Instructor or Coordinator: Prof. Jared Carbone

Contact information (Office/Phone/Email): EH 311 / x2175 / jcarbone@mines.edu

Office hours: W, 1:30 – 4:30p

Class meeting days(times): TR, 9:30-10:45p

Class meeting location: Green Center 265

Web Page/Blackboard link (if applicable): http://www.mines.edu/~jcarbone/ebgn_470_s15/

Teaching Assistant (if applicable):

Contact information (Office/Phone/Email):

Instructional activity: 3.0 hours lecture  0 hours lab  3.0 semester hours

Course designation: ___ Common Core ___ Distributed Science or Engineering

___ Major requirement  _X_ Elective ___ Other (please describe ___________)

Course description:

This is course is an upper-level elective on environmental economics. Environmental economics approaches the problem of environmental protection from the perspective of microeconomics. The key questions it attempts to answer are: What is the right level of environmental protection from society’s perspective? What design properties lead to more or less successful regulations from the perspective of achieving their environmental objectives, minimizing economic cost and balancing the gains and losses to different members of society? How can we model and measure the benefits of environmental protection?

The field of environmental economics relies heavily on ideas from microeconomic theory. As a result, the main prerequisite for the course is completion of a course in intermediate microeconomic theory (EBGN 301).
Textbook and/or other requirement materials:

Required text:


Other required supplemental information: Course materials distributed via the course website or as books on reserve at Arthur Lakes Library.

Student learning outcomes: At the conclusion of the class students will...

1. Have an understanding of the major themes covered by the field of environmental economics.
2. Be able to apply the tools of environmental economics to the analysis of contemporary environmental policy issues.

Brief list of topics covered:

1. Principles of welfare economics, public economics and applied microeconomic theory
2. Theory and empirics of environmental regulation
3. Environmental valuation

Policy on academic integrity/misconduct: The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining and fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student’s academic achievements, and giving credence to the university’s educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy is [online](#).
Grading Procedures:

Homework assignments and exams are marked on a numerical (percentage) basis, then converted to letter grades. The course grade is then calculated using the weights indicated below. As a guide to determining standing, the following letter grade equivalence will generally apply:

- A+ 97-100
- A  93-96
- A- 90-92
- B+ 87-89
- B  83-86
- B- 80-82
- C+ 77-79
- C  73-76
- C- 70-72
- D+ 67-69
- D  60-66
- F <60

Students must successfully complete all components of the course to successfully complete the course. At the instructor’s prerogative, remedial assignments for partial credit may be requested of students who have attempted term work without achieving passing grades. Any work which is not attempted and submitted will be assigned a grade of zero. The instructor will not accept work handed in after the assigned due date. The instructor will not schedule make-up exams or assignments. If a student must miss an assignment or exam due to an excused absence (i.e. one that has been arranged in advance with the instructor or involves an illness), additional weight will be placed on the remaining exams and final project (in equal measure) in calculating the final grade for the course.

There is no final exam during the final exam period for this course. Students must complete a final project that is due during the exam period.

Notes:

- Students seeking reappraisal of a piece of graded term work (term paper, essay, etc.) should discuss their work with the Instructor within 15 days of the work being returned to the class.

Readings and Exams

The chapters in the Kolstad textbook listed in the course schedule (below) should be read prior to lecture. In addition, I will periodically assign readings from the Stavins book or other articles. These reading assignments will be posted on course webpage at least a week in advance of day they are due. I expect you to be an active participant in class discussions; your class participation grade for the course will reflect your ability to do this. The discussion and lecture in our class meetings will build on the readings - not replicate them. I will post my slides after each lecture to aid you in your studies. However, you will see that the slides are in outline form, so they are not a substitute for coming to class and taking notes of your own.

There will be two in-class midterm exams. The exams will be graded on a numerical basis. Prior to each exam I will distribute a set of review questions to help you study for the exam. Completing the review questions will count toward your final grade in the course. You will hand in a written copy of your answers to these questions prior to the review session held in the class meeting immediately preceding each exam.

Final Project

At the end of the term, you will identify an environmental policy problem of your own choosing, write a final paper on the topic and present the findings of your analysis to the class in a short (~15 min)
presentation. The final paper should be 15-20 double-spaced pages long. It must identify and contemporary environmental policy issue, contain a thoroughly-researched description of the issue and the published economic research that has attempted to analyze it. Finally, it must relate the policy issue to the topics and tools we discuss in class over the course of the term. A more detailed description of this assignment will be handed out during class near the beginning of the term.

To help you get started with the final project, you are required to submit a short (2 page, single-spaced) proposal in which you explain what your research topic is and why you think it is suitable for the assignment (as judged by the criteria for the project outlined above.) The proposal is due by March 31st and you must subsequently arrange a time to discuss your proposal with me. I will give you feedback on the proposal and suggest changes in focus if I feel the topic is not appropriate in its original form.

**Distinguished Lecture Series:** Lawrence Goulder, Professor of Economics at Stanford University, will be coming February 6 to give a public lecture on the economics and policy of global warming. We will attend the lecture as a class. Part of your class participation grade will reflect your participation in this activity.

**Evaluation**

- Class Participation (15%)
- Review Questions (15%)
- First Midterm Exam (20%)
- Second Midterm Exam (20%)
- Final Project (30%)

**Coursework Return Policy:**

Graded coursework will be returned to students within two weeks of the date it is submitted for evaluation.

**Absence Policy** (e.g., Sports/Activities Policy): Students are required to attend lecture. Notification of planned absences must be given to the instructor in advance.

**Common Exam Policy** (if applicable): N/A
Preliminary Class Schedule:

This list is preliminary. I reserve the right to modify the readings and topics if I feel it is in the best interest of the class. Below I have indicated the chapters from the Kolstad textbook which each section of the course will cover. Additional readings will be posted on the course website at least a week in advance of the due dates.

   o Chapter 3: Social Choice: How Much Environmental Protection?

II. Markets and Market Failures [Weeks 3-5: January 20 – February 5]
   o Chapter 4: Efficiency and Markets
   o Chapter 5: Market Failure: Public Goods, Public Bads and Externalities
   o Chapter 6: Making Decisions about Environmental Programs
   o Chapter 13: Property Rights

III. Regulating Pollution [Weeks 6-8: February 10–26]
   o Chapter 11: Regulating Pollution
   o Chapter 12: Emissions Fees and Prices.
   o Chapter 15: Regulation with Unknown Control Costs
   o Chapter 16: Audits, Enforcement and Moral Hazard

   Review Session for First Midterm: March 3
   First Midterm Exam: March 5
   Spring Break: March 7–15

IV. Valuing the Environment [Weeks 11-14: March 17 – April 7]
   o Chapter 7: Demand for Environmental Goods
   o Chapter 8: Hedonic Price Methods
   o Chapter 9: Household Production
   o Chapter 10: Constructed Markets

   Final Project Proposals Due: March 31
   E-days: April 2-4
   Review Session for Second Midterm Exam: April 9
   Second Midterm Exam: April 14

V. Class Presentations [Weeks 15-17: April 16 – 30]