

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

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**Instructor:**

Dr. Luiz Ferraretto – Assistant Professor of Livestock Nutrition  
Office: Room 202B Animal Sciences Building  
lferraretto@ufl.edu

**Teaching Assistants, email and office hours:**

Cole Diepersloot – [cdiepersloot@ufl.edu](mailto:cdiepersloot@ufl.edu) – TBA  
Elizabeth Palmer – [e.palmer@ufl.edu](mailto:e.palmer@ufl.edu) – TBA  
Macey Soltis – [maceysoltis@ufl.edu](mailto:maceysoltis@ufl.edu) – TBA

**Instructor's office hours:** scheduled by email

**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:

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

6. Recall processing and storage of animal feeds.

**Grades and grade points**

Grading scale will be as follows:

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

The final grade will be computed as follows:

	<u>Points</u>
Exams; 3 @ 100 pts. each	300
Quizzes; 4 @ 25 pts. each	100
Exercise class assignments: 2 @ 25 pts. each	50

**Extra Credit – 10 unannounced quizzes @ 2.5 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.

**Exam/quizzes format**

Exams and quizzes will be a mixture of short-answer, true/false, matching and multiple choice questions.

Three in-class exams (100 pts each) will be performed. A cumulative final exam (100 pts) will be **optional** for students willing to replace their lowest in-class exam grade. However, if you decide to take it, it will count by automatically eliminating your lowest in-class exam.

Five in-class quizzes (25 pts each) will be performed. The lowest grade quiz will be eliminated.

Three math exercise assignments will be performed. The lowest grade will be eliminated.

**Course textbook**

None required.

All information will be given through lecture, class material will be provided on Canvas during the semester. If you wish to have extra material, these are references you may wish to consult:

**“Feeds and Feeding”**, 6th Edition, TW Perry, AE Cullison & RS Lowrey. Prentice-Hall, Inc. Upper Saddle River, New Jersey 07458

**“Animal Feeding and Nutrition”**, 11th Edition, MH Jurgens, K Brengendahl, J Coverdale

& AL Hansen. Kendall Hunt Publishing Company.

### **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.

### **Services for students with disabilities**

The Disability Resource Center coordinates the needed accommodations of students with

disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)

### **Campus helping resources**

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,*  
[www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/)  
Counseling Services  
Groups and Workshops  
Outreach and Consultation  
Self-Help Library  
Wellness Coaching
- U Matter We Care, [www.umatter.ufl.edu/](http://www.umatter.ufl.edu/)

*Career Resource Center, First Floor JWRU, 392-1601, [www.crc.ufl.edu/](http://www.crc.ufl.edu/)*

### **Student complaints**

Residential course – [https://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf)

Online course – <http://www.distance.ufl.edu/student-complaint-process>

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**TENTATIVE LECTURE SCHEDULE**

<b><u>CLASS PERIOD</u></b>	<b><u>TOPIC</u></b>
<b>WEEK 1 (Aug 20 – 22, 2019)</b>	<ol style="list-style-type: none"> <li>1. Introduction / Expectations</li> <li>2. Introduce the Nutrients</li> <li>3. History of Nutrition and Terminology</li> </ol>
<b>WEEK 2 (Aug 26 – 29, 2019)</b>	<ol style="list-style-type: none"> <li>1. History of Nutrition and Terminology</li> <li>2. Ruminant Gastro-Intestinal Tract</li> <li>3. Ruminant Gastro-Intestinal Tract</li> <li>4. Non-Ruminant Gastro-Intestinal Tract</li> </ol>
<b>WEEK 3 (Sep 2 – 5, 2019)</b>	<ol style="list-style-type: none"> <li>1. <b><u>NO CLASS Labor Day</u></b></li> <li>2. Non-Ruminants Gastro-Intestinal Tract</li> <li>3. Nutrition math class</li> <li>4. <b>Quiz 1</b> and Nutrition math class</li> </ol>
<b>WEEK 4 (Sep 9 – 12, 2019)</b>	<ol style="list-style-type: none"> <li>1. Quiz 1 Review / Nutrition math class</li> <li>2. Organs, Enzymes and Hormones</li> <li>3. Organs, Enzymes and Hormones</li> <li>4. Energy</li> </ol>
<b>WEEK 5 (Sep 16 – 19, 2019)</b>	<ol style="list-style-type: none"> <li>1. Energy</li> <li>2. Carbohydrates</li> <li>3. Carbohydrates</li> <li>4. <b>Quiz 2</b> and Carbohydrates</li> </ol>
<b>WEEK 6 (Sep 23 – 26, 2019)</b>	<ol style="list-style-type: none"> <li>1. Quiz 2 Review / Carbohydrates (<b>Assignment 1 Deadline</b>)</li> <li>2. Lipids</li> <li>3. Open lecture for questions</li> <li>4. <b>Exam 1</b></li> </ol>
<b>WEEK 7 (Sep 30 – Oct 4, 2019)</b>	<ol style="list-style-type: none"> <li>1. Exam 1 Review</li> <li>2. Lipids</li> <li>3. Lipids</li> <li>4. <b><u>NO CLASS Homecoming</u></b></li> </ol>
<b>WEEK 8 (Oct 7 – 10, 2019)</b>	<ol style="list-style-type: none"> <li>1. Lipids</li> <li>2. Protein</li> <li>3. Protein</li> <li>4. <b>Quiz 3</b> and Protein</li> </ol>
<b>WEEK 9 (Oct 14 – 17, 2019)</b>	<ol style="list-style-type: none"> <li>1. Protein</li> <li>2. Protein</li> <li>3. Vitamins</li> <li>4. Vitamins</li> </ol>

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**WEEK 10 (Oct 21 – 24, 2019)**

1. Vitamins
  2. Vitamins
  3. Open lecture for questions
  4. **Exam 2**
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**WEEK 11 (Oct 28 – 31, 2019)**

1. Exam 2 Review / Minerals
  2. Minerals
  3. Minerals
  4. Minerals
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**WEEK 12 (Nov 4 – 7, 2019)**

1. Nutrition math
  2. Feed additives
  3. Feed additives
  4. **Quiz 4** and Forage types, quality and conservation
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**WEEK 13 (Nov 11 – 14, 2019)**

1. **NO CLASS Veterans Day**
  2. Quiz 4 Review / Forage types, quality and conservation
  3. Forage types, quality and conservation / GMO
  4. GMO
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**WEEK 14 (Nov 18 – 21, 2019)**

1. Feedstuffs and diet formulation
  2. Feedstuffs and diet formulation
  3. Open lecture for questions
  4. Exam 3
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**WEEK 15 (Nov 25 – 28, 2019)**

1. Nutrition math
  2. Nutrition math
  5. **NO CLASS Thanksgiving**
  3. **NO CLASS Thanksgiving**
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**WEEK 16 (Dec 2 – 4, 2019)**

1. Exam 3 Review / Course evaluation
2. Quiz 5
3. Open lecture for questions (**Assignment 3 due**)

**FINAL EXAM: Dec 12<sup>th</sup> - 12:30 – 2:30 pm**