



BIOL 3303-600 Animal Nutrition

Biology Program, Department of Natural Sciences

Instructor information

Instructor: J. Rodolfo Valdez Barillas (Call me Dr. Valdez)

Office: Science & Technology Building 311L

E-mail: jvaldezb@tamusa.edu

Office hours: Scheduled by e-mail appointment, to be conducted via WebEx or in person

Class meeting format: Asynchronous online

Course Description

Animal Nutrition examines how wild, domestic, and exotic animals derive energy and nutrients from food given variation in anatomy, physiology, and biochemistry of their digestive systems. Emphasis will be placed on the sources, metabolism, and nutrition of macromolecules, supplementation, regulation of food intake, and metabolic disease. This course is designed for Biology majors and specifically intended for students interested in applying to Veterinary School.

Course Objectives

1. Acquire and apply a basic vocabulary of terms and concepts to analyze topics in animal nutrition
2. Associate the effects of best practices in animal nutrition on animal-derived products and explain how these impact human health.
3. Explain the mechanisms by which different animals ingest, digest, and incorporate the absorbed product into their metabolisms and body tissues.
4. Differentiate gastrointestinal systems, feed analysis methods, and metabolic requirements among animal groups.
5. Associate the potential consequences of poor animal nutrition with signs of toxicity and the related illnesses.
6. Collaborate with peers in the analysis of current research and topics related to animal nutrition.



Recommended resources

Basic animal nutrition and feeding, 5th Ed. by Pond, Church, Pond, and Schoknecht

ISBN: 0-471-21539-2

WIE ISBN: 0-471-65893-6

Course policies

Attendance: You are required to participate and regularly engage with your course through Blackboard.

- For asynchronous lectures, attendance means having visited Blackboard and viewed the lecture material within at least 48 hours from when it was posted by the instructor.

Participation: You are expected to have reviewed the course material for the week and material from previous lectures, particularly to complete quizzes. For group assignments, you are responsible for reaching out and working with your classmates.

Communication: All communication and inquiries to the instructor should be e-mailed to jvaldezb@tamusa.edu. This e-mail is intended for communication only. No late assignments will be accepted via e-mail unless the instructor has granted accommodation. All assignments are submitted via Blackboard.

Course Changes: This course syllabus and lecture schedule are subject to change at any time; however, students will be notified via e-mail should it change.

Netiquette: Avoid using inappropriate language with other students and the instructor for all types of written communication.

Make-up Exams: Make-up Exams are granted at the instructor's discretion and cannot be expected unless you have previously noticed your absence in written form or no later than 24 hours from your absence.

Late assignments: For each day past the due date, 10% will be deducted from the total possible points.

Course delivery methods:

PowerPoint, handouts in PDF format or Microsoft Word, and recorded lectures. All delivered via Blackboard. Course content and topics may also align with an assignment design to encourage the student to research scientific journals or industry standard sources.



Course Evaluation

Exams: The Exam format will include multiple-choice, matching, and true/false questions,

- Exams are closed book, and most questions will come from or will be like the quiz questions
- The Exam may include figures, tables, diagrams, or the articles that were provided in lecture
- Each exam will include the material covered during the lecture before the day of the exam
- Exams will become available between **6 am and 11:59 pm on the Friday of Exam week**. Once the Exam starts, you will have 60 minutes to complete the Exam. Questions will be presented one at a time, and no backtracking is possible.
- **Fourth Exam is on the week of finals and is not cumulative**

Quizzes: Quizzes will be available weekly

- Regular quizzes will be available via Blackboard. You will have 5 days to complete the quiz and submit it before the Due date and time.
- Your quiz can be taken three times, and the highest score will be added to your gradebook.
- Questions will be presented one at a time, and no backtracking will be possible; the number of questions may range from 5-10 questions.
- Length of quiz may range from 5 to 10 minutes.

Assignments: This may include a scientific article summary and critiques or other activities. Individual or group assignments will be included.

- Please read instructions provided on how to write an article summary and critique.
- Depending on the assignment, submission may be the same week or one week after the posting date.

GRADING (Number of quizzes and assignments may be adjusted based on student course load)

Instruction	Assessment	Cumulative pts
Lecture	Exams (4) 100pts/each	400
	Quizzes (15) 10pts/each	150
	Assignments (3) 10pts each	30
	Total	580

A = 90 – 100 points

B = 80 – 89.9 points

C = 70 – 79.9 points

D = 60 – 69.9 points

F = <59.9 points



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**BIOL 3303-600 Animal Nutrition Fall
2026 course topics Schedule**

Week	Lecture Topic	Quizzes
1	Concepts of Nutrition Role of animal nutrition in Society	
2	Common Methods of Analysis Gastrointestinal Tract and Nutrition	Quiz 1
3	Measurement of Feed and Nutrient Utilization Water	Quiz 2
4	Carbohydrates Lipids Exam 1	Quiz 3
5	Proteins and Amino Acids Energy Metabolism	Quiz 4
6	Macro nutrients Micronutrients	Quiz 5
7	Mineral and organic toxicities, regulation of Nutrient Partitioning	Quiz 6
8	Fat-Soluble Vitamins, Water-Soluble Vitamins Exam 2	Quiz 7
9	Factors Affecting Feeding Consumption, Feeding Standards and Productivity	Quiz 8
10	Feedstuffs Feed Preparation and Processing	Quiz 9
11	Diet Formulation Beef Cattle	Quiz 10
12	Dairy Cattle, Sheep and Goats Exam 3	Quiz 11
13	Swine Poultry	Quiz 12
14	Horses Dogs and cats Happy Thanksgiving	Quiz 13
15	Fish Zoo animals	Quiz 14
16	Exam 4 12/07 - 12/11	