

NRSM 360 RANGELAND MANAGEMENT

Instructor information

Instructor: Walter Lujan, Adjunct
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Phone: 243-6200 or 381-0678 - cell
Office hours: 10:00 – 12:00 MW (other times by appointment or if door is open feel free to come in)

Teaching Assistant (TA), Laura Stein CHCB 420 (Clapp Building), Email: laura.stein@umontana.edu

Course description: This course is an introduction to rangeland ecosystems and range management and science. Range management is an integrative management science involving plant physiology, animal science, ecology, soil science, hydrology, economics, and other disciplines. Students learn about social values in regards to rangeland ecosystems, historical and policy aspects, different rangeland types and ecosystem function, interaction of plant physiology with grazing response of plants and communities, issues and concerns regarding vegetation and ungulate management, and introduction to livestock and animal nutrition principles.

Lectures: Lecture topics will be determined up to one week prior class. The lectures will generally follow the text. Chapters should be read before the lectures. Reading assignments and chapters will be placed in Moodle. Material for lecture tests will come from the text, lectures, and occasionally from outside readings.

Laboratory: There will be a lab on Monday and Wednesday afternoon from 2:00 – 5:00pm each day. Labs will meet every other week. Most labs are scheduled to take place outdoors (weather permitting). On occasion, lecture material may be presented in the lab. During outdoor labs we will return to campus by approximately 5:00 - 5:30pm. However, in cases where longer driving times are needed to get to sites, return time to campus maybe after 6:00pm (make arrangements for these longer labs). All students are expected to attend field labs. Your final lab grade will be reduced for each unexcused absence of a field lab. Lab quizzes will be incorporated into your final grade.

Learning Outcomes: As a background course covering a broad range of subjects the main learning outcome is to provide the student with an overview of rangelands and range management to provide the student with the ability to work with rangeland managers within their discipline. The student will have the ability to:

- Describe rangelands, including their products and values, including multiple use principles.
- Understand basic principles of how physical aspects and management may impact values and products of rangelands.
- Determine rangeland community characteristics using basic plant ecology methods.
- Describe and communicate how grazing as a process may impact rangelands.
- Describe past methods and current understanding of theories in plant succession and state and transition models in determining rangeland conditions.
- Develop general methods to determine initial stocking levels of livestock on various rangelands.
- Describe rangeland livestock production systems and economics and issues in regards to ranching in the western U.S.
- Identify important rangeland plants found in Montana.

Textbook: Range Management: Principles and Practices (6th ed.) by J.L. Holecheck, R.D. Pieper, and C.H. Herbel

Course Calendar:

Dates (Normal)	Topic (Normal)
MW 9:00-9:50	NRSM 360 00
M 2:00 – 5:00pm	NRSM 360 01
W 2:00 – 5:00pm	NRSM 360 02

Course guidelines and policies:

Student Conduct Code

All students need to be familiar with the Student Conduct Code. The Code is available for review on line at [Student Conduct Code](#)

Attendance

Attendance will be taken for all lectures and labs.

Course withdrawal

Registration, Adding, & Dropping Classes

Dates	Description
September 21, 2017 (5:00 p.m.)	Autumn Class Day 15: <ul style="list-style-type: none">✓ Last day to drop individual Autumn classes on CyberBear with refund✓ Last day to withdraw from autumn (drop all courses) with a partial refund – see Withdrawal Policy below.✓ Last day to add Autumn classes with electronic Override on CyberBear or paper Override form.✓ Last day to change Autumn credits in variable credit courses & switch grade mode in CyberBear.✓ Last day to change Autumn grading option to or from audit.✓ Last day to buy or refuse UM's student health insurance coverage.
September 22 – November 2, 2017 (5:00 p.m.)	Through Autumn Class Day 45: <ul style="list-style-type: none">✓ Autumn course adds & drops require a Course Add/Change or Course Drop form with instructor's & advisor's signatures. \$10 fee applies.✓ A 'W' will appear on the transcript for dropped classes. No refunds.✓ Students can change variable credit amounts and grading options (except audit) using a Course Add/Change form with instructor's & advisor's signatures.
November 3 – TUESDAY, December 12, 2017 (by 5:00 p.m.)	After Autumn Class Day 45: <ul style="list-style-type: none">✓ Autumn adds require a Course Add/Change form with instructor's & advisor's signatures. \$10 fee applies.✓ Autumn drops require a Course Drop form with instructors, advisors, & Dean's signatures. \$10 fee applies.✓ A 'WP' or 'WF' will appear on the transcript for dropped classes. No refunds.✓ Students can change variable credit amounts, or change grading options, (except audit) using a Course Add/Change form with instructor's & advisor's signatures.
December 12, 2017	Last day of Autumn instruction and last day to withdraw from Autumn semester (drop all classes) by 5:00 p.m.
December 13, 2017	Student study day – no classes
December 14 – 20, 2017	Autumn finals week (Thur. – Wed.; Sat. & Sun. are study days, except for Saturday-only classes which meet Sat.)

Disability modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and [Disability Services for Students](#). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

Assignment expectations

Group project - As rangeland management is an inherently collaborative process, you will gain experience working with others to synthesize and provide an assessment and recommendations on one of following contemporary rangeland challenges: threatened and endangered species, noxious and invasive plant(s) encroachment, elk and livestock co-use, multiple land ownership, or climate change within rangeland ecosystems. Components of the project will include: goals and objectives, resources concerns, assessments, alternatives/recommendations, stakeholder analysis, a report, and an oral presentation. Individual participation will be evaluated and will affect your overall participation grade.

Grading policy

Grading System (plus/minus system will be used): Grading will be on a scale of: 90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; less than 60% = F

Final grade breakdown: Exams: 75% (Lecture Exams and Quizzes) - A minimum of one week notice will be given before exam and quiz dates.

Laboratory/group project: 25% (35% quizzes, 40% group project and 25% attendance/homework assignments).