AGRI 2400

Division: Natural Science and Mathematics
Department: Agriculture
Course: AGRI 2400
Title: Livestock Feeds and Feeding
Catalog Description:

Students will study the differences in digestive tracts of farm animals and the related digestive physiology. The composition of feeds and their uses are analyzed and ration balancing is practiced. Least cost rations are balanced for farm animals and pets using a pencil, a calculator and computer.

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 4; Lecture: 4; Lab: 0
Clock/Hour Requirements: 0
Offered for Non-Credit: No
Justification:

Animal feeding is an important activity in world agriculture. Feed costs make up about 70% of the expense of raising meat animals. With profit margins tight, it is important that feed costs are kept in check. It is also becoming more important as people pay more attention to human and pet nutrition.
This course is also a prerequisite to upper division nutrition courses in the animal science and nutrition area. This class is equivalent to ADVS 2450 at USU and as AGSC 3400 at SUU.

Student Learning Outcomes:

As a result of taking this course, students will:

- be familiar with livestock feeding principles
- have an understanding of the importance of analyzing feed ingredients
- be aware of the composition of important feedstuff
- be aware of the nutritional problems arising in feeding livestock
- have an understanding of how to find animal nutritional requirements
- have an understanding of how to balance rations for different types of animals
- have an understanding of the economics of feeding livestock.

Content:

- the digestive tracts of ruminants, non-ruminants and poultry
- the general function of feed nutrients
- the feed nutrients (carbohydrates, fats, proteins, vitamins, minerals)
- nutrient digestion, absorption, and transport
- the proximate analysis of feedstuffs
- feeds and the various feed groups
- balancing rations for various species

- processing feeds
- harvesting and storage of feeds

Field trips are taken to local agricultural operations

General Education Outcomes:

6) Apply computational skills to a variety of contexts.

Students will use their math skills to calculate feed requirements, select feeds and figure costs. They will also calculate real-life scenarios of estimating how much feed to purchase and store for different livestock feeding operations.

Key Performance Indicators:

Overall assessment will be made on the following criteria.
60% of the grade will be based of 4 tests, including the final
30% of the grade will be based on ration balancing exercises
10% of the grade will be based on short unannounced quizzes

Representative Text and/or Supplies:

Animal Feeding and Nutrition by Marshall H. Jurgens, current edition. Kendall Hunt Publishing.

Optimum Class Size: 24
Maximum Class Size: 30

Signatures:

I hereby submit this course syllabus:

Jack Anderson, , Professor

I hereby find this course consistent with the goals and resources of the Agriculture Department:

, , , Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)