

# FNR 37500 Human Dimensions of Natural Resource Management (3 credits)

## Spring 2018

### **Meeting Time and Location**

1:30 – 2:45 pm, Tuesdays and Thursdays  
Stewart Center 314

### **Instructor**

Zhao Ma, Ph.D.  
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### **Graduate Teaching Assistant**

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### **Office Hours (or by appointment)**

3 – 4 pm, Tuesdays

### **Office Hours (or by appointment)**

10:00 – 11:00 am, Mondays and Wednesdays

### **Course Description**

This course will introduce social science concepts and principles that can help you understand and address problems in natural resource management and conservation. We will discuss what human dimensions are and why they are important to a variety of natural resource issues. We will learn about relevant social science theories that provide a foundation for understanding the human dimensions of natural resources. We will also explore relevant research methods and practical strategies that can be used to help better understand and influence human behaviors to be more aligned with sustainability goals. Finally, this course will train students to think critically in an interdisciplinary way, with a focus on how to incorporate social science into natural resource problem-solving. After all, natural resource problems, and more broadly, environmental problems, are inherently human problems.

### **Learning Objectives**

The overall learning objectives for this course are to:

- Become familiar with key concepts and theories related to human dimensions of natural resource management;
- Become familiar with key methods that can be used to collect and analyze human dimensions data to assist in natural resource management and conservation decision-making;
- Be able to identify and assess the various social, economic, political, and cultural factors that influence how people (particularly individuals) think about and act towards natural resources and the environment;
- Be able to identify and assess potential tools, frameworks, and strategies for informing and influencing human behaviors towards a more sustainable future;
- Be able to critically examine current natural resource management and conservation approaches/programs from a human-dimensions perspective and suggest well-informed alternatives/changes/additions to enhance management and conservation outcomes.

### **Course Format**

This course will be delivered mainly through PowerPoint lectures. In-class discussion and activities will also be used to facilitate effective learning. Guest speakers will be invited occasionally. PowerPoint lecture notes will be made available on Blackboard before class, and I recommend that you print these off, bring them to class, and add notes to the slides as we move through the material (**note:** not all lecture notes will be printed on the slides). I strongly encourage you to ask questions during the lecture if

concepts are unclear. Questions asked during lecture are especially valuable, as others in the class may also benefit from an answer to your question. It may be necessary from time to time to adjust the course schedule with the understanding that major assignment due dates and exam dates will not be affected. I will make all announcements about any schedule change or course change in class, via email and on Blackboard. Your grades will also be posted on Blackboard. **It is your responsibility to check Blackboard, as well as your email regularly to keep track of announcements.**

### **Required Readings**

There is no assigned textbook for this course. All assigned readings and handouts are available on the course website accessible via Blackboard. Check frequently for updates as you are responsible for all material posted. Assigned readings **should be read prior to the lecture** for which they are scheduled.

### **Evaluations and Grades**

**Exams** – Three (3) exams will be given. Midterm exam #1 will cover the first third of the semester, midterm exam #2 will cover the second third of the semester, and the final exam will be comprehensive during the week of April 30 to May 5 (exact date to be determined). Exams will generally consist of multiple choices, short answers, and short essays.

**Five-minute papers** – Five (5) five-minute papers will be submitted by each student. These are low-stakes writing assignments that will be done in class (make sure your handwriting is legible). They are used to (1) make you summarize in your own words a concept or issue we discussed in class or you learned from the assigned readings, (2) make you think critically about natural resources, the environment, or the society in general, and (3) as an indicator of attendance. These are the only assignments where grammar and overall organization do not count. These five-minute papers will be assigned randomly throughout the semester – sometimes in the beginning of class, sometimes in the middle, sometimes at the end – and they should take about 5 to 10 minutes of class time. Each paper will receive one of three grades: 0 point if you are not in class to do it; 3 points if you write down something that is reasonable and makes sense in the context of the question/topic; or, 5 points if you present your thoughts carefully and write an eloquent response. **There is no make-up opportunity for these five-minute papers. You have to be in class to complete them unless you have a doctor's note or a note for an official event sponsored by Purdue University.**

**Completion of CITI Training** – Each student will go through the CITI Human Subjects Research Basic Course (<https://www.irb.purdue.edu/training/>) independently and obtain a certificate of completion. Detailed instructions will be discussed during the first week in class.

**Group research project** – A project will focus on the human dimensions of an environmental or natural resource issue and be completed by students working as part of a small group. Each group will select a current issue of interest, prepare a problem statement, develop an instrument for collecting human-dimensions data, present the project as a group, and complete a final report incorporating the problem statement, data collection methods, results, relevant discussions, and conclusion and/or an outreach plan to address the human dimensions of the issue selected by the group. I understand that some students do not like group projects, but in natural resources, you rarely work alone on projects and often times you work with individuals from different backgrounds and disciplines. Working successfully in a group towards a common goal takes practice. To facilitate such practice, encourage active participation, and make the process as fair as possible, each student will be evaluated by his/her group members using a standardized grading rubric provided by the instructor. This peer evaluation of group contribution will be counted towards each student's final grade. You will receive detailed instructions about the group project in class and on Blackboard.

Items	Total points	Due dates
Exams	300	
Midterm #1	100	February 8
Midterm #2	100	March 22
Final	100	TBD
Five-minute papers	25 (5*5)	Randomly assigned in class
Completion of CITI training	25	January 23
Group research project	175	
Problem statement	25	February 1
Data collection instrument	25	February 27
Group presentation	25	April 19, 24, 26
Peer evaluation of group contribution (informal check-in)	0	February 27
Peer evaluation of group contribution	25	April 26
Final report	75	April 26
<b>Total points possible</b>	<b>525</b>	

At the end of the semester, the total points earned in this course will be converted to a letter grade based on the following percentages (**no rounding up**):

A+ 97.0-100 percent	A 93.0-100 percent	A- 90.0-92.9 percent
B+ 87.0-89.9 percent	B 83.0-86.9 percent	B- 80.0-82.9 percent
C+ 77.0-79.9 percent	C 73.0-76.9 percent	C- 70.0-72.9 percent
D+ 67.0-69.9 percent	D 63.0-66.9 percent	D- 60.0-62.9 percent
	F 0-59.9 percent	

### **Attendance and Student Expectations**

To facilitate effective learning, the following applies:

- You are expected to be present for every class. Even though lectures notes are provided, they are partial. Without coming to class, you will not be able to complete the lecture notes, which will jeopardize your effective learning and successful passing of the course. When conflicts or absences can be anticipated, such as for University-sponsored activities and religious observations, you should inform me of the situation as far in advance as possible. For unanticipated or emergency absences when advance notification to an instructor is not possible, you should contact me as soon as possible by email, or by contacting the main office of the Department of Forestry and Natural Resources. When you are unable to make direct contact with me and are unable to leave word with my department because of circumstances beyond your control, and in cases of bereavement, you or your representative should contact Purdue University Office of the Dean of Students.
- Read assigned readings **before** coming to class.
- Complete all assignments to the best of your ability and turn them in on time. Late assignments will receive a **late penalty of 5 points per day** taken off the final points earned on the assignment. The penalty may be waived at instructor discretion **only when legitimate emergency occurs**. The instructor reserves the right to determine what a legitimate emergency is. In the event of a legitimate emergency, it is your responsibility to provide a written excuse to me prior to the initial due date of the assignment, or as soon thereafter as practical.
- All exams will be given on the dates scheduled. If you miss an exam you will be given a score of zero for that exam. In the case of University-sponsored activities, you **must** inform the instructor at least one week prior to the scheduled exam dates, and **must** take exams in advance. Make-up exams are allowed **only when legitimate emergency occurs**.

- The class will treat each other with respect. You are encouraged to critique the instructor, the graduate teaching assistant, and fellow classmates' ideas and arguments in a civilized discussion. However, it is inappropriate to attack others or their values and beliefs.
- Please be considerate to your fellow classmates, your graduate teaching assistant, and your instructor and refrain from disruptive and rude behavior including using of cell phones, sleeping, surfing the web, checking social media websites, watching videos, and talking with other students outside of designated discussion time. Students engaging in any disruptive behavior may be asked to leave the classroom.

### **Academic Dishonesty**

Incidents of academic misconduct in this course will be addressed by the course instructor and referred to the Office of Student Rights and Responsibilities (OSRR) for review at the university level. **Any violation of course policies as it relates to academic integrity will result minimally in a failing or zero grade for that particular assignment, and at the instructor's discretion may result in a failing grade for the course.** In addition, all incidents of academic misconduct will be forwarded to OSRR, where university penalties, including removal from the university, may be considered. In addition, students should be made aware that they can report issues of academic integrity that they observe, either through the Office of the Dean of Students ([purdue.edu/odos](http://purdue.edu/odos)), call 765-494-8778 or email [integrity@purdue.edu](mailto:integrity@purdue.edu). While information may be submitted anonymously, the more information that is submitted provides the greatest opportunity for the university to investigate the concern. Scholastic dishonesty includes, but is not limited to:

- Copying from, or assisting, another student during a quiz or exam;
- Using notes or prepared information (including cell phones, computers, or electronic notebooks) in a quiz or exam unless authorized by the instructor;
- Substituting for another student, or letting someone substitute for you, in taking a quiz or exam;
- Acquiring a copy of an exam (including from previous years) before taking it;
- Obtaining a copy of an exam after taking it without the explicit permission of the instructor;
- Submitting substantially the same work for an assignment in this class as you turned in for credit in another class without the explicit permission of all concerned instructors;
- Using a ghostwriter, commercial or otherwise, for any type of assignment;
- Doing a class assignment for someone else or allowing someone to copy your assignment;
- Knowingly aid and abet, directly or indirectly, other parties in committing dishonest acts;
- Plagiarizing, including paraphrasing or direct quoting the work of others (published or unpublished, public or private, written or verbal) as your own without proper citation (including phrases lifted from websites and materials prepared by those who sell term papers). Direct quotations should be used infrequently (typically <1% of a paper). If you use five or more words from a source verbatim as they are in the source and cite the source, this is still considered plagiarism. Citations should acknowledge the source of a fact or idea, but the writing should be your own.

It is expected that students will follow the Purdue Honors Pledge in this class: "As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together – we are Purdue."

### **Grief Absence Policy for Students**

Purdue University recognizes that a time of bereavement is very difficult for a student. The University therefore provides the following rights to students facing the loss of a family member through the Grief Absence Policy for Students (GAPS). According to GAPS, students will be excused for funeral leave and given the opportunity to earn equivalent credit and to demonstrate evidence of meeting the learning outcomes for missing assignments or assessments in the event of the death of a member of the student's

family. The student will need to contact Purdue University Office of the Dean of Students to obtain the necessary grief absence notice for their instructors.

### **Students with Disabilities**

Purdue University is required to respond to the needs of the students with disabilities as outlined in both the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 through the provision of auxiliary aids and services that allow a student with a disability to fully access and participate in the programs, services, and activities at Purdue University. If you have a disability that requires special academic accommodation and that has been documented by the Disability Resource Center, please make an appointment to speak with the instructor within the first three (3) weeks of the semester. It is the student's responsibility to notify the Disability Resource Center (<http://www.purdue.edu/drc>) of an impairment/condition that may require accommodations.

### **Mental Health**

Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at 765-494-6995 and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays or through its counselors physically located in the Purdue University Student Health Center (PUSH) during business hours.

### **Emergencies**

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to change that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Information about changes in this course will be posted on Blackboard and sent via email, or you can contact the instructor or graduate teaching assistant via email or phone.

### **Diversity Statement**

In this course, each voice in the classroom has something of value to contribute. Please take care to respect the different experiences, beliefs and values expressed by students and staff involved in this course. We support Purdue's commitment to diversity, and welcome individuals of all ages, backgrounds, citizenships, disability, sex, education, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experience, political views, races, religions, sexual orientations, socioeconomic statuses, and work experiences.

### **Anti-Harassment Policy**

Purdue University is committed to maintaining an environment that recognizes the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding and mutual respect; and encourages its members to strive to reach their potential. Purdue University is also committed to maintaining an educational and work climate for faculty, staff and students that is positive and free from all forms of Harassment. This policy addresses Harassment in all forms, including Harassment toward individuals with legally protected status for reasons of race, gender, religion, color, age, national origin or ancestry, genetic information or disability and Harassment toward individuals for other reasons such as sexual orientation, gender identity, gender expression, marital status or parental status. Harassment in the workplace or the educational environment is unacceptable conduct and will not be tolerated.

## Course Outline and Schedule

Week	Date	Topics	Assignments/Exams	Readings
WK 1	Jan. 9	Course overview	Group research project instructions	
	Jan. 11	Complexity of natural resource issues; what are human dimensions? why do we care?		
WK2	Jan. 16	Is ecology political? Why?		Robbins 2004 (Ch. 1, Ch. 2)
	Jan. 18	Revisit the tragedy of the commons		Hardin 1968
WK3	Jan. 23	Solutions to the tragedy of the commons with a human-dimensions focus I; research groups assigned; group work time	Due: CITI Training Certificate	McGinnis & Ostrom 1992
	Jan. 25	Solutions to the tragedy of the commons with a human-dimensions focus II		Dietz et al. 2003
WK4	Jan. 30	Social science research methods I		Duke Writing Studio n.d.; Dillman et al. 2014 (Ch. 4)
	Feb. 1	Social science research methods II		Dillman et al. 2014 (Ch. 5)
WK5	Feb. 6	Catch up; review; midterm evaluation	Due: Problem statement	
	Feb. 8	Midterm exam #1	Midterm exam #1	
WK6	Feb. 13	Human attitudes, beliefs, and values		Cook & Ma 2014; Decker et al. 2012
	Feb. 15	Social norms		Axelrod 1986; Abrahamse & Steg 2013
WK7	Feb. 20	Social norms continue; group work time		
	Feb. 22	Guest speaker: Bob Easter, Stewardship Manager, NICHES Land Trust		
WK8	Feb. 27	Diffusion of innovations; check-in on individual contribution to group project	Due: Data collection instrument; peer evaluation (informal check-in)	Baumgart-Getz et al. 2012; Kennedy & Brunson 2007
	Mar. 1	Guest Speaker: Mike Mycroft, District 1 Wildlife Biologist, Division of Fish and Wildlife, Indiana Department of Natural Resources		
WK9	Mar. 6	Diffusion of innovations (continue); Social Network Theory		Borg et al. 2015; Senbel et al. 2014
	Mar. 8	Class cancelled		
WK10	Mar. 12 – Mar. 17: <i>Spring Break</i>			
WK11	Mar. 20	Social Network Theory (continue); review; midterm evaluation		
	Mar. 22	Midterm exam #2	Midterm exam #2	
WK12	Mar. 27	Place attachment		Scannell & Gifford 2010; Walker & Ryan 2008
	Mar. 29	Theory of Planned Behavior		Armitage & Conner 2001; Hrubes et al. 2001
WK13	Apr. 3	Communication theory		Cialdini 2003; Gootee et al. 2010; Lakoff 2010
	Apr. 5	Collaborative problem-solving; participatory appraisal; community-based conservation		Coppock et al. 2011; Newmark & Hough 2000
WK14	Apr. 10	Group work time		
	Apr. 12	Group work time		

WK15	Apr. 17	Justice concerns about natural resource conservation		Martin et al. 2013
	Apr. 19	Group presentation	Group presentation	
WK16	Apr. 24	Group presentation	Group presentation	
	Apr. 26	Group presentation; semester wrap-up; peer evaluation of group contribution	Due: Group presentation; peer evaluation; final report	
<b>Final exam (Mon 04/30, 8-10 am, STEW 314)</b>				