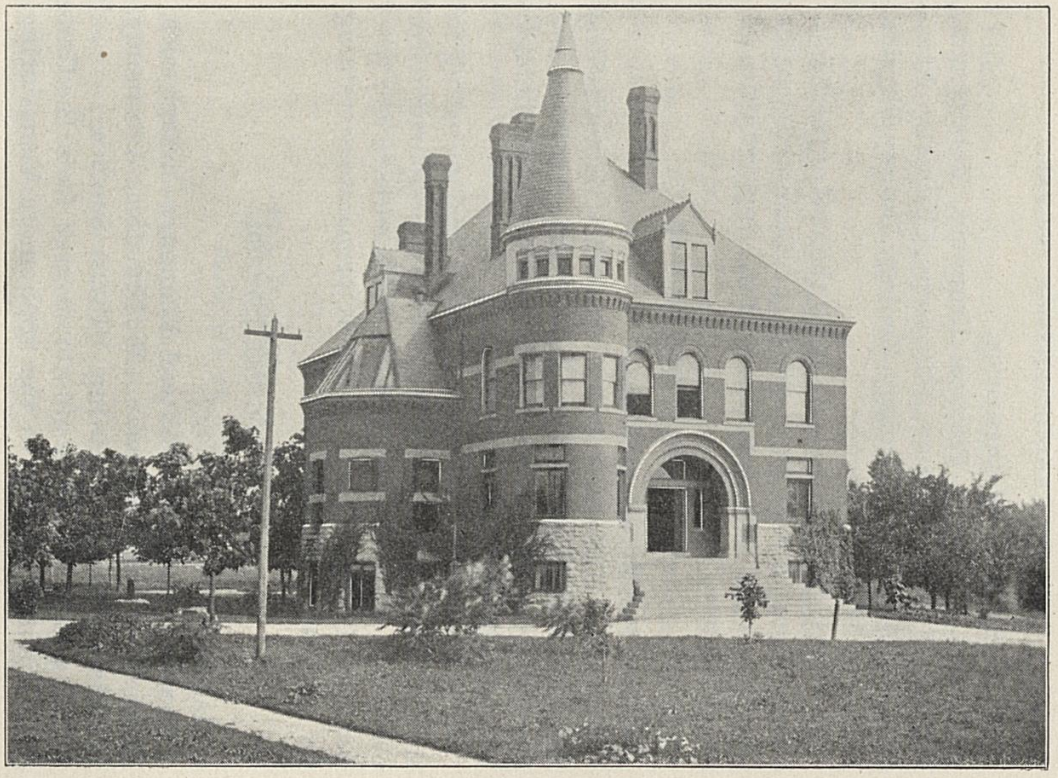
This course, with Chemical studies predominating in the last two years, gives the student an opportunity of preparing himself for life work in Chemistry as a profession. It also affords excellent preparatory training for the study of medicine.

THE BIOLOGICAL COURSE.

MAJOR STUDY.—Biology.

MINORS.—History, Political Economy, Metaphysics, English, French, German, Mathematics, Astronomy, Chemistry, Physics, Drawing, Military Science.

This course, which begins to diverge from the General Scientific Course in the Sophomore Year, during



EXPERIMENT STATION BUILDING.

the Junior and Senior Years, offers still further opportunities for specialization. It is also a fine "Medical Preparatory Course." A practical knowledge of Comparative Anatomy, Embryology, and Histology, with accompanying skill acquired in dissection and microscopical technique, so invaluable to a medical practitioner, can be best gained in college by taking some such course as this.

The Agricultural Course.

MAJOR STUDY.—Agriculture and Horticulture.

MINORS.—History, Political Economy, Metaphysics, English, French, German, Mathematics, Botany, Zoology, Chemistry, Physics, Economic Geology, Woodwork and Forging, Drawing, Military Science.

In arranging this course, a prominent place has been given to those studies which bear most direct and practical relation to agricultural pursuits.

THE SHORT COURSE IN AGRICULTURE.—(Not leading to a degree.)

This, an eight weeks' course, beginning in January of each year, and hence arranged to come at a time which is generally the least busy season upon Kentucky farms, is aimed to give an opportunity to ambitious young farmers to gain accurate and practical information on such important topics as soils and their origin, agricultural chemistry, manures and commercial fertilizers, plant life on the farm, vegetable and fruit growing, diseases of plants, injurious insects, care and feeding of live stock, dairying, etc.

For information in regard to post-graduate degrees in science, see catalogue.

XI. Mechanical Engineering.

PROF. ANDERSON.

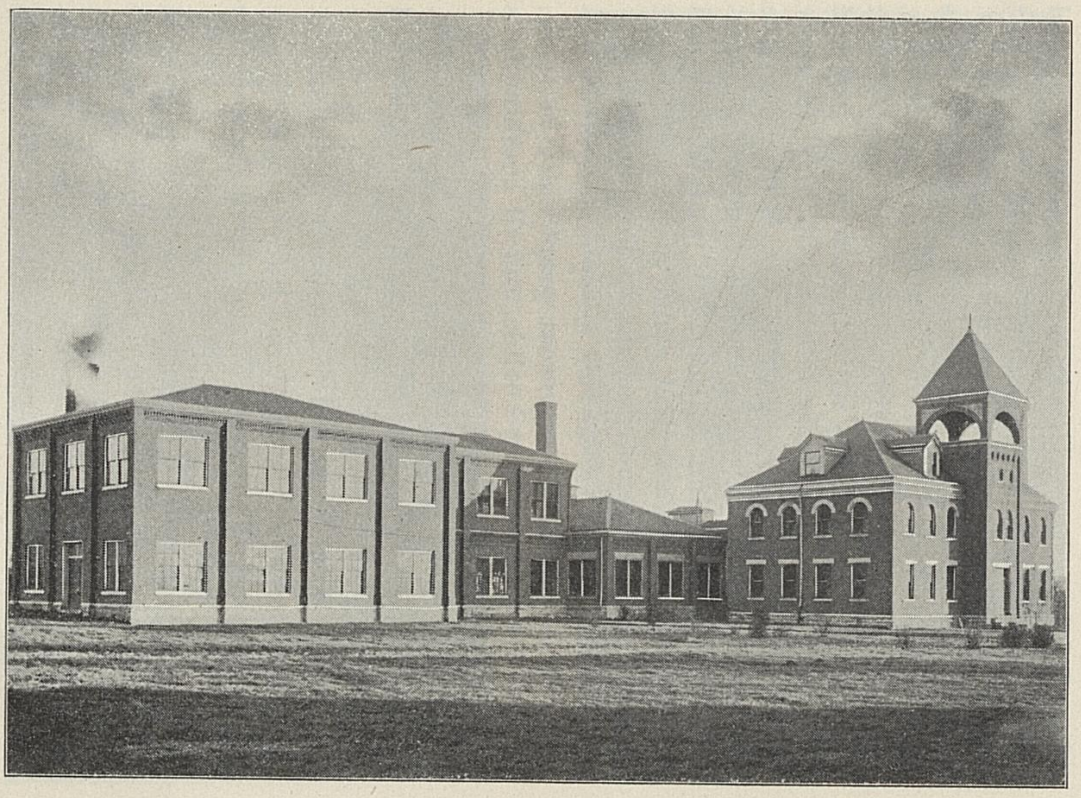
ASSISTANTS — PROF. WELLS, PROF. JOHNSON.

This department is one of the most self-contained departments in the institution, most of the studies in it being pursued only by matriculates in the Mechanical Engineering Course. These studies are distributed through the four collegiate years. The method of instruction is both didactic and practical, the class-room work, to which the morning hours are devoted, illustrating the former, and the afternoon shop-work illustrating the latter method.

TECHNICAL INSTRUCTION, consisting of lectures, accompanied by recitations, on the form and use of tools and machinery, on all processes connected with the making of castings, on forging, and finally on modern machine-shop practice, is given continuously during the first two years of the course.

MECHANICAL DRAWING — a study extending through the whole four years' course — involves the free-hand sketching and the drawing to scale of models, machines, etc.; practice in tinting and shading, and finally the working out of complete designs of machines.

In the SHOP-WORK, carried on in the afternoon during the Freshman and Sophomore years, the student is first introduced to the wood-shop, where, by a series



MECHANICAL HALL.

of graded exercises in bench-work, wood-turning, and pattern-making, he gains facility in the use of tools and a certain degree of accuracy in construction. Thence he is transferred to the foundry, where he is given practice in the various operations of molding, core-making, and the melting of iron and brass. Work in the forge-shop follows, with its exercises in iron and steel forging; and finally, with skill and accuracy improved by preceding practice, he is placed in the machine-shop, and intrusted to the conduct of operations in screw-cutting, turning, drilling, planing, and the milling of iron and steel, which give a high degree of mechanical skill and constructive precision.

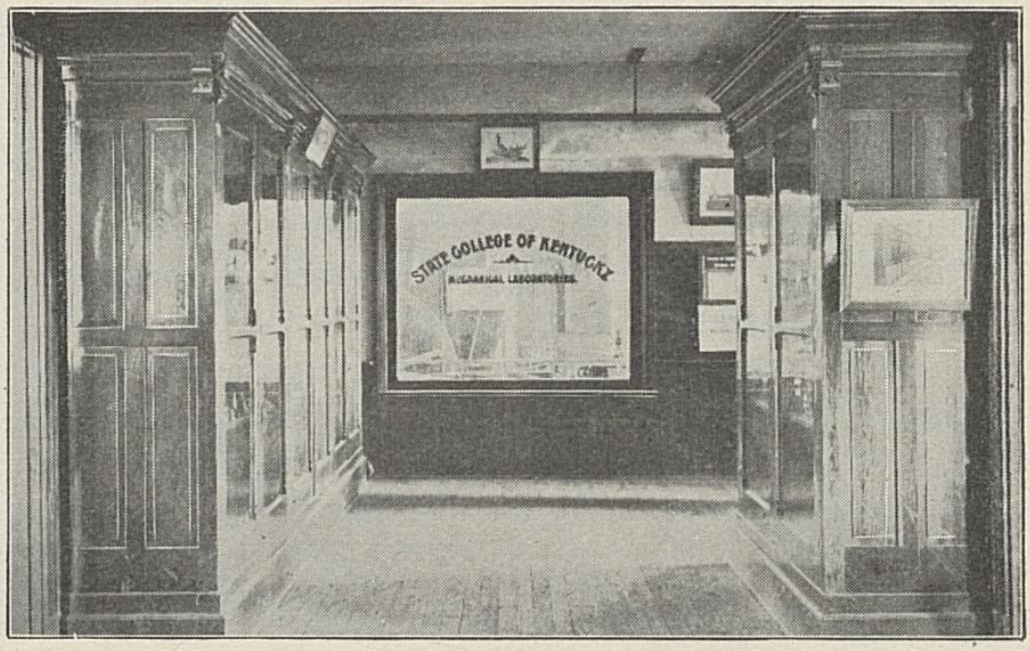
In DESCRIPTIVE GEOMETRY, a Sophomore study, the student is trained to represent graphically in space, points, lines, surfaces, and solids, and all combinations resulting therefrom.

KINEMATICS, in the Junior Year, is a study of "velocity ratios" and the various mechanical devices involved in designing trains of mechanism.

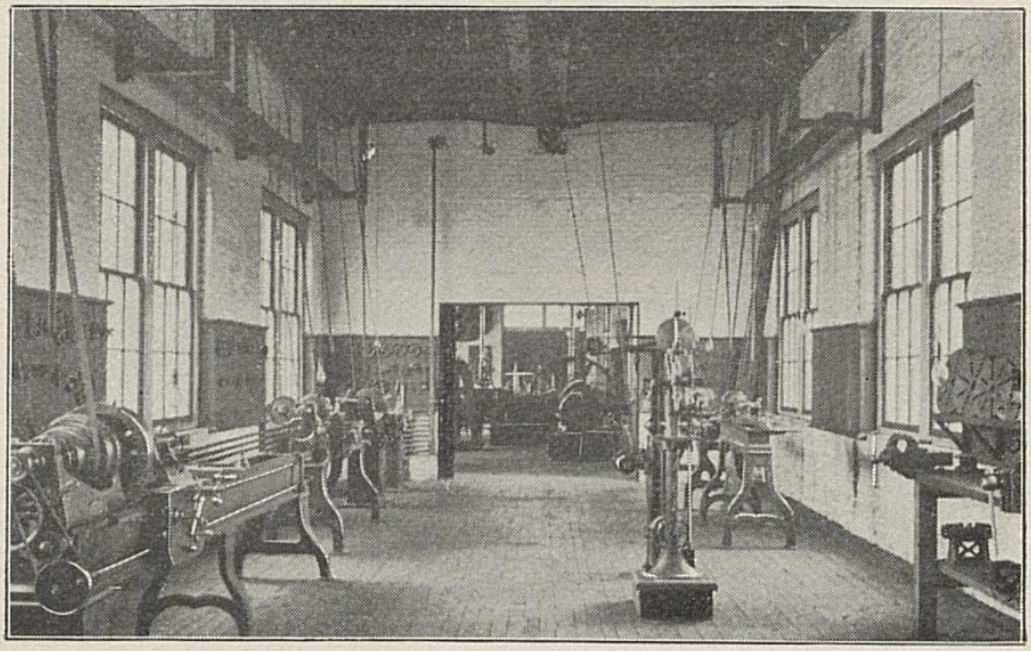
METALLURGY, a chemical discussion of useful metals.

In STRENGTH OF MATERIALS, a Junior study, the student is given both a theoretical and practical knowledge of the behavior of materials under stress.

Nine subjects engage the attention of the Mechanical Engineering student during his Senior Year. These are: Thermodynamics, Steam-Boilers, Valve-Gearing, Engine and Machine Designing, Experimental Engineering, Photography, Dynamo - Electric Machinery,



ENTRANCE TO MECHANICAL HALL.



MACHINE SHOP ANNEX — MECHANICAL ENGINEERING.

Dynamometers, and Measurement of Power, and finally Thesis Work.

The nature of most of these may be inferred from the names, but for a fuller description of these and like technical studies, reference is made to the catalogue.

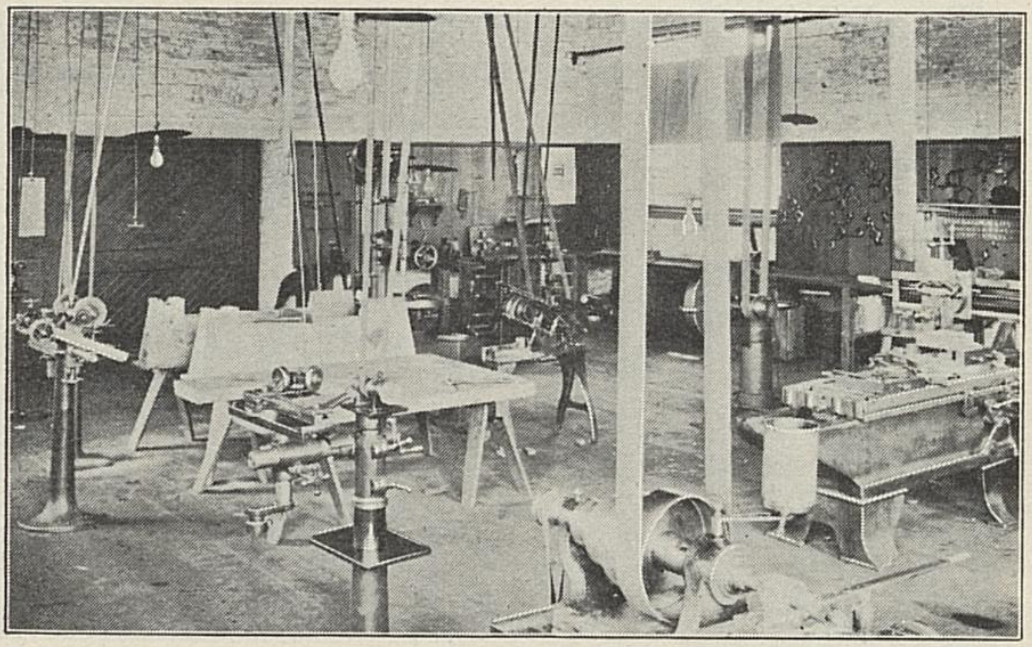
The THESIS WORK only need be touched upon here. The presentation of a satisfactory thesis upon some mechanical engineering subject is a final requisite for obtaining the degree of B. M. E. from the State College. This thesis is upon a subject assigned by the Professor of Mechanical Engineering, and must possess features of originality.

EQUIPMENT AND FACILITIES.

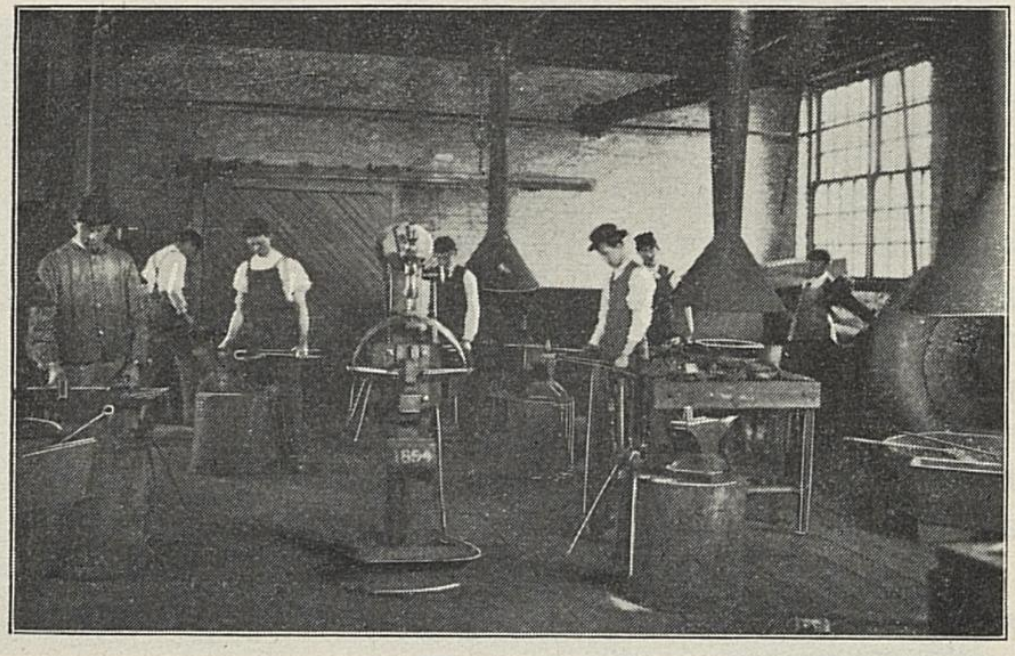
These are superior to anything in this line south of the Ohio River. The accompanying illustrations, showing exterior and interior views of Mechanical Hall, speak for themselves. But an enumeration of rooms and a brief description of equipment may not be superfluous.

The building contains three recitation-rooms, two drawing-rooms, three offices, a wood pattern shop, two boiler-rooms, wash-room, 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 the students.

The *Drawing-Rooms* are well supplied with the drawing apparatus and tables necessary to accommodate one hundred students.



MACHINE SHOP—MECHANICAL ENGINEERING.



FORGE SHOP — MECHANICAL ENGINEERING.

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 for individual student use; besides a complete general equipment of wood-working machines.

The *Foundry* contains two furnaces — one for iron and the other for brass — with all the accompanying molding equipment necessary for the making of large and small castings.

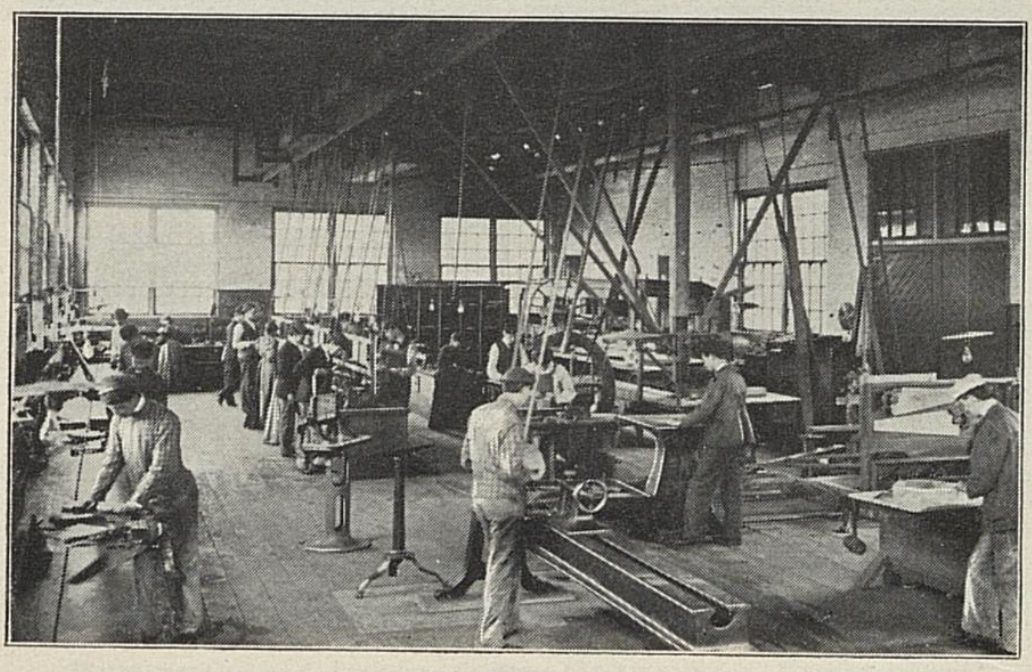
The *Blacksmith Shop* is fitted with forges, anvils, vises, blacksmith tools, emery grinder, steel blower, and power spring hammer. (The latter designed and made by students.)

The *Machine Shop* contains lathes, milling machines, shapers, drills, planers, grinders, and all the other machines and apparatus for cutting, drilling, and shaping of metal.

The *Experimental Laboratory*, the latest superb addition to this department, is supplied with steam engines, dynamos, motors, testing machines, and all the accompanying steam-engine indicators, brakes, gauges, planimeters, calorimeters, pyrometers, cement samplers, sieves, and other instruments and apparatus necessary for discussing practically problems relative to Steam and Electrical Engineering.

The *Tool-Room* is equipped with a fine assortment of superior tools for work in iron, steel, brass, and wood;

FOUNDRY — MECHANICAL ENGINEERING.



WOOD SHOP — MECHANICAL ENGINEERING.

and contains such stock and supplies as may be used in the constructions in the mechanical laboratories.

The *Wash-Room* contains lockers for 100 students, and is supplied with marble basins.

The *Boiler-Houses* contain, respectively, a fifty-one horse-power Babcock & 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 Mechanical Engineering Course.

PROF. ANDERSON, DEAN.

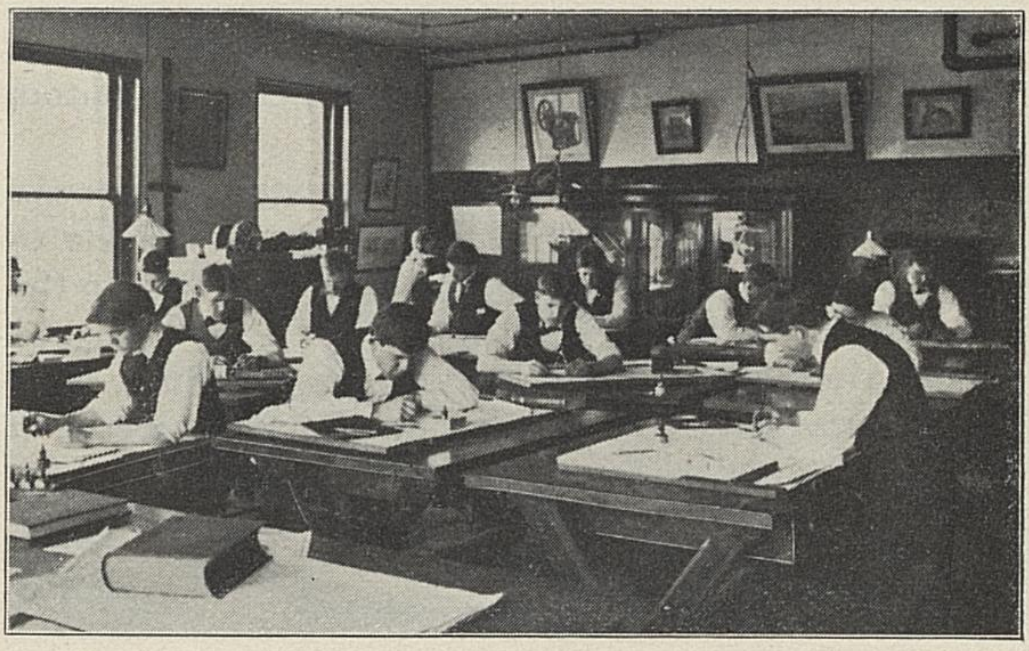
MAJOR STUDY.—Mechanical Engineering.

MINORS.—History, Political Economy, English, Mathematics, Physics, Chemistry (including Metallurgy), Military Science.

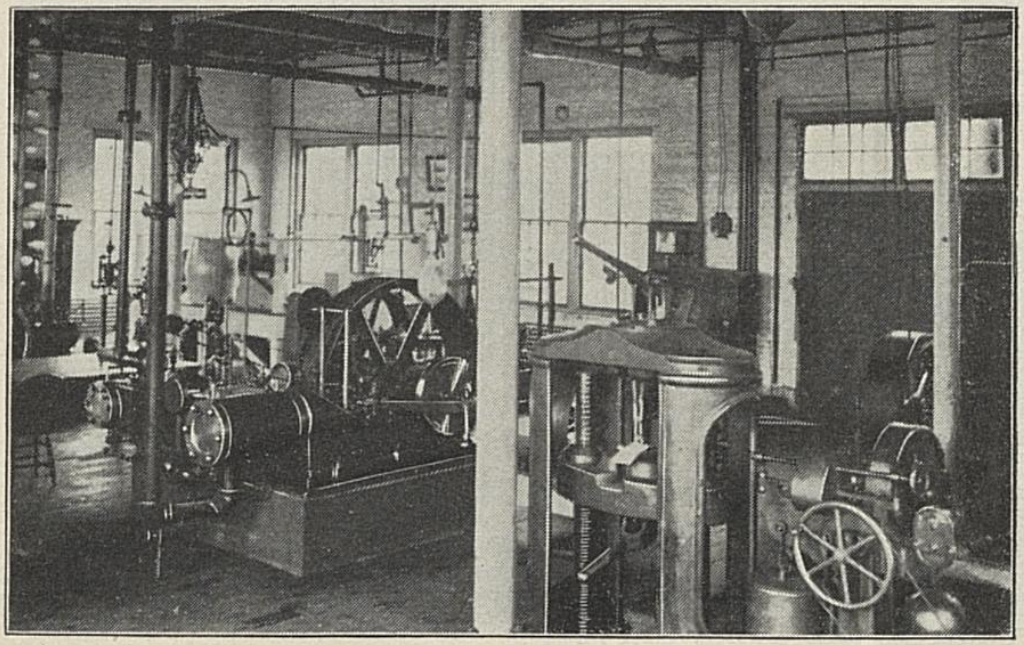
This course is largely a technical one. The object is to prepare young men for positions of responsibility and trust in mechanical engineering work. With this end in view the training given is both theoretical and practical. The course involves three separate lines of work:

1. MECHANICAL ENGINEERING.—The object of which is 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, coal, and refractory substances.



SENIOR DRAWING ROOM—MECHANICAL ENGINEERING.



EXPERIMENTAL LABORATORY—MECHANICAL ENGINEERING.

3. ELECTRICAL ENGINEERING.—In which the theory, design, building, and operation of dynamos and motors are predominant.

These three lines of work are in the nature of elective sub-courses, some one of which the student elects to pursue after the Sophomore Year—and all lead to the same degree—that of B. M. E.

For information in regard to the post-graduate Master's Degree in Mechanical Engineering (the degree of M. E.), the inquirer is referred to the catalogue.

XII. Civil Engineering.

PROF. NELSON.

The technical work required in this department is as follows:

DRAUGHTING.—Taught as a special branch of study during the Freshman Year, and almost daily practice required in it in connection with the other work of the department.

SURVEYING.—The second term of the Freshman Year is occupied with the theory and practice of Plane Surveying. Work is done in the field, where the use of the various instruments is learned. Surveys are made and platted; areas are calculated; leveling is practiced. In the Junior Year the principles of the Higher Surveying are studied, with reference to methods used in accurate Triangulation as practiced in the work of the Coast Survey.

BARN — EXPERIMENT STATION FARM.

DAIRY BUILDING — EXPERIMENT STATION FARM.

Railway Location.— The Location, Construction, and Equipment of Railways are studied theoretically; and practical knowledge is obtained, as far as possible, by inspection and study of the various railway yards and roads in and about Lexington, and by work in the field.

Structures.— The theory of the strength of all kinds of structures, such as simple beams, girders, columns, arches, roof and bridge-trusses, buildings, etc., is studied, and designs are made.

Masonry.— The study of Masonry is taught so as to inform the student as to the methods of calculating the strength of structures of stone and brick. The proper handling of cements is studied with practice in their testing.

Hydraulic, Sanitary, and Municipal Engineering are taught in such detail as may be required by students desiring to prepare themselves for the practice of such lines of their profession.

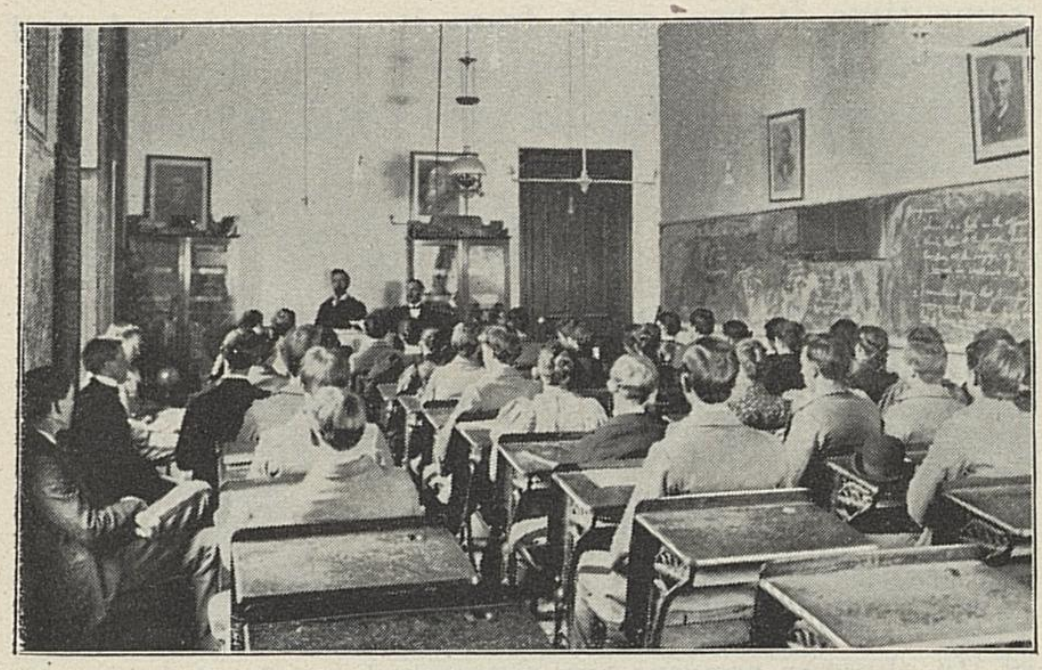
The Civil Engineering Course.

Prof. Nelson, Dean.

Major Study.— Civil Engineering.

Minors. — History, Political Economy, English, Mathematics, Astronomy, Chemistry, Economic Geology, Physics, Descriptive Geometry, Drawing, Military Science.

This course has for its primary object the training of young men to become skilled civil engineers. At the



CLASS ROOM — NORMAL DEPARTMENT.

CLASS ROOM — DEPARTMENT OF PHYSIOLOGY.

same time it has, apart from its value as technical training, a general educational value as well.

The graduate in this course receives the degree of B. C. E.

The requirements for the post-graduate degree of C. E. are indicated in the catalogue.

XIII. The Normal School.

PROF. ROARK, PRINCIPAL.
PROF. NEWMAN, ASSISTANT.

Although organized as one of the departments of the College, the Department of Pedagogy is, so far as some of its shorter courses are concerned, a school in itself.

The studies belonging exclusively to this department may be classified under two heads:

1. THE COMMON BRANCHES — Including all the subjects taught in the Common Schools of Kentucky.

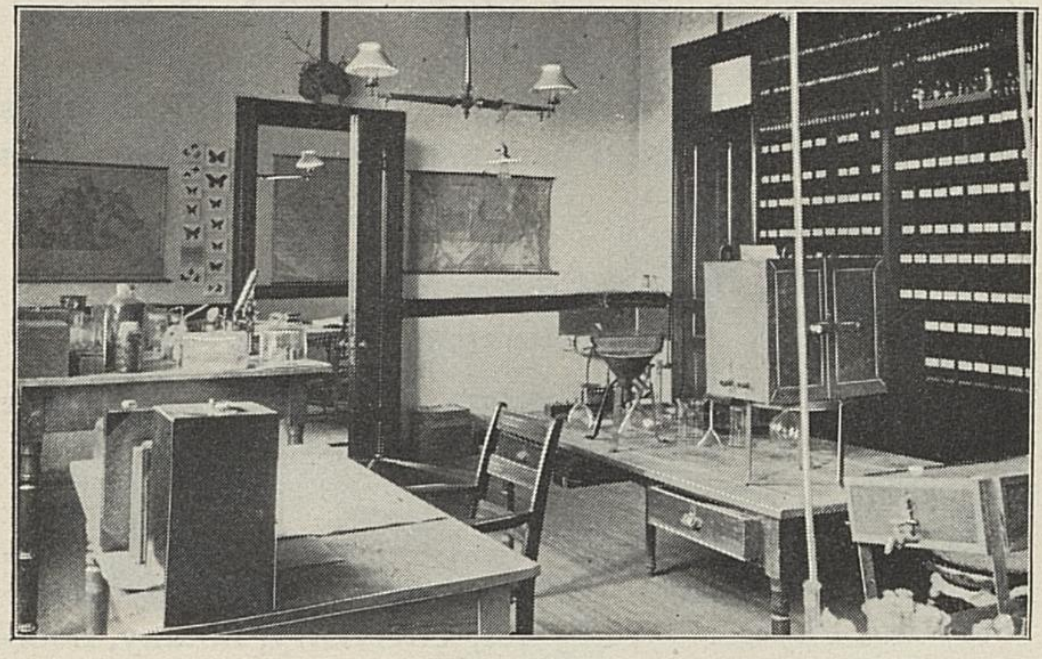
2. THE HIGHER BRANCHES — Including those of a professional nature, and also those required in addition for obtaining the State Certificate and State Diploma.

Only the professional studies in class No. 2 need be mentioned here.

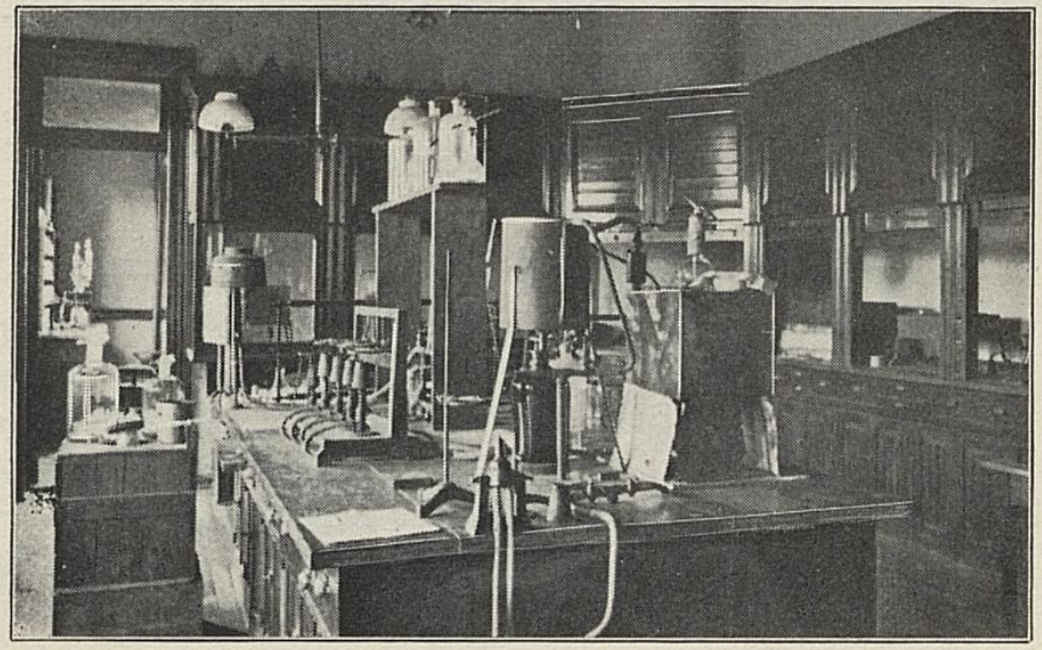
FORENSICS.— A drill in essay writing, speaking, and debating. This is an important feature in the work of the Normal School.

PEDAGOGY DRILL. — A training in the Science of Teaching.

PSYCHOLOGY. — This is "Psychology in Education."



ENTOMOLOGY — EXPERIMENT STATION.



CHEMICAL LABORATORY — EXPERIMENT STATION.

School Economy. — A study of "School Management" and "Educational Methods."

History of Education. — Painter's and Williams's "History of Education" are used as text-books on this subject.

The Degree Course in Pedagogy.

Prof. Roark, Dean.

This is a four years' course coequal with the other four-year courses in the College proper.

Major Study. — Pedagogy.

Minors. — History, Political Economy, Metaphysics, English, Greek, Latin, Mathematics, Astronomy, Anatomy and Physiology, Physics, Chemistry, Botany, Zoology, Geology, Military Science.

For announcement of shorter, exclusively normal courses, and fuller information relating to this department, the inquirer is referred to the catalogue.

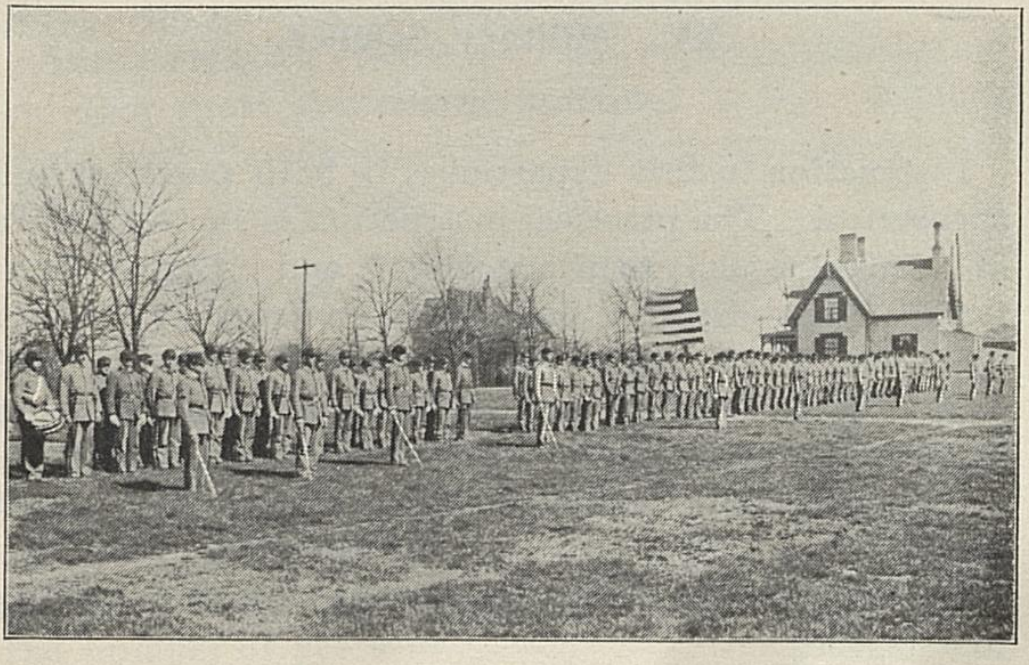
XIV. The Academy.

Prof. Patterson.

Assistants — Profs. Logan, Davis, and Muncy.

The Academy, established for the purpose of bridging over the hiatus between the common schools and the Freshman Class of the College, has a course of study covering a period of two years. Applicants for admission to the Academy must be able to pass a satisfactory examination upon the branches taught in the common school course, as prescribed by the State Board of Edu-

ARTILLERY.



BATTALION.

cation. If county appointees, such applicants must be fourteen years of age and provided with the proper credentials of scholarship from their County Superintendents. Other applicants must be fifteen years of age.

There are two courses of study in the Academy, each preparatory to two groups of courses in the College:

(*a*) *Preparatory to Scientific, Agricultural, and Engineering Courses*—Arithmetic, Algebra, Geography, History (U. S. and General), Grammar, Rhetoric, Synonyms, Elementary Physics, Physical Geography.

(*b*) *Preparatory to Classical and Normal Courses*—The same as (*a*) with omission of Physical Geography and History, and addition of Latin and Greek.

XV. Military Science.

CAPTAIN SWIGERT.

Instruction in this department is both practical and theoretical. The practical instruction is in the nature of "Infantry and Artillery Drill" and "Signal Practice." The theoretical instruction embraces *recitations* upon the U. S. Drill Regulations for Infantry and Artillery; *instruction* in preparation of reports and *lectures* on organization and administration of U. S. Army, and general principles governing in the Art of War.

Military Science forms a part of every course leading to a degree.

Student Organizations.

Four flourishing LITERARY SOCIETIES — The Union, Patterson, Normal, and Philosophian (the latter the young ladies society) — foster an interest in speaking, writing, and debate.

The Board of Trustees has given testimony to its appreciation of the work done by these societies, by employing, at their request, a special instructor in the "Art of Expression." All students of the College have the privilege of this instruction free.

Two SCIENTIFIC SOCIETIES — the Mechanical Engineering and the Biological — each indicate in their names the special objects for which they were established.

The Y. M. C. A. is a flourishing organization. It has permanent quarters in one of the dormitories.

ATHLETICS are encouraged by the opportunities for out-door sport and exercise afforded by the "Athletic Field and Parade Grounds." These are the best of their kind in the State.

Terms of Admission and Expenses.

COUNTY APPOINTEES.— Each county, or where there is more than one legislative district in a county, each legislative district is entitled to send to the State College each year five properly prepared students — one to the College (including the Academy) and four to the Normal School. The former appointment, tenable for the number of years necessary to complete the course

GROUP OF YOUNG LADY STUDENTS.

in which the student matriculates; and the latter, tenable each for one year, entitle the beneficiary to *free tuition, free room rent, fuel, and lights*, and *free traveling expenses.* The period for obtaining the Academic and Collegiate appointment is between June 1 and August 1, and for obtaining the Normal appointment between July 1 and December 31 of each year. The applicant must be of proper age, and must have completed the common school course. All appointments are made by the County Superintendents on competitive examination.

ENTRANCE EXAMINATIONS for the Session 1897–8 are held immediately following Commencement in June, and on September 6, 7, and 8. All students, excepting those with certificates from "Accredited Schools" (a list of which appears in the catalogue), must be examined for classification when they present themselves at the College for admission to the Academy, the Normal School, or to any of the courses of study in the College proper. No transfer from one course to another will be allowed within the college year.

EXPENSES.—The necessary expenses for the entire collegiate year need not exceed, for a county appointee, $125.00; for any other student, not an appointee, $200.00.

The next Session opens Thursday, September 9, 1897. Write for information or catalogue to

JAS. K. PATTERSON, President,
State College of Kentucky,
Lexington, Ky.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