FEEDS AND RATION FORMULATION

(AVS 306)

Spring 2017

Course webpage: http://www.webpages.uidaho.edu/avs306/

1. **Prerequisite:** AVS 305 (or a similar “basic animal nutrition” course)

2. **Instructor:**
   
   Dr. Pedram Rezamand  rezamand@uidaho.edu  Ag Science 215  (208) 885-5392

   **Teaching Assistants:**
   
   Chia-Yu-Tsai (tsai4799@vandals.uidaho.edu)  Ag Sci 211
   
   Anna Rodriguez (rodr6015@vandals.uidaho.edu)  Ag BioTech 316

3. **Time and place:**

   Lecture:  M, W, F,  10:30 to 11:20 a.m.  TLC 044
   
   Lab:  Wednesday,  1:30 to 3:20 pm or 3:30 to 5:20 pm,  Ag Sci 204

   Available at the UI Bookstore.

5. **Course objectives:**

   a) To understand the nutrient requirements of livestock to meet specific requirements, b) To understand the characteristics of feedstuffs and their use in ration formulation, c) Apply your knowledge of nutrients required by livestock to ration formulations so that specific nutrient requirements are met, d) To apply understanding of nutrition to prudent nutritional management, e) Have fun and get interested in livestock feed management for a lifetime.

6. **Examination procedure:**

   a) Three hourly exams (including Final exam) will be given at approximately 5 week intervals throughout the semester. Exams will be worth 100 points each. Exams will be
multiple-choice, short essays and comprehensive answers. Questions will often require students to apply information they obtain in both lecture and lab.

b) Approximately 6 quizzes will be given that are 15 points each. The quizzes will require students to apply the information that they most recently learned in lecture and the lab. A 7th quiz might be given, which would allow teaching team to drop your lowest quiz score.

c) A final examination covering all material with total possible points of 100. This exam will be designed for having the student solve or provide an answer to complex, comprehensive problems.

d) Assignments on ration formulation will be given in lab. Each lab assignment will be worth approximately 20 points and will be due the following Monday at class time. Assignments may be turned in late; however, points will be deducted as we will often discuss the assignments on during the lecture period. Also, lab assignments will be graded and returned to the students on following Monday and that lab material may be included on the next lab quiz.

e) Total possible points will be established by totaling the points on unit exams, quizzes, assignments, and the final exam as shown in the following:

<table>
<thead>
<tr>
<th>Total points</th>
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<tbody>
<tr>
<td>Hourly exams (2 × 100)</td>
<td>200</td>
</tr>
<tr>
<td>Quizzes (6 × 15)</td>
<td>90</td>
</tr>
<tr>
<td>Final exam (1 × 100)</td>
<td>100</td>
</tr>
<tr>
<td>Assignments (12 × 20)</td>
<td>240</td>
</tr>
<tr>
<td>Participation</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>700</td>
</tr>
</tbody>
</table>

7. Attendance Policy:

Students are expected to attend all lectures and lab sessions; absence will have direct negative impact on final grade.

Absence (lecture and/or lab session) for personal reasons, beyond approved medical cases and up to 4 cases, will result in 20 points reduction per absence. Absence (lecture and/or lab session) for personal reasons, other than approved medical cases, beyond 4 cases will result in 30 points reduction per absence.

University-excused absences, up to 4 cases, will be associated with 10 points reduction per absence. University-excused absences, beyond 4 cases, will be treated as personal cases.

The point is quite simple: attend the lecture and lab, and you will do just fine!
8. Grading Procedure

(Grade Percentile):

A 90; B 80; C 70; D 60; F <60

AVS 306 -- FEEDS AND RATION FORMULATION (4 cr). Application of principles of nutrition to ration formulation for livestock; evaluating feedstuffs for use in ration formulation. Three lectures and one 2-hour lab per week. Prerequisite: AVS 305 (or a similar course).

I. Review of Basic Nutrition and Nutrients

II. Evaluation of Feedstuffs

A. Chemical, B. Biological (Growth, Digestion, Metabolism), C. Microbiological, D. Economic evaluation

III. Feedstuffs Used in Livestock Rations

A. Forage
B. Energy feeds
C. Protein feeds
D. Mineral and vitamin supplements
E. Feed additives

IV. Ration Formulation

- Beef cattle
- Sheep
- Horses
- Dairy Cattle

DISABILITY SUPPORT SERVICES REASONABLE ACCOMMODATIONS:
Reasonable accommodations are available for students who have documented temporary or permanent disabilities. All accommodations must be approved through Disability Support Services, located in the Idaho Commons Building, Room 306, in order to notify your instructor(s) as soon as possible regarding accommodation(s) needed for the course. Contact DSS at 208-885-6307, email dss@uidaho.edu or go to www.uidaho.edu/dss.