ENVIRONMENTAL ECONOMICS
ECON 335 (SEC 1); SPRING 2019

ADMINISTRATIVE DETAILS
TIME: Monday-Wednesday-Friday: 1:30-2:20 P.M.
PLACE: Nguyen Building, Room 1103
INSTRUCTOR: William (Bill) McNaught
EMAIL: wmcnaught08@gmail.com (preferred) and wmcnaugh@gmu.edu
PHONE: H: 703-777-3182 (preferred) and C: 703-209-2032

OBJECTIVE
Students will learn:
► more about microeconomics and environmental science;
► how economic theory can help improve environmental policies; and
► why economics must incorporate other disciplines, e.g., environmental science and philosophy to be used effectively.

MATERIALS
PRINCIPAL TEXT
This textbook will not be available in the bookstore. The book is being published online to keep costs down, something the instructor knows is important to students. Nearly all course content is drawn from the book.
BLACKBOARD
●[GM] N. Gregory Mankiw, Principles of Microeconomics: Chapter 7, “Consumers, Producers and the Efficiency of Markets”; Chapter 10, “Externalities”; Chapter 11, “Public Goods and Common Resources”, esp. Figure 1

**COURSE POLICIES**

**Prerequisites**
The instructor assumes that all students have completed an introductory course in microeconomics, probably GMU’s Econ 103, but possibly NVCC’s equivalent course Eco 202. The course begins with a quick review of microeconomic theory using the material presented in Chapter 2 of the textbook. Additional economics training in microeconomics (GMU’s Econ 306) or perhaps macroeconomics (either GMU’s Econ 104 or NVCC’s Eco 201) would also be helpful.

**Content of Each Class Session**
Most sessions of the class will discuss one chapter of the textbook, a first draft of a textbook on which the instructor has been working for years, supplemented with some outside readings or occasionally the screening of a video. In prior years, the instructor has posted lecture notes for each daily session but except for the first session, he will not be posting notes this semester because class discussions will stick closely to the material in the textbook.

**Office Hours and Extra Help**
As an adjunct professor, the instructor does not have an office in the Economics Department and will not be holding office hours. Students needing extra help should start by emailing their questions to him at wmcnaught08@gmail.com or wmcnaugh@gmu.edu. If a student cannot get sufficient help through an email exchange, an extra session could be scheduled before class (1:00?). Students interested in a broader approach to environmental issues may wish to know the instructor is also teaching Econ 309 (Economics of Public Policies) Tuesdays in Room B220 of Robinson Hall at 4:30. He will be discussing externalities on February 26th and global warming on March 26th.
Lateness

Students need not worry about coming to class late if they enter unobtrusively. Because the instructor uses Fairfax County Parkway to drive to Mason from his home in Leesburg, he may occasionally be late, but given the early afternoon timing of the class that is unlikely. If he is going to be late, he will call a class member with an ETA. He keeps his cell phone in his car, connected to its audio system so they may call him with questions about his class arrival on 703-209-2032.

Honor Policy

The instructor, a graduate of the U. S. Air Force Academy, believes strongly in academic integrity. Students using someone else’s work without proper attribution will be reported to GMU’s Honor Council.

Disability Policy

The instructor who is disabled himself will do his best to make reasonable accommodations for all disabled students who provide him with GMU paperwork attesting to their disability.

GRADES

Grades will be determined through two graded exams and a short paper. Additionally, students may write an extra credit paper and receive up to 10 points extra credit for answering the study questions at the end of each assigned chapter in the textbook. Grades for both tests and the required paper will be averaged and up to 10 points extra credit for answering the study questions in the textbook. Both exams will have 103 possible points, essentially giving students 3 points extra credit on each exam. Letter grades probably will be awarded using the traditional grade scale of 90-100 A, 80 to 89 B, etc. Within each letter range the instructor will award some “+”s and “-”s. For example, an 81 would be a B- and a 98 would be an A+.

Exams

The two exams will combine fill-in, multiple-choice and short-answer questions. Fill-in and multiple-choice questions will test students’ knowledge of key economic terms mentioned in the readings and lectures. Each short-answer question will ask students to summarize one of the economic concepts mentioned in the text. Students will take their tests in class on their laptops using Top Hat’s on-line testing system. Fill-in and multiple choice questions will be graded automatically by the Top Hat system; the instructor will review each written short answer question himself to assign grades for this section of the exam.

The instructor will post a study guide to help students prepare for both tests onto Blackboard approximately one week before each exam. A copy of the study guide for last semester’s midterm is already posted to Blackboard. The midterm on March 8th will cover all preceding course material. The final on May 8th will cover only material presented in class sessions since the midterm (i.e., is not comprehensive.)

Paper(s)

The required paper should be from 4 to 5 pages (double-spaced) and present the student’s understanding of how economics can help mitigate the most important environmental issue of our time, i.e., global warming (a.k.a. climate change.) A suggested outline for this paper is posted on Blackboard. Students are advised the instructor is a liberal Democrat,
but students defending the environmental policies of the Trump Administra-
tion won’t be penalized if they use good scientific and economic
reasoning. The required paper is due on May 6th.

Additionally, students may write a second paper for extra credit; this
paper should also be from 4 to 5 pages. The extra credit paper may be
used to replace any of the other three graded assignments although in the
past most students have written an extra credit paper in order to skip the
final exam. Possible topics for an EC paper are:

♦ Benefit-Cost Analysis (February 15th lecture)
♦ Biodiversity (April 19th and 22nd lectures)
♦ Environmental Justice (April 29th to May 3rd lectures)
♦ Optimal Pollution Control (April 8th lecture) or
♦ Valuing the Environment (March 4th and 20th lectures).

Students who would like to write an EC paper on some other topic should
clear the topic with the instructor. Outlines for each of these topics
will be posted to Blackboard. The EC paper is due May 8th.

Both papers may be brought to class or emailed to the instructor at the
email addresses listed above. If students submit their papers via the
instructor’s GMU email address (wmcnaugh@gmu.edu), they should use
“Student Name/Econ 309 Paper” for their subject heading. The instructor
will deduct 2 points per day that a paper is late without an excused
extension.

SCHEDULE
JAN 23: COURSE OVERVIEW
REQUIRED READING: WM (Chapter 1)
RECOMMENDED READING: JS (The Anthropocene)

JAN 25: MICROECONOMICS REVIEW
REQUIRED READING: WM (Chapter 2)

JAN 28: VIDEO PRESENTATION
Video of Professor Richard Wolfson’s lecture “Is the Earth Warming”

JAN 30: EVOLUTION OF ECONOMIC THEORY
REQUIRED READING: WM (Chapter 3)
RECOMMENDED READING: WM (Chapter 4)

FEB 1: THE NEED FOR A POST-MODERN ECONOMICS
REQUIRED READING: AG (“Eco-nomics: Truth or Consequences”)

FEB 4: ECONOMIC EFFICIENCY (PART 1)
REQUIRED READING: WM (Chapter 5)
RECOMMENDED READING: econlib.org/library/Enc/Efficiency.html

FEB 6: ECONOMIC EFFICIENCY (PART 2)
REQUIRED READING: GM (“Consumers, Producers and the Efficiency of Markets”)

FEB 8: TRAGEDY OF THE COMMONS
REQUIRED READING: WM (Chapter 4)
Video of Professor Eric Strauss’s lecture “Humanity and the Tragedy of the
Commons” viewed in class
FEB 11: MARKET FAILURES
REQUIRED READING: WM (Chapter 8)
RECOMMENDED READING: WM (Chapter 7)

FEB 13: PUBLIC GOODS
REQUIRED READING: WM (Chapter 9)
RECOMMENDED READING: GM (“Public Goods and Common Resources”)

FEB 15: BENEFIT-COST ANALYSIS
REQUIRED READING: WM (Appendix A)
RECOMMENDED READING: SR (“Evaluating Public Expenditure”)

FEB 18: EXTERNALITIES (PART 1)
REQUIRED READINGS: WM (Chapter 10) and EC (“The Lives of Others”)

FEB 20: EXTERNALITIES (PART 2)
REQUIRED READING: GM (Externalities)

FEB 22: GLOBAL WARMING (PART 1: PHYSICS)
REQUIRED READINGS: WM (Chapter 11), FI (“Earth’s Climate System”), and FI (“Global Warming”)
RECOMMENDED READINGS: MBN (“Greenhouse Economics”), EC (“If All Else Fails”, EC (“Second Best Solutions”) and FI (“Greenhouse Gases

FEB 25: GLOBAL WARMING (IMPACTS)
REQUIRED READINGS: EC (“Hotter than August”), FI (“Consequences of Global Warming”)
RECOMMENDED READINGS: MBN (“Greenhouse Economics”), EC (“If All Else Fails” and

FEB 27: VIDEO PRESENTATION
Al Gore’s movie Inconvenient Truth viewed in class

MAR 1: GLOBAL WARMING (PART 2: PUBLIC POLICY)
REQUIRED READINGS: WM (Chapter 13), FI (“Dissenting Opinions”, FI “Public Policy Options”) and FI (“Politics of Global Warming”)
RECOMMENDED READINGS: JS (“Global Solutions to Climate Change”) and EC (“It’s Not the Heat, It’s the Cupidity”)

MAR 4: VALUING THE ENVIRONMENT (PART 1)
REQUIRED READING: WM (Chapter 7) and HSW (“Valuing the Environment: Concepts”)

MAR 6: DISCUSSION SESSION FOR PREPARATION FOR MIDTERM EXAM

MAR 8: MIDTERM EXAM
NOTE TO STUDENTS: students will take the midterm using the Top-Hat examination system on their lap-tops in class

MAR 11 TO 15: NO CLASSES DURING SPRING BREAK
MAR 18: REVIEW OF MIDTERM EXAM AND CLASS VIDEO
Richard Wolfson’s lecture “Impacts of Climate Change” viewed in class; midterm exam discussed, students who did not take the exam on March 5th should be prepared to take an “old-fashioned, pen-and-paper” makeup exam

MAR 20: VALUING THE ENVIRONMENT (PART 2)
REQUIRED READING: HSW (“Valuing the Environment: Methods”)

MAR 22: COMMON RESOURCES
REQUIRED READING: WM (Chapter 14)
RECOMMENDED READINGS: GM (“Public Goods and Common Resources”)

MAR 25: RENEWABLE RESOURCES
REQUIRED READING: WM (Chapters 11 and 12)

MAR 27: FORESTS AND FISHERIES
RECOMMENDED READINGS: TL (“Sustainable Renewable Resources: Forests”)

MAR 29: ENERGY
REQUIRED READING: MBN (“All Fracked Up”)
RECOMMENDED READING: MBN (“Deception of Green Energy”)

APR 1: NON-RENEWABLE RESOURCES (PART 1)
REQUIRED READING: WM (Chapter 14)
RECOMMENDED READING: TL (“Dynamic Efficiency and Sustainable Development”)

APR 3: NON-RENEWABLE RESOURCES (PART 2)
REQUIRED READING: HSW (“Non-renewable Resources and Energy”)
RECOMMENDED: GM (“Oligopoly”)

APR 5: WATER AS A RESOURCE
REQUIRED READINGS: TL (“Water”), JS (“Securing Our Water Needs”)
RECOMMENDED READINGS: MBN (“Are We Running Out of Water?”) and GM (“Public Goods and Common Resources”)

APR 8: ECONOMICS OF POLLUTION
REQUIRED READINGS: TL (“Economics of Pollution Control”)
RECOMMENDED READINGS: NM (“Economics of Selling Pollution Rights”)

APR 10: WATER POLLUTION
REQUIRED READINGS: WM (Chapter 18) and HSW (“Economics of Water Pollution”)
RECOMMENDED READINGS: NM (“Economics of Oil Pollution”)

APR 12: AIR POLLUTION
REQUIRED READINGS: WM (Chapter 19)
RECOMMENDED READINGS: TL (“Stationary-Source Local and Regional Air Pollution” and “Mobile Source Air Pollution”)

APR 15: SOLID WASTE AND RECYCLING
REQUIRED READINGS: WM (Chapter 20)
RECOMMENDED READINGS: MBN (“The Trashman Cometh”)
APR 17: EVOLUTION
REQUIRED READING: JG (“Bare Bones of Natural Selection”)

APR 19: BIODIVERSITY (PART 1)
REQUIRED READINGS: WM (Chapter 20) and MBN (“Save That Species”)
RECOMMENDED READINGS: EC (“A Modern Ark”)

APR 22: BIODIVERSITY (PART 2)
REQUIRED READING: HSW (“Biodiversity”)
RECOMMENDED READINGS: NM (“Economics of Animal Extinction”)

APR 24: WHALES
Video “Whales in the Wild” shown in class

APR 26: ETHICS
REQUIRED READING: YK (“Aristotle: The Virtuous Life”)
RECOMMENDED READINGS: KL (“The Utilitarian Challenge” and “A Contract Response: John Rawls”)

APR 29: ENVIRONMENTAL JUSTICE (PART 1)
REQUIRED READINGS: WM (Chapter 17) and GW (“Understanding Environmental Justice”)

MAY 1: ENVIRONMENTAL JUSTICE (PART 2)
REQUIRED READINGS: FI (“Ethics of climate Change”)
RECOMMENDED READINGS: GW (“Globalizing and Framing Environmental Justice”)

MAY 3: ENVIRONMENTAL JUSTICE (HISTORY)
REQUIRED READING: TL (“Toxic Substances and Environmental Justice”)

MAY 6: REVIEW SESSION
NOTE: Required papers are due

MAY 8(?): FINAL EXAM
NOTE: Extra Credit papers are due, students will take the final exam on their lap-tops in class using the Top Hat examination system