

NRC 382
Human Dimensions of Natural Resource Management
***(Decision-making for Conservation)**

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Course Info

Class meetings: Mondays and Wednesdays, 12:20-1:10, Wednesdays 1:25-5:15
Room: 203 Holdsworth
Course website: Moodle

Course Description and Justification

Over the past 20-30 years, there has been a growing recognition amongst environmental advocates, resource managers, policymakers and researchers that the underlying cause of most environmental, conservation and sustainability issues is **human behavior**. As NRC and ENVISCI majors, you have received extensive technical training in how natural systems operate yet relatively little training when it comes to influencing or understanding how people make environmental decisions that affect those natural systems. Recognizing the fundamental role that people play in shaping the environment reveals a new set of tools and approaches for both understanding the challenges we face *and* confronting those challenges effectively. We will spend the semester exploring the **underlying factors** that drive environmental decisions, the **key challenges** that environmental issues pose for decision makers, and **insights from the behavioral and communications sciences** into designing effective environmental behavior change campaigns and strategies. In doing so, we will gain a greater appreciation for the importance of focusing on *people* when our aim, ultimately, is to improve the environment.

Course Goals and Learning Objectives

After taking this course, students will be able to do the following:

- 1) Understand and appreciate the importance of looking at environmental conservation and sustainability through the lens of behavioral science;
- 2) Recognize the behavioral underpinnings of the conservation challenges we face;

- 3) Uncover the core drivers of individual and collective environmental decision-making, including psychological, social, cultural and contextual factors;
- 4) Identify and weigh the competing interests and motives of diverse stakeholders, including financial, familial, attitudinal and other factors;
- 5) Detect key barriers to and facilitators of positive conservation behavior.

Students will also develop the necessary knowledge base, tools and skills to:

- 6) Critically analyze existing and new environmental change campaigns;
- 7) Develop their own, evidence-based environmental behavior change campaigns.

What does Integrative Experience *mean*?

This course satisfies the Integrative Experience General Education requirement (IE) for students in the Natural Resources Conservation (NRC) major. The upper-division integrative experience (IE) provides a structured context for students to reflect on their own learning and explore the connections between the broad exposure provided by General Education and the more focused exposure of their major.

Integrative learning comes in many varieties: connecting skills and knowledge from multiple sources and experiences; applying theory to practice in various settings; utilizing diverse and even contradictory points of view; and, understanding issues and positions contextually.

The IE addresses the goals by fulfilling each of the following three criteria:

1. Providing a structured, credited context for students to reflect on and to integrate their learning and experience from the broad exposure in their General Education courses and the focus in their major.
2. Providing students with the opportunity to practice General Education learning objectives such as oral communication, collaboration, critical thinking and interdisciplinary perspective-taking, at a more advanced level.
3. Offering students a shared learning experience for applying their prior learning to new situations, challenging questions, and real-world problems.

The activities and assignments you'll complete in this course have been designed to achieve each of these goals while building your knowledge of the core course topic, decision-making for conservation. That is, the Integrative Experience-aspect of this course has been fully integrated into the class; it is not an extra "add-on."

Assignments

Participation (10%): I expect everyone to attend and be active in all class sessions and activities; attendance is mandatory. I've worked very hard to limit the amount of reading

required, so being present and active when we meet is critical. In addition to participating in class (which may include some short reading-based quizzes), there are a number of small tasks that I'll ask you to complete throughout the term; these will involve minimal time requirements but will add significantly to your overall course experience. One of these tasks involves keeping a reflection journal; I will provide writing prompts throughout the semester. There will also be occasional discussion forums posted to Moodle that all students will need to contribute to. NOTE: your participation grade for the course will be split into two equal parts, one for the first half of the semester and the other for the second half; this allows me to give you some feedback halfway through the semester, giving you an opportunity to make adjustments if needed.

Civic Engagement (5%): It is difficult to learn about human behavior and decision-making without observing it in person and talking to people face-to-face. We will be “participant-observers” in two on-campus sustainability efforts this Fall: UMass Gameday and a Bike Share Survey being conducted by the Pioneer Valley Planning Commission and UMass Sustainability Office. All students are required to complete a minimum of 6 hours of service to these two activities. At least 4 hours must be spent conducting surveys around campus (in pairs) for the Bike Share project. The remaining 2 hours can be spent *either* conducting additional surveys OR volunteering at the Gameday events (either October 3rd or October 17th). Both of these opportunities will serve as shared experiences for reflection and learning. Each student will submit a 1/2-page reflection on either engagement activity. These are due by October 19th and will be submitted via Moodle.

Midterm exams (2), in-class (30% total): Self-explanatory, the exams will cover all material covered up to the exam dates. Tentatively scheduled for **10/14** and **11/9**. If you require any special accommodations, please let me know as soon as possible.

Behavior change campaign project (30%): Working in groups of five (5), students will research, design and propose (as a concept plan presented to the rest of the class) an intervention or campaign that will address an environmental issue or problematic environmental decision of your choosing. The format of the proposal is flexible; the key is to develop a proposal that a) identifies an environmental issue or problem that is driven by human behavior and b) proposes an evidence-based strategy to shift behavior (of individuals, organizations, communities, etc.) in a positive, productive direction. Groups can use their experiences working at UMass Gameday or on the Bike Share Survey as the basis of their campaign, but choosing a different topic is also allowed and encouraged. I'll provide more information and details about the group project later in the semester, including a grading rubric. The assignment consists of four components:

1. **1-page** written overview of your proposed topic and behavioral analysis (**due 10/28**);
2. **1-page** initial campaign plan (**due 11/11**)
3. **7 minute** group presentation, which can be “live” or pre-recorded (**due 12/9**);
4. **3-4 page** “strategy memo” that explains your group’s proposed campaign or intervention, identifies specific behavioral science principles that it incorporates

and/or addresses, and presents a brief analysis (no more than 1 page) of the potential benefits and feasibility of the proposed intervention or campaign (**due 12/9**).

Final take-home assignment (25%): Working on your own (but with full access to any course materials or other information you can find), students will complete a take-home final assignment. The assignment will require you to pull from all of the various topics and issues we cover in the course to analyze an environmental behavior change issue and campaign that I will provide. The assignment will be handed out in the last week of the course and will be due during finals week (**due 12/16**).

Reading

There is no core text for this class. Instead I will post journal articles and chapters on the course website on Moodle. In addition, “reading” for a number of class periods will actually consist of watching YouTube and other videos on the web as well as other web-based environmental change campaign materials. Links to all readings/videos/materials will be available online via the course Moodle page.

Course Norms and Conduct

Cell phone use is not allowed during class; this includes times when we are working in small groups. Laptops are fine for taking notes, but please respect your classmates and instructor by limiting yourself to class-related activities. Though you may have a preternatural ability to multi-task, using a laptop for purposes other than taking notes is distracting to those around you. If you’d like some “cold hard facts” regarding the negative effects of multitasking on learning in the classroom, see this article (<http://slate.me/1m4ydJn>).

Grades

I use a simple summative approach, with the assignments adding up to 100 points. Letter grades are assigned as follows: **A** (94-100), **A-** (90-93), **B+** (87-89), **B** (84-86), **B-** (80-83), **C+** (77-79), **C** (74-76), **C-** (70-73), **D+** (67-69), **D** (64-66), **F** (below 64)

Academic Honesty Policy Statement

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst.

Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed

academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. The procedures outlined below are intended to provide an efficient and orderly process by which action may be taken if it appears that academic dishonesty has occurred and by which students may appeal such actions.

Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent. The University requires honesty of all its members in their academic work. Honesty is necessary to the learning process, and is integral to the atmosphere of genuine inquiry and intellectual curiosity that the University seeks to foster. Academic dishonesty not only contradicts the expectations of a community whose central purpose is the pursuit of intellectual endeavor, it violates University rules and regulations, a fact of which all students must be aware. For more information about what constitutes academic dishonesty, please see the Dean of Students' website: http://www.umass.edu/dean_students/codeofconduct/acadhonesty/

Disability Statement

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services, Learning Disabilities Support Services or Psychological Disabilities Services, you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Schedule (subject to change)

9/9 (W) What are “human dimensions” and “environmental decision making”?

9/14 (M) Why do we care about HD/EDM
Reading: Dietz et al. 2009

9/16 (W) Sustainability at UMass (guest: Ezra Small)
Reading: Hignite 2006

9/21 (M) Types of conservation decision-making
Reading: Explore www.forestadaptation.org, www.cbsm.com

9/23 (W) (Human) systems (thinking)
Reading: Meadows 1999

9/28 (M) Challenges and barriers to EDM
Reading: Gifford 2011

- 9/30 (W) Considering diverse stakeholder perspectives (guest: Emily Silver)
Reading: WWF Stakeholder Analysis
- 10/5 (M) Why do people do what they do? Part I
Reading: Weber & Lindemann 2007
- 10/7 (W) Why do people do what they do? Part II
Reading: Newell et al. 2014
- 10/13 (T) Why do people do what they do? Part III
Reading: Newell et al. 2014
- 10/14 (W) Midterm #1
Reading: Review for Midterm
- 10/19 (M) Behavior change I, problem identification and measurement
Reading: Horhota 2014
- 10/21 (W) Behavior change II, behavior analysis
Reading: Ly & Mazar 2013; McKenzie-Mohr & Schultz 2014
- 10/26 (M) Behavior change III, tools and techniques
Reading: Schultz 2014
- 10/28 (W) Behavior change IV, intervention design
Reading: Review Ly & Mazar; Schultz; McKenzie-Mohr & Schultz
- 11/2 (M) Behavior change V, research design
Reading: TBD
- 11/4 (W) Ethics of behavior change for conservation
Reading: Thaler & Sunstein 2003
- 11/9 (M) Environmental Communication
Reading: Nisbet 2009, Arvizu 2012
- 11/16 (M) Effective Communication: Message box, ABT, Social Math
Reading: Baron 2010; watch ABT video on www.randyolsonproductions.com
- 11/18 (W) Workshoring final group projects
Reading: None
- 11/23 (M) Midterm #2
- 11/25 (W) OPTIONAL: Campaign Analysis

11/30 (M) Structured Decision-Making
Reading: Conroy et al 2008

12/2 (W) Social media and the new communication landscape
Reading: Adams 2015

12/7 (M) Where is the field headed next?
Reading: None

12/9 (W) Final Group Presentations