

**ECNS 433: ECONOMICS OF THE ENVIRONMENT**  
**Fall 2017      Syllabus**

**Logistics**

- Time: Tuesday, Thursday; 11am – 12.20pm
- Classroom: Liberal Arts 103
- Instructor: Katrina Mullan
  - [Email](mailto:katrina.mullan@umontana.edu): katrina.mullan@umontana.edu
  - Phone: (406) 243-4655
  - Office hours: 1-2pm Tuesday and 9-10am Thursday; or by appointment
  - Liberal Arts Building, Rm 412
- Teaching Assistant: Madison Nagle
  - [Email](mailto:madison.nagle@umconnect.umt.edu): madison.nagle@umconnect.umt.edu
  - Office hours: 12.30-2pm Monday; 9.30-11am Wednesday; 8-9.30am Friday; or by appointment
  - Liberal Arts Building, Rm 410
- Required textbook: Callan, S. J. and Thomas, J. M. (2013) *Environmental Economics and Management: Theory, Policy and Applications*, 6<sup>th</sup> Edition. Southwestern-Cengage.
- Course website: I will post assignments, readings and any additional information on the class Moodle page. Announcements will be emailed via Moodle. Please ensure that you regularly check both the Moodle page and the email account associated with it.

**Course Description and Learning Outcomes**

Environmental economics seeks to analyze the interaction between human activity and the environment using the tools of economics. In this course, we will use economic theory to understand:

- 1) why environmental problems occur;
- 2) the extent to which they should be prevented;
- 3) how different policy mechanisms can be used to prevent them.

We will also look at how environmental economists quantify the values of environmental goods and services that are not bought or sold in markets. The environmental issues we will study will include air and water pollution, climate change, ecosystem conservation, deforestation, and how environmental quality relates to economic development.

Students who successfully complete this course will understand:

- how decisions about environmental protection are made
- how environmental problems result from market failures
- how trade-offs between environmental protection and economic activity can be evaluated
- the key methods used to assign monetary values to non-market goods and services
- the effectiveness and efficiency of alternative policy responses to environmental problems, including air and water pollution, climate change, and ecosystem degradation, in theory and in practice
- how economic development affects, and is affected by, environmental quality
- how to write about economics for different audiences and purposes
- how to find and synthesize information from different theoretical and empirical sources to construct an argument

**Class assignments**

- Homework assignments consisting of short-answer questions.
- Written summaries and in-class discussion of weekly readings.
- Policy memos that concisely describe the economic theory and evidence relating to a policy question, and make recommendations for a course of action.
- Individual presentation of a news item on an environmental issue, and group presentations of a policy case study and a non-market valuation study.
- A midterm, held during class time on **October 24<sup>th</sup>**, and a final exam at **10.10am-12.10pm** on **Monday December 18<sup>th</sup>**, both consisting of multiple choice and short answer questions.

Graduate students will substitute one policy memo for a policy report that provides in-depth guidance based on economic theory and evidence relating to a policy question of their choice.

Detailed guidelines for each assignment will be posted on the course Moodle page. Late assignments will be penalized.

Participation grades will be based on attendance and on participation in class discussions, writing workshops and in-class exercises.

### **Grading**

<u>Assignment</u>	<u>Percent of Grade</u>
Homework	20%
Policy Memos	25%
Valuation paper summary and policy case study	10%
News item and article summaries	10%
Participation	5%
Exams	30%

### **Academic Conduct**

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University (for more details on [Student Conduct Code](http://life.umt.edu/VPSA/student_conduct.php), go to: [http://life.umt.edu/VPSA/student\\_conduct.php](http://life.umt.edu/VPSA/student_conduct.php)). Students are expected to do their own work in their own words, without seeking inappropriate assistance in preparing for or completing exams or assignments. I require that you will work to uphold high standards of integrity.

### **Students with Disabilities**

Whenever possible, and in accordance with civil rights laws, The University of Montana will attempt to provide reasonable modifications to students with disabilities who request and require them. Please feel free to set up a time with me to discuss any modifications that may be necessary for this course. For more information, visit the [Disability Services for Students website](http://www.umt.edu/disability) at <http://www.umt.edu/disability>.

## Outline Schedule

<i>Week</i>	<i>Begins</i>	<i>Tentative topics (we may go faster or slower)</i>	<i>Readings for the topic</i>
1	Aug 25	Role of economics	Ch. 1 and Fullerton and Stavins (1998)
2	Sep 4	Economic efficiency: review	Ch. 2 and Sexton and Sexton (2014)
3	Sep 11	Modeling market failure	Ch. 3 and Hardin (1968)
4	Sep 18	Command-and-control approach	Ch. 4 and Gallego et al. (2013)
5	Sep 25	Command-and-control approach / Market-based approach	Ch. 4 / Ch. 5 and Walls (2016)
6	Oct 2	Market-based approach	Ch. 5 and Schmalensee et al. (1998)
7	Oct 9	Instrument choice	Ch. 15&16 and Goulder and Parry (2008)
8	Oct 16	Instrument choice – application to water pollution	Ch. 15&16 and Olmstead (2010)
9	Oct 23	Valuing environmental benefits and costs <b>Midterm – Oct 24</b>	Ch. 7&8 and Kling et al. (2012)
10	Oct 30	Valuing environmental benefits and costs	Ch. 7&8 and Ashenfelter and Greenstone (2004)
11	Nov 6	Environmental decision making	Ch. 9 and EPA (2015)
12	Nov 13	Global air quality and climate change	Ch. 13 and Hsiang et al (2017)
13	Nov 20 (no class Nov 23 <sup>rd</sup> )	Ecosystem services	Ferraro et al. (2012) and Arriagada et al. (2012)
14	Nov 27	Deforestation	Ferretti-Gallon and Busch (2014) and Alix-Garcia et al. (2013)
15	Dec 4	Environment and development	Ch. 20, Stern (2004), and Brunnschweiler and Bulte (2008)
16	Dec 11	Wrap up and review <b>Final Exam – Dec 18 (10.10am-12.10pm)</b>	