**PSSC 363 – Forage Crops**  
Course Requirements and Outline  
Spring 2009

**Instructor:** Dr. Celina Johnson  
**Contact Info:** Plumas Hall 210  
530-898-4147

**Office Hours:**  
Mondays: 9:00 am to 12:00 pm  
Wednesdays: 9:00 am to 12:00 pm  
By appointment

**Course Meeting Times:**  
Lecture: Tuesday and Thursday; 9:30 am to 10:20 am; PLMS 303  
Laboratory: Tuesday; 2:00 pm to 4:50 pm; South Campus  
(a.k.a. somewhere on the farm)

**Text (required):** Forages: An Introduction to Grassland Agriculture  
Vol. 1; 6th Ed; 24 contributing authors

**Support Material:**  
Oregon State University Forage Information Website  
[http://forages.oregonstate.edu/index.cfm](http://forages.oregonstate.edu/index.cfm)  
The Noble Foundation (Ardmore, OK)  

**Session Goals:**  
To understand this statement: "The primary form of food is grass. Grass feeds the ox: the ox nourishes man: man dies and goes to grass again; and so the tide of life, with everlasting repetition, in continuous circles, moves endlessly on and upward, and in more senses than one, all flesh is grass." Excerpt from an address of John James Ingalls, Senator from KS from 1873-1891.

**Course Objectives:**  
Upon completion of this course, students will be able to:  
- Identify various forages used for feeding livestock  
- Determine best management practices for raising forages for livestock production

**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.

**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  ( \geq 93% )</th>
<th>B  ( \geq 83% )</th>
<th>C  ( \geq 73% )</th>
<th>D  ( \geq 60% )</th>
<th>E  ( &lt; 60% )</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-</td>
<td>( \geq 90% )</td>
<td>B-</td>
<td>( \geq 80% )</td>
<td>C-</td>
<td>( \geq 70% )</td>
</tr>
<tr>
<td>B+</td>
<td>( \geq 87% )</td>
<td>C+</td>
<td>( \geq 77% )</td>
<td>D+</td>
<td>( \geq 67% )</td>
</tr>
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Points Possible:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tbody>
<tr>
<td>Mid term lab book</td>
<td>100 pts</td>
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<tr>
<td>Final lab book</td>
<td>200 pts</td>
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<tr>
<td>Exams (3 @ 100 pts)</td>
<td>300 pts</td>
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<tr>
<td>Quizzes (5 @ 25 pts)</td>
<td>125 pts</td>
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<tr>
<td><strong>Total points</strong></td>
<td>725 pts</td>
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Assignments and Activities:

LABORATORY SUMMARIES

You will need to create a 3-ring binder for your lab summaries. You will have a mid semester (100 pts – due Friday before Spring Break) and final grade (200 pts – due Friday before finals week). The following sections will need to be included in your lab manual:

1. Table of Contents. This needs to include date, title and 1-2 sentence objective for each lab
   a. Example:
      Lab. 1. 1/29/08 – Structure and Morphology of Forages
      Summary: Develop an understanding of the structures of grasses and legumes to relate to plant identification.

2. Lab dividers. Use the lab titles as titles for each divider. Keep labs in chronological order.

The purpose of this lab “book” is for you to develop a take home reference at the end of the semester. Each lab will be graded up the following content:

- Title and date at the top of the page (typed, followed by abstract)
- Abstract – this is a one-two paragraph summary of all the content of the lab (typed, double spaced)
- Notes and detailed content – this may be in the form of hand written notes from the lab or detailed summaries of the labs.

EXAMS AND QUIZZES

There will be three exams for this course. The exams will be divided by subject matter. The final will be a comprehensive final. Exams will be held during laboratory time (beginning of lab time) and 1 hour 15 minutes will be allowed for taking exams. Activity will follow exams!!!

Exams in this course are “Pick Your Own Points”. Exams will be written to allow for more points than needed (usually 15-25 points more). YOU ARE RESPONSIBLE for completing 100 points worth of material. I do allow a 5 point grace area, meaning that if you achieve 95-105 points, you will be given that value. If you complete more than the 100 points, your grade will be a percentage of the questions completed. If you do not complete 100 points, your grade will be a straight grade. NOTE: This is designed to allow you to pick and choose what questions you want to answer, it is meant to encourage you to relax and answer what you know.

The instructor reserves the right to conduct announced and unannounced quizzes as deemed necessary!

PROJECTS

Small Plot Project. We will be conducting a small plot research project this semester. The project goal is compare establishment and growth rates of three different forage species (species will be announced as the project begins). Each group of students will be assigned a plot to care for, which includes seed bed preparation, planting, fertilization, and irrigation. Plots will be worked with weekly and students need to keep a log of their activity with their plot to be included in the lab manual. Throughout the semester, sward height and forage yield will be measured and recorded.
Group Project. As a class, we will be prepping a field for planting and taking a look at the establishment of a forage crop. The class will be divided into the following groups, with each group being responsible for presenting a 15 minute presentation on that process at the end of the semester. Before and after photos are strongly encouraged to enhance your presentations.

- Discing – land prep prior to leveling
- Leveling – various implements involved in leveling fields and establishing slope
- Seeding and fertilizing – getting the seed into the soil and applying appropriate fertilizer

Because of this outside time commitment, you will receive two “free” lab times to accommodate this project. This is a TIME SENSITIVE project, meaning that we will have to be watching the weather and timing the preparation and planting – which means that I can give you “rough” estimates of a timeline, but it may vary due to external influences.

The purpose of this project is two fold. One – to get a field prepped and planted at the Sheep and Goat Unit and two – to get you some hands on experience on planting and prepping a forage crop!

Both the SMALL PLOT and GROUP project will be written up in your lab notebook!

EXTRA CREDIT

If a student desires extra credit, they may submit answers to the questions at the end of each chapter in the text book. Students may do a maximum of 5 chapters for 5 points extra credit, each (total of 25 point). Questions are graded as “all or none” – meaning full credit is only given if all questions are correctly answered. To submit questions and answers, email via WebCT (in the header state “Extra Credit Chapter __”) the instructor no later than the Friday (5 pm) of the week that chapter is assigned for reading. For example, the only chapter that is eligible for submission the last week of the semester is Chapter 20. There will be no reminders for this activity – students are on their own to complete the extra credit opportunity.

Miscellaneous:

- 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 obligated 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
- 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

<table>
<thead>
<tr>
<th>Expectations for a Learning Community</th>
<th>Expectations of Faculty</th>
<th>Expectations of Students</th>
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<tbody>
<tr>
<td><strong>Demonstrate high expectations of the course through a demanding syllabus, well-prepared classes, staying current through research and professional activities.</strong></td>
<td></td>
<td>Set high personal standards, develop a strong sense of purpose, come to class well-prepared, and complete assignments on time</td>
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<tr>
<td><strong>Offer conscientious advising and predictable availability</strong></td>
<td>Make the most of faculty advising and mentoring</td>
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<td><strong>Fully involve students in the learning experience by providing prompt, frequent feedback and developing rigorous testing methods</strong></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>
<td></td>
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<tr>
<td><strong>Develop approaches and strategies geared to diverse talents and ways of learning, while maintaining high standards of accountability</strong></td>
<td>Accept responsibility for learning and grades earned</td>
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<td><strong>Seek to eliminate opportunities to engage in academic dishonesty</strong></td>
<td>Approach each class in a professional manner</td>
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<td><strong>Actively contribute to their disciplines</strong></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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<td></td>
<td>Demonstrate complete honesty and integrity</td>
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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.
## Lecture Topics and Exams

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading Assignment</th>
<th>Laboratory</th>
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<tbody>
<tr>
<td></td>
<td><strong>Part 1. Characteristics of Forages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Introduction Forages/Grasslands</td>
<td>Chapter 1</td>
<td>Establish Plots for Project (may be moved due to weather)</td>
</tr>
</tbody>
</table>
| 2.   | Structure/Morphology of Grasses and Legumes | Chapter 2  
Chapter 3 | Structure/Morphology |
| 3.   | Physiology | Chapter 4  
Chapter 5 | Free Time Due to Outside Activities |
| 4.   | Grasses I | Chapter 6  
Chapter 7 | Forage ID |
| 5.   | Grasses II | Chapter 6  
Chapter 7 | Free Time Due to Outside Activities |
| 6.   | Legumes | Chapter 8  
Chapter 9 | Site Visit |
|      | **Part 2. Forage Management** | | **Exam 1** |
| 7.   | Seed Quality/Forage Establishment | Chapter 11 | LAB BOOKS DUE! |
| 8.   | | | Spring Break |
| 9.   | Fertilization/Nutrient Mgmt | Chapter 12 | Germination project |
| 10.  | Hay | Chapter 19 | Soils |
| 11.  | Silage/Haylage | Chapter 19 | Making Hay and Silage |
|      | **Part 3. Forage Utilization** | | |
| 12.  | Grazing Management | Chapter 20 | Grazing Lab Part 1 |
| 13.  | Grazing Management | Chapter 20 | **Exam 2**  
Grazing Lab Part 2 |
| 14.  | Grazing Management | Chapter 20 | Building Grazing Program  
Evaluate Hay and Silage |
| 15.  | Animal Disorders | Chapter 18 | Site Visit |
| 16.  | Forage Quality/Utilization | Chapter 16 and 17 | Forage NIRS  
Group Presentations |
| 17.  | | | **Finals – Exam 3**  
LAB BOOKS DUE! |