

ANS 3404C
Food Animal Nutrition and Feeding (Section 1THR, 2WED)
Spring, 2021

Course Description: 3 credits; Prerequisite = ANS 3440 Principles of Nutrition. This course is a basic nutrition course designed to familiarize students with the common feedstuffs used in cattle diets, the broad management practices used and nutrient requirements of cattle at specific stages of growth, production and reproduction, and how scientific methods and experimental results are applied to animal feeding practices.

Course Learning Objectives:

Upon completing this course, students should be able to do the following:

1. Identify and describe the characteristics of commonly used feed ingredients for cattle diets.
2. Discuss the impact of how feed processing affects nutrient utilization by cattle.
3. Read and interpret feed tags and laboratory analyses of diet/feed ingredients.
4. Describe the general changes in nutrient requirements that occur throughout the life-cycle of beef cattle and dairy cattle.
5. Calculate and formulate concentrations & amounts of nutrients in rations and feed mixes.
6. Formulate basic beef cattle and dairy cattle rations using mathematical formulas / computer software.

Faculty Instructor

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Teaching Assistants

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Schedule and Critical Dates:

Section: 1 THR:

- Lecture: Tuesday, Periods 1 and 2 (7:25-9:20 am), Room 151
- Lecture: Thursday, Period 1 (7:25-8:15 am), Room 151
- Lab: Thursday, Periods 2-3 (8:30 - 10:25 am), Room 151; Room 201 Red Larson building

Section: 1 WED:

- Lecture: Tuesday, Periods 1 and 2 (7:25-9:20 am), Room 151
- Lecture: Wednesday, Period 1 (7:25-8:15 am), Room 151

- Lab: Wednesday, Periods 2-3 (8:30 - 10:25 am), Room 151; Room 201 Red Larson building

Required Textbook: None. Required reading assignments may be given during the semester.

Grading:

For information on current UF policies for assigning grade points, see

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

ALL EXAMS ARE TO BE TAKEN AT THE SCHEDULED TIMES. MAKE-UPS WILL BE GIVEN ONLY FOR PRIOR EXCUSED ABSENCES.

%	Points	Grade	Item	Points	Dates / Time
92	736	A	Quizzes	100	Six 20-pt announced quizzes ¹
89	712	A-	First Exam	150	Tuesday, February 9
86	688	B+	Second Exam	150	Tuesday, March 23
83	664	B	Third Exam	150	Tuesday, April 20
			Final Exam	150	Tuesday, April 27 ²
80	640	B-	Lab exercises	250	12 Weekly (25 points each) ³
77	616	C+			^{1,2,3} Drop lowest quiz, 2 lowest exercises, and lowest exam
74	592	C	Total	800	
71	568	C-	Clicker	30-35	Up to 35 bonus points will be offered by correctly answering clicker questions during lecture.
68	544	D+			
65	520	D			
< 65	< 520	E			
The above grades, based on the percentage of total points (800), will be guaranteed.					

Quizzes and Exams (550 pts):

A total of six 20-point quizzes will be announced and given throughout the semester (see lecture and lab schedule at the end of the syllabus). Since quizzes are announced and you will be allowed to drop your single lowest quiz score, NO MAKE-UPS will be allowed unless one is involved in an out-of-town UF sponsored trip. QUIZZES = 100 pts. (12.5% of the total points).

The 4 exams are each worth 150 points, and you will be given up to 2 hours to complete the exams. Lowest exam will be dropped from final total. Questions on the exams will come from both lecture

and lab assignments. EXAMS = 450 pts. (56.25% of the total points).

You should notify Dr. Vyas of any questions regarding the grading of a quiz, exercise or exam within one week of its return to you. Later challenges will not be considered.

Lab Assignments (250 pts):

Problem sets (n = 12) related to feeding and diets are worth 25 points each. The two lowest scores will not count toward the final point total of the semester. For some weeks, students are to independently watch on-line instructional videos explaining the principles and methods to use in solving the problem sets prior to the scheduled lab period on Wednesdays and Thursdays. Students are encouraged to complete the problem sets prior to the Thursday lab. Students can receive personal help during established office hours and during lab time with any particular problems that were not solved independently prior to class. Students who have completed the assigned problem set prior to will not need to stay for the whole lab period. The hands-on lab exercises are due at the end of the lab period each Thursday unless otherwise indicated. Three points will be deducted for each day that the assignment is turned in late without an excused absence. Lab exercises will not be accepted after the material has been discussed and posted for class review. LAB EXERCISES = 250 points (31.25% of the total points).

Clicker responses (up to 35 points)

Providing a correct answer to each clicker question during a lecture/lab session will result in 1 point per correct answer for extra credit. This year we will use iClicker cloud for scoring these points. This can be installed on your phone and will be used both for online classes and lab sessions.

(<https://at.ufl.edu/service-teams/classrooms/classroom-technology/iclicker-response-system/>)

Attendance and Make-Up Work

Attendance will not be taken. 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>.

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.

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 <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/process/student-conduct-honor-code>.

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/

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/*
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Wellness Coaching
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*
- *U Matter We Care, www.umatter.ufl.edu/*

ANS 3404C - Lecture and Lab Schedule 2021

*Quiz Date

- **TUESDAY classes will be held online via Zoom**
- **Wednesday and Thursday lectures will be hybrid and can be attended either in classroom or online**
- **Wednesday and Thursday lab sessions will be scheduled only in classroom**

Section 1THR	Section 1WED	Lectures	Labs	Assignments
1/12 Tues	1/12 Tues	Course Syllabus Introductions Lecture Topic 1. Proximate Analysis & Detergent System Method of Forage Composition		
1/14 Thurs	1/13 Wed	Lecture Topic 2. Feed sampling techniques	Lab 1. Hands-on Feed Sampling Techniques: Hay Bales, Silage, and Grain Probes Assignments due today: <ul style="list-style-type: none"> • In-class exercise on Feed Sampling Techniques 	
1/19 Tues	1/19 Tues	Lecture Topic 3. Commonly Used Energy Concentrates and their Byproducts: Characteristics, Processing, and Feeding		
1/21 Thurs	1/20 Wed	Lecture Topic 3. Continued.	Lab 2. Proximate analysis of corn silage (DM and Ash estimation, preparing silage extract, measuring pH) <ul style="list-style-type: none"> • Begin learning to identify 16 energy concentrate feeds 	
1/26* Tues	1/26* Tues	Quiz-1 Lecture Topic 4. Commonly Used Protein & Nitrogenous Feeds: Characteristics,		

		Processing, and Feeding Recommendations		
1/28 Thurs	1/27 Wed	Lecture Topic 4. Continued.	Lab 3. Fiber, ether extract, and volatile fatty acid analysis	
2/2 Tues	2/2 Tues	Lecture Topic 5. Macro- and Micro-minerals Supplement Sources for Cattle <ul style="list-style-type: none"> • Study for Quiz 2 (Feed ID) to be given at the beginning of class on 4th Feb or 5th Feb. 		
2/04* Thurs	2/03* Wed	Quiz-2 (Feed ID) - Given at the beginning of class	Complete and turn in Lab 3. Lab 4. Determining Relative Corn Index and Simple Ration	
2/09 Tues	2/09 Tues	EXAM1		
2/11 Thurs	2/10 Wed	Lecture Topic 5. Continued.	Lab 5. Hands-on Corn Wet-Milling Lab	
2/16 Tues	2/16 Tues	Lecture Topic 6. Feeding the newborn dairy calf – liquid and dry feeds <ul style="list-style-type: none"> • Download the Dairy NRC software to your PC. Sorry, but not compatible with Mac 		
2/18 Thurs	2/17 Wed	Lecture Topic 6. Continued.	Complete and turn in corn wet-milling exercise. Lab 6. Visit to the Dairy Research Unit	
2/23* Tues	2/23* Tues	Quiz-3 Lecture Topic 7. Feeding the replacement dairy heifer		
2/25	2/24	Lecture Topic 7. Continued.	Lab 7. Feeding the newborn dairy	RECHARGE DAY (FEB 25)

Thurs	Wed		calf – NRC software	
3/2 Tues	3/2 Tues	Lecture Topic 8. Feeding the transition dairy cow		
3/04 Thurs	3/03 Wed	Lecture Topic 8. Continued.	Lab 8. Feeding the replacement dairy heifer, NRC software	
3/9 Tues	3/9 Tues	Lecture Topic 9. Feeding the lactating dairy cow		
3/11 Thurs	3/10 Wed	Lecture Topic 9. Continued.	Complete and turn in Lab 8 Lab 9. Fiber analysis	
3/16* Tues	3/16* Tues	Quiz-4 Lecture Topic 10. Labeling and Interpretation of Commercial Feed Tags.		
3/18 Thurs	3/17 Wed	Lecture Topic 10. Continued.	Lab 10. Feeding the transition dairy cow –NRC software	
3/23 Tues	3/23 Tues	EXAM 2. Feeding the dairy animal		
3/25 Thurs	3/24 Wed	Lecture Topic 11. Feeding the Beef Breeding Herd – Mature Cows	Lab 9. Mature Cows continued. Nutrient Requirements and Feeding Management	RECHARGE DAY (MAR 24)
3/30* Tues	3/30* Tues	Quiz-5 Lecture Topic 12. Feeding the Beef Breeding Herd – Replacements		

4/01 Thurs	3/31 Wed	Lecture Topic 12. Continued.	Lab 10. Nutrient Requirements and Feeding Management	
4/06 Tues	4/06 Tues	Lecture Topic 13. Stocker and Feedlot Nutrition		
4/08 Thurs	4/07 Wed	Lecture Topic 13. Continued.	Lab 11. Body Condition Scoring at the Beef Research Unit.	
4/13 Tues	4/13 Tues	Quiz-6 Lecture Topic 14. Forages & Forage Evaluation Collection of Representative Forage Samples (review) Detergent Method of Forage Evaluation (review)		
4/15* Thurs	4/14* Wed	Lecture Topic 14. Continued.	Lab 12. Harvest, Processing, and Storage Pricing & Utilization	
4/20 Tues	4/20 Tues	EXAM 3		
4/27 Tues	4/27 Tues	FINAL EXAM		