INSTRUCTOR: Arun Malik (Office Hours: Wed and Thu 4:00-5:30 pm and by appointment, Gov 305, Tel. 202-994-5471, amalik@gwu.edu )

COURSE DESCRIPTION. The course will consist of a survey of the literature on environmental economics with an emphasis on the theory of environmental regulation and empirical analyses of environmental policies. In addition, some attention will be given to valuation of environmental amenities. The prerequisites for the course are Econ 8301 and 8302. Econ 8303 is desirable but not essential; if you have not had Econ 8303, I can provide some background reading on game theory.

REQUIREMENTS AND GRADING. Approximately four homework assignments will be handed out over the course of the semester. The assignments will take the form of problem sets or article reviews. Assignments will not be accepted after the day on which they are due; however, the assignment with the lowest grade will be dropped when determining course grades.

There will be a midterm exam and a final exam. Both exams will be given in class. The midterm exam is tentatively scheduled for Monday, March 17th; you will have the full class period to take it. The final exam will be given during the final exam period.

Students have the option of writing a paper that critically reviews 3-4 articles on a specific topic. Writing a paper reduces the weight given to the exams when calculating the course grade (details below). The body of the paper must be at least 15 pages in length.

For students who choose not to write a paper, the course grade will be calculated using the following weights: homework – 30 percent, midterm exam – 35 percent, final exam – 35 percent. Students who choose to write a paper will be able to shift 25 percentage points from either exam to the paper.

ACADEMIC INTEGRITY. The George Washington University is guided by the standards of academic integrity. Students are reminded to honor the Code of Academic Integrity, which can be viewed at http://www.gwu.edu/~ntegrity/code.html

If you are not familiar with the Code, you should read through it carefully.

TOPICS AND READINGS. A tentative list of topics to be covered and accompanying readings are presented below. Readings are divided into two categories: required and optional. Required readings are marked with an asterisk (*). Required readings from outside the textbook will be made available via Blackboard or handed out in class. Students should at least skim these readings before the class in which they are discussed. The textbook for the course is listed below together with the abbreviation used when referring to it in the reading list:


This textbook is old, but for learning the basics of the economics of environmental regulation, it dominates the only current graduate-level textbook, by Hanley et al., Environmental Economics in Theory and Practice, 2nd ed., Palgrave Macmillan, 2007.
A few of the readings for the course are contained in the following edited volume. This book is an optional, but recommended, purchase:


Other books that you may find helpful are listed at the end of this document.

For the material covered in Topics 1 and 2, the following survey article should be read as we make our way through the two topics:


**TOPIC 1: THEORY OF ENVIRONMENTAL REGULATION** (5 classes)

**A. Basic Theory**

*B&O, Chapters 1, 2, and 3 [pp. 1-35]*


**B. Uncertainty and Asymmetric Information**

*B&O, Chapter 5 [pp. 57-78]*

B. Uncertainty and Asymmetric Information (cont.)


C. Market Imperfections

*B&O, Chapter 6, pp. 79-86 only


TOPIC 1: THEORY OF ENVIRONMENTAL REGULATION (cont.)

D. Liability Rules and Enforcement


E. Voluntary Approaches


TOPIC 2: EMPIRICAL ANALYSES OF ENVIRONMENTAL POLICIES & CONSEQUENCES (5 classes)

A. Methods


Note: Each reading above, except for the first one, will be assigned with one of the applications in the readings below. The first article should be read at the start of this topic.

B. Air Quality Regulations


C. Voluntary Programs and Enforcement


C. Voluntary Programs and Enforcement (cont.)


D. Environment and Health


E. Driving Restrictions


TOPIC 3: VALUATION OF ENVIRONMENTAL AMENITIES (2 classes)

A. Basic Theory


B. Stated Preference Methods


TOPIC 4: CLIMATE CHANGE (1 class)


OTHER RELEVANT BOOKS


Partha Dasgupta, *The Control of Resources*, Harvard University Press, 1982.  [An insightful but rather idiosyncratic discussion of environmental and renewable resource problems; only assumes calculus.]


Per-Olov Johansson, *Cost-Benefit Analysis of Environmental Change*, Cambridge University Press, 1993.  [Succinct exposition of issues that arise in benefit-cost analyses of environmental and resource policies. Primarily devoted to theory but includes a chapter that discusses some very topical applications of benefit-cost analysis.]


Charles Kolstad, *Environmental Economics*, 2nd ed., Oxford University Press, 2010.  [Differs from other texts in that it covers a number of interesting topics that are typically ignored; limited use of advanced mathematics.]


David W. Pearce and R. Kerry Turner, *Economics of Natural Resources and the Environment*, Johns Hopkins University Press, 1990.  [A fairly good text that only requires knowledge of calculus; stronger on environmental economics than resource economics.]