

**Animal Science 5773**

**Protein Nutrition  
Spring 2008**

**Instructor:** Scott Carter  
212B Animal Science  
744-8869

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208 Animal Science  
744-8857

**Prerequisite:** General Biochemistry, General Nutrition

**Description:** A study of the principles and concepts of protein and amino acid metabolism and nutrition in animals.

**General References:** Amino Acids in Farm Animal Nutrition, 2<sup>nd</sup> Ed. J. P. F. D’Mello (Ed.), CAB International, Wallingford, UK. 2003.

Amino Acids in Farm Animal Nutrition. J. P. F. D’Mello (Ed.), CAB International, Wallingford, UK 1994.

Absorption and Utilization of Amino Acids. M Friedman (Ed.), CRC Press, Inc., Boca Raton, Fl. 1989

<b>Grade Distribution:</b>	Quizzes	15%	<b>Grading:</b>	A – 90 and above
	Exam 1	30%		B – 80 to 90
	Exam 2	30%		C – 70 to 80
	Assignments	10%		D – 60 to 70
	Report	15%		

**General:** Quizzes will be announced in class. Two exams will be given at approximately the midpoint of the semester and the final exam. Assignments will be assigned in class at periodic intervals. A written or oral presentation will count 15% of the final grade.

## **Make-Up**

**Examinations:** Examination absences must be **approved in advance**. **Please submit absence requests in writing**. Unapproved absences for exams will be counted as zeros. University sponsored events, severe illness, and serious family issues are the only excuses for missing an exam. In those instances, a makeup exam will be available.

## **Important**

**Dates:** Last day to drop a class with no grade – January, 14, 2008  
Last day to drop a course with an automatic grade of “W” – April 4, 2008

## **Academic**

**Dishonesty:** Oklahoma State University is committed to the maintenance of the highest standards of integrity and ethical conduct of its members. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in your being sanctioned. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. You have the right to appeal the charge. Contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627, [academicintegrity.okstate.edu](http://academicintegrity.okstate.edu).

## **Special**

**Accommodations:** According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Student Disability Services. Please advise the instructor of your disability as soon as possible, and contact Student Disability Services, to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. Call 405-744-7116 or go to [sds.okstate.edu](http://sds.okstate.edu).

## **General Outline**

1. Protein and The Amino Acids
2. Protein Digestion
3. Protein Absorption
4. Measure of Digestion and Absorption
5. Protein digestion and absorption in the Ruminant
6. AA Imbalances, Antagonisms, and Toxicity
7. Disposal of Nitrogen
8. AA metabolism
9. Protein Turnover
10. Factors affecting Protein Turnover
11. Analysis of proteins and amino acids
12. Applied protein nutrition