Instructor: Ms. Samantha (Sam) Cunningham, Assistant Professor
B12 Knoblauch Hall
Office Phone: 298-1288
Email: s-cunningham@wiu.edu
Office Hours: M & W 3 to 4, T 9 to 11, or by appointment

Class Time:
Lecture: M & W 2 to 2:50 pm in 307 Knoblauch Hall
Lab: Th 1 to 2:50 pm in 307 Knoblauch Hall

Required Text:

Reference Text (not required):

Requirements: Basic Calculator

Additional Course Materials:
Any additional course materials may also be found online on Western Online:
www.westernonline.wiu.edu

Prerequisite: ANSC 112 and one semester of chemistry

Course Description:
Characteristics of feedstuffs used in livestock enterprises. Ration formulation and nutritional management of livestock.

Course Objective:
1. Review the fundamental principles of animal nutrition and their application to animal feeding
2. An ability to apply these basic fundamentals to the feeding of livestock species

Attendance:
Attendance and participation are important components of this course, and are crucial for learning. Attendance is expected and will be monitored at each lab and lecture meeting.

Students having 6 or more unexcused absences will have their final course grade reduced by a letter grade at the end of the semester.
If you anticipate an excused absence, notify me in advance, prior to an exam, quiz, or homework due date, for example. Accepted excuses would include university related activities/events and personal health. Please submit notification in writing, i.e. a letter from a faculty sponsor or a doctor’s note. All other excuses will be handled at the discretion of the instructor. The student is responsible for any missed information and/or class material, as well as making arrangements for making up any missed work.

ADA Compliance:
In accordance with University policy and the Americans with Disabilities Act (ADA), accommodations in the area of test and note-taking may be made for any student who notifies the instructor of the need for accommodation. It is imperative that you take the initiative to bring such needs to my attention, as I am legally not permitted to inquire about the particular needs of students. Furthermore, I would like also to request that students who may require special assistance in emergency evacuations contact me as to the most appropriate procedures to follow in such an emergency.

Academic Dishonesty:
Any violation of the Academic Dishonesty Policy in Student Handbook (http://www.wiu.edu/provost/students/) will result in an automatic failure in the course. Plagiarism and cheating are areas of concern for the course. Cheating will not be tolerated.

Attention Education Majors:
The changes within the state certification requirements, which go into effect immediately for all of those students who graduate in the spring 2012 and after, you are required to receive a grade of a "C" or better in this course in order to meet these new requirements. With the new university +/- grading system, receiving a "C-" or below will require you to retake this course or find a substitute course to meet School of Agriculture graduation requirements.

Class conduct:
Asking of questions and discussion of relevant information in and outside class is highly encouraged; however, talking to neighbors, texting, sleeping, or studying for other courses during class time will not be tolerated. Come to class ready for discussions (you will be called upon).

NO CELL PHONES. If you have a cell phone that rings during class, you will automatically receive an unexcused absence for that class meeting. If you have an emergency situation where you need to have a cell phone on during class, let me know ahead of time. Cell phones, blackberries, iPhones, or other electronic communication devices with built-in calculators cannot be used for exams and will not be tolerated; only actual calculators will be allowed.

Course Grade:

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<tr>
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<tbody>
<tr>
<td>3 Hour Exams</td>
<td>45%</td>
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<tr>
<td>Final Exam</td>
<td>15%</td>
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<tr>
<td>Quizzes and homework</td>
<td>40%</td>
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</table>
Exam Dates:

Exam I       Wednesday, February 13
Exam II      Wednesday, March 6
Exam III     Wednesday, April 17
Final Exam   Monday May 6 at 3 pm

**NOTE: All exam dates (excluding the final) are tentative.**

Homework and Quizzes:
Assignments are due at the start of the next class period unless specified otherwise. Late assignments will not be tolerated. Take home assignments are generally due one week from the date assigned unless otherwise specified. If they are turned in one to seven days after the due date, the student will receive an automatic 25 point discount. Assignments turned in over 7 days late WILL NOT be accepted, and the resulting grade will be “0”. Students with excused absences will be allowed to make up homework assignments within these same guidelines with modified due dates.

There will be approximately 10 homeworks assigned in lab. There will be quizzes in both lecture and lab.

Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90 to 100</td>
<td>A</td>
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<tr>
<td>87 to 89</td>
<td>B+</td>
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<tr>
<td>82 to 86</td>
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<tr>
<td>60 to 61</td>
<td>D-</td>
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<td>&lt; 59</td>
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***INFORMATION PROVIDED IN THIS SYLLABUS IS SUBJECT TO CHANGE***
Lecture Topics and TENTATIVE Dates

I. Introduction Jan 14

II. Gastrointestinal tract and Nutrient utilization Jan 16, 23

III. Overview of nutrients and Nutrient utilization Jan 28, 30, Feb 4
   A. Nutrient categories and functions
   B. Establishing nutrient requirements
   C. Nutrient utilization
   D. Measurement of nutrient content

IV. Feedstuffs Feb 6, 11, 18, 20
   A. Concentrate feedstuffs
      1. Cereal grains
      2. Cereal by-products
      3. Other concentrate feedstuffs
   B. Protein feedstuffs Feb 25, 27, Mar 4, 18, 20
      1. Oilseed meals
      2. By-products
      3. Animal protein sources
      4. Non-protein nitrogen sources and utilization
   C. Forage and roughages Mar 25, 27
      1. Forage chemistry and structure
      2. Types of forages
      3. Forage harvesting and processing
      4. Roughage by-products
   D. Mineral and vitamin supplements Apr 1, 3
      1. Major minerals
      2. Trace minerals
      3. Fat-soluble vitamins
      4. Water-soluble vitamins
   E. Feed additives Apr, 8, 10
      1. Uses of feed additives
         a. Improved performance
         b. Improved health

V. Feeding livestock Apr 15, 22, 24, 29, May 1
   A. Feeding swine
   B. Feeding beef cattle
   C. Feeding Horses
   D. Feeding sheep and goats

**NO CLASS:** JANUARY 21, 2013—MARTIN LUTHER KING, JR. DAY

MARCH 11-15, 2013—SPRING BREAK
### TENTATIVE Lecture Quiz Dates

<table>
<thead>
<tr>
<th>Quiz Type</th>
<th>Date</th>
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<tbody>
<tr>
<td>Nutrients QUIZ</td>
<td>Jan 30</td>
</tr>
<tr>
<td>Concentrate Feeds QUIZ</td>
<td>Feb 25</td>
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<tr>
<td>Protein Feeds QUIZ</td>
<td>Mar 27</td>
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<tr>
<td>Forage QUIZ</td>
<td>Apr  3</td>
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<tr>
<td>Minerals &amp; vitamins QUIZ</td>
<td>Apr 10</td>
</tr>
<tr>
<td>Feed additives QUIZ</td>
<td>Apr 15</td>
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<tr>
<td>Feeding livestock QUIZZES</td>
<td>TBA</td>
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Laboratory Topics and TENTATIVE dates

I. Units and conversions  
II. Feed ID and composition  
III. Using nutrient requirements and ingredient composition tables  
IV. Methods of diet formulation  
V. Review and more diet formulation  
VI. More diet formulation  
VII. More diet formulation fun  
VIII. Diet formulation exercises—heifers and cows  
IX. Diet formulation exercises—growing/finishing cattle  
X. Formulating supplements and premixes  
XI. Diet formulation exercises—growing/finishing swine  
XII. Diet formulation exercises—horses  
XIII. Diet formulation exercises—swine  
XIV. TBA

TENTATIVE Lab Quiz Dates

Units and conversions QUIZ  
Feed ID QUIZ  
Diet Formulation QUIZ