



2019

Environmental Decision-Making (NRC 494 EI)

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Environmental Decision-Making

NRC 494 EI Spring 2019

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Course description [M/W 10:10am-12:05pm; Holdsworth 211]

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, social 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, political, cultural and contextual/structural 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;
- 6) Understand the process and key insights of environmental negotiation;
- 7) Critically analyze existing and new environmental behavior change campaigns;
- 8) Develop their own, evidence-based environmental behavior change campaigns.

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Assignments & Grading

Participation	20%
Midterm exam	15%
Personal change project	5%
Civic engagement and reflection	10%
Behavior change team project	
Report 1 – Target behavior and population	-
Report 2 – Barriers and measurement plan	5%
Report 3 – Behavior case study presentations	5%
Report 4 – Intervention plan outline	-
Report 5 – Final intervention plan memo	5%
Report 6 – 20-25 min. post-intervention presentation	10%
Report 7 – Personal reflection	10%
Final exam	15%

Assignment details

Participation (20%): Attendance for this course is **mandatory**. Participation is not just about showing up to class. It is also about being engaged by making thoughtful comments, attending office hours and posing questions. Points are gained through active contribution to class discussion and positively collaborating with your fellow classmates. 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.

As part of your participation grade, you will be asked to **respond to a brief reading question for most assigned readings**. To receive credit, your response must be submitted by 9:00am on the day the reading is assigned for. Responses to reading questions should be 200 words (max) or less. You will receive one participation grade half way through the semester and a second one at the end of the semester so that you can recalibrate your level of engagement as you see fit. If you are intimidated by speaking out loud in class, please come and talk with me early in 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 4 hours of service during the first few weeks of the semester (all hours must be completed by Wednesday, 2/20). We will explain the core civic engagement activity for the semester in week 2. If you have an idea for an alternative CE experience that you would be especially interested in pursuing (up to 2 hours), 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 **due Monday, 2/25**.

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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, 3/18**.

Midterm exam (15%): Shortly after the halfway point of the semester, you will take a midterm exam. It will be composed of multiple-choice, matching and short answer questions. The exam is currently scheduled for **Wednesday, 3/6** (subject to change).

Behavior change campaign project (35%): Working in groups of 6-7, 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" by the week of April 1st). 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 Charlie 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:

Part #1 – 1 paragraph write-up of proposed target behavior and population (**due Wednesday, 2/6; not graded**)

Part #2 – 1 page barriers assessment and measurement plan (**due Wednesday, 2/20; 5% of total grade**)

Part #3 -- 5-7 minute behavioral case study presentations given in class (**Wednesday, 2/27; 5% of total grade**)

Part #4 – Initial intervention plan outline (**due Monday, 3/4; not graded**)

Part #5 – Final intervention plan memo (**due Sunday, 3/24; 5% of total grade**)

Part #6 – 20-25 minute post-intervention final presentation (**4/29 and 5/1; 10% total grade**)

Part #7 – 400-word personal reflection on term project experience; *each student will write their own reflection* (**due Friday, 5/3; 10% total grade**).

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PLEASE NOTE: I recognize that finding time to work on projects outside of class can be very challenging, especially in a group of 6-7 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 exam (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/exam. 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, 5/6**).

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. As noted above, as part of your participation grade you will be asked to submit short responses to each assigned article across the course of the semester. These entries will be submitted on 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.

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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."

Class norms, conduct and policies

Assignments: Unless you have made arrangements with me prior to the deadline, late work will be penalized by 5% for every day the assignment is late.

Communication: During class and office hours are the best times to ask questions, but I will do my best to respond to emails within 48 hours, if not sooner. **Please include NRC 494** in the subject line of emails.

Classroom Etiquette: This course is driven by active participation and dialogue. I ask that we maintain a high level of respect in the classroom. 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: <https://bit.ly/2RvZ0qU>.

Accommodations: 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.

Everyone has the right to be addressed by the name and pronouns that they use for themselves. Students can indicate their preferred/chosen first name and pronouns on SPIRE, which appear on class rosters. Please let me know what name and pronouns I should use for you if they are not on the roster. A student's chosen name and pronouns are to be respected at all times.

Re-grade Policy: Submit the original exam and an explanation of the problem to me, within seven days of receiving it. Provide no more than a one-paragraph explanation for each question that you feel was graded incorrectly. This must include a reasoned explanation of why your answer is correct. I will be happy to discuss your re-grade with you only after receiving your written request.

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).

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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/

Schedule (subject to change)

- 1/23 (W) What is Environmental Decision-Making (EDM)
Assignment due: Complete pre-term assessment and grouping survey
- 1/28 (M) Introduction to Term and Civic Engagement projects
Reading: Dietz et al. (2009)
Assignment due: Post to Moodle forum, 'Goals for semester/life'
Reading response
- 1/30 (W) What drives behavior? Part 1 – Internal factors
Reading: Mindspace – pages 11-28 only.
Assignment due: Reading response
- 2/4 (M) What drives behavior? Part 2 – Systems level view
Reading: Meadows (1999)
Assignment due: Reading response
- 2/6 (W) What drives behavior? Part 3 – Barriers
Reading: Gifford (2011)
Assignment due: Part # 1 (ungraded), Reading response

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2/11 (M) Barriers Assessment

Reading: Horhota et al. (2014)

Assignment due: Reading response

2/13 (W) Measurement and Design

Reading: TBA

Assignment due: Reading response

2/19 (T) Behavior Change Tools

Readings: McKenzie-Mohr & Schultz (2014); BSPA (2017)

Assignment due: Reading response

2/20 (W) Personal Change | Intervention Brainstorming

Reading: Miller & Prentice (2014)

Assignment due: Part # 2

Reading response

2/25 (M) Behavior Change Considerations | Group Time: Behavioral Case Study Prep

Readings: Ly & Mazar (2013); MINDSPACE examples

Assignment due: Reading response

Civic engagement reflection

2/27 (W) Behavioral Case Study Presentations

Assignment due: Part #3

3/4 (M) SNOW DAY

3/6 (W) Team Project Time: Groups meet one-on-one with Ezra

Assignment due: Part # 4

SPRING BREAK: Remember to complete Personal Change Project

3/18 (M) Environmental Communication | Exam Review

Readings: Nisbet (2009); Markowitz & Guckian (2018)

Assignment due: Reading response

Personal change reflection

3/20 (W) **Midterm exam**

3/25 (M) Team Project Time: Groups meet one-on-one with Ezra

Assignment due: Part # 5 (Sunday 3/24)

3/27 (W) Campaign analysis | Team Project Time

Reading: Sustainable Lifestyles Report (2018)

Assignment due: Reading response

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- 4/1 (M) Scales of change | Team Project Time
Readings: Wagner (2013); Tidwell and response (2007)
Assignment due: Reading response
- 4/3 (W) Ethics of behavior change
Reading: Thayer & Sunstein (2003); Hansen & Jespersen (2014)
Optional Reading: Sunstein (2014)
Assignment due: Reading response and debate prep
- 4/8 (M) Collective decision-making | Team Project Time
Reading: TBA
Assignment due: Reading response
- 4/10 (W) Solving environmental problems at scale | Team Project Time
Readings: TBA
Assignment: Reading response
- 4/17 (W) EDM in real-world settings
Assignment: Prep for classroom visitors
- 4/22 (M) Negotiation simulation
Reading: TBA
Assignment due: Reading response
- 4/24 (W) Debrief negotiation | Presentation Prep Time
- 4/29 (M) Final Presentations
Assignment due: Part #6—Final presentations
- 5/1 (W) Final Presentations & Course wrap-up, evaluations, post-term assessment
Assignment due: Part #6—Final presentations
Part #7—Personal Reflection Memo (due 5/3)
Take-home Final (due 5/6)