



INTRODUCTORY ANIMAL SCIENCE

AGRI 1319

Course Syllabus

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SPRING, 2017

**Course Description:**

Scientific animal agriculture that examines the biological, industrial, and species approach to the livestock and meat industries including the physiology, nutrition, reproduction, health, meat, genetics, and production of domesticated animals.

**Textbook:**

*Scientific Farm Animal Production, 11 Edition*, Thomas Field & Robert Taylor, Pearson.

**Learning Outcomes**

Upon successful completion of this course, students will:

1. Explain the role of animal agriculture in providing benefits for mankind.
2. Identify common livestock breeds and classes.
3. Define terminology specific to animal science disciplines.
4. Demonstrate understanding of fundamental animal science principles including selection, reproduction, nutrition, and health.
5. Apply animal science principles by solving common problems.
6. Identify animal issues of interest to society, and related responsibilities.

**General Course Requirements:**

Class attendance is required. If you have more than three unexcused absences, you should consult with me about your grade. Anyone who wishes to withdraw from class must take the responsibility to formally drop with the Registrar; otherwise a failing grade will be given.

**Office Hours**

MW 7:30-8:00, 1:00-1:30, 3:30-4:30 TR 7:30-8:00, 12:00-1:30, 3:30-4:30

Appointments with me may be scheduled at other times. Call for an appointment at (903) 434-8177. My office is located in AGC 110 and my e-mail address is [chenry@ntcc.edu](mailto:chenry@ntcc.edu) .

**ADA Statement**

**It is the policy of Northeast Texas Community College to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the Northeast Texas Community College Catalog or Student Handbook.**

**Family Educational Rights And Privacy Act (FERPA):**

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

### **Grading:**

Grades will be computed as follows:

(3) Exams:	60%
Class Participation:	10%
Group Project:	15%
Writing Assignment:	15%

The grading scale below will be used to determine your final grade.

Points	grade
90-100	A
80- 89	B
70- 79	C
60- 69	D
BELOW 59%	F

### **Exams:**

We will have 3 exams, each exam will make-up 1/3 of your exam grade (60%). The exams will be: true and false, matching, listing, and short answer.

### **Class Participation:**

Class participation is based on attendance, classroom discussion, quizzes and participation.

**Group Project:** Students are required to work in a group to discuss the pros and cons of different breeds of livestock. Each group is required to make a presentation to the class for discussion. Your grade will be based on the group and individual contribution within the group on the presentation of facts and informative opinions on the assigned breeds of livestock.

**Writing Assignment:** Each student is required to write position paper on the role of animal products in the global food supply. The student will research the topic, form an opinion based on scientific research and write a 3-5 page paper with at least 3 citations supporting your opinion with scientific facts. Your grade will be based on your ability to write a factual report in a logical and systematic manner. Your handwritten rough draft is due March 27, 2017 and your typed final paper is due April 17, 2017.

## Academic Dishonesty:

Cheating is against the Northeast Texas Community College policy. Cheating includes any attempt to defraud, deceive, or mislead the professor in arriving at an honest grade assessment. Plagiarism is a form of cheating that involves presenting as one's own the ideas or work of another.

Violation of the cheating policy may result in a lowered grade of "F" in the course. A grade assigned to a student because of an alleged cheating policy violation may be appealed by the student through the appeals process of the College. See the Student Handbook for details. I recommend that you become familiar with your handbook.

## Course Objectives:

The Student should know:

- The species name and common terminology used to describe cattle, horses, sheep, goats, pigs, and chickens
- What influences phenotype
- The identifying characteristics of common beef, dairy, sheep, goat, and swine breeds
- the history of animal agriculture and livestock domestication
- basic livestock names and physiological parameters
- the difference between animal breeding and animal propagation
- the effect of the environment on phenotypic expression of a genetic trait
- the systems of mating used in animal agriculture
- the difference between mitosis and meiosis
- general knowledge of Mendel's theories
- how the Punnett square is used to predict the offspring in the mating of two heterozygotes
- anatomic features of both male and female reproductive systems in the major livestock species
- the definition of puberty and the effect the environment has on its expression
- about estrous cycles and estrus lengths for various livestock species
- common methods of diagnosing pregnancy in livestock and reasons for performing these management procedures
- the current and future use of artificial insemination, embryo transfer, embryo splitting, and genetic manipulation in livestock management
- the six basic nutrients of livestock
- importance of photosynthesis to animals and humans
- the anatomy and physiology of digestive systems found in livestock
- the basic rules of thumb in feeding livestock
- the history and future trends of the dairy industry in the U.S.
- the five commonly recognized dairy breeds in the U.S.
- special considerations in feeding and managing dairy cattle
- body condition scoring and its importance to animal reproduction, nutrition, and overall well-being
- the distinguishing characteristics of the most common breeds of goats in the U.S.
- the feeding techniques, feed, and nutritional management of goats
- the common health disorders of goats
- the importance of the beef industry to U.S. agriculture
- distinguishing characteristics of beef breeds in the U.S.
- the importance of hybrid vigor in beef cattle
- beef cattle facilities, equipment, and management of beef cattle
- common parasites and the affect on the beef industry
- methods of selecting, breeding, and judging beef cattle
- distinguishing characteristics of common U.S. sheep breeds
- the difference between ewe, ram, and dual purpose breeds of sheep
- the various nutritional and reproductive management principles involved with sheep production
- distinguishing characteristics of common breeds of U.S. swine
- methods of selecting, breeding, and judging swine

- common management procedures used in various swine production systems
- common swine diseases and their symptoms
- the distinguishing characteristics of the most common U.S. poultry breeds
- how the skeletal anatomy differs from that of other livestock
- the reproductive anatomy of the hen and functions of egg development
- special considerations if feeding poultry
- common poultry diseases and their symptoms
- management considerations in both the broiler and layer industries
- distinguishing characteristics of the most common U.S. horse breeds
- reproductive and general management procedures unique to the equine
- the benefits of artificial insemination in the equine industry and the limits in some breeds
- about horse selection, breeding, and judging
- the most common diseases of horses and their symptoms

### Course Outline:

Week 1	Introduction and history
Week 2	Animal breeding and genetics
Week 3	Animal reproduction
Week 4	Animal nutrition
Week 5	Animal diseases
Week 6	Dairy industry
Week 7	Dairy goat industry
Week 8	Meat goat industry
Week 9	Beef production
Week 10	Selecting and breeding cattle
Week 11	Sheep production
Week 12	Swine industry
Week 13	Poultry industry
Week 14	Broiler management
Week 15	Equine industry
Week 16	Equine reproduction and management