

COURSE SYLLABUS
PLNT 3200 - FORAGE CROP SCIENCE
FALL 2014

Instructor:

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Office Hours: MWF @ 10:00 am -12:00 noon or by appointment

Class Meeting Time and Place: 09:00 - 09:50 am MWF, Rm 4041 Agriculture C

Prerequisites: [AECL 1000](#) or [LIFE 1000](#)

Description of Course:

This course focuses on major aspects of forage crop production and biology, for example, cultural practices, adaptation, sustainable agriculture use, seed production, harvest, livestock utilization, and storage of forages. The course especially emphasizes characteristics of important grasses and legumes.

Course Objectives and Outcomes:

1. To understand the role of forages in sustainable food production.
2. To know the most commonly grown forages and recognize their suitability in terms of climate, soil, and livestock use.
3. To learn how forage management relates to forage production and nutritive value.
4. To realize how forages are evaluated for their value to livestock.
5. Be able to utilize the above information to solve real problems facing livestock producers.

Text:

Barnes R.F., Nelson C.J., Collins M., and Moore K.J. 2003. **Forages. Volume I. An Introduction to Grassland Agriculture**, 6th Ed.

Additional readings:

Ball D.M., Hoveland C.S., and Lacefield G.D. 2007. *Southern Forages*. 4th Ed.

Barnes R.F., Nelson C.J., Moore K.J., and Collins M. 2007. *Forages. Volume II. The Science of Grassland Agriculture*, 6th Ed.

Available on:

- Bookstore
- Library Reserve
- Online Purchase (e.g., amazon.com; Barnes&Noble – BN.com)

Grading Standards:

There will be 4 lecture exams, each of which is worth 100 points. Announced and unannounced quizzes will be 50 points. Plant identification/assignment is worth 100 points. Class attendance adds 50 points. Final course grades will be based on the total points earned according to the following scale:

Total points: 600

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = less than 60%

Attendance/Examination Policy:

Attendance carries 50 points worth; students are advised to make sure that they sign the attendance sheet at every class.

Quizzes may or may not be announced the period before. No make-up quizzes will be allowed however the lowest out of 6 quizzes given will be dropped.

The first three lecture exams will be held on Fridays as scheduled in the course outline.

The fourth exam (final), is not comprehensive, will be during the final exam period, "Fall 2014 Final Examination Schedule" which is listed under "Regular Final Examination Times" on page 25 in UW Fall Class Schedule 2014. For more information about final exams, please refer to UW Regulation 6-403.

Exam questions may consist of multiple choice, true/false, matching, and short and essay type. Points will be awarded based on correct, clear, concise, and completeness of the answers.

Students who have two exams at the same time or more than two final exams scheduled in one day or have some other unavoidable circumstances, they can make alternative arrangements with the instructor ahead of time. If someone fails to attend an exam because of personal illness, personal or family emergency, he/she can make alternative arrangement with the instructor to take a make-up exam. Students are highly encouraged to carry student Campus Express ID Card at all exams.

Academic Honesty:

University of Wyoming is founded on a strong base of integrity, respect and trust. Any form of academic dishonesty is unacceptable and will not be tolerated [UW General Bulletin]. Student's involvement in any kind of academic dishonesty can result in an automatic "F" in the course. For detailed information on what constitutes an act of academic dishonesty, please refer to the latest version of University Regulation "UW Regulation 802."

Disability Statement:

If a student has a physical, learning, or psychological disability and requires accommodations, please let the instructor know as soon as possible. The student must register with, and provide documentation of his/her disability to University Disability Support Services (UDSS) in Student Educational Opportunity (SEO), room 109 Knight Hall.

Course Outline:

The instructor can make changes to the syllabus as the course proceeds. If changes occur, these will be announced in the class.

Lectures Schedule (subject to change):

| Week | Lectures | Date | Topic | Reading in text* |
|-------|----------|-----------------|--|------------------|
| Wk 1 | 1 | W, 9/3 | Introduction: Overview - Forages and Grasslands | Ch 1 |
| | 2 | F, 9/5 | Role of Forages in Agriculture | Ch 1 |
| Wk 2 | 3 | M, 9/8 | Forages in Relation to Animal Agriculture | Ch 1 |
| | 4 | W, 9/10 | Forages: Importance and Economics | Ch 1, Note |
| | 5 | F, 9/12 | Structure and Morphology: Grasses | Ch 2 |
| Wk 3 | 6 | M, 9/15 | Structure and Morphology: Grasses – continue | Ch 2 |
| | 7 | W, 9/17 | Structure and Morphology: Legumes | Ch 3 |
| | 8 | F, 9/19 | Structure and Morphology: Forbs | Ch 3 |
| Wk 4 | 9 | M, 9/22 | Physiology of Forage Plants: C3 vs C4 | Ch 4 |
| | 10 | W, 9/24 | Physiology of Forage Plants: C3 vs C4 –continue | Ch 4 |
| | 11 | F, 9/26 | Grasses for the North | Ch 6 |
| Wk 5 | 12 | M, 9/29 | Grasses for the South | Ch 7 |
| | 13 | W, 10/1 | Legumes for the North | Ch 8 |
| | 14 | F, 10/3 | Exam 1 (covers lectures 1-13) | - |
| Wk 6 | 15 | M, 10/6 | Legumes for the South | Ch 9 |
| | 16 | W, 10/8 | Forbs | Ch 10 |
| | 17 | F, 10/10 | Most Common Forage Legumes | Ch 10 |
| Wk 7 | 18 | M, 10/13 | Most Common Forage Legumes - continue | Ch 10 |
| | 19 | W, 10/15 | Most Common Forage Grasses, irrigated | Ch 10 |
| | 20 | F, 10/17 | Most Common Forage Grasses, irrigated - continue | Ch 10 |
| Wk 8 | 21 | M, 10/20 | Most Common Forage Grasses, dryland | Ch 10 |
| | 22 | W, 10/22 | Most Common Forage Grasses, dryland- continue | Ch 10 |
| | 23 | F, 10/24 | Exam 2 - Midterm (covers lectures 15-22) | - |
| Wk 9 | 24 | M, 10/27 | Most Common Annual Forages | Ch 10 |
| | 25 | W, 10/29 | Most Common Grain Forages | Ch 10 |
| | 26 | F, 10/31 | Establishment of Forages | Ch 11 |
| Wk 10 | 27 | M, 11/3 | Establishment of Forages - continue | Ch 11 |
| | 28 | W, 11/5 | Fertility and Nutrient Management | Ch 12 |
| | 29 | F, 11/7 | Insect, Disease and Weed Control | Ch 13 |
| Wk 11 | 30 | M, 11/10 | Plant Identification and Assignment: at Greenhouse | Handout |
| | 31 | W, 11/12 | Plant Identification and Assignment - continue | Handout |

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|-------|----------------|--|--|-------------------------|
| | 32 | F, 11/14 | Exam 3 (covers lectures 24-31) | - |
| Wk 12 | 33 34 35 | M, 11/17 W, 11/19 F, 11/21 | Insect, Disease and Weed Control – continue Forage Improvement and Seed Production Forage Quality | Ch 13 Ch 15 Ch 16 |
| Wk 13 | 36 - - | M, 11/24 W, 11/26 F, 11/28 | Forage Utilization Thanksgiving, no class Thanksgiving, no class | Ch 17 - - |
| Wk 14 | 37 38 39 | M, 12/1 W, 12/3 F, 12/5 | Animal Disorders in Relation to Forage Forage Storage: Hay Forage Storage: Silage | Ch 18 Ch 19 Ch 19 |
| Wk 15 | 40 41 42 | M, 12/8 W, 12/10 F, 12/12 | Grazing Management Systems Grazing Management Methods Considerations in Developing Grazing Systems | Ch 20 Ch 20 Ch 20 |
| Wk 16 | Final | 12/19 | Final Exam: Friday 8.00-10.00 am (covers lectures 33-42) | - |

*Barnes R.F., Nelson C.J., Collins M., and Moore K.J. 2003. **Forages. Volume I. An Introduction to Grassland Agriculture**, 6th Ed.

In addition to the text, additional handout/notes will be supplied in the class, as and when needed.