SUBJECT AREA AND COURSE NUMBER: ASCI 113

COURSE TITLE: FARM ANIMAL BIOLOGY

Units: 3.5

TOP Code: 0102.00 - Animal Science

Cross-Listed Courses:

CATALOG COURSE DESCRIPTION:
This course is an introduction to the scientific concepts of farm animal biology. The objective of the course is to familiarize students with basic biological concepts of farm animals. Laboratory exercise will include hands-on training of the anatomy and physiology of farm animals for those students seeking employment or advanced degrees in the animal sciences.

REQUISITES:

NONE

FIELD TRIP REQUIREMENTS: Not Required

LECTURE HOURS PER WEEK: 3   TOTAL LECTURE HOURS PER SEMESTER: 52.5
LAB HOURS PER WEEK: 1   TOTAL LAB HOURS PER SEMESTER: 17.5
ACTIVITY HOURS PER WEEK:   TOTAL ACTIVITY HOURS PER SEMESTER:
TOTAL HOURS PER WEEK: 4   TOTAL CONTACT HOURS PER SEMESTER: 70

GRADING: S - Standard Grading A-F

REPEATABLE: A - Not designed as repeatable

TRANSFERABLE:
*Approved* CSU BA Transferable (1-199 level)
YES

METHODS OF INSTRUCTION:
Methods of instruction may include, but are not limited to, the following:

* Laboratory
* Lecture and/or Discussion

METHODS OF EVALUATION:
A student's grade will be based on multiple measures of performance unless the course requires no grade. Multiple measures may include, but are not limited to, the following:
COURSE TOPICS:

Outline Of Topics:
The following topics are included in the framework of the course but are not intended as limits on content. The order of presentation and relative emphasis will vary with each instructor.

Identification of Domestic Livestock Species
Microscopy
Hematology
Circulatory System
Respiratory System
Skeletal System
Digestive System
Immunology
Mechanism of Disease

OUTCOMES:
Course Objectives
The main concepts for this course will ask students to...

1. Accurately evaluate the species of livestock by visual inspection.
2. Utilize a microscope for the examination of blood cells, parasites, and other specimens.
3. Differentiate the different components of blood and their functions.
4. Describe the function of the circulatory system and its relationship to body dynamics.
5. Describe the function of the respiratory system and its relationship to body dynamics.
6. Apply the theory of osteology to the development of the animal's structure.
7. Differentiate the ruminant and non-ruminant digestive systems as they apply to domestic farm animals.
8. Explain passive and acquired immunity as they relate to the livestock scenario.
9. Describe disease mechanisms and the importance of vectors in livestock.

Student Learning Outcomes
Given lecture, class discussion and livestock observations, students will be able to accurately evaluate different species of livestock for their intended uses. Quality of evaluation shall be based upon given livestock industry standards.

Skill demonstrations
Essay quizzes or exams
Written essays or extended papers
Multiple choice tests
Short answer quizzes or exams

Given classroom exercise utilizing the latest in Power Point and manufacturers' use instructions, students will be able to utilize microscopes for basic examination of blood cells, parasites, and other specimens. Students mastery of the use of microscopes shall be based upon given microscope manufacturer's standards.

Skill demonstrations
Essay quizzes or exams
Written essays or extended papers
Multiple choice tests
Short answer quizzes or exams

Given classroom lecture, textbook exercises and laboratory practice, students will be able to list and define function so different components of blood. Students' ability to differentiate the components of blood shall be based upon given standards of veterinary medicine.
Given classroom lecture, textbook exercises and laboratory practices, students will be able to trace the circulatory system of three major livestock animals and describe the function of these systems as they relate to overall animal health. Students will demonstrate mastery of the functions of the circulatory system by completion of industry-based circulatory system charts.

Given classroom discussion, textbook activities and laboratory exercises, students will be able to list functions of the respiratory systems of three major livestock animals and their systems relationship to overall animal health. An understanding of the functions of the respiratory system shall be demonstrated by successful completion of three industry-based exams.

Given classroom lecture and discussion, video presentations and laboratory exercises, students will be able to apply the theory of osteology as those concepts relate the the development of animals skeletal system. Mastery of the theory and application of understanding of osteology will be based upon students successful completion of industry based exams.

Given classroom lecture and discussion, textbook exercises and laboratory activities, students will be able to differentiate structure, functions, and nutritional requirements for the ruminant and non-ruminant domesticated farm animals. Students mastery of these topics shall be demonstrated through the successful completion of industry-based exams.

Given through classroom lecture and discussion and laboratory exercises, students will be able to differentiate and give advantages of both passive and acquired immunities as they relate to the production of livestock. Success in explaining and applying their understanding of these two types of immunity shall be demonstrated both through written exams and completion of laboratory exercises.

Given classroom lecture and discussions, laboratory exercises and industry based video lessons, students will be able to describe and illustrate disease mechanisms and the importance of vectors in the health and production of
domestic livestock. Students mastery of this subject shall be demonstrated by successful completion of industry-based tests.

- Skill demonstrations
- Essay quizzes or exams
- Written essays or extended papers
- Multiple choice tests
- Short answer quizzes or exams

Institutional Outcomes

1. Use appropriate creative and analytic methods to interpret ideas, solve problems, and present conclusions.
2. Write coherently and effectively, adjusting to a variety of audiences and purposes, while taking into account others' writings and ideas.
3. Locate, evaluate, and use information from a variety of sources to take action or make a decision.

Assignments

Lab Content:
Lab Content

In a possible laboratory exercise, the student will create a blood smear, stain it, and evaluate it microscopically. They will be asked to draw and describe the types of cellular material they see and evaluate the numbers of each type of cell present.

Texts and Supplies:

Textbooks may include, but are not limited to:

- **TEXTBOOKS:**

- **MANUALS:**
- **PERIODICALS:**
- **MATERIALS FEE:** $0
- **OTHER:**

Honors Course Outline Addendum

**ORIGINATOR:** Bob Britton

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