1907

Langston University Catalog 1907-1908

Langston University

ANNUAL CATALOGUE

OF THE

COLORED AGRICULTURAL AND NORMAL UNIVERSITY

1907-1908

LANGSTON, OKLAHOMA

Founded 1897

ANNUAL CATALOGUE OF THE COLORED AGRICULTURAL AND NORMAL UNIVERSITY FOUNDED 1897

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LANGSTON, OKLA.

PRESIDENT'S RESIDENCE

CALENDAR FOR 1908-1909.

First term begins Tuesday, September 1, 1908.

First term ends Friday, November 27, 1908.

Second term begins Monday, November 30, 1908.

Second term ends Friday, March 5, 1909.

Third term begins Monday, March 8, 1909.

Third term ends Friday, May 28, 1909.

Thanksgiving Day, Thursday, November 26, 1908.

Emancipation Day, Thursday, January 1, 1909.

Christmas Holidays begin Friday, December 18, 1908.

Christmas Holidays end Monday, January 4, 1909.

Lincoln's Birthday, Friday, February 12, 1909.

Commencement May 28, 1909.

BOARD OF REGENTS

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FACULTY

Inman E. Page, *A. M., President.*

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Zelia N. Breaux, *Instrumental Music.*

Mary Lee McCrary, *Domestic Science.*

Luther L. Henderson, *Ph. B., Vocal Music, Philosophy and Pedagogy.*

Aaron A. Starnes, *Superintendent of Mechanical Department.*

Norwood R. Shields, *B. S. A., Agriculture.*

Ada Hawes, *A. M., English Language and Literature.*

Horace F. Mitchell, *A. B., Mathematics.*

William A. Hinton, Jr., *B. S., Natural and Physical Sciences.*

Electa M. Longdon, *B. S. D., Penmanship, Drawing and Geography.*

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Sumner George, *Woodworking.*

Hilliard D. Harris, *Machine Work.*

Cora B. Burks, *Cooking.*

Edward A. Ward, *Reading and Study Hall.*

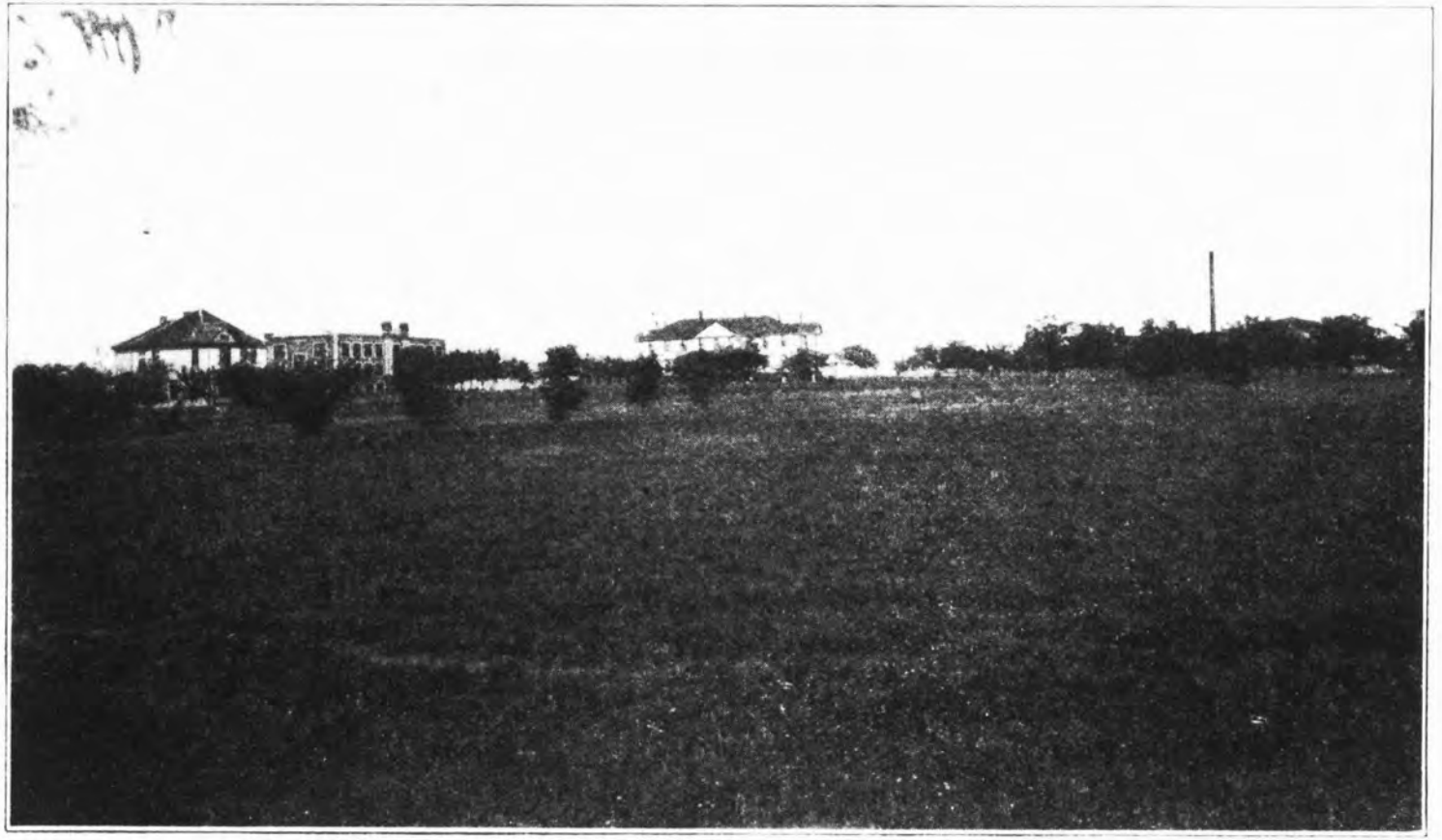
J. R. Johnson, *Assistant in Mathematics.*

Mrs. Zelia R. Page, *B. S., Matron.*

J. C. Mebane, *A. B., In Charge of Young Men's Dormitory.*

P. T. Zeigler, *Farmer.*

GENERAL INFORMATION



CAMPUS VIEW

STUDENTS' ROOM

GENERAL INFORMATION

HISTORY AND ORGANIZATION

This Institution was established at Langston by an Act of the Territorial Legislature in 1897, for the purpose of giving to the colored people of Oklahoma normal, collegiate, industrial and agricultural training. Forty acres of land for building and agricultural purposes were donated by the people of Langston and its immediate vicinity. The same Legislature which established the school, appropriated the sum of $5,000 for its benefit. But this amount proved to be inadequate for the erection of a suitable building, employment of teachers and purchase of necessary equipment. Fortunately for the school at this time, Governor Barnes made such a division of the land-lease money among the Territorial institutions as to make it possible for the school to continue its work without serious embarrassment until an appropriation could be made for its support by the next Legislature.

So favorable was the impression made by the school upon the Legislature which met in 1899, that it made an appropriation of $10,000 for building purposes, provided a special fund by a tax levy of one-tenth of a mill; set apart one-fifth of the land-lease money and one-tenth of the amount which was paid to the Territory annually by the Federal Government, in compliance with the Morrill Act, and made an appropriation of $15,000 from the accrued "Morrill Fund" for the maintenance and equipment of the University.

Owing to the fact that this last appropriation was not approved by the Secretary of the Interior because he was of the opinion that it was made in violation of law, the Regents, at the suggestion of Governor Barnes, adopted a resolution asking our Delegate in Congress to introduce a bill in the House of Representatives providing for the ratification of that part of the Act of the Legislature which contained the appropriation. Mr. Flynn immediately complied with this request, and secured the passage of the bill by both houses of Congress.

buildings were erected—a dormitory for young women and a Mechanic Arts building, and the number of acres was increased to one hundred sixty. The appropriation of $15,000 out of the "Morrill Fund," which was ratified by Congress, made it possible for the Regents to supply the University with books for the library, apparatus for the different departments, stock and implements for the Agricultural and Mechanical Departments.

By an act of the Legislature of 1901 the University was not only well provided with funds for its support during the next biennial period, but also for the erection of an addition to the Main Building, a Boys' Dormitory, and a residence for the President.

The Seventh General Assembly appropriated the usual amount for maintenance and $5,000 for installing a steam heating plant in the Main Building and in the Girls' Dormitory. The Eighth General Assembly appropriated a larger amount than usual for maintenance, $5,000 for a waterworks system and $20,000 for the erection of an additional dormitory for the young women and for the enlargement of the buildings already on the University grounds.

RESOURCES.

The current and permanent support of the University is derived from:

1. Legislative appropriation.
2. One-tenth of the proceeds from the rental of section thirteen, reserved by Congress for the benefit of institutions of higher learning.
3. One-tenth of the "Morrill Fund."

Also the Enabling Act gave to the University one hundred thousand acres of land in western Oklahoma.

The first Legislature of the State of Oklahoma very generously appropriated a fraction over $41,000 for the maintenance of the University for the year 1908-09, which amount, added to the income for the rental of section thir-

As a result of the action of this Legislature two new

teen and from the "Morrill Fund," raises the total annual income to $48,000.

To relieve the overcrowded condition due to the destruction by fire of the Main Building in November, 1907, and to the increased attendance, the same Legislature also appropriated $100,000 for the erection of a new Main Building and for additional improvements.

Thus in the first year of statehood and in the tenth year of its establishment, the University has become a large and potential plant in the educational development of Oklahoma.

LOCATION AND SURROUNDINGS.

The University is located at Langston, Oklahoma, a village of some two hundred and fifty inhabitants, two and a half miles from Coyle (the nearest station on the A. T. & S. Fe. railroad) and fourteen miles from Guthrie. The campus and buildings occupy an elevated position overlooking the school farm of an hundred and sixty acres and the surrounding country.

BUILDINGS.

The University possesses five principal buildings, the Mechanical Building, two dormitories for young women, a dormitory for young men and the President's residence. The Main Building, which contained commodious recitation rooms, laboratories, the Library and the Assembly Hall, was destroyed by fire November 23, 1907. An appropriation of $80,000 has been made by the Legislature for the construction of a new and larger building in its stead, in which ample accommodations will be provided for all of the acadamic work of the University.

A large model barn and other facilities offer exceptional advantages for training in agriculture.

LIBRARY AND LABORATORIES.

Previous to the destruction by fire of the Main Build-

ing the University possessed a well-equipped library and well-appointed laboratories. These will be restored and very much enlarged and improved immediately upon the completion of the new building. The equipment saved from the fire, with that since added, is even now fairly adequate to the ordinary needs of the several departments. In the Mechanical, Agricultural and Domestic Science Departments the equipment is excellent and is increasing steadily, a detailed statement of which will be found under the description of these departments.

MUSICAL ADVANTAGES.

The University has a well-equipped and thoroughly organized Musical Department which, besides aiming to provide thorough training in both vocal and instrumental music, encourages and maintains excellent musical organizations of students that tend to develop special talent and to create a taste for the best in music. The orchestra and the band practice weekly throughout the year and occasionally furnish concerts of a high order both at the University and in nearby towns. The University glee club and choral class meet weekly under the supervision of a member of the faculty.

LITERARY ADVANTAGES.

Two literary societies are conducted by the student body. The Arena is composed of the young men of the University while the young women conduct the DuBois Literary Society. These organizations, while voluntary and under the government of the students, are under the supervision of the faculty, a member of the faculty usually being present at every meeting. Here the students get training in parliamentary practice, in debating and in other forms of practical and literary training.

RHETORICALS.

Systematic instruction and practice in the principles of

BOYS' DORMITORY

speaking and expression are provided by weekly rhetorical exercises, which all students are required to attend. Exercises in oral interpretation, written composition and in the discussion of practical and timely subjects are required of all according to their degree of advancement, the aim being to make voice and body responsive to thought and feeling, to develop original thinking and to give the student control of himself before an audience.

RELIGIOUS REGULATIONS AND ADVANTAGES

Nothing of a denominational character is ever allowed in connection with the University, but all students are required to attend the church of their choice at least once on the Sabbath day. Devotional exercises consisting of singing, scripture reading and prayer are held daily, which all students are required to attend.

The Y. M. C. A. and the Y. W. C. A. constitute the voluntary religious organizations of the University. They are managed by the students under the supervision of the faculty.

ATHLETICS.

For the physical training and development of the male students there is provided a four-acre field, arranged for football, baseball and general athletics. Suitable athletic training and facilities are also provided for the young women. An athletic association, composed of the student body, and representatives from the faculty have general charge of athletics.

ADMISSION.

Candidates for admission to any department of the University are received at or above the age of fourteen, provided they can give satisfactory evidence of good moral character. While students are admitted at any time during the year, they should, if possible, make arrangements to enter at the opening of the school year. Every day lost

makes it that much more difficult to do the work of the year successfully.

Certificate. The University is a part of the educational system of the State and as such wishes especially to co-operate with the public school system of the Commonwealth in promoting the educational welfare of all for whom it exists. Graduates of high schools or other secondary schools which carry their pupils as far as the fourth year of the Preparatory Department of the University will be admitted to any of the college courses upon certificate. Students coming from schools of lower grade are examined and classified according to their attainments. Those who have completed the usual common school course are presumed to be able to pass the examination for admission to the first year of the Preparatory Department, though full credit is given certificates presented from the common schools.

EXPENSES.

No tuition is charged in any of the departments. Board, a furnished room, fuel and light are furnished for $6.00 a calendar month. Each student is expected to bring his bed clothing. Facilities are provided for students to do their own washing, or they can have it done for $1.00 a month. All students are required to pay their board monthly in advance. Those who fail to do so will be sent home at the expiration of two weeks.

EXAMINATIONS.

General examinations are held at the close of each term and special examinations and written tests may be held within the recitation period at any time at the discretion of the instructors. In making out the standing of students, equal weight is given to the daily standing during the term and to the written examination at the close of the term. The minimum grade required is seventy-five per cent. Students falling below this grade during the year are required to repeat the work the next year.

DISCIPLINE AND GOVERNMENT.

The regulations of the institution are few and simple, appealing always to the student's sense of honor and personal respnsibility. He is required to be present at all exercises; to abstain from the use of tobacco and intoxicating liquor; not to use or have in his possession gamcating liquor; not to use or have in his possession gambling devices or deadly weapons; to abstain from the use of profane or indecent language, and to attend a church of his choice once every Sabbath day. No student is allowed to leave the University grounds without permission. Excuse for absence from any required exercise must be obtained in advance. All association between the sexes is under strict supervision and is not allowed without special permission.

All students are presumed to come to the University for the purpose of availing themselves of the advantages offered for education and improvement. Those who conduct themselves in a contrary manner will be suspended from all the privileges of the institution.

COURSES OFFERED.

1. Agriculture.
    1. College Course.
    2. Two Years' Course.
2. College.
    1. Agricultural.
    2. Architectural.
    3. Classical.
    4. Mechanical and Electrical.
    5. Scientific.
3. Normal.
4. Preparatory.
5. Elementary.
6. Trade Courses.
    1. Blacksmithing.
    2. Carpentry.

3. Foundry Practice.
4. Machinist.
5. Steam Engineering.
6. Cooking.
7. Dressmaking.
8. Millinery.
9. Plain Sewing.

UNIVERSITY FOOT BALL TEAM

COLLEGE OF ARTS AND SCIENCES

COLLEGE OF ARTS AND SCIENCES.

The College of Arts and Sciences is devoted to the higher academic and liberal studies and to advanced courses in Agriculture and the Mechanic Arts. Four courses are offered: The Classical, the Scientific, the Agricultural and the Mechanic Arts', leading respectively to the degree of Bachelor of Arts, Bachelor of Sciences, Bachelor of Scientific Agriculture, or Bachelor of Science in the course pursued.

Preparation for entrance upon any of the foregoing courses implies the completion of a full four years' high-school course, or its equivalent, but the subjects which may be presented to meet entrance requirements are so varied that no one who has devoted four years to thorough study in any school above the elementary grades need fear rejection.

For a more detailed statement of requirements for entrance upon the advanced courses in Agriculture and the Mechanic Arts see the description of the courses of those departments.

Applications may be made at any time, but candidates for the Freshman class are advised to appear for entrance at the beginning of the scholastic year.

Failure on the part of any student to maintain a good standing in his studies will at once sever his connection with this department of the University.

OUTLINE OF COURSES.

CLASSICAL COURSE.

Freshman Year.

Fall Term	*Winter Term*	*Spring Term*
English 1 (4)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
Latin 1 (4)	Latin 2 (4)	Latin 3 (4)
Greek 1 (4)	Greek 2 (4)	Greek 3 (4)
Elocution (1)	Elocution (1)	Elocution (1)

Sophomore Year.

English 4 (2)	English 5 (2)	English 6 (2)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Chemistry 1 (7)	Chemistry 2 (7)	Chemistry 3 (7)
Literature 1 (2)	Literature 2 (2)	Literature 3 (2)
Elocution (1)	Elocution (1)	Elocution (1)
Latin or Greek 4 (2)	*Latin or Greek* 5 (2)	*Latin or Greek* 6 (2)
French or German 1 (3)	*French or German* 2 (3)	*French or Ger.* 3 (3)

Junior Year.

Philosophy 1 (4)	Philosophy 2 (4)	Philosophy 3 (4)
History 1 (3)	History 2 (3)	History 3 (3)
Biology 1 (8)	Biology 2 (8)	Biology 3 (8)
Economics 1 (3)	Economics 2 (3)	Economics 3 (3)
Elocution (1)	Elocution (1)	Elocution (1)
Literature 4 (2)	*Literature* 5 (2)	*Literature* 6 (2)
Physics 1 (8)	*Physics* 2 (8)	*Physics* 3 (8)
Mathematics 7 (3)	*Mathematics* 8 (3)	*Mathematics* 9 (3)

Senior Year.

Philosophy 4 (3)	Philosophy 5 (3)	Philosophy 6 (3)
Political Science 1 (4)	Political Science 2 (4)	Political Science 3 (4)
or	or	or
Pedagogy 1 (4)	Pedagogy 2 (4)	Pedagogy 3 (4)
Sociology 1 (4)	Sociology 2 (4)	Sociology 3 (4)
Latin 7 (4)	*Latin* 8 (4)	*Latin* 9 (4)
Economics 4 (4)	*Economics* 5 (4)	*Economics* 6 (4)
Chemistry 4 (9)	*Chemistry* 5 (9)	*Chemistry* 5 (9)
Physics 4 (4)	*Physics* 5 (4)	*Physics* 6 (4)

Subjects in italics are elective, one of which MUST be taken throughout the year.

Seniors who expect to follow teaching after graduation will be required to take the courses in Pedagogy.

Numbers refer to corresponding numbers in description of Courses.

Figures in parentheses following the subjects indicate the number of recitation periods each week.

SCIENTIFIC COURSE.

Freshman Year.

Fall Term	*Winter Term*	*Spring Term*
English 1 (4)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
German or Fr. 1 (4)	German or Fr 2 (4)	Ger. or Fr. 3 (4)
Chemistry 1 (7)	Chemistry 2 (7)	Chemistry 3 (7)
Elocution (1)	Elocution (1)	Elocution (1)

Sophomore Year.

Biology 1 (8)	Biology 2 (8)	Biology 3 (8)
English 4 (2)	English 5 (2)	English 6 (2)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Physics 1 (8)	Physics 2 (8)	Physics 3 (8)
Literature 1 (2)	Literature 2 (2)	Literature 3 (2)
French or German 4 (3)	*French or German* 5 (3)	*French or Ger.* 6 (3)
Chemistry 4 (9)	*Chemistry* 5 (9)	*Chemistry* 6 (9)

Junior Year.

Biology 9 (9)	Biology 10 (9)	Biology 11 (9)
Chemistry 4 or 7 (9)	Chemistry 5 or 8 (9)	Chemistry 6 or 9 (9)
Philosophy 1 (4)	Philosophy 2 (4)	Philosophy 3 (4)
Mathematics 7 (3)	Mathematics 8 (3)	Mathematics 9 (3)
Economics 1 (3)	*Economics* 2 (3)	*Economics* 3 (3)
History 1 (3)	*History* 2 (3)	*History* 3 (3)

Senior Year.

Pedagogy 1 (4)	Pedagogy 2 (4)	Pedagogy 3 (4)
or	or	or
Biology 12 (9)	Biology 7 (8)	Biology 8 (6)
Geology 1 (5)	Geology 2 (5)	Mineralogy 3 (9)
Sociology 1 (4)	Sociology 2 (4)	Political Science 3 (4)
Chemistry 10 (4)	*Chemistry* 11 (4)	*Chemistry* 12 (4)
Philosophy 4 (3)	*Philosophy* 5 (3)	*Philosophy* 6 (3)
Biology 4 (9)	*Biology* 5 (10)	*Biology* 6 (4)
	Biology (13)	

Students in other schools preparing to enter the Scientific Course will find it to their advantage to take courses in Manual Training equivalent to those offered in the Preparatory Department of the University.

During the Senior Year six courses in Science are required and three additional ones may be elected in Biology, Chemistry and Physics. In the selection of courses the student will consult the Head of the Department, who will advise a program suited to his particular needs.

ENGINEERING COURSES.

These courses are arranged with the purpose of offering a general education and of preparing young men for the professions of mechanical, electrical and architectural engineering. The first two years are devoted to a thorough grounding in English, mathematics, science and general mechanics and the last two to the more technical engineering studies.

MECHANICAL AND ELECTRICAL ENGINEERING COURSE.

Freshman Year.

Fall Term	*Winter Term*	*Spring Term*
English 1 (4)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
German or Fr. 1 (4)	German or Fr. 2 (4)	Ger or Fr. 3 (4)
Chemistry 1 (7)	Chemistry 2 (7)	Chemistry 3 (7)
Mechanical Drawing 1 (4)	Mechanical Drawing 2 (4)	Mechanical Drawing 3 (4)
Joinery 1 (6)	Joinery 2 (6)	Joinery 3 (6)

Sophomore Year.

English 4 (2)	English 5 (2)	English 6 (2)
Literature 1 (2)	Literature 2 (2)	Literature 3 (2)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Physics 1 (8)	Physics 2 (8)	Physics 3 (8)
Mechanical Drawing 4 (4)	Mechanical Drawing 5 (4)	Mechanical Drawing 6 (4)
Forging 1 (4)	Forging 2 (4)	Mach. Shop Prac. 1 (4)
German or Fr. 4(3)	*German or Fr.* 5	*German or Fr.* 6 (3)
Chemistry 4 (8)	*Chemistry* 5 (8)	*Chemistry* 6 (8)

Junior Year.

Fall Term	*Winter Term*	*Spring Term*
Mathematics 7 (3)	Mathematics 8 (3)	Mathematics 9 (3)
Strength of Materials (5)	Boilers (5)	Steam Engines (5)
Machine Shop 2 (4)	Foundry 1 (4)	Foundry 2 (4)
Electricity and Magnetism (5)	Applied Electricity (5)	Electrical Measurements (5)
Mechanical Drawing 7 (6)	Mechanical Drawing 8 (6)	Mechanical Drawing 9 (6)

Senior Year.

Economics 1 (3)	Economics 2 (3)	Business Forms (3)
Machine Design 1 (5)	Machine Design 2 (6)	Machine Design 3 (6)
Electrical Engineering 1 (6)	Electrical Engineering 2 (6)	Electrical Engineering 3 (6)
Mechanical Engineering 1 (5)	Mechanical Engineering 2 (5)	Mechanical Engineering 3 (5)

Subjects in italics are elective, one of which MUST be taken throughout the year.

ARCHITECTURAL ENGINEERING.

Freshman Year.

The same as in Mechanical and Electrical Engineering Course.

Sophomore Year.

English 4 (2)	English 5 (2)	English 6 (2)
Literature 1 (2)	Literature 2 (2)	Literature 3 (2)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Physics 1 (8)	Physics 2 (8)	Physics 3 (8)
Architectural Drawing 1 (6)	Architectural Drawing 2 (6)	Architectural Drawing 3 (6)
Forging 1 (4)	Machine Shop 1 (4)	Machine Shop 2 (4)

Electives same as in Mechanical and Electrical Engineering Course.

Junior Year.

Fall Term	*Winter Term*	*Spring Term*
Mathematics 7 (3)	Mathematics 8 (3)	Mathematics 9 (3)
Economics 1 (3)	Economics 2 (3)	Economics 3 (3)
Architectural Engineering 1 (6)	Architectural Engineering 2 (6)	Architectural Engineering 3 (6)
Architectural Drawing 4 (6)	Architectural Drawing 5 (6)	Architectural Drawing 6 (6)
Strength of Materials (5)	Machine Design 4 (5)	Steam Engines and Boilers (5)

Senior Year.

Law 1 (3)	Law 2 (3)	Law 3 (3)
History of Architecture 1 (3)	History of Architecture 2 (3)	Business Forms (3)
Architectural Engining 4 (8)	Architectural Engineering 5 (8)	Architectural Engineering 6 (8)
Roofs and Bridges 1 (5)	Roofs and Bridges 2 (5)	Roofs and Bridges 3 (5)
Specifications 1 (3)	Specifications 2 (3)	Thesis

In the Senior Year students taking the Engineering Courses will be required to take a three-term course in public speaking.

AGRICULTURAL COURSE.

This course is designed to provide a thorough training in general knowledge and in the science of agriculture and to equip young men who expect to follow agriculture as a life work, or to prepare themselves as teachers of others therein. The first two years are devoted to the study of the sciences generally and the last two to the special study of agriculture.

OUTLINE OF COURSE.

Freshman Year.

Fall Term	*Winter Term*	*Spring Term*
English 1 (4)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
Horticulture 1 (5)	Horticulture 2 (5)	Animal Husb'ry 1 (5)
Chemistry 1 (7)	Chemistry 2 (7)	Chemistry 3 (7)

Sophomore Year.

Fall Term	*Winter Term*	*Spring Term*
English 4 (2)	English 5 (2)	English 6 (2)
Literature 1 (2)	Literature 2 (2)	Literature 3 (2)
Agronomy 1 (5)	Agronomy 2 (5)	Agronomy 3 (5)
Physics 1 (8)	Physics 2 (8)	Animal Husb'ry 2 (8)
Biology 1 (8)	Biology 2 (8)	Biology 3 (8)

Junior Year.

Dairy Industry 1 (8)	Dairy Industry 2 (8)	Dairy Industry 3 (8)
Biology 9 (7)	Biology 10 (7)	Biology 11 (7)
Field Engineering 1 (5)	Field Engineering 2 (5)	Forestry (5)
Poultry 1 (5)	Poultry 2 (5)	Poultry 3 (5)

Senior Year.

Geology 1 (5)	Geology 2 (5)	Politiacl Science (3)
Economics 1 (3)	Economics 2 (3)	Thesis
2 Electives	2 Electives	2 Electives

In the Senior Year courses to the number of six must be elected from the work which will be offered in agriculture.

The thesis will embody the results of investigation upon some selected topic in agriculture.

DESCRIPTION OF COURSES

DESCRIPTION OF COURSES.

AGRONOMY*

1. Field Crops.

History, cultivation and marketing of farm crops; practice with growing and dried specimens, including cereals, grasses, clovers and other forage crops.

Lectures, recitations and field work. 5 periods.

2, 3. Farm Management.

Present agricultural methods of various countries; cost and relative profit of farming in various countries; farm operations and systems.

Lectures and recitations 5 periods.

ANIMAL HUSBANDRY.

1. Stock judging; breeds of live stock—their origin, distribution, adaptability and leading characteristics.

Lectures, recitations and laboratory. 5 periods.

2. A summary course upon animal nutrition, feeds and feeding, and animal breeding.

Lectures, recitations and laboratory. 5 periods.

*Owing to changes, readjustments and improvements which are to be made in the Department of Agriculture all the courses in agriculture for the year 1908-09 are not described. A full description of all courses will appear in the next Catalogue or in a Special Bulletin.

BIOLOGY.

1, 2, 3. (Botany). Morphology of Plants.

These courses embrace a comprehensive study of the classification, morphology, reproduction and development, and evolution of plants.

Lectures and recitations 2 periods.

Laboratory work. 5 periods.

Texts: Bergen and Davis, Principles of Botany, and Laboratory and Field Manual.

1. First Term. The general principles of classification, morphology, and evolution of plants, with an introductory study of the cell, algae and fungi.

2. Second Term. Liverworts, mosses, ferns and their allies.

3. Third Term. Seed Plants: Elementary Oecology. The last six weeks of the term will be spent in the classification of the flowering plants of Langston and vicinity.

4. (Botany). Bacteriology.

This course treats of the classification and the morphological and biological character of bacteria, their relationship to other micro-organisms, and embraces the methods of staining, examining, cultivating and isolaing bacteria. Bacteriology 4, 5 and 6 are advised for those who intend to enter the study of medicine.

Lectures and recitations. 2 periods.
Laboratory work. 7 periods.
Text: Muir and Ritchie.

5 (*Botany*). *Bacteriology.*

In this course the student elects some special division of the subject (sanitary, medical or industrial) to which he will devote his time in the laboratory. Prerequisite: Bacteriology 4.

Conferences and lectures by appointment.
Laboratory work. 10 periods.
Collateral reading: Sternberg's Text-Book of Bacteriology

6. (Botany) Bacteriology.

A study of the important modern theories of immunity. This important branch of biological research recently treated according to the principles of physical chemistry, is now occupying an important position in the study of the action of bacteria and their toxines upon man. Students who have had Chemistry 7, 8 and 9 may ordinarily arrange their work so as to take the courses in Physical Chemistry and Bacteriology during their Senior Year. These courses in Chemistry afford an excellent preparation for a rational understanding of the more complicated immunity reactions, hence are advised though not required of those taking Bacteriology 6.

Lectures and conferences upon collateral reading. 5 periods.

PHYSIOLOGY.

7 and 8. Human Physiology.

These courses aim to give a general knowledge of the anatomy, physiology and hygiene of the human body. The laboratory work consists of a careful examination of the human skeleton, a life-size manikin, microscopic slides of normal histology, with experiments upon the circulatory, respiratory and nervous systems, together with exercises in physiological chemistry.

Texts: Martin's Human Body (unabridged). Collateral reading: Gray's Anatomy, Hammarstein's Physiological Chemistry.

7. Physiology of blood; circulation; respiration; digestion; secretion; absorption.

Lectures and demonstrations, recitations. 3 periods.
Laboratory work. 5 periods.

8. Physiology of Metabolism; nervous system; senses. During the last two weeks of the term 5 periods a week are spent in lectures and recitations upon Personal Hygiene.

Lectures and demonstrations, recitations; 4 periods.
Laboratory work; 2 periods.

ZOOLOGY.

9. *Invertebrate Zoology.*

This course begins with a brief historical sketch of Zoology and its subdivisions, including the general principles and leading theories of the science, and continues by cosidéring the morphology and life history of the more important groups of invertebrate animals. The laboratory work consists of the dissection and microscopic examination of a type-example of the groups studied.

Lectures and recitations; 2 periods.
Laboratory work; 7 periods.
Text: Parker and Haswell, Zoology, Vol I.

10. *Invertebrate Zoology.*

A continuation of Zoology 9.
Lectures and recitations; 2 periods.
Laboratory work; 7 periods.
Text: Parker and Haswell, Zoology, Vol. I.

11. *Vertebrate Zoology.*

An introductory course on the comparative anatomy of vertebrates, including a dissection of the frog, dogfish, pigeon and cat.

Lectures and recitations; 2 periods.
Laboratory work; 7 periods.
Text: Parker and Haswell, Zoology, Vol. II.

12. *Animal Histology.*

An introductory course on the structure of the cell and elementary tissues, followed by a microscopic examination of the various viscera. In the laboratory the histologic technique of fixing, staining, embedding and mounting is practiced.

Lectures and recitations; 2 periods.
Laboratory work; 7 periods.
Text: Bohm and von Davidoff, a Text-Book of Histology.

13. (*Zoology Vertebrate*) *Embryology.*

This course begins with a study of the general principles of Embryology and the important theories of heredity, and considers the various stages of the development of typical germ

cells and of the different organs. The laboratory work consists of a study of serial secions illustrating the development of the frog and chick and the preparation of serial sections of chick embryo.

Lectures and recitations: 2 periods.
Laboratory work: 7 periods.
Text: Minot, a Laboratory Manual of Embryology.

CHEMISTRY.

1. *Discriptive Inorganic Chemistry.*

This course involves the elementary principles of theoretical chemistry as applied to the preparation, properties and uses of the more important non-metallic elements and their inorganic compounds.

Lectures and demonstrations, recitations: 2 periods.
Laboratory work: 5 periods.
Text:
Collateral reading: Ostwald, Principles of Inorganic Chemistry.

2. *Descriptive Inorganic Chemistry.*

A continuation of Course 1, in which the metallic elements are treated.

Lectures and demonstrations, recitations: 2 periods.
Laboratory work: 5 periods.
Text:
Collateral reading: Ostwald, Principles of Inorganic Chemistry.

3. *Qualitative Analysis.*

Introductory lectures upon "the theory of solutions" and methods of Qualitative Analysis Laboratory exercises covering the more important actions and the qualitative determination of actions in unknown solutions and substances.

Lectures and demonstrations: 2 periods.
Laboratory work: 5 periods.
Text: Baily and Cady, Qualitative Analysis.

4. *Qualitative Analysis.*

A continuation of Course 3, covering the actions and their detection in known and uknown solutions and substances.

Lectures and demonstrations: 2 periods.
Laboratory work: 7 periods.

Text: Baily and Cady, Qualitative Analysis.

5. *Quantitative Analysis.*

Lectures on the theory and technique of Quantitative Analysis and the solution of problems in Stoickiometry. The labora-

CHEMICAL LABORATORY

tory work embraces the standardization of weights and the determination of the amounts of each constituent in substances of known and unknown quantitative composition by gravimetric methods.

Lectures and demonstrations; 2 periods.
Laboratory work; 7 periods.
Text: Talbot's Quantitative Analysis.

6. Quantitative Analysis.

A continuation of Course 5, consisting of the calibration of volumetric apparatus, and of quantitative analyses by volumetric methods.

Lectures and demonstrations; 2 periods.
Laboratory work; 7 periods.

7, 8, 9. Organic Chemistry.

These courses embrace a comprehensive and systematic study of the carbon compounds. In the lectures the characteristic reactions and synthetic methods of preparing organic compounds are treated theoretically by general groups. Much time is devoted to the proof of the structure of the compounds considered. The laboratory work consists in the analysis and preparation of organic compounds. Courses in Organic Chemistry are now required by many medical schools for entrance, hence Courses 7, 8 and 9 are advised for those who intend to study medicine.

Lectures and written tests throughout the year; 3 periods.
Laboratory work; 6 periods.
Texts: Holleman, a Text-Book of Organic Chemistry and a Manual of Organic Chemistry.

10, 11, 12. Physical Chemistry.

These courses deal with the entire subject of theoretical chemistry and afford an opportunity for the application of physics and mathematics to chemical laws and theories. Some time is devoted to elementary applications of the fundamental laws of thermo-dynamics. A general knowledge of physical chemistry is invaluable to those who intend to become professional chemists, physicists or physiologists, in that the more advanced work in those fields of investigations is now being covered in accordance with the methods and principles of Physical Chemistry.

Lectures and numerous demonstrations and recitations; 4 periods.

Text:
Collateral reading: Nernst, Theoretical Chemistry (1904); Walker, Introduction to Physical Chemistry; Ostwald, Principles of Inorganic Chemistry.

10. Introductory lectures on the fundamental principles of modern chemistry and its relation to physics: derivation of the two fundamental equations of Thermodynamics; the universal properties of the gaseous, liquid and solid state of aggregation and their physical mixtures: dilute solutions; and the atomic theory. (Omitted 1908-1909.)

11. The kinetic theory of the molecules; a critique of the methods of molecular weight determination; dissociation of gases and of salts in aqueous solutions. (Omitted 1908-1909.)

12. Laws of chemical mass-action; chemical statics; equilibria in salt solutions; chemical kinetics; Thermo-Chemistry and the "phase rule" of Gibbs; Electro and Photo-Chemistry. (Omitted 1908-1909.)

DAIRY INDUSTRY.

1. *Milk and Butter.*

The characters of milk, methods of handling for different commercial purposes; Pasteurization; tests for purity; butter making and marketing.

Lectures, recitations and laboratory; 8 periods.

2. *A continuation of Course 1.*

3. *Cheese Making.*

Chedder cheese, its manufacture and marketing.

Lectures, recitations and laboratory; 8 periods.

ECONOMICS.

Work in Economics is described in Normal Work, save Economics III, which will be original work pertaining to economic and social life.

ARCHITECTURAL ENGINEERING.

1. History of architectural construction. Building material and processes.

2. Stresses in frame structures solved by both analytical and graphical methods; stability of structures.

3. Masonry construction; stereotomy; theory and practice in building arches, piers, retaining walls, etc.; building problems.

4. Modern methods of steel and fireproof construction.

5. Heating and ventilation; wiring buildings for electric lighting and power; construction and operation of elevators.

6. Plumbing and sanitary engineering, including disposal of house waste and methods of purification.

FIELD ENGINEERING.

1. *Surveying and Plotting of Farms.*

Roads and fences; water supply, drainage and irrigation.

Lectures, recitations and field work; 5 periods.

Farm Machinery.

Capital invested, construction, life and uses of: draft of tillage, seeding, harvesting, threshing, cleaning, grinding, machinery, vehicles and farm motors.

Lectures, recitations and practicums; 5 periods.

MACHINE DESIGN.

1. General principles of machine design. Definitions. Classification of machines, etc. Design of pillow blocks, shaft hangers, etc.

2. Belts, chains, rope transmission. Link, eccentrics and cams. Gearing—spur, bevel, miter, etc. Screws—worm, spiral, etc.

ELECTRICAL ENGINEERING.

1. Management and design of electrical central stations. Transmission of electrical energy. Arc and incandescent lamps.

2. Management and installation of direct current and alternating current machinery, storage batteries, etc.

3. Management of electric railways, telephone exchanges, etc.

MECHANICAL ENGINEERING.

1. Design and operation of power plants, including design and construction of suitable buildings, selection and installation of boilers, engines, etc.

2. Design and operation of central heating stations. Design of steam and hot water heating systems, forced system of heating and ventilating.

3. Design and operation of shops. Choice, arrangement and installation of machinery for foundries, machine shops, wood working establishments. Principles and methods of shop arrangement and management.

Electricity and Magnetism.

Application of Ohm's law to closed and derived circuits. Magnetic density, lifting coils, etc.

Electrical Measurements.

Theory of galvonometer shunts. Measurements of potentials, insulation, resistance, etc.

Applied Electricity.

Telegraph receivers and transmitters, telephone exchange, graphical representation of the E. M. F., etc. Dynamo and motor design.

ELOCUTION.

The courses in Elocution and Oratory will be more fully de-

scribed hereafter. The aim of the courses is to get before the student a proper conception of public speaking and the method of reaching that conception.

They are designed to furnish an opportunity for the mastery of the principles of argumentation, persuasive speaking and interpretation. For the present such work will be given as will meet the needs of the student. 2 periods.

ENGLISH.

Candidates for admission to the Freshman class are expected to be familiar with the forms of discourse. They must be able to write a composition that is very nearly correct in respect to spelling, grammar, idiom, punctuation and division into paragraphs. They must understand the structure of simple English verse and be familiar with the figures of speech. Also they must have read the Classics required of students taking the Preparatory Course of this University, or such others as will be accepted as equivalent.

1, 2, 3. Composition.

These courses are devoted to a thorough study of the principles of exposition, narration and description. Occasional lectures are given by the instructor. Themes are required throughout the year.

Text: Cairns, Forms of Discourse.

Exposition. Frequent short themes and occasional long ones are required. Such classics as will serve as models in expository composition are read and analyzed.

Lectures and recitations; 3 periods.

Conferences; 1 period.

2. Narration. The elements of a good narrative are studied. The plot is carefully considered. Such short stories as Poe's "Gold Bug" and Hawthorne's "Great Stone Face" are read as models.

Lectures and recitations; 3 periods.

Conferences; 1 period.

3. English 2 continued. Description.

Lectures and recitations; 3 periods.

Conferences; 1 period.

4, 5, 6. Argumentation.

These courses are devoted to a thorough study of argumentation. During the year famous orations are read and analyzed.

Text: Baker and Huntington, Principles of Argumentation.

4. For Analysis: "Webster's Reply to Hayne." Two briefs and two forensics are required. 2 periods.

5. For analysis: "Burke's Conciliation With the Colonies." Two briefs and two forensics are required. 2 periods.

6. For analysis: Demosthenes' "On the Crown." Debates upon current topics are prepared. 2 periods.

FRENCH AND GERMAN.

Courses in French and German for 1908-09 will be offered according to the preparation of the students taking them Attention is called to the courses given in the Preparatory Department which are requisite to the advance courses. Students pursuing the Scientific, Mechanical and Agricultural courses are required to take work in both classical and scientific German Prose during the Freshman Year.

GEOLOGY AND MINERALOGY.

1. *Elementary Dynamic Geology.*

The mode of action and the effects of physical forces upon the earth. The various geologic features treated by the text and in the lectures are illustrated by the aid of stereoptican views.

Lectures and recitations; 5 periods.
Field excursions by appointment.
Text: Dana, A manual of Geology. (Omitted 1908-1909.)

2. *Elementary Historical Geology.*

The great rock systems, mountain building, glaciation, etc., together with a brief introduction to the study of Paleontology.

Lectures and recitations; 5 periods.
Field excursions by appointment.
Text: Dana, A Manual of Mineralogy. (Omitted 1908-1909.)

1. *Elementary Mineralogy.*

This is an introductory course covering in a summary way the entire subject. The laboratory work is devoted to the study of Crystallography, and Descriptive and Determinative Mineralogy and serves to acquaint the student with the simple methods of determining the more common minerals.

Lectures and recitations; 3 periods.
Laboratory work; 6 periods.
Text Dana's Manual of Mineralogy. Omitted 1908-'09.)

GREEK.

The courses given below presuppose a thorough training in elementary Greek.

1. *Xenophon, Selections from Books I-IV of the Hellenica; Prose Composition; Studies in Greek History from the Persian Wars to the Peloponnesian War.*
   4 periods.

2. *Lysias, Select Orations; Studies in Athenian History in the Age of Pericles.*
   4 periods.

4. *Lysias. Select Orations continued; Homer. The Odyssey. Books I-III.*
4 periods.

5. *Sophocles, Oedipus Tyrannus, or Philoctetes; Studies in Development of the Greek Drama.*
2 periods.

5-6. *Plato. Selections from the Phaedo; Studies in Greek Philosophy.*
2 periods.

HISTORY OF ARCHITECTURE.

1. Early architectural forms and development of same: architectural history of early civilizations. 3 periods.
2. History of mediaeval and modern architecture

HISTORY.

1. *Modern European History.*

This course is introduced by a brief survey of the European society during the Renaissance; the European states at the beginning of the modern period; the church. Beginning with the Reformation in Germany, the history of Europe is studied to the close of the Thirty Years' War.

Text: Schwill's Political History of Modern Europe.
Three periods.

2. *Modern European History.*

A continuation of History 1. The growth of absolutism; Revolution and Democracy; European expansion; social and scientific movements of the nineteenth century.

Text: Schwill's Political History of Modern Europe.
Three periods.

3. *American History.*

This term is devoted to a careful study of the formative period; the origin and development of the constitution; growth and development of the Union; the history of slavery in America; the beginning of the Civil war.

Three periods.

HORTICULTURE.

Nursery and Orchard practice, dealing with the multiplication and subsequent care of plants, grafting, budding, making, cuttings, polination, pruning, spraying, garden tools, etc.

1. *Nursery and Orchard Practice.*

Lectures, recitations and field excursions; 5 periods.

2. *Plant Breeding and Practical Pomology.*
Lectures, recitations and field excursions; 5 periods.

BUSINESS LAW.

1, 2, 3. These courses are intended to cover the laws governing ordinary business transactions as they relate to Contractors and Engineers. Only well-established elementary principles are discussed and illustrations are given of their application.

The Courses embrace Contracts, Sales, Negotiable Instruments, Real Estate, Partnership and Corporations.
Lectures and recitations; 3 periods.

LATIN.

The aim of the courses offered below is to give the student a somewhat systematic and extended knowledge of the language and its development, an acquaintance with some of the representative authors of Latin literature and some insight into Roman history and culture, and to provide training for those who look forward to teaching, or to other vocations that presuppose preparation in Latin.

The requirements for admission to the Freshman Year are as follows: (1) as thorough training in Latin forms and syntax as is given in standard secondary schools; (2) ability to translate from Cicero's Orations; (3) preparation in five books of Virgil's Aeneid, including a knowledge of the rules of prosody, and (4) careful preparation in Latin prose composition.

1. *Livy, Selections from Books I, XXI and XXII; Prose Composition.*
4 periods.

2. *Cicero, De Senectute; Horace, Odes and Epodes; Topical study of Periods of Roman Literature.*
4 periods.

3. *Horace, Odes and Epodes; Tacitus, Agricola and Germania; Roman Colonial Development.*
4 periods.

4. *Terence, Phormio; History of Roman Drama.*
2 periods.

5. *Sallust, Catiline; Study of causes of break down of the Roman Republic.*
2 periods.

6. *Plautus, Trinummus; Lange's Masterpieces of Latin Literature.*
2 periods.

7-9. These courses are designed to assist students who intend to teach and consist of rapid reviews of Latin courses taught in secondary schools, specific instruction in pronunciation, quantity, syntax and method of teaching vocabulary, paradigms, translation, etc. 4 periods.

LITERATURE.

1. History of English Literature.

The outline as given in Smith's Synopsis of English and American Literature is followed. Supplementary lectures are given by the instructor. The Library furnishes ample material for the expanding of the outline. A carefully prepared notebook is required of each student. This course closes with the prose of the Restoration Era. 2 periods.

2. History of English Literature.

This course continues the work of Literature 1, beginning with the period of French Influence and extending to the present. 2 periods.

3. History of American Literature.

The same plan is followed as in Literature 1 and 2. 2 periods.

4. Shakespeare.

Critical study of "Hamlet" and "Macbeth." 2 periods.

5. Shakespeare.

Critical study of "As You Like It" and "Merchant of Venice." 2 periods.

6. Shakespeare.

Study of the characters and tendencies of the modern novel. Reading and discussion of typical ones. 2 periods.

MATHEMATICS.

1. College Algebra.

Brief Review of Quadratic Equations; arrangements and Groups; Probabilities. Text: Van Velzer and Slichter's. 4 periods.

2. Trigonometry.

Trigonometric Functions; Right Triangle; Oblique Triangle; Problems illustrating their use. Text: Wentworth's Second Revision. 4 periods.

3. Surveying.

Chaining, alignment, study of instruments, differential and profile leveling, platting and location surveying; (3) recitation; (2) field work. Text: Wentworth's.

4. *Analytics.*

Construction of Loci. The relation between the Polar and Rectilinear Systems; common and general equations of the conics; Transcendental curves, planes and surfaces of revolution. Text: Hardy's. 4 periods.

5. *Differential Calculus.*

Differentiation of Algebraic Functions, of Transcendental Functions, Successive Differentiation and Applications, Curve Tracing. Text: Hardy's. 4 periods.

6. *Integral Calculus.*

Integration and the geometrical application of Integral Calculus.

7. *Differential and Integral Calculus.*

Partial Differentiation, Successive and Partial Integration. Text: Granville's. 3 periods.

Or Descriptive Geometry.

A clear presentation of the Theory of Projection as a medium of expression is attempted. Text: Randall. 3 periods.

8. *Astronomy.*

The movements of the sun, moon, planets and stars, both apparent and real; the determination of Latitude and Longitude; the determination of the distance of the moon from the earth, and of the distances of the planets from the sun. Special emphasis is laid on Climatology and Meterology. A study of the Constellations and the use of the small astronomical telescope and other simple instruments are required. Text: Young's. 3 periods.

ARCHITECTURAL DRAWING.

1. Shades and shadows; modeling in clay.
2. Free-hand drawing in pencil and charcoal; history and composition of ornament.
3. Perspective; interior decoration; out door sketching.
4. Elements of architecture; pen and ink rendering; water color work.
5. History, study and application of the orders.
6. Architectural composition and design.

MECHANICAL DRAWING.

1. Orthographic projection.
2. Descriptive geometry.
3. Shades and shadows.
4. Machine drawing—working drawings.
5. Gears, cams, etc.

6. Links, belts, etc.
7. Steam engines: governors; fly wheels; cylinders; valve gears.
8. Original machine drawing and design.
9. Original design of power plants, etc.

PEDAGOGY.

1 and 2. Education from the standpoint of Psychology. Connection of modern systems of education with the psychologic method. 4 periods.

3. A study is pursued showing why the beginnings of education were as per history's records. Conditions affecting methods of teaching are described. Continuation of Pedagogy 1 and 2. 4 periods.

PHILOSOPHY.

1 and 2. Psychology.

After developing the relation between bodily condition and mental activity, an attempt is made to develop the relation between the various mental capacities. Relation of brain to body on the one hand, and mind on the other, is shown. Especial attention is given to the matter of the formation of habits. Experimental work is also done.

Recitations and laboratory; 4 periods.

3. Logic.

As per Philosophy 3; Normal work.

4 and 5. History of Philosophy.

This covers three terms, beginning with the Ancient period. Middle ages philosophy is next studied, followed by the Modern period. An attempt is made to get the fundamentals of the various schools and to ascertain wherein they agree and wherein they differ.

Text: Weber's History of Philosophy. 3 periods.

6. History of Philosophy.

This embodies a theoretic study of the principles which determine conduct of man. The will, as an important factor, is shown to have most force in obligation. The breadth of ethical considerations and bearing in the various walks of life are developed. 3 periods.

PHYSICS.

1. Experimental Physics.

Theory and methods of physical measurements as applied to the Mechanics of Solids, Liquids and Gases.

Lectures and demonstrations, recitations; 2 periods.

Laboratory work; 6 periods.

Text: Sabine's Laboratory Course in Physics.
Collateral reading: Ganot's Physics.

2. *Experimental Physics.*

A continuation of Physics 1 covering the subjects of Sound, Heat and Light.

Lectures and demonstrations, recitations: 2 periods.
Laboratory work: 6 periods.
Text: Sabine's Laboratory Course in Physics.
Collateral reading: Ganot's Physics.

3. *Experimental Physics.*

A continuation of Physics 2, covering Electricity and Magnetism.

Lectures and demonstrations, recitations: 2 periods.
Laboratory work: 6 periods.
Text: Sabine's Laboratory Course in Physics.
Collateral reading: Ganot's Physics.

4, 5, 6. *Physics.*

These courses cover the subjects of Heat, Electricity and Magnetism, and Light, and although introductory in character, the fundamental principles are developed mathematically. They are advised for only those who have shown a keen interest marked by exceptional ability in both Mathematics and Physics. It is desirable that students entering these courses shall have some knowledge of Plain and Partial Differential Equations.

4. (*Physics*). *Thermodynamics.*

General principles of heat; the two fundamental equations as applied to "perfect" and "imperfect" gases; entropy; development of thermodynamic relations; change of state, the "thermodynamic potential" of Duhem and the Phase rule" of Gibbs.

Lectures and recitations; 4 periods.
Collateral reading: M. Planck, Thermodynamic (English translation by Ogg); Preston, Theory of Heat. (Omitted 1908-1909.)

5. (*Physics*). *Mathematical Theory of Electricity and Magnetism.*

An introductory course based upon an elementary treatment of the "Newtonian Potential Function."

Lectures and recitations; 4 periods.
Text: Emtage. Electricity and Magnetism.
Collateral reading: B. O. Pierce, Newtonian Potential Functions. (Omitted 1908-1909.)

6. (*Physics*). *Mathematical Theory of Wave Motion.*

The propagation of waves with applications to the reflection and refraction of light and a brief sketch of the

Electromagnetic Theory of Radiation as proposed by Hertz. Lectures and recitations; 4 periods.

Text: Preston's Theory of Light. (Omitted 1908-1909.

POLITICAL SCIENCE.

1. *Political Science.*

This is an introductory course, embracing a general outline of the subject. 4 periods.

2. *International Law.*

A text-book and reference course, embracing a study of the general principles of international law, diplomacy and world politics. 4 periods.

3. *Modern, Municipal and Colonial Government.*

Problems and methods of municipal government in the United States; the theory and history of colonization and modern colonial government and colonial problems. Special study of dependencies of the United States. 4 periods.

POULTRY CULTURE.

1, 2 and 3. Classification and development of domestic breeds of poultry; breeding and feeding; poultry management, including the construction and planning of buildings; brooding and marketing.

Lectures, recitations and laboratory. 5 periods.

ROOFS AND BRIDGES.

The weight of different kinds of roofs, stresses of straight and curved rafters. Trusses solved by graphics. In bridges, wooden bridges are first considered, together with their capacity, followed by the study of steel and other bridges.

STRENGTH OF MATERIALS.

Resistance and elasticity of materials. Strength of pipes and cylinders. Riveting and designing riveted joints. Cantilevers and simple beams. Strength of columns. Shafting for transmitting power. Ropes and cables.

STEAM ENGINES.

1. Steam and its properties, with steam tables. Engine mechanism. Indicators and valves. Compound engines. Condensers. Fly wheels.

2. The care and running of engines. Various types of engines.

STEAM BOILERS.

Types, designs and construction of boilers, including methods of riveting and staying. Chimneys, management and care of boilers. Testing and designing.

STEAM ENGINE DESIGN.

The application of machine design to steam engine, including the design of cylinders and steam chests, connecting rods, crank shafts, pistons, valves, accessories, stems, fly wheels, frames or beds, and engine proportions.

NORMAL DEPARTMENT

GIRLS' OLD DORMITORY

NORMAL DEPARTMEMNT.

The Normal Department is designed to furnish instruction for those who intend to pursue the profession of teaching in elementary and secondary schools and especially in the public schools of Oklahoma.

The two purposes of the Normal Course are to provide instruction in the science of education and to instruct in the art of teaching by practice under intelligent direction. Hence there are two branches of the Normal Course, the scholastic and the professional, corresponding to the usual Normal School and Training School.

The Normal School embraces two lines of study: (1) Special Method, in which the subject matter of each of the various branches of education is organized with reference to its own inner relations, and also with reference to the interests and aptitudes of the child; (2) General Method, which governs all learning and teaching and embraces the formal study of psychology, history of education, the classification of educational problems and acquaintance with the best literature bearing upon them.

The Training School is designed to exemplify by observation of good teaching and by actual teaching the theory of the Normal Course.

The Normal Course requires for its preparation the completion of a four years' high school, or its equivalent, and candidates offering themselves for this course will be required to furnish evidence of such preparation. Applicants who have not acquired the requisite preparation can procure the same in the Preparatory Department of the University.

Graduates from the Normal Department receive a diploma and degree of Bachelor of Scientific Didactics. This diploma entitles the holder to teach in the public schools of Oklahoma for a period of five years without further examination.

OUTLINE OF COURSES.

Junior Year.

Fall Term	*Winter Term*	*Spring Term*
English 1 (4)	English 2 (4)	English 3 (4)
Philosophy 1 (3)	Philosophy 2 (3)	Philosophy 3 (3)
Nature Study 1 (5)	Nature Study 2 (5)	Nature 3 (5)
Peadgogy 1 (3)	Pedagogy 2 (3)	Pedagogy 3 (3)
History 1 (3)	History 2 (3)	History 3 (3)
Music (1)	Music (1)	Music (1)
Drawing (1)	Drawing (1)	Drawing (1)
Manual Training (2)	Manual Training (2)	Manual Training (2)

Senior Year.

Pedagogy 4 (4)	Pedagogy 5 (4)	Pedagogy 6 (4)
Literature (4)	Phys. Geog. 1 (5)	Phys. Geog. 2 (5)
Economics (3)	Ethics (3)	Ethics (3)
Teaching 1 (4)	Teaching 2 (4)	Teaching 3 (4)
Music	Music	Music
Drawing (1)	Drawing (1)	Drawing (1)
Agriculture (2)	Agriculture (2)	Agriculture (2)

Graduates from accredited high schools who have taken Greek instead of Chemistry and Biology will receive therefor credit in either History or English and will be allowed to take courses in Chemistry and Biology.

AGRICULTURE.

The work in agriculture will embrace the study of the courses in agriculture taught in the elementary schools of the State and of the best methods of teaching the same.

The work is made practical as possible and will, therefore, consist largely of field and laboratory work.

Required of Seniors. 2 periods.

DRAWING.

A course in Drawing is given to Normal Students to better prepare them for classroom work.

Junior Year.

The work consists of the drawing of simple, familiar objects, geometiric forms and sketching from nature, and the ruling principles of drawing.

Senior Year.

The work consists of elementary mechanical drawing, principles of perspective and water color work, with a general study of the history of art.

ECONOMICS AND SOCIOLOGY.

1 and 2. Political Economy.

The study of Political Economy is designed especially to give those pursuing it a technical training in the theory of Economics, such as will be of practical use in life. By a knowledge of the principles of production and distribution, the individual is better prepared for the struggle of life.

Illustrations from daily experience are used to make the study more comprehensive and practical.

Sociology.

The purpose of the study is to acquaint the student with those engaged in the varieties of occupations and social units, and how certain conditions affect their interrelations.

Statistics are gotten pertaining to social problems, and students are instructed how to note the trend of the times by them. Each student investigates, originally, some phase of social problems, and brings, in writing, the plan and result of his research.

Wright's text is used.

ENGLISH.

1, 2. Composition.

These courses are devoted to a study of the forms of discourse. Lectures are given by instructor and reference books provided for the use of the students. Weekly themes are required throughout the courses.

1. Description and Narration.
   Lectures; 2 periods.
   Conferences; 1 period.
2. Exposition and argumentation.
   Lectures; 2 periods.
   Conferences; 1 period.

3. Review English.

English Grammar is reviewed from teacher's view point. Text books are discussed, methods of presentation, and such classics as can be made use of in the elementary grades are recommended, with suggestions for their use.

HISTORY.

1, 2. Modern European History.

These courses are the same as History 1 and 2 of the College Department. For description see page 38.

3. American History.

This course includes a discussion of the methods of teaching the history of the United States. Text books are reviewed and their good points and defects noted. Such original sources as

are available are suggested. A list of books containing history, biography and literature for supplementary reading is discussed.

MANUAL TRAINING.

The course in Manual Training will present the subject from a pedagogical standpoint along with construction of models in material used in the general school work from the third to the eighth grades.

Required of Juniors. 2 periods.

NATURE STUDY.

1. *Nature Study (Elementary Zoology).*

This course begins with an elementary study of the simple and compound microscope and continues with an examination of such simple types of invertebrate animals as the amoeba, the fresh-water sponge, the fresh-water hydra, the starfish, the earthworm, the crayfish, the grasshopper and the snail. In the lectures and recitations these animals are as fully described anatomically as the time will permit. There wil be occasional lectures and required reading upon the relation of Nature Study to Pedagogy.

Lectures and recitations; 2 periods.
Laboratory work; 3 periods.
Text: Boyer, Elementary Biology.

2. *Nature Study (Elementary Zoology)*

This is a continuation of Nature Study 1 and is conducted in a like manner. The animals studied are the perch, the frog, the turtle, the pigeon and the cat.

Lectures and recitations; 2 periods.
Laboratory work; 3 periods.
Text: Boyer, Elementary Biology.

3. *Nature Study (Botany)*

The first five weeks are devoted to a study of one type example each of the algae, fungi, liverworts, mosses and ferns, while the next two weeks are spent in a summary examination of the structure and functions of seeds and seedlings, leaves, roots and stems. The remaining time is spent on the structure and classification of flowering plants Occasionally in the lectures advantage will be taken of the frequent opportunity for comparing the similarity and differences in the function of animal life and plant life.

Lectures and recitations; 2 periods.
Laboratory work; 3 periods.

Texts: Boyer's Elementary Biology; Bergen, Foundations of Botany.

PEDAGOGY.

1. School Management.

In this course the work is so arranged as to give the young teacher a theoretic knowledge of school organization and discipline, of the requirement of teachers, and that which relates to control of school room, discipline, morals, as well as the interrelations of the Superintendent, School board, parents and teacher. To build character is insisted on as an end, not a means.

Text: Seeley's New School Management. 4 periods.

2. Art of Teaching and Methods.

This course covers one term. It is preceded by Psychology which serves as a foundation for the General Methods and Principles taught. Lectures are given on best methods of teaching the common branches. These are made a note of by students, discussed in class, and at certain times there are tests. The originality and individuality of students receive much consideration. 4 periods.

3 and 4. History and Philosophy of Education.

The aim of the course is to give the student a familiarity with the origin and development of education in the leading countries of the world from the earliest time to the present, along with conditions causing modifications of systems and varying ideals. Attention is especially called to the development of education in the United States, and the relation of our system of education to other systems, past and present.

Text: Painter's History of Education.

Open to Junior College students as Pedagogy 1 and 2.

5 and 6. Practice Teaching by Senior Normals, 3 hours a week.

PHILOSOPHY.

1 and 2. These are courses in educational Psychology.

It furnishes theory as a basis for educational method. The work gives a brief presentation of perception, memory, imagination, will and thought in connection with the development of child mind. Special study is given to the comparative physiology of the nervous system, and the relation of the physical to the mental activities is emphasized. 3 periods.

3. Logic.

The period covered by the study is one term. It is preceded by Psychology, which serves as a basis. The primary aim of the course is to develop a sound method of reasoning by daily practice and by noting certain infallible principles, laws indispensable in accurate judgments and reasoning. With these priciples as guides, correcting all false reasoning and encouraging free thought, the student receives power to pursue truth

in all fields with a vividness and a certainty not to be attained in any other way. 3 periods.

4. Applied Pyschology.

This covers one term and is given three days each week. Experiments are made by which the theoretic principles of Psychology are verified and applied. The text used is "Witmer's Analytic Psychology." (Open to Junior College students as Pedagogy 3.) 3 periods.

5 and 6. Ethics.

In the Normal course in Ethics attention is given to the principles underlying the subject and to the practice. Very much time is devoted to Ethical theory as a foundation for practical application. The wide requirements of benevolence are illustrated. The relation of Ethics to Psychology and to Religion is shown. Text: "Fairchild's Ethics."

PHYSICAL GEOGRAPHY.

1. Physical Geography.

This course begins with a study of general physiographic processes as they apply to the earth as a whole, and continues with the physiography of the United States, including its plains and plateaus. Frequent attention is called to the utility of physiographic methods as applied to the instruction of elementary geography; while many of the fundamental principles of biology, physics and chemistry are emphasized. The formal lectures are illustrated by the aid of the projection lantern. The laboratory work consists of a study of models, maps, reports upon fieldexcursions, etc.

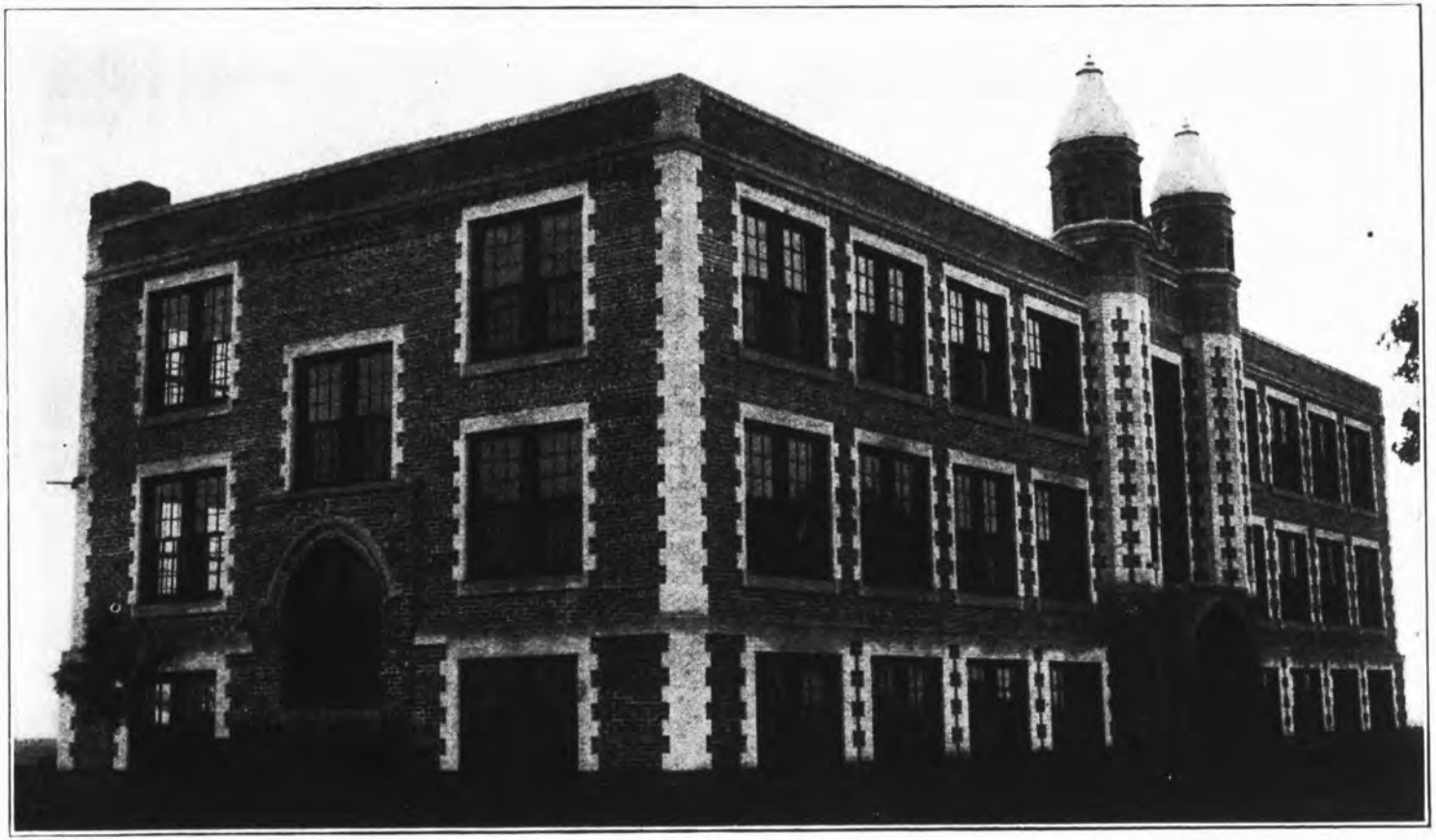
Lectures and recitations. 3 periods.
Laboratory work. 2 periods.
Occasional field excursions by appointment.
Text: Fairbanks, Practical Physiography.
Collateral reading: Davis, Physical Geography.

2. Physical Geography.

A continuation of Physical Geography, conducted in a similar manner in which the Physiography of the United States is completed, including its mountains, valleys and canyons, rivers, lakes and basins, coast lines, climate, forests and irrigation.

Lectures and recitations. 3 periods.
Laboratory work. 2 periods.
Occasional field excursions by appointment.
Text: Fairbanks, Practical Physiography.
Collateral reading: Davis, Physical Geography.

PREPARATORY DEPARTMENT



GIRLS' NEW DORMITORY

PREPARATORY DEPARTMENT.

The Preparatory Department offers two courses, the Classical and the Scientific. Students taking either course are prepared for the Normal Course or for a similar course in the College Department or for the advanced courses in the Mechanical or Agricultural Departments.

In addition to fitting students for the above mentioned courses this department aims to provide systematic training in secondary education which will equip the average student for the duties and responsibilities of citizenship by the development of him in body, mind and heart under favorable and inspiring influences.

Admission.

To enter the first year students should have completed the regular Grammar School course provided by the public school system or its equivalent. Especially should they have a good knowledge of Geography, Arithmetic and the elements of English Grammar.

Before beginning English 1 or Latin, the student should be familiar (1) with parsing, including inflection and construction; (2) with the classification and analysis of sentences; (3) with the use of the relative pronouns, infinitives and participles, and (4) with the conjugation of the verb.

Reports of the standing of students will be made to parents upon request at the end of each term.

OUTLINE OF COURSES.

CLASSICAL COURSE.

First Year.

Fall Term	*Winter Term*	*Spring Term*
English 1 (5)	English 2 (5)	English 3 (5)
Algebra 1 (5)	Algebra 2 (5)	Algebra 3 (5)
Latin 1 (5)	Latin 2 (5)	Latin 3 (5)
Manual Training (6)	Manual Training (6)	Manual Training (6)
Rhetoricals (2)	Rhetoricals (2)	Rhetoricals (2)
Music	Music	Music

Second Year.

Fall Term	*Winter Term*	*Spring Term*
English 4 (4)	English 5 (4)	English 6 (4)
Algebra 4 (3)	Algebra 5 (3)	Algebra 6 (3)
Latin 4 (4)	Latin 5 (4)	Latin 6 (4)
History 1 (4)	History 2 (4)	History 3 (4)
Manual Training (6)	Manual Training (6)	Manual Training (6)
Rhetoricals (2)	Rhetoricals (2)	Rhetoricals (2)
Music	Music	Music

Third Year.

English 7 (2)	English 8 (2)	English 9 (2)
Geometry 1 (4)	Geometry 2 (4)	Geometry 3 (4)
Latin 7 (4)	Latin 8 (4)	Latin 9 (4)
Greek 1 (5)	Greek 2 (5)	Greek 3 (5)
Manual Training (4)	Manual Training (4)	Manual Training (4)
Rhetoricals (2)	Rhetoricals (2)	Rhetoricals (2)
Music	Music	Music

Fourth Year.

Physics 1 (6)	Physics 2 (6)	Physics 3 (6)
History 4 (2)	History 5 (2)	History 6 (4)
English 10 (2)	English 11 (2)	
Latin 10 (4)	Latin 11 (4)	Latin 12 (4)
Greek 4 (4)	Greek 5 (4)	Greek 6 (4)
Geometry 4 (2)	Geometry 5 (2)	Review Mathemat. (2)
Manual Training (4)	Manual Training (4)	Manual Training (4)
Rhetoricals (1)	Rhetoricals (1)	Rhetoricals (1)
Music	Music	Music

Numbers refer to the corresponding numbers in the Description of Courses.

Figures in parentheses indicate the number of recitations per week in the subject.

SCIENTIFIC COURSE.

First Year.

English 1 (5)	English 2 (5)	English 3 (5)
Algebra 1 (5)	Algebra 2 (5)	Algebra 3 (5)
Latin 1 (5)	Latin 2 (5)	Latin 3 (5)
Manual Training	Manual Training	Manual Training
Rhetoricals (2)	Rhetoricals (2)	Rhetoricals (2)

Second Year.

Fall Term	*Winter Term*	*Spring Term*
English 4 (4)	English 5 (4)	English 6 (4)
Algebra 4 (2)	Algebra 5 (2)	Algebra 6 (2)
Latin 4 (4)	Latin 5 (4)	Latin 6 (4)
Biology 1 (6)	Biology 2 (6)	Biology 3 (6)
Manual Training	Manual Training	Manual Training
Rhetoricals (2)	Rhetoricals (2)	Rhetoricals (2)

Third Year.

English 7 (2)	English 8 (2)	English 9 (2)
German 1 (4)	German 2 (4)	German 3 (4)
or	or	or
French 1 (4)	French 2 (4)	French 3 (4)
Geometry 1 (4)	Geometry 2 (4)	Geometry 3 (4)
Physics 1 (6)	Physics 2 (6)	Physics 3 (6)
Manual Training	Manual Training	Manual Training
Rhetoricals (2)	Rhetoricals (2)	Rhetoricals (2)

Fourth Year.

Ger. or Fr. 4 (4)	Ger. or Fr. 6 (4)	Ger. or Fr. 6 (4)
Chemistry 1 (6)	Chemistry 2 (6)	Biology 2 (6)
History 5 (2)	History 5 (2)	History 6 (4)
English 10 (2)	English 11 (2)	
Geometry 4 (2)	Geometry 5 (2)	Review Mathemat. (2)
Manual Training	Manual Training	Manual Training
Rhetoricals (1)	Rhetoricals (1)	Rhetoricals (1)

DESCRIPTION OF COURSES.

BIOLOGY.

1. *Biology (Elementary Zoology).*

This course is similar to Nature Study 1 of the Normal Department (see page 52); but differs from it in that no mention is made of the relation of Zoology to Pedagogics, while stress is laid upon its utility in the Arts and Sciences, such as farming, stock raising, agriculture and medicine.

Lectures and recitations; 2 periods.
Laboratory work; 4 periods.
Text: Boyer, Elementary Biology.

2. *Biology (Elementary Zoology).*

A continuation of Biology 1 and similar to Nature Study 2 of the Normal Department with the exceptions noted under Biology 1. For description see page 52.

Lectures and recitations; 2 periods.
Laboratory work; 4 periods.

Text: Boyer, Elementary Biology.

3. *Biology (Elementary Botany).*

For the description of this course see Nature Study 3, page 52.

Lectures and recitations; 2 periods.

Laboratory work; 4 periods.

Texts: Boyer, Elementary Biology; Bergen, Foundation of Botany.

4. *Biology (Elementary Physiology).*

The anatomy, physiology and hygiene of the human body. The laboratory work consists in the examination of prepared histologic slides, the mammalian heart and brain, simple experiments in the digestion of foods, bandaging and dressing of wounds, testing for color blindness and vision, etc.

Lectures and recitations: 3 periods.

Laboratory work; 3 periods.

Text: Blaisdell's Physiology.

CHEMISTRY.

1. *Elementary Chemistry.*

The preparation, properties and uses of the more important non-metallic elements and their inorganic compounds.

Lectures and demonstrations, recitations, and written exercises; 2 periods.

Laboratory work; 4 periods.

Text: Brownlee and Others.

2. *Elementary Chemistry.*

A continuation of Chemistry 1 in which the metallic elements are treated.

Lectures and demonstrations, recitations, and written exercises; 2 periods.

Laboratory work; 4 periods.

Text: Brownlee and Others.

ENGLISH.

1. *Composition.*

A course in the practical application of the theoretical grammar completed in the 8th Grade. Exercises in description and narration required on assigned subjects.

Text: Maxwell's Writing in English.

Reading: Longfellow's Hiawatha.

5 periods.

2. *Composition.*

A continuation of English Exercises in narration and argumentation. Some attention is paid to oral debate.

Text: Maxwell's Writing in English.
Reading: Selections from the Sketch Book.
5 periods.

3. Composition.

A continuation of English 2. Exercises in argumentation and exposition.
Text: Maxwell's Writing in English.
Reading: Assigned Classics.
5 periods.
Note: A ten minute conference period is assigned each student throughout the year.

4. Rhetoric and Composition.

Themes in narration and description. Special attention is given to punctuation and paragraphing.
Text: Lockwood and Emerson.
Reading: Cooper's Last of the Mohicans; Scott's Lady of the Lake.
4 periods.

5. Rhetoric and Composition.

Exposition and letter-writing.
Text: Lockwood and Emerson.
Reading: Scott's Ivanhoe; Marmion.
4 periods.

6. Rhetoric and Composition.

Versification and figures of speech: simple argumentation.
Text: Lockwood and Emerson.
Reading: Stevenson's Treasure Island; Tennyson's Princess.
4 periods.

7, 8, 9. Composition.

Throughout the year students will be required to write themes based upon their reading. They will also be required to memorize poems carefully selected from American and English authors.

7. Reading: Shakespeare's Merchant of Venice; Julius Caesar; Midsummer Night's Dream.
2 periods.

8. Reading: Coleridge's Rime of the Ancient Mariner; Arnold's Sohrab and Rustum; Tennyson's Enoch Arden.
2 periods.

9. Reading: Goldsmith's Vicar of Wakefield; Deserted Village. 2 periods.

10, 11. Composition and Rhetoric.

One period each week is devoted to the study of Rhetoric. The library of the English Department contains reference books for the use of students. Lectures are given by the instructor.

Besides the classics given below students are required to read an approved novel and make reports at the end of each month.

10. Reading: Tennyson's Idylls of the King. 2 periods.

11. Reading: Hawthorne's House of Seven Gables; Tennyson's In Memoriam. 2 periods.

MODERN LANGUAGES.

The aim of the first year's work in German and French is to enable the student to acquire correct pronunciation, knowledge of fundamental form and a vocabulary for reading easy texts. The second year enlarges upon the work of the first and is designed to enable the student to read easily intermediate texts and to appreciate the language.

German.

1. Spanhoofd's Lehrbuch der Deutschen Sprache. 4 periods.

2. Lehrbuch continued; Anderson's Maerchen und Bilderbuch. 4 periods.

3. Zerschoke's Der Zerbrochene Krug; Sheldon's German Grammar. 4 periods.

4. Harris' German Composition; Arnold's Fritz auf Ferien. 4 periods.

5. Harris' German Composition; Die Journalisten. 4 periods.

6. Schiller's Maria Stuart; Hoffman's Historische Erzaehlugen. 4 periods.

French.

1. Super's Preparatory French Reader. Special attention given to pronunciation, the use of articles, adjectives, pronouns. 4 periods.

2. Continuation of Course 1, with special attention to the verb, and translation of simple English sentences into French. 4 periods.

3. Translation of Madame Therese; sight reading and camposition. 4 periods.

4. Erckmann Chartrain's L'Histoire d'un Payson; composition one period a week. 4 periods.

5. Course 4 continued; Bruce's Selections for Sight Translation. 4 periods.

6. Hugo's Quatre-vingt-treize. Sight reading. 4 periods.

MATHEMATICS.

Algebra.

1. *Simple Equations, and Fundamental Operations. Text: Wentworth's New School.*
   5 periods.
2. *Factoring, and Simple Fractions.*
   5 periods.
3. *Complex Fractions, including Fractional Equations.*
   5 periods.
4. *Simultaneous Equations, and Indeterminate Equations.*
   3 periods.
5. *Involution and Evolution, Theory of Exponents, Radicals and Imaginaries.*
   3 periods.
6. *Quadratic Equations, Ratio and Proportion, Progressions, Variables and Limits, Properties of Series, Binomial Theorem, and Logarithms.*
   5 periods.

Geometry.

1. *Plane Geometry. Rectilinear Figures; Extensions of the meaning of Angles; Symmetry; Methods of Proving Theorems, Original Exercises and Numerical Problems are given. Text: Wentworth's.*
   3 periods.
2. *The Circle; Theory of Limits; Problems of construction; Solution of Problems; Theory of Proportion; Numerical Properties of Figures.*
   3 periods.
3. *Areas of Polygons; Regular Polygons and Circles; Maxima and Minima.*
   3 periods.
4. *Lines and Planes in Space; Polyhedrons, Cylinders, and Cones; The Prismatoid Formula.*
   3 periods.
5. *Figures on the Surface of a Sphere; Spherical Volumes Numerical Problems.*
6. *Review of Mathematics.*

The purpose of this course is to give the student an opportunity to fix thoroughly in mind the principles of Arithmetic, Algebra and Geometry, and their applications to practical problems.

3 periods.

GREEK.

The work in Greek consists of the study of the common inflections and syntactical constructions usually done in the first year of the study of Greek, two books of Xenophon's Anabasis and three books of the Iliad. Greek Prose Composition is studied throughout the course.

1. White's First "Greek Book"

Twenty-five lessons. 5 periods.

2 and 3. White's "First Greek Book" completed and Book 1 of *Xenophon's Anabasis.*

Daily drill in inflections and syntax. 5 periods.

4 and 5. Xenophon, Anabasis, Books II-IV.

Prose Composition. Special study of modes and tenses and construction. 4 periods.

Texts: Goodwin and White's Anabasis; Jones' Greek Prose Composition; Goodwin's Greek Grammar.

6. Homer, The Iliad, Books I, II.

Scanning, Homeric inflections and Mythology. 4 periods.

Text: Seymour, School Iliad.

HISTORY.

1, 2, 3. Ancient History.

In these courses particular attention is given to the civilization of each of the nations studied. The mythology of Greece and Rome is carefully considered. Special reports upon assigned topics are required throughout the year.

Text: West, Ancient World.

1. The Eastern Nations. Egypt; the Tigris-Euphrates states; Phoenicia; Hebrews; Persian Empire; Greece (to page 154). 4 periods.
2. Greece continued to the invasion of Rome; Rome to the founding of the Empire. 4 periods.
3. Rome. A continuation of History 2. This course closes with a study of the civilization of Rome. 4 periods.

4, 5. English History.

In these courses topical outlines of Magna Charta, Petition of Rights and Bill of Rights are required. Special attention is given to the origin and development of the House of Commons, the origin and development of ministerial government, and the extension of the franchise. 3 periods.

6. Civil Government.

The aim of this course is to give the student a thorough knowledge of the elementary principles of American constitu-

tional law and their historic development. The machinery and growth of government, local, state and national, are emphasized and the theory of the divisions of government into departments and the separation of powers are noted. The government of the state of Oklahoma, the relation of government to agriculture, good roads, schools and other matters relating to the general welfare are studied topically. 4 periods.

Text: Young's Government Class-Book.

LATIN.

Those students succeed best in the study of Latin who have a good understanding of English. The best possible preparation, therefore, for the study of Latin is a thorough mastery of the principles of English Grammar.

1. *Twenty-five Lessons in Collar and Daniel's "First Year Latin".*

The general rules of Roman accent are applied from the beginning. Study of quantity. Daily practice in changing English into Latin based upon the text and reciting the same orally. 5 periods.

2. *Collar and Daniel's "First Year Latin" to Lesson Sixty-five.*

Study of verb forms and simple construction, principal parts, synopses, infinitives, participles. 5 periods.

3. *Lessons Completed and "Selections for Reading."*

Special study of final, consecutive, conditional and circumstantial clauses. General review of "First Year Latin." 5 periods.

4. *Caesar's Gallic War, Book I.*

Review of forms and construction. Latin Prose Composition. 4 periods.

Texts: Johnston-Sanford, "Caesar's Gallic War;" Jones, Latin Prose Composition; Allen and Greenough, New Latin Grammar.

5. *Caesar's Gallic War, Books II and III.*
6. *Caesar's Gallic War, Books IV and V.*
7. *Cicero Oration, First and Second against Catiline. Latin Composition.*

4 periods.

Texts: Harkness, Kirkland and Williams, Cicero's Orations; Jones, Latin Prose Composition; Allen and Greenough, New Latin Grammar.

8. *Cicero, Orations, Third and Fourth against Catiline.*
9. *Cicero, Orations, Manilian Law and part of Poet Archias.*
10. *Vergil, Aeneid, Book I. Quality and prosody; Life and Times of Vergil; Mythology based upon the text.*

4 periods.

Texts: Carter, Vergil's Aeneid, Allen and Greenough, New Latin Grammar.

11. *Vergil, Aeneid, Books II and III.*
4 periods.

12. *Vergil, Aeneid, Books IV-VI.*
4 periods.

MANUAL TRAINING.

Joinery.

1. Planing to surface and square; measuring and sawing to line; making simple joints.
2. Making mortise and tenon joints, bandsawing, boring, etc. Practical application of above in making simple articles of use and ornament.
3. Practical application of preceding technical work continued

Wood Turning.

1. Turning wood centers, centering, roughing with gouge, calipering, smoothing straight with skew chisel, convex turning with chisel, concave turning with gouge.
2. Face plate work; chuck and mandrel work.
3. Ornamental turning, turning balusters, shellac polishing.

Forging.

1. Pointing, drawing out, upsetting, bending, twisting and punching iron.
2. Scarfing and simple welding; forging steel; making chisels, punches, screwdrivers, springs, etc.
3. Ornamental iron work; tool making.

Machine Work.

1. Bench work, including chipping and filing; hack sawing and thread cutting.
2. Lathe work—Plain and taper cylinders; cutting right and left V threads; drilling holes; planing with planer and shaper.
3. Machine construction.

Mechanical Drawing.

1. Drawing and joining straight and curved lines, three plates. Geometrical problems, four plates.
2. Study of orthographic projection, 2 plates. Isometric perspective, 2 plates. Drawing plans, elevations and sections from other drawings.
3. Drawing plans, elevations and sections from free hand sketches of objects.

PHYSICS.

1. *Elementary Physics.*
   Mechanics of solids, liquids and gases.
   Lectures and demonstrations, recitations. 2 periods.
   Laboratory work. 4 periods.
   Text: Hall and Bergen, A Text-Book of Physics.

2. *Elementary Physics.*
   Light, heat and sound.
   Lectures and demonstrations, recitations. 2 periods.
   Laboratory work. 4 periods.
   Text: Hall and Bergen, A Text-Book of Physics.

3. *Elementary Physics.*
   Magnetism and electricity.
   Lectures and demonstrations, recitations. 2 periods.
   Laboratory work. 4 periods.
   Text: Hall and Bergen, A Text-Book of Physics.

Note—In the above courses each student is furnished with all of the apparatus necessary that forty-five of the exercises as described in the text may be performed, thus acquainting him with the quantitative as well as the qualitative methods of physical science.

ELEMENTARY DEPARTMENT

ELEMENTARY DEPARTMENT.

The Elementary Department consists of four grades—fifth and eighth inclusive—with a course of study similar to that of the best city graded school. Its object is to fit students for the Preparatory Department, to furnish an elementary education to those who are not provided with suitable school facilities at their homes and to provide a Training School for applying the theories and methods of the Normal Department. This Department is under the control of trained and experienced teachers and keeps abreast of educational theories and practice.

Agriculture and manual training have been introduced into this Department and are a profitable source of interest and development.

It offers special advantages to those students who have lacked the opportunities for thorough elementary training and who desire to pursue special work in the Mechanical Department, the Domestic Science Department and the Agricultural Department.

Students completing the work in this Department are promoted to the Preparatory Department.

FIFTH GRADE.

Reading—Cyr's Reader, Book Five is studied. Spelling consists of the new words of each lesson.

Geography—Special attention is given to home geography. The earth as a whole is studied. North America and South America are studied, attention being given to their chief products, domestic transportation and trade, and cities. Frye's Elements of Geography is completed and reviewed.

Arithmetic—Milne's Elements is used. Fundamental principles involving fractions, decimals, denominate numbers, simple interest are studied. The book is completed.

Grammar—Maxwell's introductory Lessons, pp. 1-83. Special attention is given to the study of parts of speech and diagramming.

Agriculture.—This work will consist of classroom and practical work as arranged by teacher.

Drawing.—The Eclectic Drawing Book No. 4 is used. The work consists of drawing simple lines and figures.

Penmanship.—Barnes' Copy Book No. 4 is used.

Manual Training —Domestic Science see page 90.

Vocal Music.—Chart. Text. Natural Music Reader No 1. Stress is placed on clefs, lettering, pitch-names, time, kinds of notes, etc

Sixth Grade.

Reading.—Cyr's Reader, Book Six, is studied during the year with the work "Choice Selections from Longfellow." Spelling consists of new words of each lesson.

Geography.—Study of the earth as a whole physiographically, effect upon climate, vegetable and animal life, industries and population. The United States is studied, special attention given to map drawing and relief modeling. The detached parts of the United States, Canada, Mexico and Central America are studied.

Arithmetic.—Milne's Standard is used. A complete review of fundamental principles, extensive work in fractions, decimals and denominate numbers to longitude and time.

Grammar.—Maxwell's Introductory Lessons, pp. 83 to end of text. Stress is placed upon both oral and written composition work, letter wriitng, rules for capitals, punctuation and abbreviations

Nature Study.—This course is taught by means of object lessons. The life history of bees, ants and insects injurious to agriculture is studied.

Drawing.—The Eclectic Drawing Book No. 5 is used. The work consists of drawing simple familiar objects and landscape.

Penmanship.—Barnes' Copy Book No. 5 is used.

Manual Training.—Forging, foundry practice and wood turning.

Domestic Science.—(See page 90.)

Vocal Music.—Text, Natural Music Reader No. 2. Review of principles of music. Drill in accent, force, harmony and intervals.

Seventh Grade.

Reading—Cyr's Reader, Book Seven is studied, along with Goldsmith's "Deserted Village." Spelling involves the new words of each lesson.

Geography.—Europe is studied as a whole, with a special study of the countries, their boundaries, principal cities and resources. In a simple way forms of government, with their relation to the intelligence and the character of the people, are studied. Frye's Higher Geography is completed. Elementary work in Physical Geography. Review form and size of earth, rotation, revolution, seasons, latitude, longitude. A study is made of the conditions affecting commerce and the interdependence of nations. Adams' Commercial Geography is taken as a basis.

Arithmetic.—Milne's Standard will be used. The aim of the

work is to teach the pupils to apply all principles taught to original problems. Percentage will be especially emphasized, hence a thorough knowledge of decimals is necessary.

Grammar.—Maxwell's Advanced Lessons, pp. 1-140. Technical work continued, sentence structure, diagramming, use of reference grammars.

Beginning Agriculture.—This is to give the student a general idea of the entire field of agricultural activity. Dairying, animal husbandry and agronomy are taught in a general way. Text: Burlsett, Stevens and Hill.

Drawing.—The Eclectic Drawing Book No. 6 is used, with original work. Once each month the class has work on the life of some artist.

Penmanship—Barnes' Copy Book No. 6 is used.

Manual Training.—Forging and foundry practice.

Domestic Science.—(See page 91.)

Vocal Music.—Text, "Natural Music Reader" No. 2. Easy note reading in the various keys. Key signature and chromatic scales are studied.

Eighth Grade.

Reading.—Cyr's Reader, Book Eight, is studied during the year with selected supplement work.

Physiology.—In connection with recitations, demonstrations are given on Human Anatomy and Hygiene. Text: Blaisdell's Physology.

Arithmetic.—Milne's Standard Arithmetic is completed. Special attention is given to ratio, proportion, square root, cube root, metric system and mensuration. In the third term a course in book-keeping is offered. Text: Bryant & Stratton.

Grammar.—Maxwell's Advanced Lessons. Complete technical work, general review of theoretical principles and practical application of same.

American History.—Fiske's U. S. History. A careful study of American History. Use of reference histories. History conference is held once each month, at which time collateral work is reported.

Poultry Craft.—This embraces a general study of poultry industry. The students are taught the history and method of scoring the various breeds and are required to handle incubators and brooders. Text: Poultry Craft.

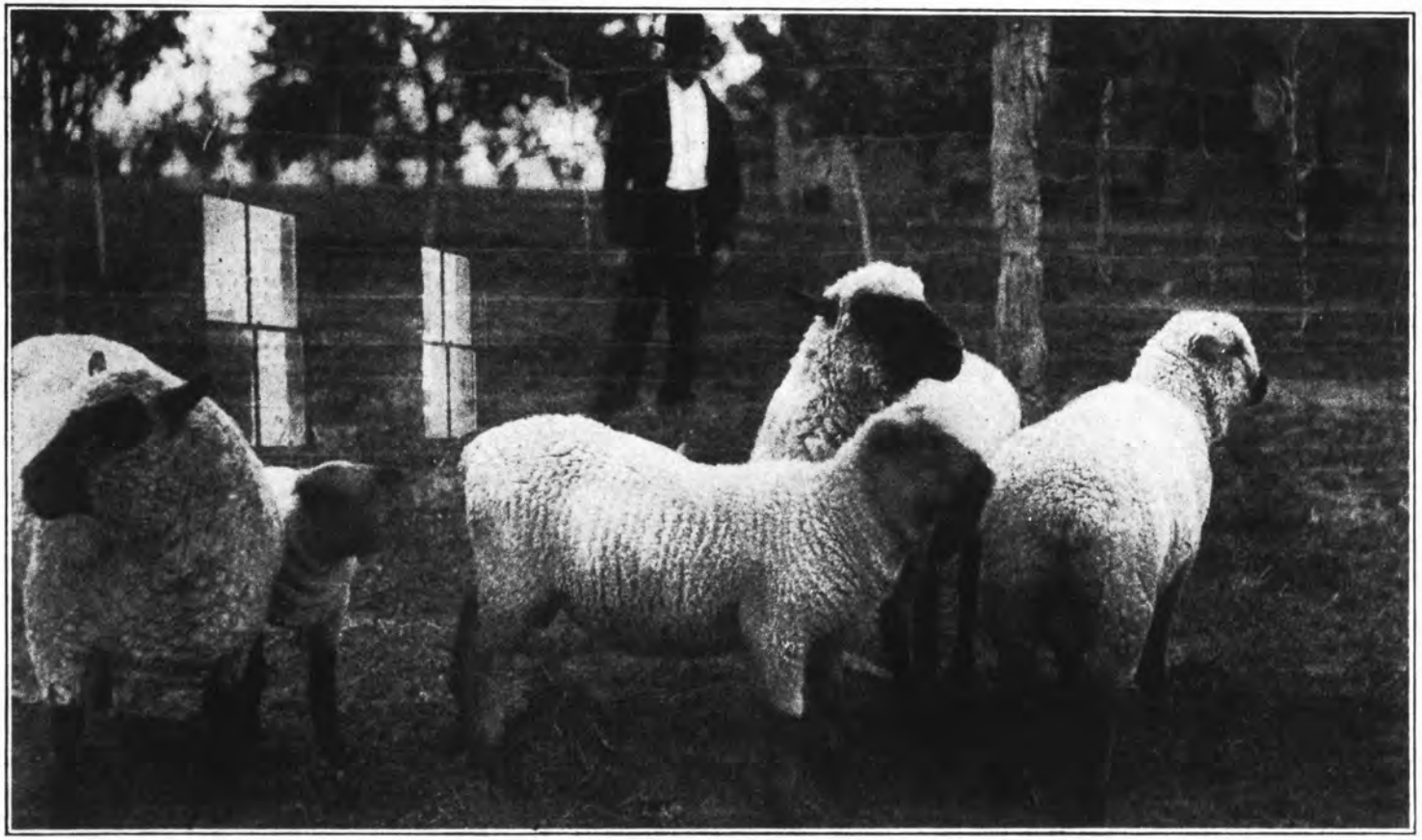
Drawing.—The Eclectic Drawing Book No. 7 is used. The class is required to do original work. Once each month the work of some artist is studied.

Penmanship.—Barnes' Copy Book No. 7 is used.

Manual Training.—Wood-working, machine shop practice, forging and foundry practice.

Domestic Science.—(See page 91.)

Vocal Music.—Key signatures from point of view of intervals, position of sharps and flats in various keys. Relative minor keys. Sources of various kinds of music. Text: "Song Monarch."



UNIVERSITY FARM.—SHEEP

AGRICULTURAL DEPARTMEN T

UNIVERSITY BARN

DEPARTMENT OF AGRICULTURE.

The Department of Agriculture aims to interest young men and young women in the very things with which they live day by day—the soil, the weather, the animal, the farm home, the school, and all the customary rural affairs. It seeks both to give them power to make the most of the farm and to inspire contentment with agricultural life.

The University is provided with one hundred sixty acres of good farm land, with about one hundred twenty acres of it available for cultivation, also with stock, orchards, gardens, libraries and other equipment under the supervision and management of an expert and a practical farmer. The buildings comprise a large Michigan barn with some of the most modern improvements and a piggery. The laboratory facilities are suitable to all the needs of agricultural instruction. There are herds of cattle, sheep, swine and various farm horses; many kinds and specimens of fruit trees in orchards and plants, and farm machinery and implements. The library facilities comprise a collection of books bearing upon agricultural and rural life and almost a complete series of Experimental Station publications.

The work of the Department is expanding every year and the agricultural courses are so correlated with the courses of the other Departments that it is possible for all students, if they so desire, to avail themselves of agricultural training. Besides the regular courses offered in the College of Arts and Sciences and the Two years' Course all students in the Elementary Department are required to take agriculture as a part of their regular course. A special course in Agriculture is also provided for students in the Normal Department who expect to become teachers in the schools of the State.

Through this department alone, the University hopes that its influence will touch thousands of homes in the State and by special courses and frequent conferences to promote the well-being and progress of the Negro farmers of the State.

TWO YEARS' COURSE IN AGRICULTURE.

This is a brief course in agriculture designed for those who are unable from a lack of time or preparation to pursue the regular four years' course in this subject. The object is to fit the students to be successful farmers, stock raisers and gardeners.

Students who are reasonably proficient in the common school branches and those of mature years may take the agricultural and mechanical work of both years in one, if they desire, and may be excused from the other work.

OUTLINE OF STUDIES.

First Year.

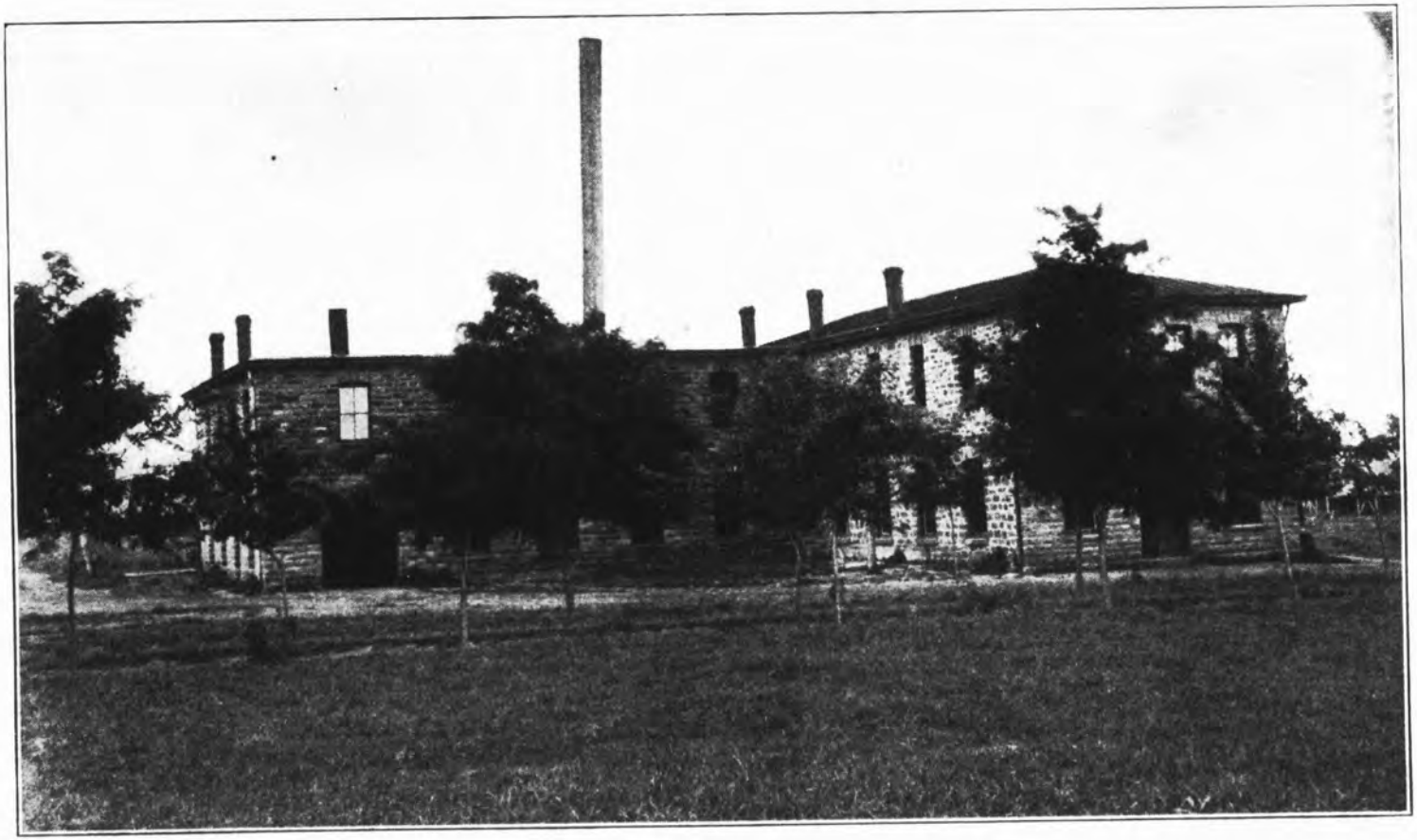
Fall Term	*Winter Term*	*Spring Term*
English	English	English
Arithmetic	Arithmetic	Arithmetic
Blacksmithing (men)	Blacksmithing (men)	Blacksmithing (men)
Domes. Econ. (women)	Domes. Econ. (women)	Dom. Econ. (women)
Horticulture	Horticulture	Horticulture
Carpentry (men)	Carpentry (men)	Carpentry (men)
Reading	Reading	Reading

Second Year.

English	English	English
Arithmetic	Arithmetic	Arithmetic
Dairy Industry	Dairy Industry	Dairy Industry
Stock and Poultry	Stock and Poultry	Stock and Poultry
Gardening and Insects	Gardening and Insects	Gardening, Insects
Domestic Economy	Domestic Economy	Domestic Economy

For the regular college course in Agriculture see page 24.

MECHANICAL DEPARTMENT



MECHANICAL BUILDING

DEPARTMENT OF MECHANIC ARTS.

The Department of Mechanic Arts offers courses in Engineering, Trades and Manual Training.

The Engineering Courses are described on page 22

The Trade Courses taught are Carpentry and Joinery, Machinery, Blacksmithing Steam Engineering and Foundry Practice and are open to young men who have made the Eighth Grade or higher.

The Russian system of tool instruction is followed as far as possible and is correlated with work of a practical nature.

The Department also offers to all Academic students Manual Training Courses as follows: Wood-working, Forging,, Machine Shop Practice, Foundry Practice, Steam Engineering and Mechanical Drawing.

The American system of manual training is used.

Students completing satisfactorily any of the above Trades are granted certificates of proficiency. Persons who are not candidates for graduation, but who desire to pursue special work in any of the trades, are permitted to enter the same without taking the regular examination, provided they are able to do the work required.

EQUIPMENT.

The machine shop is equipped with the following machinery, etc.: One Flather 12 in. swing engine lathe; one Draper 8 in. swing engine lathe, with quick change feed and taper turning attachment; one Cincinnati 6 in. swing engine lathe; one Bath universal grinding machine, with internal grinding attachment; one Perkins 20 in. stroke geared shaper; one Fosdick 36 in. arm radial drill; one 10 in. upright drill; one Flather 24 in. x72 in. planer; one Brainard universal milling machine No. 14½ with complete assortment of milling cutters; one power hack saw; one emery grinder; a complete assortment of hand tools, machinist's vises, etc.

The two wood-working rooms are equipped with twelve manual training benches with a complete set of tools for each; four cabinet maker's benches; six wood turning lathes; one Superior 36 in. band saw; one Bentel universal wood worker with boring attachment; one Beach jig saw; one Hall and Brown gang saw;

one Seneca Falls Mfg. Co. foot power mortising machine; one power band saw filer; one sand papering machine; a complete assortment of all necessary hand tools.

The blacksmith shop is equipped with six Buffalo down draft forges, one hand forge, one emery grinder, one post drill, one tire shrinker, one tire bender, one swage block, one 48 in. Buffalo exhause fan, one Buffalo blast blower No. 6, and a complete assortment of hand tools.

The foundry has the following equipment: One Whiting cupola No. 2 with a capacity of 1½ tons of iron per hour, one Millets core oven, one Sturtevant blast blower No. 5, an assortment of hand tools, ladles, flasks, etc.

The power plant, electric lighting and central heating station has the following equipment: One 60 H. P. high pressure boiler, one Skinner 50 H. P. automatic high speed engine with automatic oiling device, one Columbus 25 H. P. special electric gasoline engine, one 20 K. W. Edison dynamo, two Furman sectional cast iron boilers, one Cookson oil separator, feed water heater and filter, two Knowles boiler feed pumps, one Fairbanks-Morse 8 in. x 24 in. deep well pumping engine, one 6 in. x 18 in. American deep well pump, all equipped with the usual accessories.

TRADE COURSES.

The purpose of the Trade Courses is to prepare young men to become skilled workmen of the highest type, and to give them preparation which will enable them to reach the more advanced positions of foremen, contractors and builders.

OUTLINE OF COURSES.

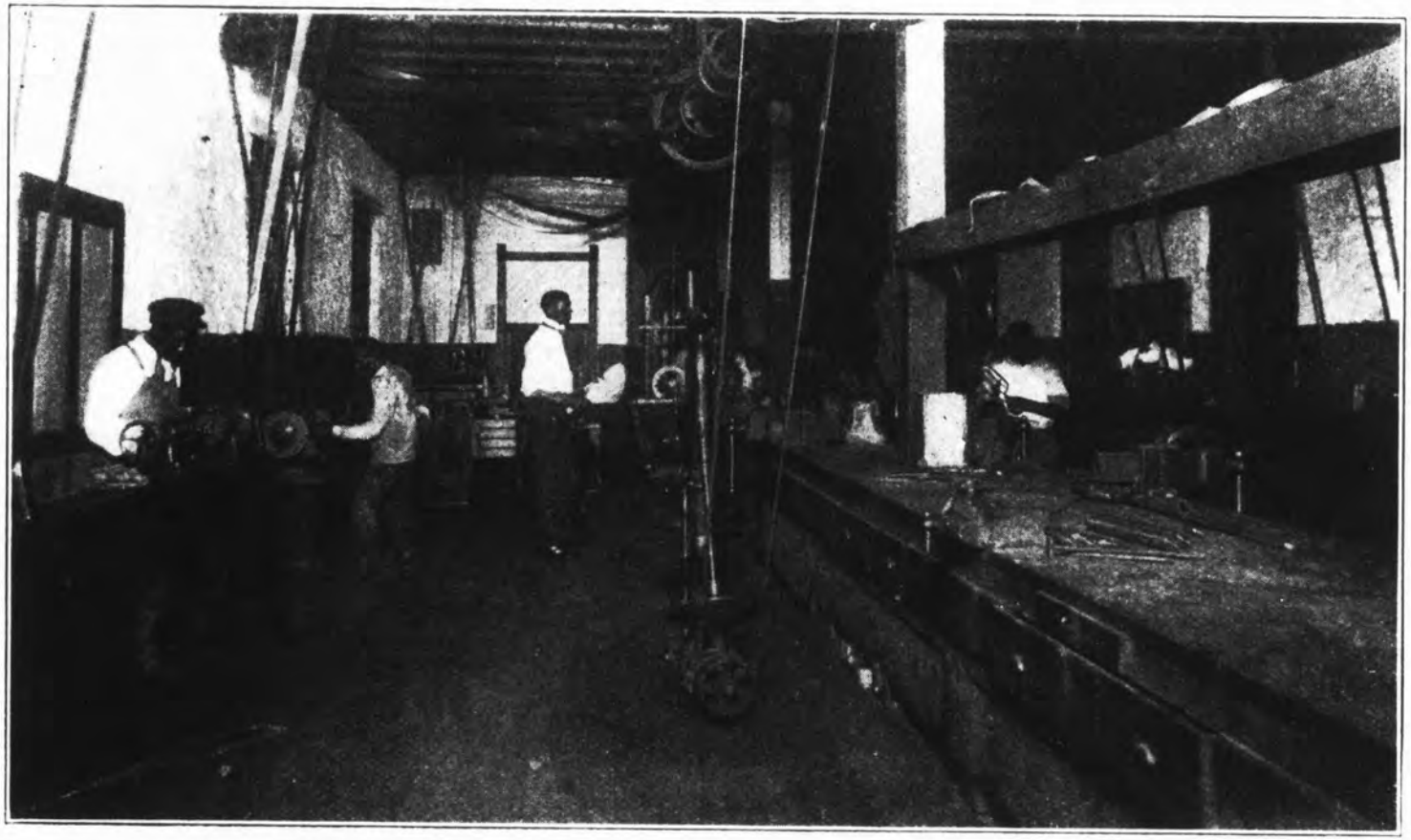
Carpentry.

First Year.

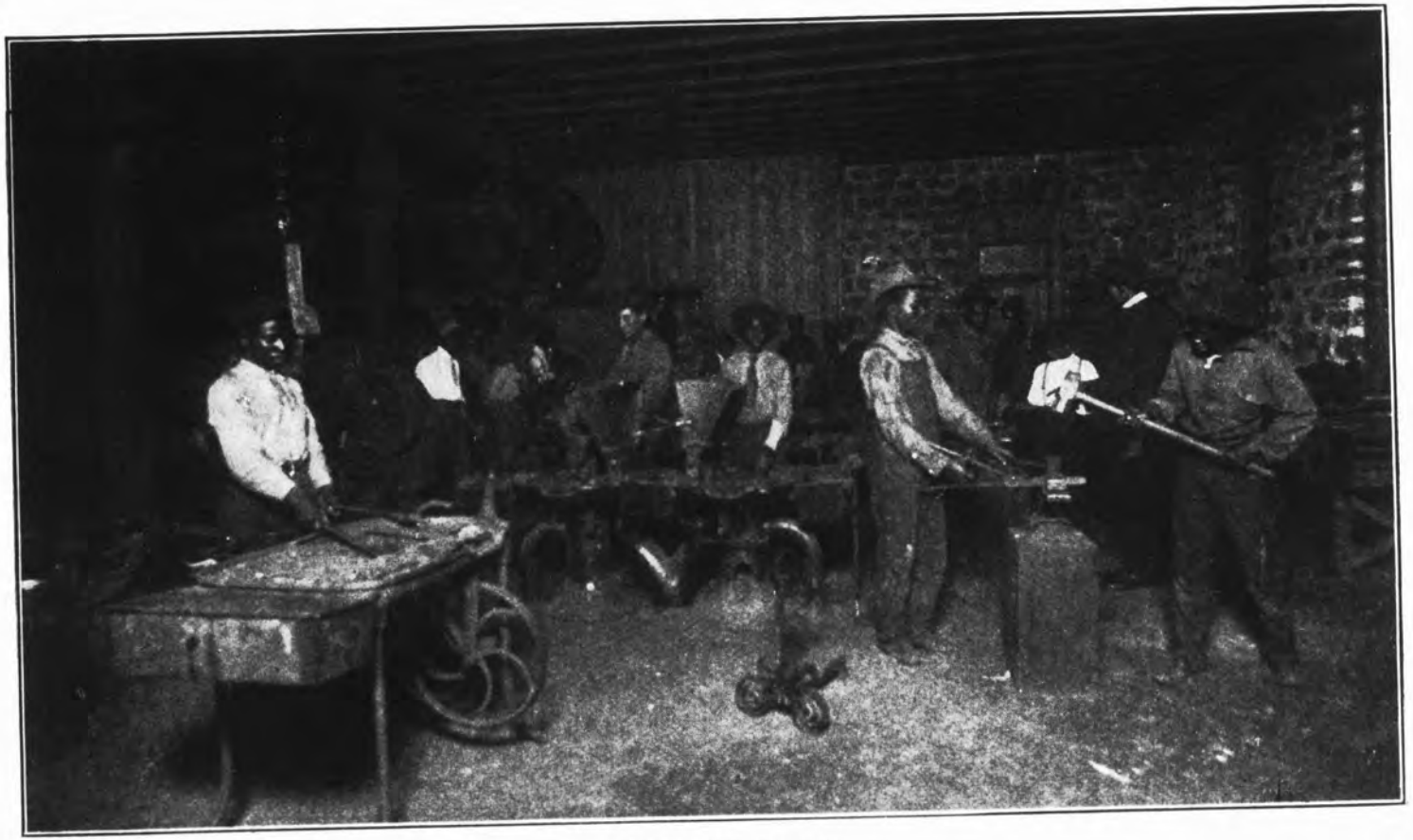
Full Term	*Winter Term*	*Spring Term*
Grammar	Grammar	Grammar
U. S. History	U. S. History	U. S. History
Arithmetic	Arithmetic	Arithmetic
Joinery	Joinery	Joinery
Mechanical Drawing	Mechanical Drawing	Mechanical Drawing

Second Year.

English 1 (5)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
	Physics 1 (6)	Physics 2 (6)
Free-hand Drawing 1 (2)	Free-hand Drawing 2 (2)	Free-hand Drawing 3 (2)
Architectural Drawing 10 (4)	Architectural Drawing 11 (4)	Architectural Drawing 12 (4)
Joinery 4 (15)	Joinery 5 (12)	Joinery 6 (12)



MACHINE SHOP



BLACKSMITH SHOP

Third Year.

Fall Term	*Winter Term*	*Spring Term*
English (4)	English 5 (4)	English 6 (4)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Physics 3 (6)	Chemistry 1 (6)	Chemistry 2 (6)
Joinery 7 (12)	Joinery 8 (12)	Joinery 9 (12)
Architectural Drawing 13 (4)	Architectural Drawing 14 (4)	Architectural Drawing 15 (4)

Machine Work.

First Year.

Same as Carpentry Course with the exception of Machine Shop Practice instead of Joinery.

Second Year.

English 1 (4)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
	Physics 1 (6)	Physics 2 (6)
Machine Shop Practice 4 (15)	Machine Shop Practice 5 (15)	Machine Shop Practice 6 (15)
Free-hand Drawing 1 (2)	Free-hand Drawing 2 (2)	Free-hand Drawing 3 (2)
Mechanical Drawing 4 (4)	Mechanical Drawing 5 (4)	Mechanical Drawing 6 (4)

Third Year.

English 4 (4)	English 5 (4)	English 6 (4)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Physics 3 (6)	Chemistry 1 (6)	Chemistry 2 (6)
Machine Shop Practice 7 (15)	Machine Shop Practice 8 (15)	Machine Shop Practice 9 (15)
Mechanical Drawing 7 (4)	Mechanical Drawing 8 (4)	Mechanical Drawing 9 (4)

Blacksmithing.

First Year.

Same as Carpentry Course with the exception of Blacksmithing instead of Joinery.

Second Year.

English 1 (4)	English 2 (4)	English 3 (4)
Mathematics 1 (4)	Mathematics 2 (4)	Mathematics 3 (4)
	Physics 1 (6)	Physics 2 (6)
Blacksmithing 4 (15)	Blacksmithing 2 (15)	Blacksmithing 6 (15)
Free-hand Drawing 1 (2)	Free-hand Drawing 2 (2)	Free-hand Drawing 3 (2)
Mechanical Drawing 4 (4)	Mechanical Drawing 5 (4)	Mechanical Drawing 6 (4)

Third Year.

Fall Term	*Winter Term*	*Spring Term*
English 4 (4)	English 5 (4)	English 6 (4)
Mathematics 4 (4)	Mathematics 5 (4)	Mathematics 6 (4)
Physics 3 (6)	Chemistry 1 (6)	Chemistry 2 (6)
Blacksmithing 7 (15)	Blacksmithing 8 (15)	Blacksmithing 9 (15)
Mechanical Drawing 7 (4)	Mechanical Drawing 8 (4)	Mechanical Drawing 9 (4)

DESCRIPTION OF COURSES.

Carpentry and Joinery.

1. Planing to surface and square; measuring and sawing to line; making half, dado, mortise and tenon, tongue and groove joints; proper care of edge tools

2. Making bevel, miter, dovetail, scarf and other difficult joints.

3. Wood turning between centers, centering, roughing with gouge, calipering, smoothing straight with skew chisel, turning concave with gouge, convex turning with chisel, etc.

4. Wood turning—face plate work, chuck and mandrel work, shellac polishing. Pattern making.

5. Scroll and band sawing. Cabinet making—furniture design, panel work, drawer work, etc.

6. Cabinet making—making selected pieces of furniture.

7. Building construction—balloon framing, mortise and tenon framing, making door and window frames, etc.

8. Stair building, inside finishing, etc.

9. Painting and varnishing. Mill work—filing and sharpening, mouldings, etc.

Machine Work.

1. Bench work—chipping with cape and cold chisel, filing to a plane surface, squaring, filing to line and exact dimensions, cutting key ways, making sliding fit, dove-tailing hack sawing, thread cutting, etc.

2. Lathe work—turning plain and taper cylinders, free hand turning, eccentric turning, thread cutting, etc.

3. Lath work—chuck and mandrel work. Drilling and drill press work.

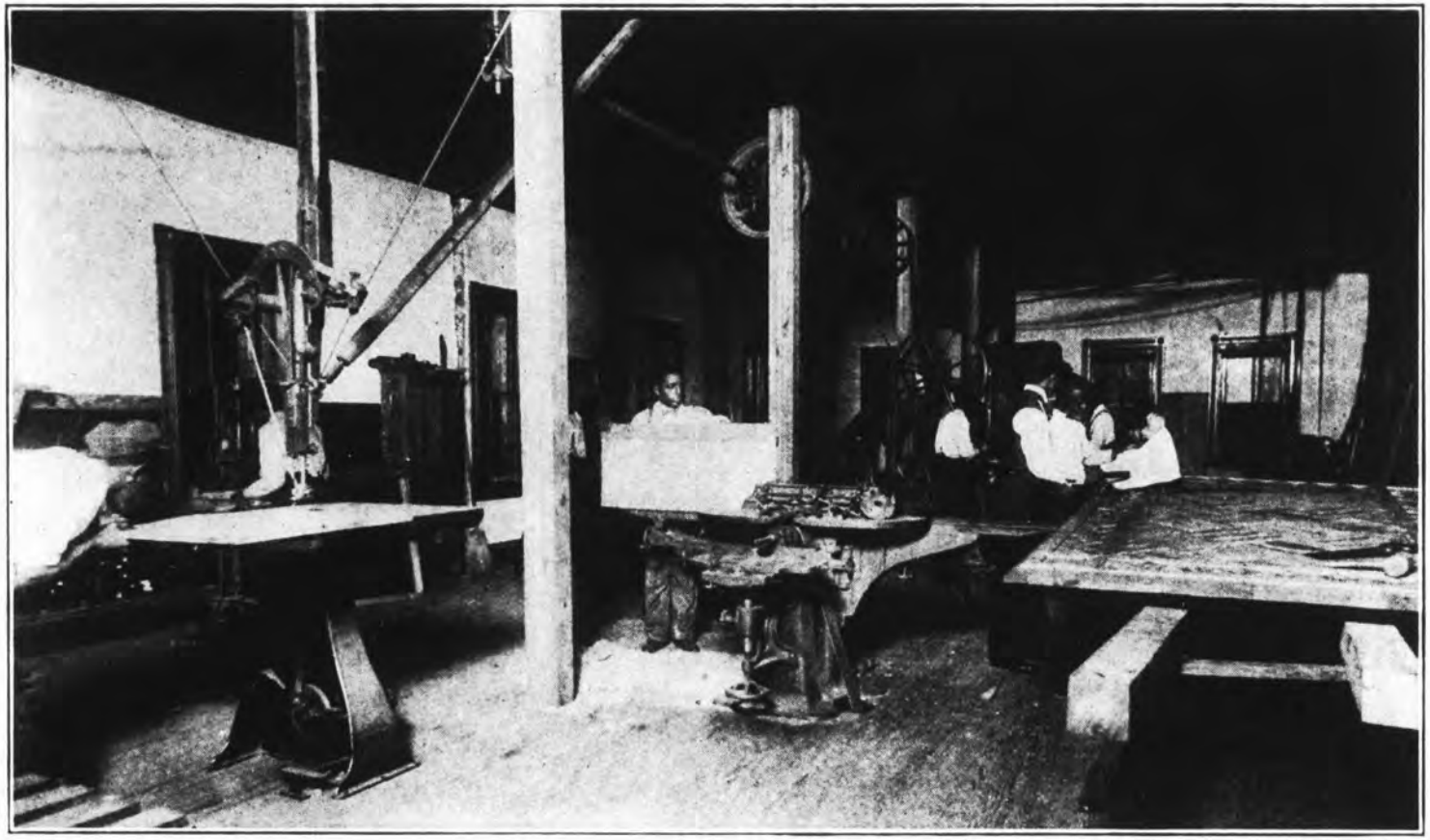
4. Planer and shaper—key ways and keys, bevels, cotters and dove-tails, etc.

5. Tool making—milling, grinding, etc.

6. Tool making continued.

7. Cutting spur and bevel gears. Machine construction.

8 and 9. Machine construction continued.



CARPENTER SHOP

Blacksmithing.

1. Pointing, drawing out, upsetting, bending, twisting and punching iron.
2. Scarfing and welding iron—corner, V, butt, T, jump, faggot and other welding. Forging steel—slitting, bending, welding. Welding steel and iron.
3. Making and tempering springs, chisels, punches, screw drivers and other tools.
4. Wheel-wrighting—wagon and buggy making and repairing.
5. Wheel-wrighting continued.
6. Productive work. Ornamental iron work.
7. Power forging. Running gasoline engine.
8. Horse shoeing, with lectures on hoof diseases and interferences, etc.
9. Tool making.

MECHHANICAL DRAWING.

1. Penciling, inking, and joining straight and curved lines. Free hand lettering. Talks on use and care of instruments.
2. Six plates of geometric problems of practical application.
3. Six plates free hand sketching of models. Three plates line shading of cylinders, cones, etc.
4. Orthographic projection—projection of points, lines discs, solids. Development of surfaces.
5. Isometrical perspective—cubes, cylinders, prisms, etc.
6. Working drawings, cross sections, shading, conventional methods.
7. Machine drawings, screws, belts, gearing.
8. Machine design and working drawings for same.
9. Machine design, etc., continued.
10. Orthographic projection. Development of surfaces. Isometrical perspective.
11. Architectural details—frame buildings.
12. Architectural details—brick buildings.
13. Lectures on planning houses. Original house plans.
14. Estimating materials, time, labor in building construction.
15. Writing specifications and contracts. Building laws.

FREEHAND DRAWING.

1. The work for this term will be pencil work in Outline Drawing, Shading and the drawing of Geometric models.
2. The work will be Designing and Charcoal Work.
3. The work will be entirely on water-color.

CHEMISTRY.

1, 2. The elementary principles of Inorganic Chemistry are so treated by lectures and laboratory exercises that the facts and

theories learned may be applied to many of the chemical phenomena commonly observed in the trades.

Lectures, demonstrations and recitations. 2 periods.

Laboratory work. 4 periods.

1. Non-metallic elements.
2. Metallic elements.

PHYSICS.

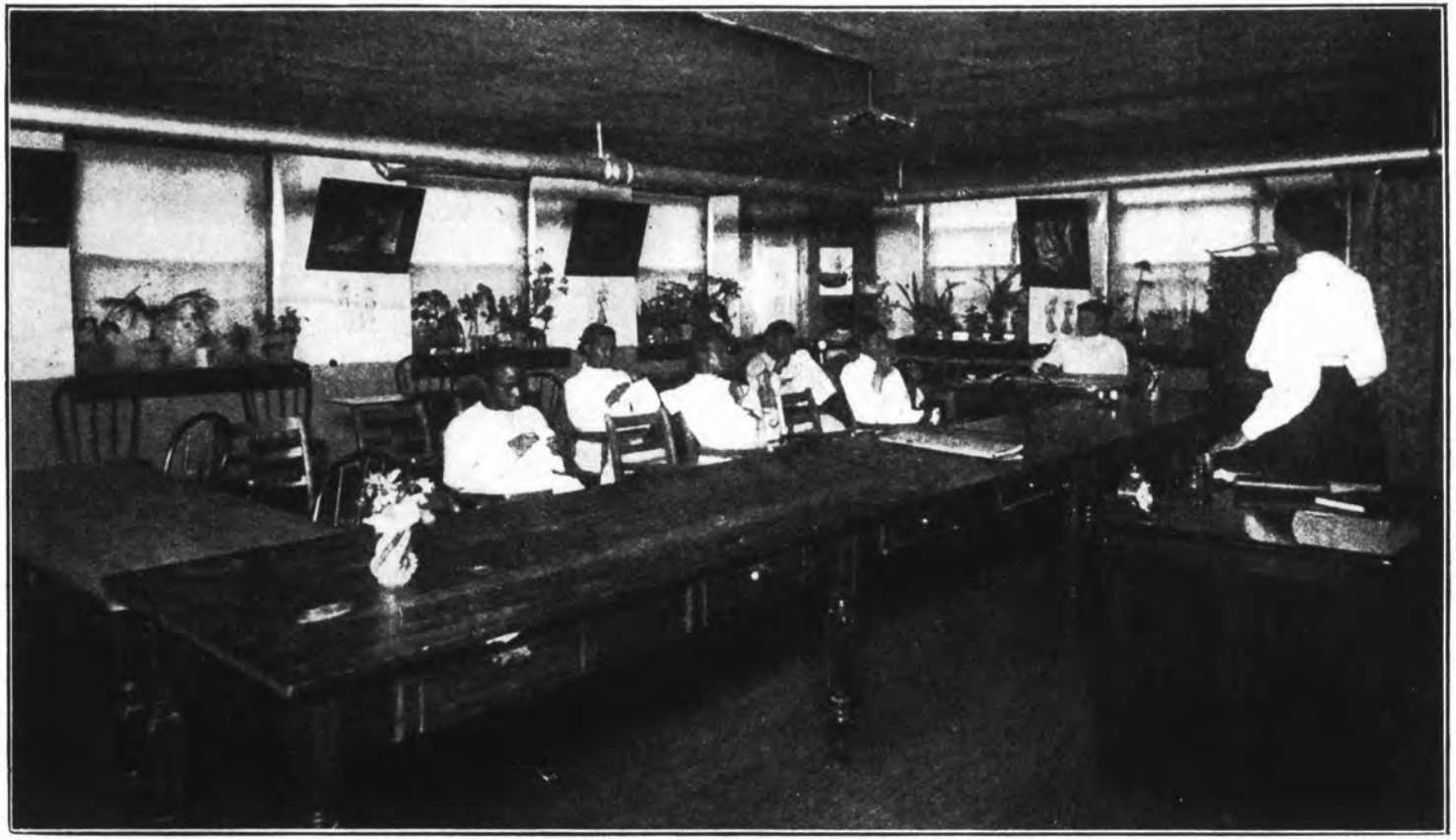
1, 2, 3. These courses are designed to familiarize the student with such facts and theories of elementary physics as will aid him in pursuing the trade of his choice. Fifty experiments of a quantitative nature, carefully performed and neatly recorded, are required as laboratory exercises.

Lectures and demonstrations, recitations. 2 periods.

Laboratory work. 4 periods.

1. Mechanics of solids, liquids and gases.
2. Sound, light and heat.
3. Magnetism and electricity.

DOMESTIC ECONOMY DEPARTMENT



SEWING ROOM

DEPARTMENT OF DOMESTIC ECONOMY.

The Department of Domestic Economy aims to give young women the kind of education which they need to enable them to properly discharge the duties and bear the responsibilities of home life. The work is so conducted as to give them not only the practical knowledge and dexterity which they will need in presiding over their homes, but also the intellectual and moral benefits which naturally follow manual and industrial training. Inasmuch as many women are obliged to depend entirely upon their own resources, instruction is given in this department with a view to making it possible for them to become independent by earning a livelihood in the trades of their choice.

Courses are offered in Domestic Science and Domestic Art. The purpose and methods of all the courses are educative, affording training through motor activity, which is one of the principle educative functions of manual training.

The courses offered are as follows:

Domestic Science; Cookery; Marketing; Serving and Household Economics.

Domestic Art: Plain Sewing, Dressmaking and Millinery.

Those who finish any of the above courses satisfactorily are given certificates to this effect.

EQUIPMENT.

This department is equipped with a school kitchen, suitable to provide the best facilities for class-work, individual and co-operative, and a furnished dining room for practical serving. The Domestic Art classes are equipped with sewing machines and other appliances suitable for good work.

DESCRIPTION OF COURSES.

DOMESTIC SCIENCE.

Foods and Cookery.

A systematic study of principles and methods involved in the preparation of foods, care of kitchen, table-setting and serving.

Serving.

This course is given to the advanced classes and consists of instruction in the following subjects: Table-laying; serving of breakfast, luncheon and dinner; laundering; preparation of beverages, salads and desserts, and general care of dining-room.

Household Economics.

Instruction is given in the selection, purchase, preservation, preparation, construction, decoration and equipment of a house.

DOMESTIC ART.

Course in Plain Sewing.

This course is intended for girls who know practically nothing about hand sewing.

With the primary sewing, this course includes the drafting, cutting, fitting and making of ten garments.

All students taking sewing must be provided with tape-line, thimble, needles, pins, scissors, emery bag, two yards of white domestic and white aprons.

Special Students.

Only girls of the eighth and higher grades are admitted as candidates for graduation. Students below the eighth grade who wish to specialize may do so, but are not given certificates

FIFTH GRADE.

Fall Term.

Use of tape line and sewing implements; running stitches; basting. The over-casting stitch; hemming, 1, 2 and 3. History of needles.

Winter Term.

Back-stitching, half-stitching, combining stitches; blanket and flannel stitches. First lessons in button-holes. History of thimbles.

Spring Term.

History of sewing. Study of material and practice work. Darning, 1, 2 and 3. Patching, 1, 2 and 3. Practice piece and review. History of pins.

Fall Term.

Bands, gatners and gussets. Cloth darning and matching stripes. Button-holes, eyelets, sewing on buttons, hooks and eyes. Taking measures, drafting, drafting patterns with tape line and ruler, cutting. Review of stitches in making garments.

Winter Term.

Taking measurement and drafting a child's pattern. Making the child's garment. Review of work of the first term.

SIXTH GRADE

Spring Term.

Taking measurements and drafting patterns. How to regulate machine, cutting and making the garment. Free hand curves. Drafting continued. Cutting and making the garment. Review of work of first term. Cutting and making the garment which furnishes the lady's suit.

DRESSMAKING.

The room for dressmaking is fitted with large tables for drafting, tracing and cutting and with sewing machines, dress forms, mirrors, book of modes and a library of reference books relative to the different subjects taught. Applicants must have completed the course in plain sewing or must pass an examination to prove their knowledge of hand and machine sewing and their ability to make simple garments before they are admitted to take the course in dressmaking. All students taking sewing must be provided with tape line, thimble, needles, pins, scissors, emery bag.

SEVENTH GRADE.

Fall Term.

Taking measures and drafting skirt patterns, boys' pants patterns, cutting and making boys' jacket patterns. Cutting and making men's underwear.

Winter Term.

Cutting and making men's underwear. Embroidery of flannels. Color lessons. Review work. Drafting waist and sleeve pattern. Cutting and making same.

Spring Term.

Drafting a dress skirt pattern. Cutting and economy of material. Cutting and making a dress. Practice work. Lessons on purchasing material. Review.

EIGHTH GRADE.

Fall Term.

Review of plain sewing. Lessons on material for church. Material for street and home work. Review colors. How to face and put on bindings. How to sponge and press silks and velvets. Economy of dress and how to shop. Lecture on useful rather than showy material.

Winter Term.

How to draft a waist. How to draft and fit sleeves. How to draft a five-gored skirt. How to draft a seven-gored skirt. Trimmings or accessories for dresses.

Spring Term.

How to take measures and draft patterns for shirt waist. How to fit and make a waist. Combining colors. How to draft, cut and make a wrapper. Cutting paper wrappers for practice. Practice work.

NINTH GRADE.

Fall Term.

Cutting and making paper dresses. How to baste velvets and silks to linings. How to finish lined dresses. Ancient and modern styles. Review.

Winter Term.

Theory lessons reviewed on silks, velvets and fine material. How to fit deformed figures. Practice embroidery work and crocheting. Fancy stitches.

Spring Term.

Theoretical and practical work done independently of teachers. Review. Lessons on tailoring. Tailoring as done by dressmakers. Review. Practice.

MILLINERY COURSE.

Girls who know how to do neat hand sewing are admitted into the millinery class.

All applicants must furnish their own material.

Fall Term.

Foundation of a hat and how to trim a hat. How to make and trim a shirred winter hat. How to make and trim small velvet hats. How to wire ribbon. Combining colors.

Winter Term.

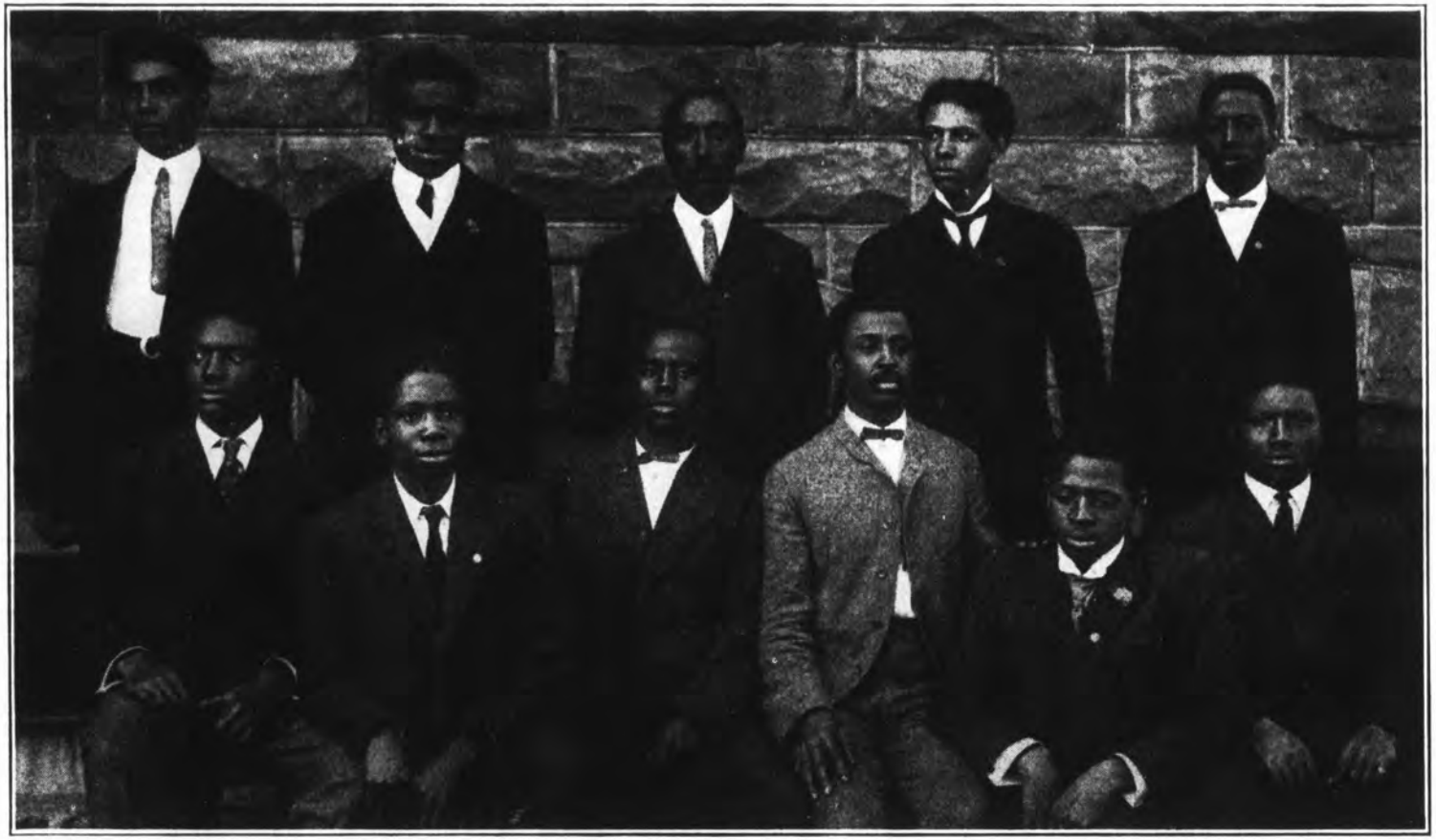
How to make and trim small velvet bonnets. How to make and drape straw hats. Points on millinery. How to make shirred summer hats.

Spring Term.

How to brace and trim Leghorn hats. How to make mourning bonnets. Arranging trimmings. How to make bows and bandeaus. How to make and wire frames.

UNIVERSITY MUSIC ROOM

DEPARTMENT OF MUSIC



UNIVERSITY GLEE CLUB

DEPARTMENT OF MUSIC.

This Department offers work in vocal and instrumental music to those pursuing regular courses in other Departments of the University and to special students.

Vocal music is required of all regular students in the Normal, Preparatory and Elementary Departments as a minor course. Special work is given in voice building, modulation and execution. Music for public exercises is prepared.

One afternoon in each week work in chorus singing is done by those who are sufficiently advanced for such work. Also the Glee Club meets once a week.

Piano courses are provided for as many students as can be accommodated.

Instruction on wind instruments and the violin is provided with a view to orchestra and band playing. The University Band and Orchestra practice twice each week.

COURSE IN VOCAL MUSIC.

First Preparatory.

Key signatures viewed from the standpoint of the order of intervals. Key building in all major keys and the relative minor keys named. Familiarize students with the forces giving origin to the different classes of music, noting relation of purpose to structure. Note the place of emotion in music. Part. 2. Note singing continued, with new examples and varieties of pitch, force, quality and movement. Complete the practical principles and theory of vocal music as preparatory to sight reading. Text: "Song Monarch."

Advanced Course.

Review of all work in preceding years. Sight reading, discussions of different phases of music, transposition of selections, analysis of some of the very best classic and modern music.

PIANOFORTE COURSE.

Elementary.

Landron's Pianoforte Method, F. Beyer, Bk. I, E. D. Wagner, finger exercises, scales, easy pieces.

Intermediate.

Studies by Czerny, Preyer, Burgmuller, Low, Krause and others. Harmonic and melodic minor scales. Octave studies. Sonatas by Hayden and Mozart. Pieces by Bach, Chopin, Schubert, etc.

Advanced.

Studies by Plaidy, Czerny, Clementi; pieces by modern composers and Beethoven, Mendelssohn, Chopin, Rubenstein and others.

UNIVERSITY CHORUS

UNIVERSITY BAND

REGISTER OF STUDENTS

REGISTER OF STUDENTS

COLLEGE OF ARTS AND SCIENCES

CLASSICAL COURSE.

Senior Year.

Page, Mary E. R.	Langston

SCIENTIFIC COURSE.

Senior Year.

Pyrtle, Nolan	Langston
Slaughter, Thomas	Langston

Sophomore Year.

Roberts, Joseph E.	Langston
Sadler, Samuel L.	Muskogee

NORMAL DEPARTMENT.

Senior Year.

McCain, Mary J.	Ran

Junior Year.

Barbee, Rosa B.	Central [illegible]
Reed, Osie L.	Langston

PREPARATORY DEPARTMENT.

Fourth Year.

Graham, Charles D.	Lexington, Mo.
Spraings, Malinda V.	Guthrie
Waterford, Sadie R	Muskogee

Third Year.

Clark, Edward E.	Fallis
Dawson, John W.	Langston
Dunlap, Andrew	Wewoka
Jones, Theodosia	Muker
McLamore, Edna	Muskogee
Manuel, William	Gatesville
Perkins, Israel S.	Goliad T.
Stroud, Thomas L.	Hernando, Miss.
Turner, Bertha	Langston
White, Cora	Lamar, Colo.

Second year

Abernathy, Lewis	Lawton
Adams, Bee	Wellston
Baker, Maud	Coalgate
Brown, Daisy	Shawnee
Brown, Lillie Belle	Muskogee
Dunlap, Geneva	Langston
Floyd, Jedediah	Guthrie
Foster, Anthone	Kaufman, Tex.
Harris, Irene	Langston
Hatchett, Maud	Henderson, Ky.
Hawkins, Mollie	Vinita
Jones, Letha	Langston
Lyons, Mack	Okmulgee
Mason, Tilmon	Red Bird
Presley, Levi	Muskogee
Reece, Jessie	Guthrie
Slaughter, Lomis	Langston
Smith, Virginia	Chickasha
Stevens, Romeo	Fallis
Woods, Holsia	Langston
Woods, Lelia	Langston
Yeldell, Mayme	Luther

First Year.

Anderson, Donie	Guthrie
Baker, Roberta	Coalgate
Brooks, David	Stroud
Brown, Willa	Shawnee
Byers, Fannie	Muskogee
Drake, Viola	Buck
Floyd, Elizabeth	Guthrie
Freeman, Junius	Eufaula
Gibbs, Margaret	Langston
Griffith, Lillian	Ardmore
Johnson, Robert	Wewoka
Jones, Laura	Langston
Jones, Walter	Langston
Lacefild, Willa	Okeene
Lewis, Alonzo	Perry
McConnell, Martin	Byers, Tex.
McNamee, Henry	Muskogee
McShann, Bertha	Tullahassee
McShann, Lewis	Tullahassee
Mathews, Ollie	Guthrie
Mitchell, Charlotte	Wellston
Mitchell, Sarah	Wellston

Moon, Jetta	Wellston
Morgan, Simon	Dover
Neal, Lewis	Langston
Reed, Willis	Langston
Scott, Frank	Langston
Sewell, Frederick	Muskogee
Sewell, Martha	Muskogee
Shackelford, Elizabeth	Goliad, Tex.
Simmons, Bessie	Guthrie
Thomas, William C	Argenta, Ark.
Wadley, Hugh	Berwyn
Wallace, Andrew	Okmulgee
Watkins, Alice	Oklahoma City
Whitlow, Frederick	Langston
Wilkes, Rufus	Langston

ELEMENTARY DEPARTMENT.

Eighth Grade.

Alexander, William	Guthrie
Allen, Arthur	Ardmore
Allen, Luther B.	Ardmore
Baker, Cora	Langston
Baker, Ethel	Coalgate
Bassett, John	Ft. Scott, Kan.
Benningfield, Jessie	Tulsa
Bradley, Augusta	Muskogee
Burres, Mary	Pawnee
Butler, Prudence	Stillwater
Chandler, James	Wewoka
Chandler, Roena	Wewoka
Cohn, Edward	Purcell
Coleman, Ellen	Okmulgee
Coleman, Howard	Lawton
Crump, Sadie	Dover
Dillard, Paul	Ardmore
Doran, James	Langston
Downs, Harlow	Langston
Denlap, Bertha	Langston
Fletcher, Aaron	Atkins, Ark.
Foster, Allie	Kaufman, Tex.
Franklin, Reanna	Boynton
Frazier, William	Anadarko
Furh, Anthon	Oklahoma City
Gwimmitt, Rosa	Taft
Harmon, Walter	Langston
Johnson, Daisy	Arcadia
Johnson, Plessie	Denison, Tex.

Kirk, Grace	Langston
Lawson, William	Langston
Lee, Della	Newkirk
Lewis, Jesse	Boynton
McClain, Arthur	Watonga
McNome, James	Guthrie
Mame, Benjamin	Grayson
Manning, Judson	Chandler
Meeks, Elsworth	Langston
Mitchell, Alice	Wellston
Vage, Horace	Langston
Palms, Thomas P.	Greenwood, La.
Richarson, Clarence	Langston
Sanburn, Charles	Anadarko
Smith, Richard	Raleigh, N. C.
Taylor, Emogene	Langston
Thomas, Ada	Mustang
Tyson, Elma	Wewoka
Walker, Jeremiah	Musokgee
Wasson, Houston	Musokgee
West, Myrtle	Prague
Yeldell, Error	Luther
Young, George	Langston
Younger, Cora	Langston

Seventh Grade.

Bilbrew, Watson	Langston
Black, James	Perry
Blackwell, Retta	Arcadia
Boston, Charles	Topeka, Kan.
Bowen, Ethel	Wellston
Bowen, Minnie	Wellston
Brooks, Ella	Stroud
Brown, Addie	Langston
Brown, Lee	Langston
Butler, John	Langston
Byrd, Lentulus	Oklahoma City
Chandler, William	Wewoka
Cooper, Eliza	Ft. Gibson
Cooper, Margaret	Ft. Gibson
Crayford, Leuvenia	Muskogee
Davis, David	Gatesville
Degratte, Eva	Gatesville
Downs, Susan	Langston
Edminson, Delos	Prague
Edwards, Lonnie	Guthrie
Emmerson, Sarah	Newkirk

Epps, Frances	Texarkana, Tex
Floyd, Vinita	Guthrie
Giddings, Maud	Langston
Goodlow, Nola	Langston
Harris, Olive	Langston
Harris, Rhetta	Langston
Holiday, William	Newkirk
Howard, Dora	Chandler
Hudson, Benjamin	Gatesville
Hudson, Esther	Gatesville
Jackson, Pansy	Woodward
James, Nona	Muskogee
Jefferson, Emma	Boynton
Jefferson, Martha	Boynton
Johnson, Elnora	Berwyn
Johnson, Robert	El Reno
Jones, Minnie	Meeker
Kirk, Frank	Langston
Lawson, Madison	Berwyn
Lawson, James	Temple, Tex
Lewis, Amanda	Goodnight
Lincoln, Everett	Wewoka
McCormack, Herber	Sac and Fox
McGinnis, Clifford	Cobre
McLamore, Nettie	Muskogee
Martin, Susan	Vinita
Meeks, Beulah	Langston
Miller, Lucy	Crescent
Morrison, Herbert	Bristow
Myles, Henry	Langston
Nafner, Joseph	Stroud
Parks, Rusiah	Waurika
Peoples, James	Cleveland
Pressley, Clonia	Muskogee
Pyrtle, Beauford	Langston
Pyrtle, Willa	Langston
Roberts, Clayton	Muskogee
Rolland, Martha	Chandler
Russell, Pearl	Langston
Scott, George	South McAlester
Smith, Margaret	Guthrie
Smith, William	Wewoka
Starr, Frederick	Boynton
Stephens, Gertrude	Fallis
Strickland, Oda	Langston
Strickland, Ona	Langston
Stripling, Sylvester	Berwyn

Tilmon, Anabel	Gatesville
Walker, Cora	Oklahoma City
Walker, Lina	Langston
Walker, Samuel	Muskogee
Walters, Benjamin	Ardmore
Watkins, Maire	Buck
Williams, Azie	Langston
Young, Grant	Langston

Sixth Grade.

Abram, Riva	Berwyn
Alievine, Luther	Langston
Amos, David	Langston
Amos, Biola	Langston
Beyer, Edward	Iconium
Black, Hettie	Langston
Black, Maud Esther	Langston
Bowman, Jessie	Dover
Brown, Dora	Langston
Burks, William	Gatesville
Burlison, George	El Reno
Carolina, Prince	Wewoka
Chester, Elizabeth	Fallis
Cravens, Georgia	Chickasha
Davis, Lovetta	Vinita
Dolan, Emmettee	Langston
Elliott, Edgar	Berwyn
Everly, Ulysses	Langston
Frazier, Katherine	Anadarko
Glass, Martha	Chandler
Glover, Charity	Chandler
Graham, Clarence	Arcadia
Harper, Frenchie	Boley
Henderson, Douglas	Depew
Holmes, Furlon	Langston
Hutton, Selina	Council Hill
Lyder, Eugene	Meridian
James, Ephraim	Berwyn
Jeltz, Dovie	Dover
Johnson, Lillian	Wewoka
Johnson, Ulysses	Langston
Lay, Maud	Langston
McConnell, Ella	Byers, Tex.
Macklin, Andrew	Jones
McMurray, Alfred	Cleveland
Manning, Somuel	Chandler
Phillips, Arthur	San Antonio, Tex.

Foytwood, Beulah	Langston
Red, Charity	Langston
Richardson, Florence	Langston
Shanns, Edna	Guthrie
Smith, James	Shawnee
Snowton, Oscar	Lawton
Taylor, Ella	Purcell
Templeton, Walker	Atkins, Ark.
Tilmon, Charles	Goodnight
Thomas, Leola	Okmulgee
White, Bertha	Nowata
White, Rachel	Nowata
Whitman, William	Burge
Williams, Orlista	Hugoton, Kan.
Willis, Benjamin	Beardon

Fifth Grade.

Abram, Benjamin	Milo
Abram, Garrett	Milo
Abram, Mack	Milo
Austin, Lottie A.	Tatum
Bowles, Allen G.	Britton
Bradley, Jeanette	Alto, Tex.
Brooks, Evans	Langston
Brown, Alice	Iconium
Brown, Charity	Wetumka
Burger, Sarah	Anadarko
Burney, Rebecca	Wagoner
Campbell, William	Langston
Carroll, Leola	Chandler
Carson, Bessie	Berwyn
Carter, Elijah	Langston
Carter, Henry	Tatum
Claggitt, Millie	Nowata
Claggett, Tessie Mae	Springer
Cobb, William	Ft. Worth, Tex
Copeland, Gertrude	Luther
Cowans, L. K.	Wybark
Cowans, Robert	Wybark
Curtwright, Arthur	Langston
Curtwright, Pearl	Langston
Daniels, Clarence	Oklahoma City
Davis, Delphia	Tatum
Davis, Moses	Tatum
Elliott, Lucy M.	Vian
Ellis, John	Muskogee
Estus, Maud	Wellston

Farrow, Carrie	Dover
Ferguson, Butler	Henepin
Fisher, Partella	Washington
Flint, Elnora	Boynton
Gant, Joseph	Eufaula
Gasper, Ruth	Vian
Giddings, Wayman	Langston
Goldsmith, Carrie	Norman
Goodlow, Lillian	Langston
Hames, Anabel	Guthrie
Hamlin, Laura	Guthrie
Harjo, Buzz	Okmulgee
Hawkins, Elvira	Boynton
Hill Flossie	Vinita
Hill, Sadie	Vinita
Humes, May	Vinita
Humphrey, Ollie	Chandler
James, Emma	Berwyn
Jefferson, Bertha	Boynton
Jefferson, Grant	Boynton
Johnson, Carrie	Boynton
Johnson, Geneva	El Reno
Johnson, Robert	Tatum
Jones, Bessie	Eufaula
Jones, Lee	Tatum
Jones, Ulysses	Tatum
Kidd, Gertrude	Cleburn, Tex.
King, Edward	Biggs
King, Frederick	Biggs
King, Jeanette	Biggs
Lackey, Irelia	Sulphur Springs
Lackey, Pharlena	Sulphur Springs
Lackey, Sevallia	Sulphur Springs
Lagway, Laura	Coalgate
Lawson, Arthur	Temple, Tex.
Lee, Della	Boynton
MacAlister, Dennis	Stroud
Madden, Lee	Hayden
Madden, Willomly	Hayden
Malone, Minnie	Jennings
Malone, Simpson	Jennings
Manning, Alberta	Chandler
Manning, Samuel	Chandler
Mannel, William	Gatesville
Morrison, Johnson	Taft
Morrow, Lillian	Tulsa
Myers, Joseph	Tullahassee

Neal, Cora B	Vinita
Nelson, Cleola	Temple, Tex.
Nelson, Iola	Temple, Tex.
Obedience, Ernest	Chandler
Peoples, Lairy N.	Cleveland
Portwood, Milton	Langston
Portwood, Raleig	Langston
Post, John	Huttonville
Quinn, Robert	Boley
Redman, William	Beggs
Reutie, Mayme	Muskogee
Rhodes, Thomas	Langston
Roberts, Arthur	Bristow
Roberts, Stella	Bristow
Snellgrow, Anna	Langston
Spraings, Zepher	Guthrie
Tate, Thomas	Sapulpa
Taylor, George	Purcell
Taylor, Lillian	Purcell
Tillman, Julius	Goodnight
Toms, Till	Arkansas City, Kan.
Waits, Samuel	Lawton
Walker, Bruce	Langston
Wallace, Mattie	Gatesville
White, Callie	Eufaula
Whitmire, Mary	Nowata
Wiley, Alice	Cleburn, Tex.
Williams, Alonzo	Ardmore
Williams, Charlie Mae	Sherman, Tex.
Wilson, Mary	Dover
Wolfe, Delilah	Nowata
Wolfe, Jesse	Nowata
Wolfe, Robert	Nowata
Wright, Aaron	Langston
Wright, Joseph	Langston
Young, Ella Mae	Eufaula

Special.

Walker, Harris	Africa, Miss.

DEPARTMENT OF DOMESTIC ECONOMY.

Special Students.

Billups, Bessie	Chandler
Buttram, Myrtle	Eufaula
Campbell, Linnie	Guthrie
English, Irene	Olathe, Kan.

Jackson, Lillian	Guthrie
Jones, Sarah	Berwyn
Jordan, Lucy	Iconium
Keys, Stella M.	Coffeyville, Kan
Lee, Rosa E.	Boynton
Longdon, Zelia	Langston
Portwood, Maggie	Langston
Prather, Hilma	Chicago, Ill.
Riley, Zodie	Chandler
Roberts, Hattie	Boynton
Robinson, Bertha	Langston
Sanders, Maud	Iconium
Thomas, Jennie	Okmulgee
Veasy, Cora	Edmond
Younger, Katherine	Homestead

DEPARTMENT OF MECHANIC ARTS.

Trade Students.

Cobb, Penman	Springer
Jones, Nelson	Langston
Lacy, Arthur	Kansas City, Mo.
Oden, Alva	Guthrie
Ross, Stephen	Hitchcock
Sprainge, Mokaski	Guthrie

DEPARTMENT OF INSTRUMENTAL MUSIC.

Piano Students.

Henderson, Florence	Langston
Henderson, Lillian	Langston
Kennard, Lydia	Langston
Starnes, Margaret	Langston

Total number enrolled.....405

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