**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

1. **GENERAL COURSE INFORMATION**

Course Number: AGRI 1110

Course Title: Fundamentals of Animal Nutrition

Credit Hours: 3

Prerequisites: AGRI 1106 Principles of Animal Science

Division/Discipline: Workforce Training & Community Education/Agriculture Business Management, Beef Cattle Production

Course Description: This course builds on the foundation provided in AGRI 1106, Principles of Animal Science. Fundamentals of Animal Nutrition is designed to create a basic understanding of animal nutrition, including nutrient digestion and metabolism, feedstuff characteristics, and principles for formulating nutritionally balanced diets.

1. **INSTRUCTOR INFORMATION**
2. **COLLEGE POLICIES**

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage).

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

1. **COURSE AS VIEWED IN THE TOTAL CURRICULUM**

The course is designed to create a basic competency in the area of animal nutrition; including nutrient digestion and metabolism, feedstuff characteristics, and principles for formulating nutritionally balanced diets. Student understanding and literacy will increase in the area of animal nutrition and exposure of the student to animal nutrition builds on the basic knowledge provided in Principles of Animal Science for more specialized and advanced agriculture courses. This course assists students in developing critical thinking in order to effectively evaluate oral and written statements regarding animal nutrition.

1. **ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

1. Describe nutrient digestion and metabolism:
2. Explain the characteristics and function of six basic nutrients.
3. Describe the nutrient need of animals.
4. Identify the parts and functions of animal digestive systems.
5. Use comparative anatomy to contrast digestive system differences.
6. Explain feedstuff digestion and nutrient absorption.
7. Understand feedstuff characteristics:
8. List and describe analytical methods of nutrient composition.
9. Explain the difference between a feeding trial and a digestion/metabolism trial
10. Evaluate the physical characteristics of a feedstuff.
11. Categorize feedstuffs into proper groups, including concentrates, roughages, nutrient additives and non-nutrient additives.
12. List factors that affect dry matter intake.
13. List and explain methods of feedstuff preparation and mixing.
14. Perform basic formulation of nutritionally balanced rations:
15. Demonstrate the proper use of feedstuff composition tables.
16. Design ration formulations using Net Energy Requirement tables.
17. Construct basic ration formulations balancing important nutrients.
18. List and describe different types of feed additives used in livestock production.
19. Create proper swine, beef, dairy, sheep, and horse rations.
20. Explain feeding guides and management systems for animals:
21. Diagram and discuss life-cycle feeding programs for beef, swine, sheep, dairy, and poultry.
22. Identify specific nutrient needs within each life cycle.
23. Illustrate feeding systems as they apply to different species.
24. Describe nutritive and non-nutritive feed additives in livestock feed.
25. **INSTRUCTOR’S EXPECTATIONS OF STUDENTS IN CLASS**
26. **TEXTBOOKS AND OTHER REQUIRED MATERIALS**
27. **REFERENCES**
28. **METHODS OF INSTRUCTION AND EVALUATION**
29. **ATTENDANCE REQUIREMENTS**
30. **COURSE OUTLINE**