
ENVIRON 806K

Environmental Economics II

Spring 2018



Dates / course meeting time: 150 minutes of contact hours per week for 14 weeks

Academic credit: 3

Course format: Lecture

Instructor's Information

Moon Joon Kim

Visiting Assistant Professor of Environmental Economics

Email: moonjoon.kim@dukekunshan.edu.cn

Office hours: Two-hour/week or by appointment

Office: CC 2015

What is this course about?

This course provides for continued development and practice of skills learned in PUBPOL 870K Statistics and Program Evaluation and ENVIRON 805K Environmental Economics. Students develop conceptual and professional skills related to environmental policy evaluation. The goal is to stimulate critical thinking about today's environmental problems and the public policies designed to improve them by implementing the theories and principles acquired in class. Achievement of class objectives requires writing two (10-15page) research papers on environmental-related policy. It is the opportunity to apply skills and theories that can be monitored, reflected upon, and improved. This course helps students to start original research work and develop it into a thesis or an actual working paper.

What background knowledge do I need before taking this course?

The prerequisite for this course are courses in statistics, program evaluation, or environmental economics, such as PUBPOL 870K and ENVIRON 805K here at DKU. Students should be comfortable with the economics concepts, and data and graphical analysis in such courses.

What will I learn in this course?

Students completing this course will be able to

- Learn how to write professional research papers on environmental policy evaluation.
- Identify research questions related to environmental policy and collect data needed.
- Explore how their research could contribute to issues raised in class readings.
- Develop and execute empirical estimation.
- Develop critical thinking skills and gain research inspiration from critiquing other students' works.

How will I know if I have met the objectives of this course?

1 research papers and assignments: Students will complete one research papers to learn how to write professional papers on environmental policy evaluation, based on their prior knowledge of environmental economics. Students will collect the data and conduct data analyses, model design, and result interpretation. Students will be required to submit weekly progress to an instructor. Students need to not only complete a single section of a paper every week but also revise previous section(s), based on the feedback they receive during their presentation. Through the written assignments, students would gain a practical understanding of composing a research paper, starting from the literature search, synthesizing previous findings, and presenting a coherent argument. Those skills in writing and reading research papers acquired in this course can be applied to a variety of academic disciplines.

Participation: Students will have opportunities to develop their research paper through biweekly presentations to an instructor and other students, and receive feedback. Students will learn how to write a paper in a timely manner, how to present it in a professional way, and how to read others' works critically.

How can I prepare for the class sessions to be successful?

Biweekly presentation is limited to 20 minutes per student. Students should prepare to present their research progress monthly (before midterm) or biweekly (after midterm). With the presentation, students are required to submit a revised draft.

What required texts, materials, and equipment will I need?

This course is based on students' own research. Students will compile a list of readings in consultation with their professor. Literature section in each research paper should include all previous works in the reading list.

What optional texts or resources might be helpful?

"Environmental and Natural Resource Economics" by Tom Tietenberg and Lynne Lewis

"Environmental Economics" by Charles D. Kolstad

"Markets and the Environment," by N.O. Keohane and S.M. Olmstead

"Experimental and Quasi-Experimental Designs for Generalized Causal Inference," by Shadish William, Thomas Cook, and Donald Campbell

Computer program: LaTeX(required, free)

Statistical program: STATA (recommended, USD \$50 for one-year license), R (optional, free)

How will my grade be determined?

Students will be evaluated on the basis of 2 research papers, presentation, assignments, and participation in class and seminars. These components will be weighted as follows:

Research papers: 50% (first paper: 25%, second paper 25%)

Assignments: 30%

Presentations: 10%

Class and seminar participation: 10%

Based on the cumulative grade, final grade will be specified as:

A+ = 97% and higher

A = 94% and higher

A- = 90% and higher

B+ = 87% and higher
B = 84% and higher
B- = 80% and higher
C+ = 77% and higher
C = 74% and higher
C- = 70% and higher
F= below 70%

What are the course policies?

ACADEMIC INTEGRITY:

Each student is bound by the academic honesty standard of the Duke Kunshan University. Its Community Standard states: “Duke Kunshan University is a community composed of individuals of diverse cultures and backgrounds. We are dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Members of this community commit to reflecting upon and upholding these principles in all academic and non-academic endeavors, and to protecting and promoting a culture of integrity and trust.”

CLASS ATTENDANCE:

Students are expected to engage in active classroom discussion, thus class participation and attendance is mandatory. This includes submitting assignments, leading discussions and participate classroom debates.

POLICY ON MAKE-UP WORK:

Students are allowed to make up work only for medical reasons, consistent with DKU policy. You must notify the instructor in advance if you will miss a report or presentation.

What campus resources can help me during this course?

Duke library website: <https://dukekunshan.edu.cn/en/academics/library>

Duke software licensing: <https://software.duke.edu/>

What is the expected course schedule?

Date	Class topic/unit name	Pre-class work for students	Planned in-class activities	Assignments due
Week 1	Overview of environmental economics	Review class materials from environmental economics course	Lecture: Recap the concepts used in environmental economics	
Week 2	Stated Preference Methods: Contingent valuation method (CVM)	Read the required articles	Lecture: CVM	Brainstorming for research topic due Jan 17, 2018
Week 3		Presentation preparation	Presentation on articles on CVM	Regular meeting with an instructor on Jan 26, 2018
Week 4	Revealed Preference Methods: Travel cost method (TCM)	Read the required articles	Lecture: TCM	Assignment 1: Research proposal due Jan 31, 2018
Week 5		Presentation preparation	Presentation on articles on TCM	Regular meeting with an instructor on Feb 7, 2018
Week 6	Revealed Preference Methods: Hedonic method	Read the required articles	Lecture: Hedonic method	Regular meeting with an instructor on Mar 6, 2018
Week 7		Presentation preparation	Presentation on articles on hedonic method	Assignment 2: First draft due Mar 12, 2018
Week 8	Discounting rates	Read the required articles	Lecture: Discounting rates	Regular meeting with an instructor on Mar 19, 2018
Week 9	Program evaluation: Matching method (MM) and Instrumental variable method (IV)	Read the required articles	Lecture: MM and IV	Assignment 3: Second draft due Mar 26, 2018
Week 10		Presentation preparation	Presentation on articles on MM and IV	Regular meeting with an instructor on Apr 2, 2018
Week 11	Program evaluation:	Read the required articles	Lecture: DID and RDD	Assignment 4: Third draft due Apr 9, 2018

Week 12	Difference-in-differences (DID) and Regression discontinuity design (RDD)	Presentation preparation	Presentation on articles on DID and RDD	Regular meeting with an instructor on Apr 16, 2018
Week 13	Final presentation	Complete term paper		Term paper due before class

Required articles for class

Week 1

Almond D. et al. 2009, "Winter Heating or Clean Air? Unintended Impacts of China's Huai River Policy", *American Economic Review*, 99(2): 184-190

Zhang J. and Mu Q. 2017, "Air Pollution and Defensive Expenditures: Evidence from Particulate-filtering Facemasks", *Journal of Environmental Economics and Management*, In Press

Kim M. 2018, "Ambient Air Pollution and Hospital Admission: Evidence from South Korea", working paper

Week 2

Carson et al. 2003, "Contingent Valuation and Lost Passive Use: Damages from the Exxon Valdez Oil Spill", *Environmental and Resource Economics*, 25: 257-286

Ehmke M. et al. 2008, "Is Hypothetical Bias a Universal Phenomenon? A Multinational Investigation", *Land Economics*, 84(3): 489-500

Hanemann M. 1994, "Valuing the Environment Through Contingent Valuation", *Journal of Economic Perspectives*, 8(4): 19-43

Labao R. et al 2008, "Do Colored Photographs Affect Willingness to Pay Responses for Endangered Species Conservation?", *Environmental and Resource Economics*, 40: 251-264

Ladenburg and Olsen 2009, "Gender Anomalies in Experimental Economics – Are Biases Really Gender Dependent?", working paper

Landry C. et al. 2007, "Is a Donor in Hand Better than Two in the Bush? Evidence from a Natural Field Experiment", working paper

Week 3

Boyle et al. 2001

Carson 2011

Mitchell 2002

Whittington 2002