
ANS 3440
PRINCIPLES OF ANIMAL NUTRITION
Monday to Thursday, Period 2: 8:30 – 9:20 AM
Rm. G186 McCarty Hall A

Dr. Luiz Ferraretto
Assistant Professor
lferraretto@ufl.edu

Teaching Assistants: Michael Poindexter, Ibukun Ogunade and Junyi Tao

CATALOG DESCRIPTION:

Credits: 4; Prerequisites: CHM 2045 and CHM 2045L

The nutrients required by animals, their functions, interrelationships and the processes of their utilization; feedstuff composition and their use in diet and ration formulation.

GENERAL SCOPE:

This course is taught as an introduction to animal nutrition with emphasis placed on both non-ruminant and ruminant species.

LEARNING OBJECTIVES:

Upon completing this course, undergraduate students should be able to:

1. Discuss historical perspective and define the major terminologies used in animal nutrition.
2. Compare and contrast the functional anatomy of the gastrointestinal systems of ruminant and non-ruminant species.
3. Understand various enzymatic and metabolic processes involved in nutrient digestion and metabolism.
4. Discuss various methods used to determine the chemical composition and biological value of feed ingredients.
5. Understand how animal diets are formulated to meet requirements for maintenance and production.
6. Discuss processing and storage of animal feeds.

GRADES AND GRADE POINTS

Grading scale will be as follows:

**A = 93-100 A⁻ = 90-92.9 B⁺ = 87-89.9 B = 84-86.9 B⁻ = 81-83.9 C⁺ = 78-80.9
C = 75-77.9 C⁻ = 72-74.9 D⁺ = 69-71.9 D = 65-68.9 **E < 65****

The final grade will be computed as follows:

	<u>Points</u>
Exam # 1	100
Exam # 2	100
Final Exam	150
Quizzes; 4 @ 25 pts. each	100
Exercise class assignments: 4 @ 25 pts. each	100

Extra Credit – 10 unannounced quizzes @ 3 points each.

For information on current UF policies for assigning grade points, see
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

NOTE: ALL EXAMS AND QUIZZES ARE TO BE TAKEN AT THEIR SCHEDULED TIMES. GRADE ASSIGNMENTS FOR EXCUSED ABSENCES WILL BE DISCUSSED WITH THE INSTRUCTOR.

COURSE TEXTBOOK: NONE REQUIRED.

Reference Text you may wish to consult:

“Feeds and Feeding”, 5th Edition, TW Perry, AE Cullison & RS Lowrey. Prentice-Hall, Inc. Upper Saddle River, New Jersey 07458

ABSENCES AND MAKE-UP WORK

Class attendance is not mandatory but strongly encouraged. Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

ONLINE COURSE EVALUATION PROCESS

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at the end of the semester at <https://evaluations.ufl.edu/results>.

ACADEMIC HONESTY

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

SOFTWARE USE:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

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TENTATIVE LECTURE SCHEDULE

CLASS PERIOD

TOPIC

WEEK 1 (Aug 22 – 25)

1. Introduction / Expectations / Introduce the Nutrients
2. History of Nutrition and Terminology
3. Ruminant Gastro-Intestinal Tract
4. Ruminant Gastro-Intestinal Tract / Non-Ruminants

WEEK 2 (Aug 29 – Sep 1)

1. Non-Ruminants Gastro-Intestinal Tract
2. Organs, Enzymes and Hormones Affecting Digestion
3. Energy
4. Nutrition math class and Quiz-1

WEEK 3 (Sep 5 – 8)

1. **NO CLASS Labor Day**
2. Quiz 1 Review / Energy
3. Carbohydrates

4 Carbohydrates

WEEK 4 (Sep 12 – 15)

1. Carbohydrates
2. Carbohydrates
3. Lipids
4. Nutrition math class and Quiz-2

WEEK 5 (Sep 19 – 22)

1. Quiz 2 Review / Lipids
2. Lipids
3. Lipids
4. Lipids

WEEK 6 (Oct 3 – 6)

1. Protein
2. Protein
3. Protein
4. **Exam 1**

WEEK 7 (Oct 10 – 13)

1. Exam 1 Review / Protein
2. Protein / Vitamins
3. Vitamins
4. Vitamins

WEEK 8 (Oct 17 – 20)

1. Vitamins
2. Vitamins
3. Minerals
4. Nutrition math class and Quiz-3

WEEK 9 (Oct 21 – 24)

1. Quiz-3 Review / Minerals
2. Minerals
3. Minerals
4. Minerals

WEEK 10 (Oct 31 – Nov 3)

1. Minerals
2. Feed additives
3. Feed additives
4. Nutrition math class

WEEK 11 (Nov 7 – 10)

1. Feed additives
2. Forage types and quality
3. Forage types and quality
4. **Exam 2**

WEEK 12 (Nov 14 – 17)

1. Exam 2 Review / Silage basics
2. Silage basics
3. GMOs
4. **Exam 2**

WEEK 13 (Nov 21 – 24)

1. Exam 2 Review / GMOs
2. Feedstuffs and diet formulation
3. **NO CLASS Thanksgiving**
4. **NO CLASS Thanksgiving**

WEEK 14 (Nov 28 – Dec 1)

1. Feedstuffs and diet formulation
2. Feedstuffs and diet formulation
3. Feedstuffs and diet formulation
4. Nutrition math class and Quiz-4

WEEK 15 (Dec 5 – 7)

1. Quiz 4 review and course evaluation
2. Open lecture for questions
3. Open lecture for questions

FINAL EXAM: Dec 16th 10 am - noon