

Principles of Feeds & Feeding

AGAH 2413

Course Syllabus

Chad Henry-Instructor
e-mail: chenry@ntcc.edu

Spring, 2018

Course Description:

Study of the role and application of feed nutrients and additives. Topics include comparative aspects of digestion, absorption, and metabolism of nutrients, emphasis on identification of nutrient requirements and formulation of dietary feeding regimens.

Textbook:

Feeds and Feeding, 6th Edition, Tilden Perry, Arthur Cullision, and Robert Lowrey. Prentice Hall.

Course Goals:

The student will outline the roles and functions of feed nutrients and non-nutritive feed additives; describe and compare digestion, absorption, and metabolism; compute dietary feeding regimens; and identify nutritional problems as related to digestive systems.

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.

Grading:

Grades will be computed as follows:

(3) Exams:	60%
Class Participation:	10%
Quizzes/Assignments:	10%
Lab:	20%

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:
There will be 3 exams that count for 60% of your overall grade.

Class Participation:
Class participation is based on attendance, classroom discussion, and participation.

Lab:
Online assignments will be given in blackboard and each student will be required to conduct a feeding experiment and present your results to the class. The feeding experiment must include the following: complete ingredient list, weighed amount of feed used daily, cost analyst, performance measurements, and results.

Class Hours		**Office Hours**	
Lecture	TR 11:00-12:20	MW	7:30-8:00, 1:00-1:30
Lab	Hybrid (Feeding Experiment & Online Assignments)	T	7:30-8:00, 1:00-4:00
		R	7:30-8:00, 9:30-11:00, 1:00-3:30

Appointments can be scheduled at other times. Call for an appointment at (903) 434-8177. My office is located in IT 112 and my e-mail address is 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.

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 be able to:

- Compare nutrient requirements
- Evaluate production requirements
- Evaluate reproduction requirements
- Evaluate growth requirements
- Evaluate maintenance requirements
- Evaluate effects of environmental factors on nutritional requirements
- Explain effects of genetic factors on nutritional requirements
- Determine nutritive value of feedstuffs
- Classify feeds according to major nutrient groups
- Identify factors influencing feedstuff quality
- Collect grain and forage samples for nutrient analysis
- Interpret nutrient analysis methods and results
- Interpret feed tag and label regulations
- Interpret feed composition tables
- Determine nutrients provided by forage
- Balance rations
- Use Pearson square method
- Perform math calculations
- Determine costs
- Select feeds and additives
- Substitute feedstuffs and evaluate their effects
- Feed animals
- Follow general safety precautions
- Follow feeding guidelines
- Identify feeds
- Prepare feedstuffs
- Control feed waste
- Remove spoiled feedstuffs
- Identify factors that cause loss of appetite
- Evaluate and report ration palatability
- Feed colostrum to newborn animals
- Wean calves/lambs
- Feed milk replacer to calves/lambs
- Start calves/lambs on grain and roughage feeding
- Clean and maintain equipment
- Observe animal for loss of appetite
- Identify reactions to flavors, enzymes, molds, and microtoxins
- Prepare mineral mixes
- Follow feed additive mixing regulations

Course Outline:

Week 1	Feed nutrients and functions
Week 2	The digestive tract and nutrient digestion
Week 3	Total digestible nutrients
Week 4	Energy utilization
Week 5	Protein nutrition
Week 6	Vitamin and mineral nutrition
Week 7	Feeds and feed groups
Week 8	Roughages
Week 9	Hay and Hay making
Week 10	Silage and feed storage
Week 11	Pasture management
Week 12	Balancing rations general
Week 13	Balancing rations beef, dairy, horses, sheep, and swine
Week 14	Least cost rations
Week 15	Estimating feed requirements
Week 16	Livestock and poultry feeding