

Butyrate Glucose
Vitamins Rumen **Proteins** Acetate Small intestine
 Propionate Large intestine Amino acids **Carbohydrates**
Principles of Animal Nutrition
Minerals Stomach Muscle Abomasum **Water**
 Fermentation Liver Fatty acids Adipose tissue
Lipids Mammary gland

ANS 3440- Principles of Animal Nutrition

Welcome to Principles of Animal Sciences! I am excited to be working with you this semester! Feel free to contact me if you have any questions regarding the syllabus. I am looking forward to a fun and productive semester! Fernanda

“Every adversity, every failure, and every heartache carries with it the seed of an equivalent or greater benefit.” – Napoleon Hill

Instructor

Fernanda Batistel

Assistant Professor of Ruminant Nutrition

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Phone: 352-294-1005

Office hours: You are welcome to send me an e-mail to set up an appointment.

E-mail policy: Please use your GatorMail account to communicate with me and add to the email subject ANS3440. I generally respond to emails within 2 working days (Monday – Friday, 8:30 am – 5:00 pm).

Teaching Assistants

Daniel de Oliveira: danieldeoliveira@ufl.edu

- Office hours: Wednesday 8:30-9:30 am
- Zoom link: Canvas >> Course navigation menu >> Zoom Conferences >> TA - Daniel de Oliveira

Derick Rosler: derickrosler@ufl.edu

- Office hours: Friday 8:30-9:30 am
- Zoom link: Canvas >> Course navigation menu >> Zoom Conferences >> TA - Derick Rosler

Taylor Jackson: taylor.jackson1@ufl.edu

- Office hours: Monday 4:10-5:00 pm
- Zoom link: Canvas >> Course navigation menu >> Zoom Conferences >> TA - Taylor Jackson

Note: TAs are available via Zoom and in-person as well. If you would like to meet in person, contact the TAs directly via e-mail. Please use your GatorMail account to communicate with them and add to the e-mail subject ANS3440.

Course Description

This course is an introduction to animal nutrition with emphasis on both non-ruminant and ruminant species. The course covers the nutrients required by animals, their functions, interrelationships and the processes of their utilization as well as feedstuff composition and their use in the diet and diet formulation.

Course credits: this is a 4 credits course, which means that we will be meeting 4 hours per week in class, and you are recommended to study 5-8 hours per week outside the classroom.

Course prerequisites: CHM 2045 and CHM 2045L, or equivalent.

Meeting Days and Time, and Location

Days: Mondays, Tuesdays, Wednesdays, and Thursdays.

Time: 8:30 - 09:20 am.

Location: Florida Gym (1864 Stadium Rd)

Use of Canvas

Canvas is the Learning Management System that we will use for our course. You can login to Canvas here <https://elearning.ufl.edu/>. Login with your GatorLink Username and password. You can find a Quickstart guide for students here <https://elearning.ufl.edu/keep-learning/quickstart-guide-for-students/>. For any technical problems with your computer related to accessing Canvas, please contact the Computing Help Desk at 352-392-4357. During the course, all class materials and grades will be posted on Canvas. Please set up the "Notification Preferences" on Canvas to be alerted when new material and additional information are posted on the web. Follow these instructions to change Canvas Notification Preferences <https://guides.instructure.com/m/4152/l/719738>.

Course Objectives

1. Have a basic vocabulary of terms important in the area of animal nutrition.
2. Understand the anatomy, physiology, and microbiology of the gastrointestinal tract of ruminant and non-ruminant species.
3. Understand the six major nutrient classes and how they are digested and metabolized.
4. Understand various methods used to determine the chemical composition and biological value of feed ingredients.
5. Understand how animals regulate feed intake.
6. Understand how animal diets are formulated to meet requirements for maintenance and production.

Course Resources

No textbook is required, but we will be using some chapters of the books listed below.

- Pond, Church, and Pond. Basic Animal Nutrition and Feeding. 1995.
- Tisch. Animal feeds, feeding and nutrition, and ration evaluation. 2006.

- Wu. Principles of Animal Nutrition. 2018.
- Also, key research papers will be posted on Canvas.

Evaluation Methods and Criteria

The total number of points for this course is 1000. There will be 8 quizzes and 8 summaries. The grade of the 6 highest quizzes worth a total of 600 points (100 points each) and will be used to calculate your final grade (in this way you can eliminate the 2 lowest quiz scores). The summaries worth 400 points (50 points each).

Final grade: sum of the 6 highest quizzes + sum of 8 summaries

Comprehensive Final Exam (200 points) is optional. It can be used to improve your grade by replacing the third and fourth lowest quizzes' scores. However, if you decide to take it, it will count and automatically will eliminate you're the two lowest quizzes' scores.

There will be no make-up quizzes. This is why you are allowed to drop two quizzes. If you miss two quizzes, you can take the comprehensive final exam.

Grade Scheme

The following grading standards will be used in this class:

Grade	Range	Points
A	90.0 – 100%	900 - 1000
B+	85.0 - 89.9%	850 - 899
B	80.0 - 84.9%	800 - 849
C+	75.0 - 79.9%	750 - 799
C	70 - 74.9%	700 - 749
D+	65 - 69.9%	650 - 699
D	60 - 64.9%	600 - 649
E	<59.9%	<599

Tentative Course Schedule/Outline

Date	Weekday	Topic	Deadlines
23-Aug	Mon	Syllabus	
24-Aug	Tue	Concepts of animal nutrition	
25-Aug	Wed	Concepts of animal nutrition	
26-Aug	Thu	Anatomy, microbiology and physiology of the GIT	
30-Aug	Mon	Anatomy, microbiology and physiology of the GIT	
31-Aug	Tue	Anatomy, microbiology and physiology of the GIT	
1-Sep	Wed	Anatomy, microbiology and physiology of the GIT	Summary 1- Concepts of Animal Nutrition & Anatomy, microbiology and physiology of the GIT
2-Sep	Thu	Mini-Review and Quiz 1	Quiz 1
6-Sep	Mon	No class - Labor Day	
7-Sep	Tue	Carbohydrates: nutrition and metabolism	

8-Sep	Wed	Carbohydrates: nutrition and metabolism	
9-Sep	Thu	Carbohydrates: nutrition and metabolism	
13-Sep	Mon	Carbohydrates: nutrition and metabolism	
14-Sep	Tue	Carbohydrates: nutrition and metabolism	
15-Sep	Wed	Carbohydrates: nutrition and metabolism	Summary 2- Carbohydrates: nutrition and metabolism
16-Sep	Thu	Mini-Review and Quiz 2	Quiz 2
20-Sep	Mon	Lipids: nutrition and metabolism	
21-Sep	Tue	Lipids: nutrition and metabolism	
22-Sep	Wed	Lipids: nutrition and metabolism	
23-Sep	Thu	Lipids: nutrition and metabolism	
27-Sep	Mon	Lipids: nutrition and metabolism	
28-Sep	Tue	Lipids: nutrition and metabolism	Summary 3- Lipids: nutrition and metabolism
29-Sep	Wed	Mini-Review and Quiz 3	Quiz 3
30-Sep	Thu	Proteins: nutrition and metabolism	
4-Oct	Mon	Proteins: nutrition and metabolism	
5-Oct	Tue	Proteins: nutrition and metabolism	
6-Oct	Wed	Proteins: nutrition and metabolism	
7-Oct	Thu	Proteins: nutrition and metabolism	
11-Oct	Mon	Proteins: nutrition and metabolism	Summary 4- Proteins: nutrition and metabolism
12-Oct	Tue	Mini-Review and Quiz 4	Quiz 4
13-Oct	Wed	Minerals: nutrition and metabolism	
14-Oct	Thu	Minerals: nutrition and metabolism	
18-Oct	Mon	Minerals: nutrition and metabolism	
19-Oct	Tue	Minerals: nutrition and metabolism	
20-Oct	Wed	Minerals: nutrition and metabolism	Summary 5- Minerals: nutrition and metabolism
21-Oct	Thu	Mini-Review and Quiz 5	Quiz 5
25-Oct	Mon	Vitamins: nutrition and metabolism	
26-Oct	Tue	Vitamins: nutrition and metabolism	
27-Oct	Wed	Vitamins: nutrition and metabolism	
28-Oct	Thu	Vitamins: nutrition and metabolism	
1-Nov	Mon	Vitamins: nutrition and metabolism	
2-Nov	Tue	Water	Summary 6- Vitamins: nutrition and metabolism & Water
3-Nov	Wed	Mini-Review and Quiz 6	Quiz 6
4-Nov	Thu	Feed additives	
8-Nov	Mon	Feed additives	
9-Nov	Tue	Feed analyses	
10-Nov	Wed	Feed analyses	
11-Nov	Thu	No class - Veterans Day	
15-Nov	Mon	Feed analyses	
16-Nov	Tue	Regulation of feed intake	
17-Nov	Wed	Regulation of feed intake	
18-Nov	Thu	Regulation of feed intake	Summary 7- Feed additives & Feed analyses & Regulation of feed intake
22-Nov	Mon	Mini-Review and Quiz 7	Quiz 7

23-Nov	Tue	Digestibility measurements	
24-Nov	Wed	No class - Thanksgiving	
25-Nov	Thu	No class - Thanksgiving	
29-Nov	Mon	Digestibility measurements	
30-Nov	Tue	Digestibility measurements	
1-Dec	Wed	Nutritional requirements	
2-Dec	Thu	Nutritional requirements	
6-Dec	Mon	Nutritional requirements	Summary 8- Digestibility measurements & Nutritional requirements for maintenance and production
7-Dec	Tue	Mini-Review and Quiz 8	Quiz 8
8-Dec	Wed	Review Final	
17-Dec	Fri	Final Exam	Final exam

*I reserve the right to alter this schedule at any time during the course of the semester.

Attendance Policy and Make-Up Policy

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

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

Online course evaluation process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at gatorevals.aa.ufl.edu/public-results/.

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

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. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Other Course Policies

Student Feedback: ALL types of feedback are welcome. You can send me an email or drop a note into the "ANS3440 Suggestion envelope" that I will keep in my office door (Bldg. 459, Room 202B).

Late work: Late work will be accepted, but 5 points will be deducted each 1-hour period that the assignment is late.

Cellphone: please don't use your cellphone during the class period. Keep your phone in silent mode.

Unhappy with the grades that you received? Please follow the steps below in order:

- Revise the quiz/exam's rubric and check what you have answered.
- Check the lecture materials.
- Make notes of what you think was not properly graded.
- Wait 24 hours.
- Check again the rubric and your answers.
- If you still think that your presentation/exam was not properly graded, then send me an email and I will be happy to discuss your grade with you!

Advice for Success:

- Attend the lectures in person or via Zoom.
- Arrive in class/start the Zoom meeting on time. The first 5-7 minutes of each lecture will be used to revise the key points of the previous lecture. This is a good time to clarify concepts and ask questions.
- Take notes. Not all the information will be listed on the slides because I expect you to pay attention to the class and make some notes.
- Ask your questions! You can ask them in the classroom, by email or stop by my office.
- Revise, revise, and revise! Revise the lecture materials after each class.
- When studying keep in mind the lecture objectives.
- Find a buddy to study with you. It can keep you motivated and gives you another level of insight into course materials.
- Be active. Eat well. Get enough sleep. Enjoy your loved ones.

Professionalism and Respect: I value our diverse identities and viewpoints. I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and

honors your identities (including race, gender, class, sexuality, religion, ability, etc.). To help accomplish this:

- I am committed to the principle of universal learning. This means that our classroom, our virtual spaces, our practices, and our interactions be as inclusive as possible. Mutual respect, civility, and the ability to listen and observe others carefully are crucial to universal learning. Active, thoughtful, and respectful participation in all aspects of the course will make our time together as productive and engaging as possible.
- Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities.
- If you have a name and/or set of pronouns that differ from those that appear in your official records, please let me know and I will make changes to my records.
- If you feel like your performance in the class is being impacted by your experiences outside of class, please do not hesitate to come and talk with me. I want to be a resource for you.
- I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.
- You are expected to treat your instructor, teaching assistants, and all other participants in the course with courtesy and respect. Your comments to others should be factual, constructive, and free from harassing statements. You are encouraged to disagree with other students, but such disagreements need to be based upon facts and documentation (rather than prejudices and personalities).

Campus Resources

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), [or http://www.police.ufl.edu/](http://www.police.ufl.edu/).

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.

<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.

<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>