

## NRSM 121S - Nature of Montana

Fall, 2016

### Instructors

#### **Dr. Alexander L. Metcalf**

Office Location: Room 440, Charles H. Clapp Building

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**Office hours: My door is always open, stop by  
Specific office hours: Monday and Wednesday, 2:00 – 3:30PM  
AND by appointment.**

*If you need to meet outside my office hours, please send me  
an e-mail and suggest at least **two** other times that fit your schedule.*

#### **Adam Snitker, Teaching Assistant**

Office Location: 412, Charles H. Clapp Building

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Office hours: **Tuesday and Thursday, 10:00AM – 12:00PM**

### Meeting Times

10:00 – 10:50 a.m. Monday, Wednesday, & Friday

### Meeting Place

Stone Hall, Room 304

### Credits

Three (3.0)

### Course Overview

The course will provide a foundation for students to understand the dynamics of human relationships with the environment. It will offer a unique combination of material covering environmental ethics, ecological processes, natural history, and current social conflicts regarding human uses of natural resources. It will use the ecology of western Montana and topical issues in resource management as focal points for learning.

The course aims to develop an “environmental literacy,” so participants can acquire a foundation of knowledge to address the enormous challenges facing the human relationship with nature. Students will receive an introduction to the natural history of Montana as well as a social history of human land use practices, population/growth impacts, and policy trends in the interior West. A particular focus will be placed on current environmental controversies – such as endangered species management, water policy, and wildfire management - to understand how social demands and political processes affect natural systems. Because of the breadth of information covered, this will be a rigorous course. Students will be expected to be familiar with foundational concepts and theories from social science and natural science, such that they understand the underpinnings of natural resources issues and conflicts that stretch from Montana across the globe.

Lecture materials will follow a major, established course text on the challenges of sustainable natural resources management (Chiras and Reganold’s, *Natural Resource Conservation*, the required text for the course). Additional selected readings will also be assigned to offer specialized insight into conservation dilemmas in the western United States. Lectures will highlight ongoing natural resource debates within the region to illustrate the multiple features and disciplinary integration of natural and social sciences.

### Course Objectives

This interdisciplinary course will examine a series of concepts in the management of natural resources. Its objectives are threefold:

1. Recognize the impacts of human demands on natural resources and ecosystems;
2. Become familiar with the policies, economic factors, and social dynamics affecting major natural resources issues in the western United States; and
3. Understand foundational scientific principles of ecology, environmental processes, and natural resources management

## Social Science Learning Objectives

1. Describe the nature, structure, and historical development of human behavior, organizations, social phenomena, and/or relationships;
2. Use theory in explaining these individual, group, or social phenomena; and
3. Understand, assess, and evaluate how conclusions and generalizations are justified based on data

## Required Technology

This course will employ two online supplements: Moodle and TopHat. You cannot succeed in this course without engaging BOTH of these tools.

Moodle is the University of Montana online course management system ([Link to http://www.moodle.umt.edu/](http://www.moodle.umt.edu/)). Sign in and find our class using 'NRSM 121.' Any changes to the course calendar and additional assignments will be posted exclusively on Moodle. All supplemental readings will be posted on Moodle.

TopHat is an app for your smartphone, tablet, or laptop (search for "TopHat" in the App or Android store). You must obtain a TopHat subscription for this class at TopHat ([Link to http://www.tophat.com/](http://www.tophat.com/)) before signing into the app. Subscriptions are \$26 for four months, \$38 for 1 year, or \$75 for lifetime – any will work for this course. Once you have created an account and signed in, search for our course using the **Join Code 979296**. We will use TopHat to take attendance, answer sample exam questions in class, and engage in class discussions. *If you do not have a smartphone, tablet, or laptop, you can still participate using a normal flip-phone via SMS text. If you do not have any of these technologies, TopHat will waive the subscription fee so you can purchase a disposable phone for the semester. You must bring your cell phone (or other technology used to access TopHat) to class every day.*

## Required Texts (Available in the Campus Bookstore OR anyplace online)

Chiras, Daniel and John Reganold. 2010. *Natural resource conservation (10<sup>th</sup> edition)*. San Francisco, CA: Benjamin Cummings/Pearson. 659 p.

Other materials as assigned – available on course Moodle site.

## Student Assessment and Expectations

This class is offered for traditional letter grade only, it is not offered under the credit/no credit option. This course will be graded on the following scale: 93-100 (A), 90-92 (A-), 87-89 (B+), 83-86(B), 80-82 (B-), 77-79 (C+), 73-76 (C), 70-72 (C-), 60-69 (D), <60 (F).

Students will be evaluated based on performance in five areas:

Assignment/Evaluation type	Date	Proportion of grade
Attendance	<i>Everyday</i>	10 pts
Quizzes & participation	<i>Everyday</i>	15 pts
Exam #1	October 6	25 pts
Exam #2	November 8	25 pts
Final examination	December 15, 8:00AM	25 pts
<b>TOTAL</b>		<b>100 pts</b>

To be successful in this class, you will be expected to:

- attend every class period
- complete all readings prior to each class (basic readings listed on syllabus; supplemental readings on Moodle)
- actively participate in class lectures, polls, and discussions (both online and in person), and
- demonstrate understanding of readings and lecture material via two exams and the final exam.

Attendance is required by University Policy. If you must miss a class due to an emergency, you must contact me **beforehand** with a legitimate reason. Legitimate reasons include such things as: illness *with a note from Health Center or Doctor*, field trips in another courses *with a note from your professor*, or other emergencies *with documentation*. If you miss a class, you are still responsible for the material (yes we covered something important). Please ask a classmate for the information **before** visiting with me during office hours. Opportunities to make up attendance or in-class participation points will only be offered to students who contact me **beforehand** and have a legitimate reason for missing class. All exam dates are final.

### Academic Honesty

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](http://www.umt.edu/vpesa/Dean%20of%20Students/default.php) (Link to <http://www.umt.edu/vpesa/Dean%20of%20Students/default.php>). Plagiarism or cheating will not be tolerated; all violations will result in reduced credit for the assignment, zero credit for the assignment, zero-credit for the course, and/or reference to the Provost and Vice President for Academic Affairs.

**Warning:** Do NOT send attendance codes or in-class participation information to others via text, snapchat, or any other means. If you send or receive information intended to falsely represent your attendance or participation, this is cheating and you will automatically receive a zero for **ALL** attendance and/or participation for the **ENTIRE** semester.

### Students with Disabilities Statement

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

### Important Dates Restricting Opportunities to Drop a Course in Fall Semester 2014

Deadline	Description	Date
To 15 <sup>th</sup> instructional day	Students can drop classes on Cyberbear with refund & no "W" on Transcript	Sept. 21 = last day
16 <sup>th</sup> to 45 <sup>th</sup> instructional day	A class 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.	Sept. 22 until Nov. 2
Beginning 46 <sup>th</sup> instructional day to end	Students are only allowed to drop a class under very limited and unusual circumstances. 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 45th 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, leave sufficient time to schedule meetings with each of these individuals (generally this will take at least 3-5 working days). A \$10 fee applies if approved. Instructor must indicate whether the individual is Passing or Failing the class at the time of request.	Nov. 3 until Dec. 12

## Other Course Policies

Food is allowed in class, but please be polite. Please avoid odiferous ingredients, loud chewing or packaging, and items that might spill and/or otherwise cause disruption or damage.

UM is a tobacco free campus. This includes smokeless/chewing tobacco, vaporizers, and e-cigarettes. Do not bring any of these products to class or you will be asked to leave.

Please do not use your cell phone in any way that might disrupt class; a good first step is muting the volume or turning your phone to vibrate.

## **Tentative Course Schedule**

All supplemental readings will be posted on Moodle  
Any course schedule updates will be posted on Moodle

### **Week 1 – Welcome**

Sept. 1 Welcome and course purpose – “Finite planet”

### **Week 2 – Course overview & Technology**

Sept. 4 NO CLASS – Labor Day  
Sept. 6 Course overview and technology  
Sept. 8 NO CLASS – NRSM 215 Field Studies in Conservation

### **Week 3 – Human Population & Hunger**

Sept. 11 Introduction to conservation and natural resource management (Ch. 1, 1-13)  
Sept. 13 Human populations (Ch. 4, 86-97)  
Sept. 15 Human hunger (Ch. 5, 108-115, 119)

### **Week 4 – Economics & Ethics**

Sept. 18 Demographics and foreign aid (see Moodle)  
Sept. 20 Sustainable economies (Ch. 2, 25-33, 36-39)  
Sept. 22 Why care about Nature? Environmental ethics and critical thinking (Ch. 1, 13-17 & Ch. 2, 39-45)

### **Week 4 – Forestry and Fire Management**

Sept. 25 Forest fire dynamics I (Ch. 14, 387-390)  
Sept. 27 Forest fire dynamics II (see Moodle)  
Sept. 29 Sustainable forestry in the western US (Ch. 14, 371-387)

### **Week 5 – Water Systems and Use (Exam)**

Oct. 2 Water cycle and availability (Ch. 10, 226-238)  
Oct. 4 Western US water issues (Ch. 11, 257-266 & 279-293)

**Oct. 6 EXAM #1**

### **Week 6 – Property & Resource Management**

Oct. 9 Public land management (see Moodle)  
Oct. 11 Private land conservation (see Moodle)  
Oct. 13 Community-based natural resource management (see Moodle)

### **Week 7 – Energy; Ecology**

Oct. 16 Non-renewable energy (Ch. 22, 563-580, 589-593)  
Oct. 18 Sustainable energy (Ch. 23, 597-619)  
Oct. 20 Principles of ecology (Ch. 3, 50-73)

**Week 8 – Ecology; Soils**

- Oct. 23 Ecological systems (Ch. 3., 73-82)
- Oct. 25 Soil conservation and sustainable agriculture (Ch. 6, 123-138; Ch. 7, 141-154)
- Oct. 27 Rocky mountain flora and fauna (see Moodle)

**Week 9 – Wildlife, Fisheries, & Biodiversity**

- Oct. 30 Ethics of biodiversity protections (Ch. 15, 406-415, 418-425)
- Nov. 1 Fisheries management in the western US (Ch. 12, 306-308, 319, 322, 327)
- Nov. 3 Wildlife management in the western US (Ch. 16, 429-456)

**Week 10 – Recreation and Tourism (Exam)**

- Nov. 6 Wildlife Values (see Moodle)

**Nov. 8 EXAM #2**

- Nov. 10 NO CLASS – VETERAN’S DAY

**Week 11 – Consumptive Recreation**

- Nov. 13 Hunting in the western US (see Moodle)
- Nov. 15 Angling in the western US (see Moodle)
- Nov. 17 Recreation management in the western US (see Moodle)

**Week 12 – Global warming and climate change I**

- Nov. 20 Nature-based and ecotourism
- Nov. 22 NO CLASS – THANKSGIVING BREAK
- Nov. 24 NO CLASS – THANKSGIVING BREAK

**Week 13 – Global warming and climate change II**

- Nov. 27 Global climate (Ch. 19. 513-527)
- Nov. 29 Ecological impacts of climate change (see Moodle)
- Dec. 1 Human impacts of climate change (see Moodle)

**Week 14 – Natural Resource Decision Making**

- Dec. 4 Human dimensions of natural resources (see Moodle)
- Dec. 6 Democracy and natural resource decisions (see Moodle)
- Dec. 8 Collaborative approaches to western US conservation issues (see Moodle)

**Week 15 – Review; Final Exam**

- Dec. 11 REVIEW
- Dec. 13 NO CLASS – READING DAY

**Dec. 15 Comprehensive Final Exam (8:00AM, STONE 304)**