

**ANNU 4370/6370: Monogastric Nutrition
(ADSC and POUL 4370/6370)**

**Room 118 - Animal Science Complex
Monday, Wednesday, Friday
9:05 - 9:55**

Instructor: Michael Azain
244 Animal Science Complex
542-0963
mazain@uga.edu

Prerequisites: Undergraduate Animal Nutrition: such as ADSC 3300 or POUL 3750
Undergraduate Biochemistry: such as BCMB 3100

Goals: Develop an understanding of the basis for and determination of nutrient requirements.
Provide an introduction to the current research literature in monogastric nutrition.
Develop oral and written communication skills related to nutrition research.

Grading:

Mid-Terms	6-7 th and 11-12 th week of class	40%
Final	Dec. 14 (Mon.) 8:00-11 AM	30%
Reports:	Feed Ingredient (oral)	5
	Amino Acid + Vitamin and Mineral Homework	5
	Diet Formulation	10
	<u>Journal Article reports</u>	<u>10</u>
	Total	<u>100</u>

Class Fee: The fee covers a student subscription to Feedstuffs and xeroxing costs for articles distributed in class. There is no formal textbook for this class. However, students will find it useful to have a nutrition reference book. Graduate Students should consider purchasing an NRC book in the species they are doing their research.

National Research Council: Nutrient Requirements of poultry (1994) \$ 29.66 \$ 22.50
Nutrient Requirements of swine (1998) \$ 40.46, \$34.50
Nutrient Requirements of horses (2007) \$90
Nutrient Requirements of dogs and cats (2006) \$265

Web Site <http://www.nap.edu/catalog/4758.html>

Feedstuffs on line: User ID: monogastric

Password: godawgs

Attendance is expected. Five unexcused absences will result in withdrawal by the instructor. Students should be aware of University rules for Drop/Add and Withdrawals.

Tentative Lecture Schedule

<u># Lectures</u>	<u>Topic</u>
1	First Class, Introduction - Nutrition, US Feed Industry
1	Changes in productivity over time; examples of genetic improvements
2	Classes of nutrients, proximate analysis, other analytical procedures
4	Overview of digestive anatomy and processes, digestive enzymes, digestibility determinations
2	Nutrient Requirements: Determination, species differences, effects of stage of production.

Feed Ingredient Reports - topic due Sept 9.

3 Feed Ingredient Presentations on 9/28, 9/30 and 10/2

First Mid-term Exam: date to be determined

7 Energy Nutrition: Energy requirements, Carbohydrates, fiber-degrading enzymes. Lipids

7 Proteins and Amino Acids: Requirements, amino acid balance, ideal protein

10/30 Fall Break – No Class

1 Feed efficiency, relationship of composition to efficiency

4 Feed Intake Regulation
Endocrine control of metabolism, metabolic integration, repartitioning agents
Feed Additives, Antibiotics

Mid-term # 2 Date to be determined

5 Mineral Nutrition

5 Vitamin Nutrition

Dec 14 Final Exam - Cumulative