Crop Sciences 414  
Forage Crops and Pasture Ecology  
Location: Bevier Hall 166 (http://www.fs.uiuc.edu/ada/0158.html)  
Times: T, TH 3:30 -4:50pm  
Instructors:  
Dr. María Villamil  
N323 Turner Hall  
villamil@illinois.edu  

Office hours: After class or by appointment  

Course Description  
Forages, their plant characteristics, ecology, and production; grasslands of farm and range as related to  
animal production and soil conservation (from course catalog.)  
The course has been developed with the premise that principles of forage physiology and utilization and  
grazing methods are transferable knowledge among the worlds’ grassland ecosystems: by learning the  
characteristics of a given soil-plant-animal ecosystem, students can design an appropriate and profitable  
forage-livestock management system for other ecosystems. Upon completion of this course, the student  
should be able to use the principles of ecology, morphology, physiology, and plant and animal nutrition,  
to develop a forage-livestock system that fits the unique combination of soil, plant, animal,  
environmental, and management characteristics, and production goals in a given location.  

By the end of this course you should be able to:  
1) Describe basic morphology and growth of grasses and legumes.  
2) Recognize major forage species.  
3) Understand and explain basic principles associated with pasture/hayland management.  
4) Understand fundamentals of forage quality and utilization.  
5) Describe fundamental relationships and importance of forages within common livestock production  
systems: beef, dairy, etc.  
6) Design a functioning forage/livestock system.  

Course Web site: A course web site will be maintained on Compass, accessible at  
https://compass.illinois.edu. Course information and materials, including assigned readings,  
announcements, grades, etc. will be posted on the website. Students are required to use the mail box  
inside Compass to communicate with the instructor(s).  

Important: If you can enter the Compass website for our class that means you are an authorized user  
and your emails or assignments will never be rejected or considered junk email. Compass is very  
reliable and efficient program designed for class management. So, please, do not request or expect a  
confirmation email from the instructor(s) every time you submit and assignment or send an email.  

Recommended text and references  
Forage related websites: listed in Compass website (continuously updated)  
Forage related readings: to familiarize students with current issues and research in forage production and  
grazing systems, discussion activities will follow the lectures once a week. These readings will be made  
available electronically on the Compass website. Ideally, during a given week, you will read one  
(occasionally, two) chapter(s) from the book and discuss a selected research paper that will complement  
your assigned reading. Be sure to do this before class so that you will be comfortable discussing the
materials after the lecture.

Grade Components

Final grades will be based on percentage of points obtained out of 1000 total.

<table>
<thead>
<tr>
<th>Required Grade Components</th>
<th>Points</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Participation</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Colleague interview</td>
<td>50</td>
<td>Sept 3 by 5pm – online submission</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>150</td>
<td>Sept 17-19</td>
</tr>
<tr>
<td>Botanical names quiz</td>
<td>50</td>
<td>Sept 24</td>
</tr>
<tr>
<td>Exam I</td>
<td>200</td>
<td>Sept 26</td>
</tr>
<tr>
<td>Exam II</td>
<td>200</td>
<td>Oct 22</td>
</tr>
<tr>
<td>Final exam</td>
<td>250</td>
<td>Dec 19- take home (online sub. by 5pm)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional Extra Credit Activities</th>
<th>Points</th>
<th>Submit only on the following dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annotated bibliography</td>
<td>50</td>
<td>Midterm I</td>
</tr>
<tr>
<td>Scholarly book review</td>
<td>125</td>
<td>Midterm II</td>
</tr>
<tr>
<td>Movie Review</td>
<td>25</td>
<td>Last day of classes (Dec 10)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td></td>
</tr>
</tbody>
</table>

Required Grade Components

Attendance (50 points): To achieve the goals of this course successfully, a high rate of attendance is necessary and it is clearly recognized as a component of the final grade. No more than 4 absences will be allowed during the semester (students with 5 or more absences will receive an F grade). Students must provide, when possible, advance notice of absences to the instructor or as soon as possible following the illness or event that led to an absence. The student is responsible for making up all work that is missed. Attendance will be recorded daily.

Participation (50 points): Class participation is an important element of the course and it is also considered in the final grade. The quality of participation, which is a reflection of careful reading of book chapters and papers, detailed quantitative analysis where necessary, thoughtful reflection, and clear and concise comments, is extremely important. It is also important to build on each other’s comments, which means attentive listening and respectful interactions with others. Class participation will be judged on the basis of quality and consistency of effort on a daily basis. Attendance is not participation. Each student can ascertain the adequacy of his or her class participation by occasional discussion with the instructor.

Additional information for the following grade component will be provided during the course.

Colleague interview (50 points): to build community within the class the student will write a one page article about a classmate during the first week of classes.

Botanical names quiz (50 points): To familiarize the students with the common and scientific names of forages species this quiz will be assigned during the third week of classes.

Oral presentation (150 points): During the week previous to Midterm I, student groups (4 people max) will choose one forage crop/species (a list will be provided) and give a short oral presentation summarizing relevant ecological and agronomic information about the species.

Midterm exams (2 exams, 200 points each): Two types of questions: short answer and multiple choice formats. Short answer questions will be randomly taken from the list of study questions that follow each
book chapter covered. Multiple choice questions will be related to the discussion activities based on research papers and will test important critical thinking skills such as reading data from tables and interpreting graphs, i.e. from 4 possible choices, select the answer that BEST describes the graph. NO MAKE UP EXAMS will be given unless under extraordinary circumstances (e.g., death in family, severe illness) for which written proof will be required.

Final exam (250 points): Take home and in groups, students will work on designing a functioning forage/livestock system for a given location around the US. The instructor will provide a rubric for the assignment and disclose the location to the group members during the last day of classes. Exam must be submitted online by 5pm on December 19 which corresponds to the official final date for the class. NO LATE FINALS will be accepted.

Optional Extra Credit Activities
A list of possible topics for the annotated bibliography and of books and movies to review will be available from the instructor and rubrics for each activity will be posted on compass. These options are open to all students but the due dates are fixed with no late works accepted. For example, if a student decides to take on a certain topic for an Annotated bibliography (50 points), the work must be submitted on the same day and time that Midterm I is offered. After that date, no annotated bibliographies can be submitted. Yet the student has the option of writing a Scholarly book review (125 points) due on the same day and time Midterm II is offered. After that date, no book review will be accepted. By the last day of classes, however, the student still has the option of writing a movie review (25 points) following the instructions posted in our website. Students interested in these activities must register with the instructor beforehand.

Grading
Final grades will be based on percentage of points obtained out of 1000 total.

<table>
<thead>
<tr>
<th>Letter grade</th>
<th>Range</th>
<th>Letter grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>950-1000</td>
<td>C</td>
<td>700-749</td>
</tr>
<tr>
<td>A</td>
<td>900-949</td>
<td>D+</td>
<td>650-699</td>
</tr>
<tr>
<td>B+</td>
<td>850-899</td>
<td>D</td>
<td>600-649</td>
</tr>
<tr>
<td>B</td>
<td>800-849</td>
<td>F</td>
<td>&lt;599 or &gt; 5 absences</td>
</tr>
<tr>
<td>C+</td>
<td>750-799</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Class Policies
This syllabus is subject to change. Any changes will be announced in class and updated on the course website on Compass. You are responsible for all information given out in class. Failure to obtain information or receive announcements in class is no excuse for missing assignments or for turning assignments in late.

General: This course will follow all the policies of the UIUC- Student Code that you can find at www.admin.uiuc.edu/policy/code/. We encourage all students to become familiar with it and specifically with Part 4 of the code pertaining to ‘Academic Integrity’ (www.admin.uiuc.edu/policy/code/article1_part4_1-401.html)
Academic integrity exists when students and faculty seek knowledge honestly, fairly, with mutual respect and trust, and accept responsibility for their actions and the consequences of those actions. The following are examples of violations of academic integrity:
- Using or attempting to use in any academic exercise materials, information, study aids, or electronic data that the student knows or should know is unauthorized.
- Look at or copy another student quiz or assignment as well as allowing another person to look at
or copy your quiz or assignment.
- Using electronic devices or other methods to share answers or assignments in an unauthorized manner.
- Submitting an assignment paper without properly citing or acknowledging the work of others.

Instructors can and will search on blocks of text to determine whether unauthorized use/plagiarism has taken place and will proceed according to the University policy code.

Accommodations: UIUC provides academic support for those students who have been diagnosed with learning, physical, and psychological disabilities. Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Disability Resources and Educational Services (www.disability.illinois.edu); (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class. All accommodations will follow the procedures stated in the UIUC-Student Code (http://admin.illinois.edu/policy/code/article1_part1_1-110.html)

Communication: When you have questions regarding course material or procedures, please consult your classmates and the course website as your first resource. We will follow conversation threads on Compass, and will weigh in on a topic when helpful. This will keep email volume down and allow us to avoid duplication of efforts. If your question remains unanswered, please start a new thread and we’ll respond in a timely way. For private matters, you may contact us directly by email, phone or set up a meeting appointment.

Course suggestions and/or Complaints: Your opinion counts and we encourage students to offer suggestions to improve this course. Write your ideas regarding teaching methods, course topics, etc. and hand them to the instructors anytime during the semester. Also, if you have grading complaints please submit them to me in writing within a week of when the work is available for the students. Use a word processor and justify your complaint in a clear and concise way (< 1 page).

Notes on Expectations and Classroom Behavior:
According to the faculty handbook, it is expected that students will spend, in preparation for courses, two to three hours of study time outside the classroom for every hour of credit in the classroom. This means that students should be prepared to spend, on average, seven hours per week outside of class working on a three-credit course; however, this will vary from student to student and from course to course. As far as behavior goes, we will treat you in a respectful, cordial way, and expect that you do the same for all those present. http://www.phdcomics.com/comics.php?f=1219

Overview of topics:
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Book chapter*</th>
</tr>
</thead>
</table>
| 1    | Syllabus – *Colleague interview*  
Forages and grasslands in a changing world | Ch 1 |
| 2    | Definitions and terms used in grassland management  
Grass and legume morphology and growth | Glossary p517-webpage  
Ch 2 & 3 |
| 3    | Physiology of forages | Ch 4 |
| 4    | *Student Presentations* - Overview of common forage species and their uses | Compendium (following p236) |
| 5    | *Botanic names quiz*  
*Midterm I* | Appendix p 503 |
| 6    | Environmental aspects of forage management | Ch5 |
| 7    | Forage management | Ch 11 & 12 |
| 8    | Forage quality | Ch 16 |
| 9    | *Midterm II*  
Movie session |  |
| 10   | Forage utilization | Ch 17 |
| 11   | Forage utilization and animal disorders | Ch 18 |
| 12   | Hay and silage | Ch 19 |
| 13   | Grazing systems – Invited speaker Beef cattle farms in the Midwest | Ch 20 |
| 14   | **Thanksgiving Break** |  |
| 15   | Grazing systems – Invited speaker Dairy farms in the Midwest | Ch 20 |
| 16   | *Final assignment*  
**Reading day** |  |
| 17   | **FINAL EXAM DUE – DECEMBER 19th 5pm** |  |

* Most lecture topics will have an additional reading that will be given in class or posted on Compass for discussion activities following lectures.

BEST WISHES FOR A HAPPY AND PRODUCTIVE SEMESTER!