Instructor: Dr. Celina Johnson

Contact Info: Plumas Hall 210
530-898-4147

Office Hours: Wednesdays: 1:00 pm to 4:00 pm
Thursdays: 9:00 am to 11:00 am
By appointment

Course Meeting Times: Lecture: Tuesday/Thursday; 8:00 am – 9:00 pm; PLMS 329
Laboratory: Tuesday OR Thursday; 2:00 pm – 5:00 pm; PLMS 333
(may occasionally meet at South Campus – a.k.a. “farm”)

David Tisch, Thomson Delmar Learning.

Course Objectives: Upon successful completion of this course, students will be able to:
• Describe the nutrients found in feeds
• Describe the basic steps of digestion/absorption in farm animals
• Describe how nutrients are metabolized by the animal to be used for maintenance or gain/production
• Understand implications of changing diets on the animals performance

Computer Use:
All communication for this course will be conducted via WebCT Vista. This includes email communications and course announcements. It is the student’s responsibility to check WebCT regularly for any announcements regarding the course. If an activity or lab is not posted to WebCT by 6 pm of the day before that lab/activity; the instructor will bring copies to class.

Computer use is required for this class. Numerous spreadsheets will be used, therefore students must have access to Microsoft Excel. If a student does not have personal access to Excel, computer labs on campus have Excel (including Plumas Hall).

A flash drive is recommended for all activities, so that work can be saved during the activity.

Grading:
This course is designed to have a variety of assignments, exams, and quizzes to allow a variety of opportunities for you to make points. There is no curve, but grades will be rounded up to the nearest whole number (ex. 89.5 would round up to 90). The following is the grading scale for this class:

<table>
<thead>
<tr>
<th>Grading Scale</th>
<th>A  ≥ 93%</th>
<th>B  ≥ 83%</th>
<th>C  ≥ 73%</th>
<th>D  ≥ 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-</td>
<td>≥ 90%</td>
<td>≥ 80%</td>
<td>≥ 70%</td>
<td>F &lt; 60%</td>
</tr>
<tr>
<td>B+</td>
<td>≥ 87%</td>
<td>≥ 77%</td>
<td>D+</td>
<td>≥ 67%</td>
</tr>
</tbody>
</table>
Assignments and Activities:

LABORATORY NOTEBOOK AND ATTENDANCE

*Your laboratory notebook is your life* for the laboratory section of this class. There will be a mid semester check after Lab 6 (due at the end of the lab - maximum of 50 points) and the final grade on the notebook due at the end of Lab 13 (maximum of 100 points). Follow the guidelines on WebCT for guidelines for the notebook. See the end of the syllabus for the grading rubric for the laboratory notebook.

Additionally – attendance is required for laboratory exercises. As such, students will earn 10 points for each lab they participate in. If a student must miss a lab, they will miss out on those points. Only school related activities that have prior approval from the instructor will be excused (see instructor's course policies).

RESEARCH EXPERIMENT

Each semester this class conducts a feeding experiment. Details of the project will be supplied during lab. Each student will be required to participate in the project by feeding the animals and collecting samples a minimum of 2 times during the project. You will be writing a scientific abstract and submitting it as part of your final – it will count for 50 points of the final exam!

PROBLEM SETS

There will be a minimum of 10 problem sets throughout the semester (if more are offered, best 10 will count towards your grade). These will be available on WebCT through the Assignments function and all due dates are posted. Problem sets are designed to assist you in synthesizing course material to prepare for the final.

EXAMS AND QUIZZES

The instructor reserves the right for “pop quizzes” at any point in the semester! Usually happens if attendance drops off!

This class will have one exam – the final! Don’t panic! The exam is a comprehensive take home final. You will have access to the final on December 4th at 5 pm and it is due Friday, December 18th, by noon. You MUST USE THE APPROPRIATE ASSIGNMENT FUNCTION ON WEBCT!!! Follow the directions carefully!

EXTRA CREDIT

During the experiment – if you assist in feeding above the required times for class, you will receive a maximum of 15 points extra credit (5 points per time, maximum of three additional data collection times).

Diet Case Study – For up to 15 points (variable points), you may evaluate any human/animal diet program. You must include the diet requirements, digestive/metabolic theory of the diet, validity of the diet (does it make sense compared to what you have learned in class?). Some example diets include: Atkins, South Beach, Mediterranean, and MANY OTHERS. NOTE: THIS IS A CRITICAL EVALUATION of the diet, as such, must include references!!!
Course Policies:

- **NO LATE ASSIGNMENTS WILL BE ACCEPTED!** If you are not going to be attending class where an assignment is due, drop it off early or send it with a classmate.
- No make-up exams/quizzes will be allowed, **EXCEPT FOR ABSENces THAT HAVE BEEN CLEARED BY THE INSTRUCTOR PRIOR TO THE ABSENCE!**
  - For school related activities, a letter from the supporting faculty/instructor is required prior to the absence.
- Remember – you earn grades, professors merely assign them!
- **“Pet Peeves”:**
  - Asking how long something will take. You are paying for a certain amount of time by signing up for this course – we will meet for the full time!
  - Asking to be excused from rules that all classmates are following.
  - Cell Phones that ring or vibrate during class time (lecture or activity). Leads to Celina’s Cell Phone Rule - If a cell phone goes off during class time (lecture or lab), the owner will lose 10 points off total grade, for every infraction.
  - Inappropriate or disruptive behavior will not be tolerated, nor will lewd or foul behavior
  - Unstapled assignments – multiple page assignments without a staple will receive a score of 0.
  - Missing names on assignments – receive a score of 0.
- You are responsible for adding/dropping classes.
- It is YOUR responsibility to obtain any information announced in class.
- You will have a one-week period following the return of any exams, quizzes, or assignments to resolve any questions regarding the grading. After that time period, all grades are final.
- You should retain all graded items until a final course grade is assigned.
- If there is evidence that you have been involved in any form of academic dishonesty, you will receive an “F” grade for the course, be locked from WebCT, and a report will be provided to the Student Judicial Affairs for further action.
- If you need specific accommodations due to a disability (or other circumstances), you must contact a counselor at Disability Support Services, 530-898-5959.

Academic integrity
Students are expected to be familiar with the University’s Academic Integrity Policy. Your own commitment to learning, as evidenced by your enrollment at California State University, Chico, and the University’s Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Judicial Affairs. The policy on academic integrity and other resources related to student conduct can be found at: [http://www.csuchico.edu/sjd/sja.shtml](http://www.csuchico.edu/sjd/sja.shtml)
Philosophical Statement – Academic Rigor

Academic rigor consists of dedication on the part of students and faculty to the pursuit of academic excellence, including discipline of mind and disciplined behavior, intellectual honesty, decorum and civility. It is exemplified by the attainment of the highest standards as defined by and in each discipline. It also includes transmitting, sustaining, evaluating, and enhancing the continuity of recognized intellectual achievements in each discipline. A passion for learning and high expectations should pervade the atmosphere of the University. The quality of education and the degrees and certificates offered by the University will only have value insofar as the administration, faculty, and students view themselves as custodians of the University’s reputation.

Expectations for a Learning Community

<table>
<thead>
<tr>
<th>Expectations of Faculty</th>
<th>Expectations of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate high expectations of the course through a demanding syllabus, well-prepared classes, staying current through research and professional activities.</td>
<td>Set high personal standards, develop a strong sense of purpose, come to class well-prepared, and complete assignments on time</td>
</tr>
<tr>
<td>Offer conscientious advising and predictable availability</td>
<td>Make the most of faculty advising and mentoring</td>
</tr>
<tr>
<td>Fully involve students in the learning experience by providing prompt, frequent feedback and developing rigorous testing methods</td>
<td>Treat fellow students and the classroom environment with complete respect; give each class full attention and participation; do not miss class, arrive late, or leave early</td>
</tr>
<tr>
<td>Develop approaches and strategies geared to diverse talents and ways of learning, while maintaining high standards of accountability</td>
<td>Accept responsibility for learning and grades earned</td>
</tr>
<tr>
<td>Seek to eliminate opportunities to engage in academic dishonesty</td>
<td>Approach each class in a professional manner</td>
</tr>
<tr>
<td>Actively contribute to their disciplines</td>
<td>Recognize that a full-course load is equivalent to full time work and spend no less time on it</td>
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<tr>
<td></td>
<td>Demonstrate complete honesty and integrity</td>
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</tbody>
</table>

Lecture Topics and Exams

<table>
<thead>
<tr>
<th>1. Introduction (chapter 1)</th>
<th>7. Energetics (chapter 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Water (chapter 11)</td>
<td>8. Carbohydrate digestion/absorption/metabolism (chapter 6)</td>
</tr>
<tr>
<td>3. Minerals (chapter 9)</td>
<td>9. Protein digestion/absorption/metabolism (chapter 7)</td>
</tr>
<tr>
<td>4. Vitamins (chapter 10)</td>
<td>10. Lipid digestion/absorption/metabolism (chapter 8)</td>
</tr>
<tr>
<td>5. Enzymes (chapter 2)</td>
<td>11. Digestive issues (if time) (components of chpt 14, 16, 18, 20, 22, 24)</td>
</tr>
<tr>
<td>6. Basics of digestion/absorption (chapter 2)</td>
<td></td>
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</tbody>
</table>
### Lab Activities:

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
</tr>
</thead>
</table>
| 1    | LAB 1 – ATRC SHEEP AND GOAT UNIT  
Scientific method; feeding trial/design; sample collection and preparation.  
Students need to sign up for feeding shifts for remainder of trial |
| 2    | NO LAB – FREE TIME FOR PROJECT |
| 3    | LAB 2 – ATRC MEATS LAB  
Anatomy and Physiology – look at gastrointestinal tracts from farm animals. |
| 4    | LAB 3 – PLMS 333  
Intro to lab work; lab safety; lab notebook requirements; necessary chemistry skills |
| 5    | LAB 4 – PLMS 333  
Sample prep (grinding and storage);  
Beginning of Proximate Analysis - DM, Ash, and OM |
| 6    | LAB 5 – PLMS 333  
Protein Digestion and CP analysis  
MIDTERM LAB BOOK CHECK – DUE AT END OF LAB |
| 7    | LAB 6 – PLMS 333  
Rotation: Ether Extract/Bomb Calorimetry/ADF |
| 8    | LAB 7 – PLMS 333  
Rotation: Ether Extract/Bomb Calorimetry/ADF |
| 9    | LAB 8 – PLMS 333  
Rotation: Ether Extract/Bomb Calorimetry/ADF |
| 10   | LAB 9 – PLMS 333  
NDF/NIRS Demo |
| 11   | LAB 10 – PLMS 321  
Technical Writing |
| 12   | LAB 11 – PLMS 321  
Statistical Analysis Basics |
| 13   | NO LAB – FREE TIME FOR PROJECT |
| 14   | Thanksgiving Break – Enjoy! |
| 15   | Lab 12 – PLMS 333  
Mineral Analysis I |
| 16   | Lab 13 – PLMS 333  
Mineral Analysis II  
LAB NOTEBOOKS DUE AT END OF LAB |
# Laboratory Notebook

## Grading Rubric

The first value in “Points Possible” column is for mid semester check, the second value is for the final grading of the lab book.

<table>
<thead>
<tr>
<th>Description</th>
<th>Points Possible (Mid/Final)</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Proper book (hardback, prenumbered pages, 7” x 9” size)</td>
<td>5/10</td>
<td></td>
</tr>
<tr>
<td>2. Cover and Table of Contents (name is on front, contact info is included, Table of Contents is formatted as per the instructions and examples provided, all entries are up to date).</td>
<td>5/10</td>
<td></td>
</tr>
<tr>
<td>3. For all analyses – the following factors need to be covered: title provided, principle defined, procedure outlined, all data collected for each analysis, summary page for each analysis. Be sure to include all case studies for the appropriate labs.</td>
<td>30/60</td>
<td></td>
</tr>
<tr>
<td>4. Overall – organized, easy to follow, neat, entries in pen, any corrections are simple lined out, not scribbled.</td>
<td>10/20</td>
<td></td>
</tr>
<tr>
<td>5. Total Points</td>
<td>50/10</td>
<td></td>
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</tbody>
</table>