GEOG 430/530 – Syllabus
Resilience-Based Natural Resource Management

GEOG 430/530
Winter 2015
Tu/Th 12:00-1:20pm
Wilkinson 207

Professor Hannah Gosnell
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541-737-1222
Office Hours: Tu 1:30-3:30
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Catalog course description. RESILIENCE-BASED NATURAL RESOURCE MANAGEMENT (3). Causes and consequences of conflict over natural resource management at local to global scales; principles for managing social-ecological systems for resilience. Field trip(s) may be required; transportation fee charged.

“Over the past 50 years, humans have changed ecosystems faster and more extensively than in any period in human history. This has been due largely to rapidly growing demands for food, freshwater, timber, fiber, and fuel. The result has been a substantial and largely irreversible loss in the diversity of life on Earth. The pressures on ecosystems will increase globally in coming decades unless human attitudes and actions change.” (Millennium Ecosystem Assessment, 2005)

“It is clear that the environmental problems we face will not be solved using the failed approaches of the past. But they can be resolved if we embrace resilience thinking.” (Walter V. Reid, Director of the Millennium Ecosystem Assessment)

This is a critical time to be studying the geography of natural resource management, as the statements above attest. We are at a crossroads, and the need for creative solutions to the many environmental problems we face is profound. Before we can develop such solutions, however, we need to understand the roots and drivers of our problems.

This course introduces students to the study of relationships between people and the environment providing a theoretical context for thinking about the anthropogenic causes and consequences of environmental change in different parts of the world. A central premise guiding the course is that it is difficult if not impossible to understand social and ecological systems independently of one another; thus our challenge is to consider how they influence each other and what those dynamics mean for efforts to address natural resource management challenges. After familiarizing ourselves with theories and concepts associated with “resilience thinking” we will explore some of the most promising new solutions to the environmental problems we face through case studies, field trips, and guest speakers. As we consider different natural resource management issues, challenges, and solutions, we will repeatedly come back to four key questions:

• Where are we?
• How did we get here?
• What’s possible for the future?
• Where do we go from here?

The goals of this course are:
• to challenge students to think critically about the relationship between humans and the environment, and the geography of natural resources;
• to provide students with the tools and critical thinking skills necessary to view the world in fresh ways and assess possible routes forward;
• to produce informed global citizens and active, engaged participants in current debates about the future of the planet;
• to enhance students’ analytical, communication, research and writing skills.

Learning Outcomes

Upon completing this course, GEOG 430 students will be able to:
- Characterize and explain the evolution of different approaches to natural resource management
- Define key terms and concepts associated with resilience-based natural resource management
- Give examples of how ecosystem services are connected to human well-being
- Compare and contrast different approaches to environmental governance
- Demonstrate an understanding of the adaptive cycle in social ecological systems
- Characterize major resource management challenges and solutions in the PNW
- Articulate their vision of how they can contribute to “the Great Turning” – a collective effort to improve the resilience of social-ecological systems and human well-being at local, regional and/or global scales

In addition to the learning outcomes listed above, GEOG 530 students will be able to:
- Demonstrate a command of additional assigned scholarly literature related to resilience-based natural resource management including theories about regime shifts, thresholds, and transformation.
- Communicate verbally, and through oral presentation and scholarly writing, key concepts, techniques and theoretical motivations associated with the study of resilience-based natural resource management
- Utilize Web of Science to identify scholarly literature relevant to a chosen paper topic
- Construct and draft a properly cited 10-12 page written analysis of a topic related to resilience-based natural resource management, drawing on assigned readings, lectures, and supplemental scholarly literature found independently

Course Structure

Classes will combine lectures, small- and large-group discussions, occasional viewing of films and material from the Internet, and two or three field trips. In terms of student work and graded material, note that more than half of your final grade will be determined by factors that are very much within your control – performance in regard to short written assignments, oral presentations, participation, and attendance. The remainder of your grade will be determined by performance on two exams (over which you have somewhat less control).

Summarizing and Responding to Readings

In preparation for a series of small group discussions during the first part of the course, you will be expected to take notes on the assigned readings and bring them to class.
These responses should be typed, but they can be informal with bullet points. They should include key points along with any questions you have. You should use your notes for discussion, add hand-written notes during the discussion, and hand them in at the end of class. You will be evaluated primarily on the typed responses you bring to class, but also on the degree to which you supplement what you wrote with hand-written insights and clarifications you gain during the discussion. (This will both demonstrate your engagement and help your study efforts.)

Grads will also read supplemental journal articles and address questions such as:
- What is the central argument in this paper? How is it innovative or provocative or problematic?
- How does it relate to class themes? To other class readings? To your research?
- What questions does the paper raise for you?

The purpose of these write-ups is threefold. First, they will require you to digest the material and assemble your thoughts, reactions and questions prior to class, which will make you more prepared for in-class discussion; second, they will challenge you to think critically and articulate yourself clearly in writing; and third, they will make it easier for you to study for the exams, which will include material from readings and discussions.

Small Group Discussions and Discussion Leadership

As stated above, students will participate in several small group discussions of class material. Discussions will be peer-led and discussion leadership will rotate among group members, with each student leading one discussion by the end of the term. The duties of the discussant involve preparing a list of provocative discussion questions along with any “unanswered” questions (i.e., points or concepts you had difficulty understanding or for which you need clarification). These must be submitted to Dr. Gosnell via email by 5:00 pm on the day prior to leading the discussion. On the day you lead discussion, your role is to facilitate exploration of the concepts covered in the readings with others in your group, take notes, and report back to the larger group. Note that, whether leading discussion or not, everyone is expected to come to class each day having completed assigned readings, having taken notes and written down questions, and having given the material substantial thought.

Group Research Project

In small groups (2-3), students will apply the resilience thinking learned in the first part of the course to one of the “two percent solutions” in Courtney White’s book and develop an engaging oral presentation that delves further into the case study and considers how the solution could be scaled up. Students will be graded on content and presentation style, and on the coherence of the presentations as a whole. See guidelines on Canvas.

Field Trips

To improve our understanding of resilience-based natural resource management, we will do two (and possibly three) field trips. Confirmed trips this year include Sunbow Farm (in Corvallis) on Thursday, February 11; and the Five Mile Bell Restoration Project (near Florence) on Thursday, February 18. Both field trips will require additional time outside
of class. We will discuss the best approach to scheduling at the beginning of the course. Students who cannot attend either or both field trips will be required to make up the work with a community service project, to be coordinated with Dr. Gosnell.

Expectations

Students are expected to attend all classes (attendance will be taken – notify me in advance if you will miss class and provide an explanation); and engage substantively in class discussions and activities. Analyzing environmental issues lends itself to lively debate, but if you are not prepared, it won’t be as interesting.

Given that this is an upper level course, the expectation is that students will demonstrate a solid mastery of the English language and produce high quality, written material that has been proofread. Evaluation of your work will focus mostly on content; but please note that even the most brilliant insights will not make up for a poorly written paper when it comes to assigning a grade.

Grades

GEOG 430
- Notes/Questions re: Readings (5) 10 pts
- Discussant Duty 5 pts
- Midterm Exam 20 pts
- Group Project 10 pts
- Field Trip Write-Ups (2) 20 pts
- Essay Response to In Transition Film 10 pts
- Final Exam 20 pts
- Participation and Attendance 5 pts

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- Group Project 10 pts
- Field Trip Write-Ups (2) 20 pts
- Essay Response to In Transition Film 10 pts
- 10-12 pg final paper 25 pts
- Final paper oral presentation 15 pts
- Participation and Attendance 5 pts

Extra Credit
- Up to 2.5 pts towards final grade for either volunteering locally or attending a talk on campus or in town related to class and writing it up and presenting it to class
- Consult with Dr. Gosnell before you choose an EC activity.
Required Texts, Supplemental Readings, Other Course Materials


- The textbooks are available at the campus bookstore (and for sale online).
- Grads will read several additional articles, which will be available on Canvas. Interested undergrads are also encouraged to read these.
- See below for a list of articles relevant to the course that may be of interest.
- All lecture Powerpoints, supplemental readings, and guidelines for assignments will be posted on Canvas, unless otherwise specified.

Important Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
<th>Due in Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 5</td>
<td>Intro to Course</td>
<td>NA</td>
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<tr>
<td>Jan 7</td>
<td>Conceptualizing the Problem</td>
<td>WS Forward, Preface, Ch 1, Case Study 1; Skim White</td>
<td>Reading/Discussion Notes for WS Ch 1 due</td>
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<tr>
<td>Jan 12</td>
<td>What is Resilience-Based NRM?</td>
<td>WS Ch 2, Case Study 2 GRADS: Holling and Meffe 1996</td>
<td>Reading/Discussion Notes for WS Ch 2 due</td>
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<td>Jan 14</td>
<td>Understanding Thresholds, Tipping Points and Regime Shifts</td>
<td>WS Ch 3, Case Study 3 GRADS: Kinzig et al. 2006</td>
<td>Reading/Discussion Notes for WS Ch 3 due</td>
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Tentative Class Schedule and Reading Assignments

Note: WS = Walker and Salt, Resilience Thinking. Supplemental readings on Canvas.
Policies

Lateness and Absence
Please note that no late assignments will be accepted without prior arrangements. If you anticipate that you will not be able to attend a session in which there is an assignment due, turn it in ahead of schedule. Submitting an exercise/assignment late without an acceptable excuse will result in a ZERO.

Failure to take a quiz or exam on the date it is scheduled will also result in a grade of ZERO. Please do not come to me after an exam is missed to explain why you were not in attendance. See me if you anticipate in advance that you cannot take an exam on the day and time outlined because:

1. You are traveling to an official university-sponsored event; or
(2) You have a prescheduled medical appointment. If you foresee an absence due to one of the reasons listed above, you must contact me a minimum of two weeks in advance of the anticipated absence with appropriate documentation. Appropriate documentation includes a letter (on official letterhead) from your coach, instructor, or doctor that provides me with the details of the pre-existing time conflict and is signed by the appropriate party. All rescheduled exams must be taken before the original date and time for the exam.

**Communication**

Email with the professor should be limited to questions that require short answers. Anything requiring longer communication should occur during office hours. I encourage you to come to office hours to discuss course materials, concerns, and questions. Email should be respectful and grammatically correct (vs. texting style).

**Academic Honesty**

Students are expected to be honest and ethical in their academic work. Academic dishonesty is defined as an intentional act of deception in one of the following areas:  

- **Cheating**: Use or attempted use of unauthorized materials, information, study aids  
- **Fabrication**: Falsification or invention of any information  
- **Assisting**: Helping another student to commit an act of academic dishonesty  
- **Tampering**: Altering or interfering with evaluation instruments and documents  
- **Plagiarism**: Representing the words or ideas of another person as one’s own

The goal of Oregon State University is to provide students with the knowledge, skill, and wisdom they need to contribute to society. University rules seek to assure each student’s freedom to learn and to protect the fundamental rights of others. People must treat each other with dignity and respect in order for scholarship to thrive. Behaviors that are disruptive to teaching and learning will not be tolerated, and will be referred to the Student Conduct Program for disciplinary action.

For more information please see [http://oregonstate.edu/studentconduct/offenses-0](http://oregonstate.edu/studentconduct/offenses-0)

**Statement Regarding Students with Disabilities**

"Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098."

**Student Evaluation of Courses**

The online Student Evaluation of Teaching form will be available in week 9 and close at the end of finals week. Students will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. Students will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted. Course evaluation results are very important and are used to help improve courses and the learning experience of future students. Results from questions are tabulated anonymously and go

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1 A prescheduled medical appointment is one that is hard to come by (i.e., specialist) and does not include routine medical and/or dental appointments.
directly to instructors and unit heads/supervisors. Unless a comment is “signed,” which will associate a name with a comment, student comments on the open-ended questions are anonymous and forwarded to each instructor. “Signed” comments are forwarded to the unit head/supervisor.

**Recommended Readings**


http://dx.doi.org/10.5751/ES-05063-170330

FOR MORE READING ON THESE TOPICS...

- BROWSE THE BIBLIOGRAPHY ON THE RESILIENCE ALLIANCE WEBSITE (UNDER RESOURCES): http://www.resalliance.org/