

NRC 494EI
Environmental Decision-Making
M/W 10:10a-12:05pm, Holdsworth 211

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Course Description and Justification

Over the past 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 ENVIRSCI 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 human decision-making plays 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 protect the natural world.

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 behavior change campaigns;
- 7) Develop their own, evidence-based environmental behavior change campaigns.

Assignments

Participation (20%): I expect everyone to attend and be active in all class sessions and activities; attendance is mandatory. In addition to participating in class (which includes engaging in numerous individual and group activities), 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 and help you integrate the learning you are doing in this course with your broader education at UMass. There will be occasional discussion forums posted to Moodle that all students will need to contribute to. You will receive one participation grade half way through the semester and a second one at the end of the semester.

Civic Engagement and Reflection (10%): It is difficult to learn about human behavior and decision-making without observing it in person. All students are required to complete a minimum of 4 hours of service during the first few weeks of the semester (all hours must be completed by Friday, 10/6). In collaboration with the UMass Sustainability office, our core CE experience for the semester will involve helping collect observational and experimental data on composting behavior in the BlueWall. If you have an idea for an alternative CE experience that you would be especially interested in pursuing, please let me know as soon as possible. This might include volunteer events that are related to environmental decision-making or attending relevant off-campus events (e.g., local town Conservation Commission meetings). You will need to submit a 300-word reflection on your CE experience by the beginning of class on Tuesday, 10/10 (Tuesday after Columbus Day weekend).

Personal change project (5%): Before you try to change other people's behavior, it's a good idea to try out some of the tools and techniques we'll learn about in this class on yourself. This should be a fun, enlightening opportunity to try changing your (environmentally-relevant) behavior using evidence-based techniques. More details will be provided during the semester. A 200-word reflection on your efforts is due Monday, 10/23.

Scales of change short paper (15%): Due in class on 11/8. This persuasive essay assignment asks you to carefully consider the pros and cons of approaching conservation at various scales of intervention, from individuals and households to organizations and governments. Relying on what you have learned in class, assigned readings to date and your own analysis, your essay should address the following question: "What are the advantages and disadvantages of various types of intervention—behavioral, (infra)structural, political—when it comes to promoting environmental conservation efforts?" There is a strict **500-word limit** for this essay assignment. Your job is to be persuasive—make a claim and then back it up with evidence. Detailed instructions to be provided later in the semester.

Behavior change campaign project (35%): Working in groups of six, students will research, design, build and implement a behavior change campaign that will address a problematic environmental decision of your choosing. This is an intensive and ambitious project that is integrated throughout the entire semester (we'll get started on it right away in Week 2). I promise it will be worth the effort. The key to being successful is twofold: first, to select a **specific target behavior** (or behaviors) that is **within the decision-makers' control** and that lends itself to **quantifiable measurement**; and second, to **be organized and disciplined as a group!** The aim

of the exercise is to provide you with an opportunity to bring together everything you will learn in this course about environmental decision-making in a meaningful ‘real-world’ setting. I’ll provide more information and details about the group project as we go along, including relevant grading rubrics and a clear timeline (e.g., your projects should all be “in the field” the week of October 30th). The assignment consists of multiple components, some of which will be graded (clearly indicated) and others of which you will only receive informal (but detailed) feedback on from Lauren and me. Exact due dates may change slightly, but here’s a rough outline of assignments and when you’ll need to turn something in:

1. 1 paragraph write-up of proposed target behavior and population (**due Wednesday, 9/20; not graded**)
2. 1 page barriers assessment and measurement plan (**due Monday, 10/2; 5% of total grade**)
3. 5-7 minute behavioral case study presentations given in class (**Wednesday, 10/4; 5% of total grade**)
4. Initial intervention plan outline (**due Monday, 10/16; not graded**)
5. Final intervention plan memo (**due Wednesday, 10/25; 5% of total grade**)
6. 20-25 minute post-intervention final presentation (**12/4 and 12/6; 10% total grade**);
7. 400 word personal reflection on term project experience; *each student will write their own reflection* (**due Friday, 12/8; 10% total grade**).

PLEASE NOTE: I recognize that finding time to work on projects outside of class can be very challenging, especially in a group of six students. I have built in a lot of in-class time for groups to work together on their projects throughout the semester in an effort to help alleviate this challenge as much as possible. That being said, you and your team members will have to do some of the project work outside of class time (though my hope is that almost all work that requires you all to be in the same physical location at the same time can be done in class).

Final take-home assignment (15%): 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 Monday, 12/18**).

Reading

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

What does Integrative Experience mean?

This course satisfies the Integrative Experience General Education requirement (IE) for students in the Natural Resources Conservation (NRC) and Environmental Science (ENVIRSCI) majors.

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 course addresses the goals of IE 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."

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)

9/6 (W) What is Environmental Decision-Making (EDM)?

9/11 (M) Introduction to term and civic engagement projects

Reading: Dietz et al., 2009

Assignment due: Post to Moodle forum, 'Goals for semester/life'

9/13 (W) What Drives Behavior? Part 1: Looking Internally

Reading: MINDSPACE Report, p. 11-28 only

9/18 (M) What Drives Behavior? Part 2: Systems-Level View

Reading: Meadows, 1999

Assignment due: Post to Moodle forum, 'What shapes your behavior?'

- 9/20 (W) What Drives Behavior? Part 3: Barriers
Reading: Gifford, 2011
Assignment due: 1 paragraph target behavior group memo
- 9/25 (M) Barriers assessment
Reading: Horhota et al., 2014
- 9/27 (W) Measurement and Design
No Reading
- 10/2 (M) Behavior Change Tools
Reading: McKenzie-Mohr & Schultz, 2014
Reading: BSPA, 2017
- 10/4 (W) Behavioral Case Study Prep
OPTIONAL Reading: Miller & Prentice, 2014
Assignment due: Barriers Analysis and Measurement Plan
- 10/10 (T) BCS Presentations
Assignment due: BCS presentations
- 10/11 (W) Intervention Brainstorming
Reading: Ly & Mazar, 2013
Reading: MINDSPACE examples
Assignment due: Civic Engagement reflections
- 10/16 (M) Project Workshopping
Assignment due: Initial intervention plan sent to E&L
- 10/18 (W) Effective Communication
Reading: Nisbet, 2009
Reading: Arvizu, 2012
- 10/23 (M) Team Project Time
Assignment due: Personal Change Project reflection
- 10/25 (W) Team Project Time
Assignment due: Final intervention plan
- 10/30 (M) Campaign Analysis
Reading: TBD
Assignment due: Start pre-intervention measurement by today
- 11/1 (W) Team Project Time

11/6 (M) Decision-Making in Context

Reading: TBD

11/8 (W) Scales of Change

Reading: Wagner, 2013

Reading: Tidwell and response, 2007

Assignment due: Scales of Change essay

11/13 (M) Team Project Time

11/15 (W) Ethics of Behavior Change

Reading: Sunstein, 2014

Reading: Hansen & Jespersen, 2014

Assignment due: Prep for in-class debate by posting to Moodle

11/27 (M) Personal Implications

Reading: TBD

11/29 (W) Presentation Prep Time

12/4 (M) Final Presentations

12/6 (W) Final Presentations

Assignment due (12/8): Project Reflection Memo

12/11 (M) Wrap-up and Final Assessment