

ANIMAL NUTRITION

11:067:330

Fall, 2018

Time & Place: 102 CDL; Monday & Thursday, 12:35-1:55

Instructor:

Dr. Barry Jesse 213C Bartlett Hall M 10:55-12:15 & Th 10:55-12:15, or
By appointment, or
By walk-in
(848) 932-9095 barry.jesse@rutgers.edu

Texts (Recommended):

Basic Animal Nutrition and Feeding, by Pond, Church, Pond & Schoknecht. 5th edition (2005), Wiley

Principles of Companion Animal Nutrition, by McNamara. 2nd edition (2014), Pearson-Prentice Hall

Resources: Lecture notes, supplemental readings and announcements will be provided via Sakai (<https://sakai.rutgers.edu/portal>).

Grading: Grades will be assigned based on the results of 6 feedback questions (10%), two hourly examinations (2@25%) and a semi-cumulative final examination (40%). **MAKE-UP EXAMINATIONS ARE TYPICALLY NOT GIVEN.**

Course Learning Goals: By the end of this course you will have:

- 1) Learned the basic principles of animal nutrition, including feeding practices, nutrient requirements and nutrient interactions. (PLG 2)
Assessment: Feedback questions and exams.
- 2) Understand the feeds that are used in formulating animal diets. (PLG 2)
Assessment: Feedback questions and exams.
- 3) Understand the digestive processes and strategies used by different animals. (PLG 2)
Assessment: Feedback questions and exams.
- 4) Understand nutrient metabolism and its regulation, and the various body functions that utilize nutrients. (PLG 2)
Assessment: Feedback questions and exams.

These basic skills and knowledge will allow you to:

- 1) assess the nutritional adequacy of a ration for an animal in any given physiological state, and
- 2) critically evaluate the nutritional claims of various consumer products (*e.g.* weight loss products and nutritional supplements).

Schedule of Classes

<u>Session#</u>	<u>Date</u>	<u>Topics</u>	<u>Readings</u>
Introduction			
1	9/ 6	Introduction	
		Nutrition: Basic Concepts	Chpt. 1 & 2
2	9/10	Feedstuffs	Chpt. 19
3	9/13	> FB1 Feedstuffs (cont.)	
4	9/17	Comparative GIT Anatomy and Function	Chpt. 4
5	9/20	< FB1 Comparative GIT Anatomy (cont.)	
6	9/24	Nutrient Analysis & Nutrient Requirements	Chpt. 3 & 5
Nutrient Metabolism			
7	9/27	> FB2 Carbohydrates	Chpt. 7
8	10/ 1	Carbohydrates (cont.)	
9	10/ 4	< FB2 Water	Chpt. 6
10	10/ 8	Lipids	Chpt. 8
11	10/11	Exam 1	
12	10/15	> FB3 Lipids (cont.)	
13	10/18	Proteins and Amino Acids	Chpt. 9
14	10/22	< FB3 Proteins and Amino Acids (cont.)	
15	10/25	Energy Metabolism	Chpt. 10
16	10/29	> FB4 Energy Metabolism (cont.)	Chpt. 16
17	11/ 1	Minerals - Macro	Chpt. 11
18	11/ 5	< FB4 Minerals - Micro	Chpt. 12 & 13
19	11/ 8	Vitamins: Fat-Soluble	Chpt. 14
20	11/12	Vitamins: Water-Soluble	Chpt. 15
21	11/15	Exam 2	
Applied Animal Nutrition			
22	11/19	> FB5 Factors Affecting Feed Consumption	Chpt. 17 & 18
23	11/20	Feed Preparation & Processing	Chpt. 20
Week of Thanksgiving			
24	11/26	< FB5 Diet Formulation	Chpt. 21
25	11/29	Dog & Cat Nutrition	Chpt. 28
26	12/ 3	> FB6 Dairy Cattle Nutrition	Chpt. 23
27	12/ 6	Beef Cattle Nutrition	Chpt. 22
28	12/10	< FB6 Swine and Poultry Nutrition	Chpt. 25 & 26

12/20 **Final Exam: Thursday, Noon – 3:00 PM, 102 CDL**

>**FB** **Feedback Questions Posted**
 <**FB** **Feedback Questions Returned**