

Course Syllabus

ECON 1355: Environmental Issues in Development Economics Course Description

Spring 2017

Professor

Instructor: Andrew Foster

Office: 203 Mencoff

Office Hours: 1:30-3:30 Tuesdays or by appointment

Telephone: 401 863 2537

Email: afoster@brown.edu

Meeting times

Lecture Days/Time: MW 8:30am-9:50am

Lecture Location: [Smith-Buonanno Hall](#)

http://brown.edu/Facilities/Facilities_Management/maps/index.php#building/SMITH-BUON G12

Exam Date: 19-MAY-2017 Exam Time: 09:00:00 AM Exam Group: 02

Prerequisites:

[\(ECON 1110](#) [_](https://cab.brown.edu/search/?p=ECON%201110) [_](https://cab.brown.edu/search/?p=ECON%201110)) or [1130](#) [_](https://cab.brown.edu/search/?p=ECON%201130)

[_](https://cab.brown.edu/search/?p=ECON%201130)) and [\(ECON 1620](#) [_](https://cab.brown.edu/search/?p=ECON%201620) [_](https://cab.brown.edu/search/?p=ECON%201620)), [APMA 1650](#) [_](https://cab.brown.edu/search/?p=APMA%201650) [_](https://cab.brown.edu/search/?p=APMA%201650)), [1655](#) [_](https://cab.brown.edu/search/?p=APMA%201655) [_](https://cab.brown.edu/search/?p=APMA%201655)), [CSCI 1450](#) [_](https://cab.brown.edu/search/?p=CSCI%201450) [_](https://cab.brown.edu/search/?p=CSCI%201450)) or [0450](#) [_](https://cab.brown.edu/search/?p=CSCI%200450) [_](https://cab.brown.edu/search/?p=CSCI%200450)) or minimum score of

WAIVE in 'Graduate Student PreReq'

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Summary of Course

This advanced economics course examines environmental issues in developing countries, including air and water pollution, land use change, energy use, and the extraction of natural resources. The course uses microeconomic theory to link household and firm decision-making on environmental issues to choices in labor, land, and product markets; it also emphasizes basic empirical techniques and uses recent research to illustrate the roles of econometric analysis and economic theory in diagnosing and con-fronting problems lying at the nexus of the environment and economic development.

Course Goals

This course interweaves economic theory and empirical techniques in an effort to better understand the relationship between human decision-making, economic markets, and the natural environment in

developing countries. By the end of the course, I hope that you will be able to:

- Discuss the key environmental problems in development and understand their possible economic causes and consequences
- Apply basic microeconomic theory to a wide variety of environmental issues, and decide which frameworks are most appropriate for a given situation
- Conduct simple econometric analysis of household survey data
- Evaluate the validity of statistical arguments in popular media and policy debates
- Evaluate the spectrum of government and market-based solutions to environmental issues in development and understand when and how these are effective

Logistics

We are using Canvas for this course. Students registered for the course should be able to access the full canvas site by logging in through canvas.brown.edu. Those not registered can access a limited version of the site through <https://canvas.brown.edu/courses/1070699>

Paper and single chapter readings will generally be available here and assignments should be submitted through Canvas unless indicated otherwise.

Grading

Readings: The primary focus of the course will be on reading and working through articles published or suitable for major economics journals. These will be available on the class web page. If you are off campus you will need VPN to access some articles. You will be expected to read these articles and understand their basic approach and conclusions on your own well enough to discuss them in class. You are not responsible for the technical details in these articles unless these details are highlighted in the lectures.

Class: Class attendance in the course is critical. There will be a mix of lectures and discussion around particular papers. Students should come to class prepared to describe how empirical results in assigned readings illustrate the authors' main points as well as put the results in a broader context.

Overall class participation will constitute 10% of your grade. It is understood that you may miss a class due to job interviews, illness, etc.. It is your responsibility to access and learn the materials covered in a week that you miss.

Problem sets (4 over semester): Build on readings and lectures and test theoretical and empirical skills. You are welcome to work with others but should submit your own. Please note the names of people you have worked with closely on the first page of the problem set. Problem sets will count equally and will, in total, represent 30% of your grade. I will schedule a section outside of the normal class to go over problem sets.

Online quizzes (every two weeks or so): 3-5 short answer questions, usually T/F with explanation. Online quizzes will count equally and will, in total, represent 20% of your grade. They are formally due at the end of each module but you should look at them while doing the relevant readings as we will

sometimes discuss in class. I encourage you to discuss your answers with classmates outside of class. Not only will this make you a better economists but you will also have more fun.

Short paper (3): You are asked to write three 3-5 page papers on a current issue related to the material in the course. I will provide a list of questions from which you should select one and you should answer them using both papers on the syllabus and those from the literature. You can also pick your own topic if you clear it with me first. You may find it particularly useful to look at papers presented at recent development conferences listed at neudc.org and ibread.org. Short papers will count equally and will, in total, represent 20% of your grade. This course is designated as a WRIT course so you should expect substantive feedback from me and at least one student in the class that should be incorporated into the subsequent papers.

Final: You will have a final during the exam period. It will count 20% of your grade. Please ensure that you do not book your departure from Brown prior to the scheduled date/time of the exam.

Time: Anticipated time requirements for this course are as follows: Classes: 28 hours (12 @ 2.33 hours), Section: 8 hours (8 @ 1 hours), Papers: 15 (3 @ 5 hours), Problem Sets: 15 hours (3 @ 5 hours), Readings: 96 (48 @ 2 hours), Online Responses: 24 (12 @ 2 hours), Final Exam: 14 (1 @ 16). Total: 200 hours.

Lateness: You can submit up to three assignments (any combination of problem sets, papers, or quizzes) after the formal due date/time without penalty. For the fourth and any further late assignment you will receive a 20% reduction in your grade for that assignment. I may make changes in assignments or due dates over the course of the semester. Canvas's Modules section will always have the most up to date information. If I do make changes I will notify you either through Canvas or in class.

Books

There is no textbook for this class. In case you would like references on environmental economics concepts, two useful ones are:

- Environmental Economics, by Charles Kolstad
- Environmental Economics and Management, by Scott Callan and Janet Thomas

If you would like references on econometrics concepts, then three good ones are:

- Introductory Econometrics, by Arthur Goldberger
- Basic Econometrics, by Damodar Gujarati
- Statistics for Business and Economics, by Newbold, et al.











Two good references for microeconomics are:





- Intermediate Microeconomics, by Hal Varian
- Microeconomic Theory, by Walter Nicholson











Finally, a good reference on math skills for economists is











- Maths for Economics, by Geoff Renshaw











Course Summary:

Date	Details	Due
Wed Jan 25, 2017	 Greenstone and Jack (2013) (https://canvas.brown.edu/courses/1071609/assignments/7654339)	due by 11:59pm
Mon Jan 30, 2017	 No class (https://canvas.brown.edu/courses/1071609/assignments/7654377)	due by 11:59pm
Wed Feb 1, 2017	 Deaton (2010b) (https://canvas.brown.edu/courses/1071609/assignments/7654340)	due by 11:59pm
Wed Feb 1, 2017	 Greenstone and Gayer (2009) (https://canvas.brown.edu/courses/1071609/assignments/7654341)	due by 11:59pm
Wed Feb 1, 2017	 Maple for Economics Students (https://canvas.brown.edu/courses/1071609/assignments/7655635)	due by 11:59pm
Mon Feb 6, 2017	 Gutierrez-Fernandez and Foster (2009) (https://canvas.brown.edu/courses/1071609/assignments/7654351)	due by 11:59pm
Mon Feb 6, 2017	 Jayachandran (2009) (https://canvas.brown.edu/courses/1071609/assignments/7654343)	due by 11:59pm
Mon Feb 6, 2017	 Overview of outdoor pollution: HEI (2010) (https://canvas.brown.edu/courses/1071609/assignments/7654342)	due by 11:59pm
Wed Feb 8, 2017	 Duflo, Greenstone, Pande, and Ryan (2013) (https://canvas.brown.edu/courses/1071609/assignments/7654350)	due by 11:59pm
Mon Feb 13, 2017	 Oliva (2012) (https://canvas.brown.edu/courses/1071609/assignments/7654352)	due by 11:59pm
Wed Feb 15, 2017	 Overview of indoor pollution: Duflo, Greenstone, and Hanna (2008) (https://canvas.brown.edu/courses/1071609/assignments/7654344)	due by 11:59pm

Date	Details	Due
	 Pitt, Rosenzweig, and Hassan (2010) https://canvas.brown.edu/courses/1071609/assignments/7654345	due by 11:59pm
	 Quiz 1 https://canvas.brown.edu/courses/1071609/assignments/7654384	due by 11:59pm
Mon Feb 20, 2017	 No class II https://canvas.brown.edu/courses/1071609/assignments/7654378	due by 11:59pm
Wed Feb 22, 2017	 Hanna, Duflo, and Greenstone (2012) https://canvas.brown.edu/courses/1071609/assignments/7654349	due by 11:59pm
Mon Feb 27, 2017	 Mobarak, Dwivedi, Bailis, Hildemann, and Miller (2012) https://canvas.brown.edu/courses/1071609/assignments/7654348	due by 11:59pm
	 Problem Set I https://canvas.brown.edu/courses/1071609/assignments/7654374	due by 11:59pm
Wed Mar 1, 2017	 Kremer, Leino, Miguel, and Zwane (2011) https://canvas.brown.edu/courses/1071609/assignments/7654354	due by 11:59pm
	 Overview: WHO (2010) https://canvas.brown.edu/courses/1071609/assignments/7654353	due by 11:59pm
	 Quiz 2 https://canvas.brown.edu/courses/1071609/assignments/7654385	due by 11:59pm
Mon Mar 6, 2017	 Bennett (2012) https://canvas.brown.edu/courses/1071609/assignments/7654355	due by 11:59pm
Wed Mar 8, 2017	 Benbear, Tarozzi, Pfaff, Balasubramanya, Ahmed, and van Geen (2012) https://canvas.brown.edu/courses/1071609/assignments/7654356	due by 11:59pm
	 Paper 1 https://canvas.brown.edu/courses/1071609/assignments/7655380	due by 11:59pm

Date	Details	Due
Mon Mar 13, 2017	 Field, Glennerster, and Hussam (2011) https://canvas.brown.edu/courses/1071609/assignments/7654357	due by 11:59pm
Wed Mar 15, 2017	 Galiani, Gertler, and Schargrotsky (2005) https://canvas.brown.edu/courses/1071609/assignments/7654358	due by 11:59pm
	 Problem Set 2 https://canvas.brown.edu/courses/1071609/assignments/7654632	due by 11:59pm
Mon Mar 20, 2017	 Lipscomb and Mobarak (2013) https://canvas.brown.edu/courses/1071609/assignments/7654359	due by 11:59pm
	 Quiz 3 https://canvas.brown.edu/courses/1071609/assignments/7654386	due by 11:59pm
Wed Mar 22, 2017	 Anderson (2011) https://canvas.brown.edu/courses/1071609/assignments/7654362	due by 11:59pm
	 Ostrom and Gardner (1993) https://canvas.brown.edu/courses/1071609/assignments/7654361	due by 11:59pm
	 Overview: FAO (2007) https://canvas.brown.edu/courses/1071609/assignments/7654360	due by 11:59pm
Mon Apr 3, 2017	 Sekhri (2011) https://canvas.brown.edu/courses/1071609/assignments/7654363	due by 11:59pm
Wed Apr 5, 2017	 Glick (2016) https://canvas.brown.edu/courses/1071609/assignments/7657485	due by 11:59pm
	 No class https://canvas.brown.edu/courses/1071609/assignments/7657423	due by 11:59pm
Mon Apr 10, 2017	 Foster and Rosenzweig (2006) https://canvas.brown.edu/courses/1071609/assignments/7654379	due by 11:59pm
	 Problem Set 3 https://canvas.brown.edu/courses/1071609/assignments/7654633	due by 11:59pm

Date	Details	Due
	 Quiz 4 https://canvas.brown.edu/courses/1071609/assignments/7654387	due by 11:59pm
Wed Apr 12, 2017	 Jacoby and Gine (2016) https://canvas.brown.edu/courses/1071609/assignments/7654380	due by 11:59pm
	 Paper 2 https://canvas.brown.edu/courses/1071609/assignments/7655382	due by 11:59pm
Mon Apr 17, 2017	 Alix-Garcia, McIntosh, Sims, and Welch (2013) https://canvas.brown.edu/courses/1071609/assignments/7654366	due by 11:59pm
	 Foster and Rosenzweig (2003) https://canvas.brown.edu/courses/1071609/assignments/7654365	due by 11:59pm
	 Overview: Economist (2010) https://canvas.brown.edu/courses/1071609/assignments/7654364	due by 11:59pm
Wed Apr 19, 2017	 Burgess, Hansen, Olken, Potapov, and Sieber (2012) https://canvas.brown.edu/courses/1071609/assignments/7654368	due by 11:59pm
	 Edmonds (2002) https://canvas.brown.edu/courses/1071609/assignments/7654367	due by 11:59pm
Mon Apr 24, 2017	 Jack et al https://canvas.brown.edu/courses/1071609/assignments/7654382	due by 11:59pm
	 Jayachandran et al (2016) https://canvas.brown.edu/courses/1071609/assignments/7654381	due by 11:59pm
Wed Apr 26, 2017	 Problem Set 4 https://canvas.brown.edu/courses/1071609/assignments/7654634	due by 11:59pm
	 Quiz 5 https://canvas.brown.edu/courses/1071609/assignments/7654393	due by 11:59pm
	 McRae (2009) https://canvas.brown.edu/courses/1071609/assignments/7654370	due by 11:59pm

Date	Details	Due
	 Wolfram, Shelef, and Gertler (2012) https://canvas.brown.edu/courses/1071609/assignments/7654369	due by 11:59pm
Mon May 1, 2017	 Burgess, Deschenes, Donaldson, and Greenstone (2011) https://canvas.brown.edu/courses/1071609/assignments/7654371	due by 11:59pm
	 Jack and Smith 2016 https://canvas.brown.edu/courses/1071609/assignments/7654383	due by 11:59pm
Wed May 3, 2017	 Review Session https://canvas.brown.edu/courses/1071609/assignments/7662119	due by 11:59pm
	 Paper 3 https://canvas.brown.edu/courses/1071609/assignments/7655381	due by 11:59pm
	 Quiz 6 https://canvas.brown.edu/courses/1071609/assignments/7654394	due by 11:59pm
	 final https://canvas.brown.edu/courses/1071609/assignments/7664418	
	 Mobarak, Dwivedi, Bailis, Hildemann, and Miller (2012) https://canvas.brown.edu/courses/1071609/assignments/7654347	
	 participation https://canvas.brown.edu/courses/1071609/assignments/7664593	
	 Pitt, Rosenzweig, and Hassan (2010) https://canvas.brown.edu/courses/1071609/assignments/7654346	