AGRICULTURAL SCIENCE

(ANIMAL SCIENCE)

Program Description

The College of Agriculture and Applied Science at Alcorn State University offers a minor in Animal Science, providing a rich and detailed curriculum designed for students with a keen interest in agriculture, biological sciences, or related fields. The program integrates essential aspects of animal science, focusing on health maintenance, nutritional strategies, reproductive physiology, breeding techniques, and fundamental anatomical and physiological insights. It aims to equip students with a deep understanding of the biological and practical aspects of livestock production. The integrated approach ensures that students gain a holistic view of animal husbandry, preparing them for successful careers in the agricultural sector and enhancing their knowledge and practical skills in animal production, health, and management.

Program Learning Outcomes

1. Students will be able to develop scientific principles in animal production
2. Students will be able to demonstrate the ability to integrate knowledge of animal science disciplines

Admission Requirements

Academic Standing: Students must have completed at a minimum 24 hours in their major with a minimum GPA of 2.5 prior to starting the animal science minor

Statement of Purpose: Include a statement of purpose outlining the reasons for choosing this minor and how it fits into the student's academic and career goals.

Transcripts: Official transcripts from previous or current institutions attended must be submitted. These transcripts should reflect all coursework completed and demonstrate fulfillment of the prerequisites.

Graduation requirements:

- A grade of 'C' or higher will be required to fulfill the requirements of the minor in Plant, Soil, and Horticultural Sciences.
- Students will take a total of 15 credit hours of coursework (three required courses + three elective courses) to obtain a minor in plant, soil, and horticultural sciences. The list of courses is provided below.
- Equivalent transfer courses with a grade of 'C' or above can be substituted.

Curriculum

Required Courses (12 hours)	
AS 213 Animal Production	3
AS 323 Livestock Disease & Sanitation	3
AS 343 Anatomy & Physiology of Farm Animals	3
AS 413 Animal Nutrition	3
Electives Courses (3 Credit Hours)	
AS 463 Animal Management	3
AS 485 Physiology of Reproduction	3
AS 487 Livestock Breeding	3
Grand Total	**15 hours**

Note: Students admitted into the minor in Animal Science will be able to receive instruction online.

Course Descriptions

AS 213: (3 credit hours) Animal Production
This course is an introduction to the role of farm animals in providing food and other products for humans. A study of general principles and practices, including basic terminology common to animal science, common breeds of farm animals, basic principles of feeding, reproduction, breeding, and management of farm animals, will also be covered. Special emphasis will be placed on the development of the livestock industry and producing animals fit for the market.

AS 323: (3 credit hours) Livestock Disease and Sanitation
A study of the control and prevention of common infectious and non-infectious diseases of livestock. The common parasites, their prevention, and control. This course introduces animal husbandry practices associated with disease mitigation in livestock species. The course focuses on common respiratory, reproductive, and metabolic diseases by examining clinical symptoms of morbidity and mortality, as well as interconnections across species, including humans/zoonosis. The epidemiology impacts, including distribution and determinants, will also be covered.

AS 343: (3 credit hours) Anatomy and Physiology of Farm Animals
An experiential class of structure and function of the animal body systems and a study of their interrelationships; function of cellular components; cell division and metabolism; and economically important aspects of body form and function.

AS 413: (3 credit hours) Animal Nutrition
This course focuses on the anatomy, physiology, digestion, absorption, and metabolism of nutrients related to Farm animals, the fate of feedstuffs, and the nutritional requirements of both non-ruminants and ruminants; rumen dysfunction; and basic knowledge of diet formulation using software.

AS 463: (3 credit hours) Animal Management
This course provides the opportunity for students to study the fundamentals of livestock management techniques, including health, facilities, animal handling, nutrition, and reproduction. The course will cover the application of animal handling and management techniques for swine, poultry, beef, dairy, goat, and sheep.

AS 485- (3 credit hours) Physiology of Reproduction
The student will be introduced to the principles of reproductive physiology in domestic animals. This course will provide an overview of everything from prenatal development to puerperium and lactation. The result of the class should allow the student to be confident in the organization and function of the female and male reproductive systems and apply this new knowledge to help the reproductive management of farming.

AS 487- Livestock Breeding
An experiential class based on genetic evaluation procedures and predictions of an animal's genetic merit.

Career Paths
Employers appreciate students who can integrate several fields of study. An Animal Science Minor will provide students with the most current and up-to-date information on production methods involved in the care and management of livestock and poultry. A minor in animal science can prepare you for many jobs in animal care, agriculture, and government, such as:

Animal care
- **Animal care technician**: Monitor and care for animals in labs, shelters, and veterinary offices
- **Zookeeper**: Care for animals in zoos

Agriculture
- **Agricultural journalist**: Write about agriculture
- **Rancher or farm manager**: Manage a ranch or farm
- **Feed mill manager**: Manage a feed mill
- **Cow/calf and feedlot manager**: Manage cows, calves, and feedlots

Government
- **Animal health inspector**: Inspect animals for health concerns
- **Nature conservation officer**: Work to conserve nature

Other careers
- **Breed association representative**: Represent a breed association
- **Equine equipment sales and service**: Sell and service equipment for horses
- **Allied animal industry sales**: Sell animal feed, pharmaceuticals, and other products
- **Agricultural finance and credit**: Work in agricultural finance and credit

An animal science minor can be useful for many other majors, including biology, journalism, and chemistry.