# **CEV 406 Environmental Economics**

Fall 2020-2021

## **Course Information**

**Instructor** Dr. Shihomi Ara-Aksoy

Office: Department of Economics

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**Time/Place Thursdays 10:00 – 12:50 (Zoom)** 

**Office Hours:** by appointment (Zoom meeting will be arranged upon request.)

Course Website: <a href="http://www.shihomiaksoy.org">http://www.shihomiaksoy.org</a>; evdekal.hacettepe.edu.tr

**Course Description** This course provides an introduction to environmental economics and policy. Lectures are designed to provide foundations of environmental economics together with the basic micro and macroeconomics concepts for engineering students to be familiar with the economic way of thinking. Practical knowledge and techniques which become necessary to conduct an environmental cost-benefit analysis and environmental policy evaluation will be discussed.

**Course Objectives** By the end of this course, students are expected to (i) develop a capacity to conduct an environmental cost-benefit analysis for environmental/health policies and projects, (ii) analyze the policy alternatives, and (iii) assess the impacts of the chosen instrument. 1.

# **Course Requirements**

| 1. | Midterm Exam           | 30% |
|----|------------------------|-----|
| 2. | Final Exam             | 40% |
| 3. | 10 Attendance Quizzes* | 10% |
| 4. | Homework               | 20% |

## \*10 Attendance Quizzes

It will be conducted in the form of "Exam" on HUZEM platform. It will be a short quiz testing your comprehension of each class as well as the attendance (almost) every week. There will be no make-up for these quizzes.

#### **Textbooks**

• Anthony E. Boardman, David H. Greenberg, Aidan R. Vining, David L. Weimer. Cost-Benefit Analysis Concepts and Practice. Pearson Education.

Make-up Exam No makeup exam will be given unless a legally acceptable document (such as medical report) is submitted. Validity of such document will be examined.

## **Grading**

Final grade will be given entirely based on your scores under a fair and single grading policy. None of students' "special situations/needs" (e.g. scholarship, graduation, financial condition, family situation etc.) will affect the grade. No exception. If you need a certain grade, work hard.

## **Academic Misconduct**

Please read the relevant material at <a href="http://www.plagiarism.org/">http://www.plagiarism.org/</a>. Detected plagiarism throughout the coursework will cause the student to be punished according to the University rules. The students are expected to know what plagiarism is and lack of knowledge is not an acceptable excuse.

# **Course Schedule**

| Week | Topics                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Introduction: What's Environmental Economics?                                                                                                                        |
| 2    | Microeconomics Foundation  Demand/Supply, Willingness to Pay  Utility  Market Failure  Opportunity Cost  Elasticity                                                  |
| 3    | <ul> <li>Macroeconomics Foundation</li> <li>Basic Macroeconomic Indicators (GDP, CPI, Interest Rate, Inflation)</li> <li>PPP, Inflation and Exchange Rate</li> </ul> |
| 4    | Cumhuriyet Bayrami (No Class)                                                                                                                                        |
| 5    | Cost-Benefit Analysis: Time and Money  Discounting Present Value/Future Value/Net Present Value Real vs. Nominal Time Preference                                     |
| 6    | Fundamentals of Regression Analysis  Introduction to R  Ordinary Least Squares  Logit Model                                                                          |
| 7    | Property Rights/Externalities                                                                                                                                        |
| 8    | Midterm Exam                                                                                                                                                         |
| 9    | Economics of Pollution Control (1)  • Externalities  • Optimal Level of Pollution  • Marginal Abatement Cost  • Marginal Damage Cost                                 |
| 10   | Economics of Pollution Control (2)                                                                                                                                   |
| 11   | Environmental Evaluation (1)  • Basic Concepts  • Values  • WTP  • VSL/VSLY                                                                                          |
| 12   | Environmental Evaluation (2)  CVM  Choice Experiment Hedonic Cost Method                                                                                             |
| 13   | Health Evaluation: DALY, QALY/ Cost-Effectiveness Analysis                                                                                                           |
| 14   | Climate Change and Policy Evaluation                                                                                                                                 |