

Course Title: *Large Animal Science*

Board Approval Date: November 17, 2020

Credit / Hours: 1 Credit / 126 Hours

Course Description:

This course focuses on animals used in agriculture. We will discuss the selection, nutrition, reproduction and management of horses, beef cattle, goats, chickens, swine and sheep. Other topics include animal anatomy and physiology, animal diseases, and animal research. We will discuss the federal regulations with regards to meat consumption. We will also experiment with different food science techniques. This class is very hands-on and will include labs and dissections. This is a great course for anyone entering the medical field. This course contributes to the Ag. General (CIP 01.000) pathway.

Learning Activities / Modes of Assessment:

Small Group
Whole Group
Independent
One-on-One
Classwork Activities
Technology

Projects
Presentations
Research
Test
Quizzes
Writing

Instructional Resources:

Lab Materials/Kits
Dissection Tools (physical and virtual)
Online Resources
Scientific Journals

Curriculum: General Agriculture
 Course: Large Animal Science

Know/Task:	Understand:	Do:
103-Identify products and uses of major animal species in the agricultural industry	Students will know: the proper terminology and how to utilize the terms in the correct setting.	Students will be able to: identify, using correct terminology, all large species and products associated with that species.
101-Compare and contrast cultural and societal uses and contributions of animals locally and globally	Students will know: the various breeds of each large animal species and their uses, past and present	Students will be able to: identify specific breeds and their use
102-Use animal handling techniques	Students will know: how to handle and deal with large animal species and be able to identify various handling equipment	Be able to handle most species of livestock, & Be able to choose the proper equipment for the species
110-Investigate environmental, food, medicinal, public safety, and biosecurity issues and related to animal health 111-Evaluate the equipment and facilities	How livestock are cared for, What are the federal requirements for consumption, & What	Be able to identify biosecurity measures, debunk common food security misconceptions, discuss USDA's role in

<p>used in modern animal agricultural production</p> <p>905-Research the impact of state and federal agencies on food supply industries</p> <hr/>	<p>biosecurity measures are in place to protect the food supply</p> <hr/>	<p>animal health, & identify health issues that impact food security</p> <hr/>
<p>107-Predict genetic types using the Punnett square method</p> <hr/>	<p>Students will know: what a Punnett Square is, how to set up a Punnett Square, and how genetics determine blood type</p> <hr/>	<p>Students will be able to: identify the types of blood, antigens, and antibodies, draw a punnett square, and determine genetic probability</p> <hr/>
<p>109-Demonstrate preventative animal medicine techniques</p> <p>114-Analyze medication labels and application</p> <hr/>	<p>Students will know: what the various types of preventative health measures, how to administer them, how to read medication labels, and how to calculate dosages</p> <hr/>	<p>Students will be able to: discuss the various types of preventative measures, administer dewormers, & administer 3 different types of vaccinations</p> <hr/>
<p>108-Explain the significance of the 6 classes of nutrients for animal growth, performance, maintenance and reproduction</p> <p>115-Identify and analyze the quality of common feedstuffs</p> <hr/>	<p>Students will know: what the 6 classes of nutrients are and how they impact the productivity and health of the animal</p> <hr/>	<p>Students will be able to: identify and explain the importance of the 6 classes of nutrients</p> <hr/>

<hr/> <p>104-Identify the external anatomy of animals</p> <p>105-Describe the functions of the animal body systems and system components</p> <hr/>	<hr/> <p>Students will know: how the various systems work in livestock, both externally and internally</p> <hr/>	<hr/> <p>Students will be able to: explain how the various systems function and identify the external anatomy of various species</p> <hr/>
<hr/> <p>901-Identify and describe foods derived from animal and plant source</p> <p>902-Research and describe current consumer food trends</p> <p>903-Explain techniques and procedures for the handling of food products</p> <p>904-Interpret and evaluate results of quality assurance tests on food products and examine steps to implement corrective procedures</p> <p>906-Examine the various paths food products take to get from farm to table</p> <hr/>	<hr/> <p>Students will know: how to properly process, handle, and prepare food for consumption based on consumer trends, check for quality assurance, know the various processes and means food takes to get from farm to table, and discuss various quality assurance agencies and their requirements</p> <hr/>	<hr/> <p>Students will be able to: process and prepare a whole swine, perform proper food handling techniques, create recipes based on consumer food trends, and analyze the various paths food products take to get from farm to table</p> <hr/>

Pacing Guide

Course: Large Animal Science

Course Unit (Topic Periods)	Length of Instruction (Class Days)
Livestock Terminology	3 Days
Animal Breeds and Uses	10 Days
Handling Techniques	5 Days
Animal Health and the Consumer	10 Days
The Science of Blood	3 Days
Preventative Medicine	10 Days
Nutrients and Digestion	10 Days
Animal Anatomy	20 Days
Food Safety	15 Days
Final Review & Assessment	4 Days
Total:	90 Days