

## 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), Rebekah Brassfield Email: [rebekah.brassfield@umconnect.umt.edu](mailto:rebekah.brassfield@umconnect.umt.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 maybe 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 week. Most labs are scheduled to take place outdoors (weather permitting) during the first half of the semester. Outdoor labs will meet outside at the Campus Police/Parking Permit office. 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. Purchase of the book is optional. Chapters from the book will be posted in moodle prior to lectures.

### 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](#)

#### **COVID-19 Protocol**

- Mask use is required within the classroom or laboratory.
- If you feel sick and/or are exhibiting COVID-19 symptoms, please don't come to class and contact the Curry Health Center at (406) 243-4330.
- If you are required to isolate or quarantine, you will receive support in the class to ensure continued academic progress. (Add specific information about how you, as the instructor, will continue providing course materials to students in quarantine or isolation.)
- (If instructors are comfortable sharing or including this) UM recommends students get the COVID-19 vaccine. Please direct your questions or concerns about vaccines to Curry Health Center.
- Where social distancing (maintaining consistent 6 feet between individuals) is not possible, specific seating arrangements will be used to support contact tracing efforts.
- Class attendance and seating will be recorded to support contact tracing efforts.
- Drinking liquids and eating food is discouraged within the classroom.
- (If applicable) Mask use is required in vehicles when traveling to field sites as part of class/fieldwork.
- (If applicable) Please note this class is being recorded. Notifying students is a requirement if this is the

case

#### Attendance

Attendance will be taken for all lectures and labs.

#### Course withdrawal

Deadline	Description	Date
To 15th instructional day	Students can drop classes on Cyberbear with refund & no "W" on Transcript	September 17, 2021, @ 5:00pm
16th to 45th instructional day	Drop requires a form with instructor and advisor signature, a \$10 fee from registrar's office, student will receive a 'W' on transcript, no refund.	September 20 thur October 29, 2021 @ 5:00pm
Beginning 46th instructional day	<b><u>Students are only allowed to drop a class under very limited and unusual circumstances</u></b> Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45 <sup>th</sup> instructional day of the semester. . Requests to drop must be signed by the instructor, advisor, and Associate Dean (in that order) so if you pursue this request, <b>leave sufficient time to schedule meetings with each of these individuals</b> (generally this will take at least 3-5 working	November 1 thru December 10, 2021 @ 5:00pm.

Deadline	Description	Date
	days). A \$10 fee applies if approved. Instructors must indicate whether the individual is Passing or Failing the class at the time of request.	

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

Laboratory/group project: Approximately 25% (group project and attendance).

**\*Violations of the Student Conduct Code may affect your final grade.**