

ENVIRONMENT AND DEVELOPMENT

ACE 411

Fall 2020

University of Illinois at Urbana Champaign

“Environmental degradation is everyone’s problem, but it’s especially a problem for the poor, and for obvious reasons. Their position is more precarious, so when things go wrong, whether it’s pollution in a neighborhood or rising sea levels swallowing a country, they are less able to respond effectively.”

Joseph Stiglitz, 2001 Nobel Laureate for Economics

Class schedule:

This is a fully remote course that offers a blend of synchronous and asynchronous learning. Synchronous learning sessions will be held on Mondays from 11:00 - 11:50 am. You can connect to synchronous learning sessions using <https://illinois.zoom.us/j/96306295726>. All asynchronous materials will be posted on the Compass course website.

Instructor and TA:

Instructor: Professor Sarah Janzen, PhD

Contact: Please message Prof. Janzen through the course website.

Zoom Student Hours: Wednesdays 10:00 a.m. - 12:00 p.m.

TA: Victor Funes Leal

Contact: Please message Victor through the course website.

Zoom Student Hours: Thursdays 2:00 pm - 4:00 p.m.

Course description and objectives:

This course applies economic theory to environmental and natural resource issues in developing countries. In particular, we will use welfare analysis and game theory to understand market failures and strategic decisions relevant for answering two key questions: Why are developing countries poor, and why is environmental quality poor in developing countries? After exploring the answers to these questions, we will discuss some proposed solutions to environmental problems globally, while also discussing implementation and distributional challenges. The course concludes with three in-depth case studies in which we will look at air pollution, climate change, and deforestation. Students who successfully complete this course will be able to:

1. describe the relationship between the environment and development
2. use economic theory to explain environmental problems and solutions in developing countries
3. discuss implementation and distributional challenges for environment & development policies
4. analyze, visualize and interpret economic relationships using data in excel

Course website:

I will use the Compass platform to post required readings, assignments, recorded lectures, lecture notes, quizzes, exams, announcements and other course materials. All asynchronous learning materials will be posted on Compass.

Synchronous sessions:

Although learning can be achieved in isolation, engaging with classmates is an important part of the collegiate learning experience. Unfortunately, the class capacity for this course exceeds 50 students, which means we are unable to meet in person and have those conversations that often take place in a typical classroom setting (before, during, and after class). To facilitate engagement with classmates, synchronous learning sessions will be held on Mondays from 11:00 - 11:50 am. These sessions will primarily be used to facilitate discussion with your peers in smaller breakout rooms. Please come prepared by reading the week's required reading assignment *in advance*. Attendance will not be taken, but if you want to maximize your learning experience you should make every effort to attend, just as you would for an in-person class. The content discussed during synchronous sessions will be fair game for quizzes and exams.

To connect to the synchronous learning session, go to <https://illinois.zoom.us/j/96306295726>. You will be placed in a waiting room until class begins. You can also call in (+1 312 626 6799) or use the zoom meeting id: 963 0629 5726. Because you will be expected to listen and contribute your own ideas, please try to find a quiet place without distractions so that you can be fully engaged.

Whether we like it or not, I expect that engaging professionally with clients and colleagues in an online setting will become more and more important in the business world once you graduate. I have multiple virtual meetings every week with colleagues, current and former students, co-authors, policymakers, and implementation partners from around the world to discuss my research related to international agricultural development. This was true even before the pandemic, and will continue to be true once we return to normalcy. You may soon find yourself interviewing for a job on zoom. Becoming comfortable engaging in an online platform will be an advantage in your future career.

Groups:

To facilitate discussion inside and outside the virtual classroom, students will be randomly assigned to a group of approximately six students. Group members will remain consistent throughout the semester. Groups will meet during every synchronous learning session, will have access to a group discussion board on Compass for posting questions and discussing topics, and will collaborate together for a final project. All graduate students will be assigned to the same group.

Readings:

To take charge of your own learning, you must be willing to read. The required reading list includes academic journal articles that will supplement lectures to enrich your understanding of the course content. Readings will be discussed during Monday's synchronous sessions. For this reason, readings are to be completed *before* Monday's synchronous session. There is no required textbook, but I strongly encourage you to pick up a copy of the suggested supplemental textbook: *Games in Economic Development* by Bruce Wydick, Cambridge University Press, 2008. The suggested textbook will be particularly beneficial for those whom have never been exposed to game theory. You can rent it on amazon as an e-book for the semester for only \$10.

Grading:

The final grade will assess each student's achievement of the course objectives. Grades will be assigned using the following weights:

1. **Weekly quizzes (25%):** Credit will be awarded for comprehension of key course concepts – as obtained through careful reading, synchronous discussions and viewing the pre-recorded lectures – using weekly quizzes. Quizzes are open book, open note, and open internet. You can even discuss quiz questions with peers, but it is your responsibility to make sure you understand the content deeply, or you will later struggle on exams. Given the online learning environment, I expect these weekly quizzes will help students make continual progress toward achieving course objectives, rather than falling behind. Late quizzes will not be accepted, but the lowest two quiz scores will be dropped. Dropped quiz scores are available to accommodate any unanticipated challenges (sickness, car accident, relational issues, tech issues, tornado, capture by aliens, etc.), so please don't ask to make up a quiz *ex post*.
2. **Data homework assignments (20%):** Because data science skills are becoming more and more valuable, four data-based homework assignments will be assigned to allow students the opportunity to analyze, visualize and interpret economic relationships using data in excel. Students who are familiar with other statistical software packages are welcome to use other software to complete the assignment if they wish (this is expected of most graduate students). Late assignments will be accepted only under extremely challenging (and documented) circumstances. A postponed due date is more likely to be granted to students who ask *in advance*. Students are encouraged to work collaboratively on homework assignments, but each student is expected to submit their own assignment.
3. **Group project (15%):** The course culminates with a final group project that will demonstrate achievement of all four course objectives. Late assignments will absolutely not be accepted. Students will be asked to evaluate the effort of group members, and any members reported as “free riders,” may not receive any credit. Because group dynamics will develop over the course of the semester, students who do not participate regularly in synchronous sessions may find it more difficult to contribute to the group final project, which could affect their individual group project grade.
4. **Exams:** Given the online learning environment, exams are essential to ensure independent learning (that is, to ensure you earn credit for your own understanding, and do not earn credit based on collaboration with and the comprehension of your peers). Unlike other course assessments (quizzes, homeworks, group projects) which can be completed in collaboration with peers, exams must be completed independently and students are expected to follow an honor code. Exams will be open book and open internet, however the answers will not be easily searchable. Rather, they will require understanding of course material and independent critical thought. The final exam will be cumulative. Do not miss an exam. Exams cannot be retaken or made up *ex post*.
 - **Midterm exam (15%)**
 - **Final exam (25%)**

If you are a graduate student enrolled in the class for graduate-level credit, the group project will be replaced with a final independent project and receive more weight (25%) in the calculation of your final grade. Weekly quizzes will subsequently be given less weight (15%). Data assignments may have extensions.

Grades will be roughly allocated as follows:

- A = 90-100
- B = 80-89
- C = 70-79

D = 60-69

F = 0-59

Zoom student hours:

The course instructor and TA have both set aside zoom student hours to meet with students in this class. These times are *for you*, so please take advantage of them. You may be placed in a waiting room, but please be patient; it is likely that we are meeting with one of your peers. If the wait seems excessive, please message us using the course website and we can set up another time to meet.

- Prof. Janzen will hold zoom student hours on Wednesdays from 10:00 a.m. - 12:00 p.m.. I am also available by appointment. To connect to Prof. Janzen's zoom student hours, go to <https://illinois.zoom.us/j/94737196945>. You can also call in (+1 312 626 6799) or use the zoom meeting id: 947 3719 6945.
- Victor, the course TA, will hold zoom student hours on Thursdays from 2:00 p.m. - 4:00 p.m.. He is also available by appointment. To connect to the TA's zoom student hours, go to <http://illinois.zoom.us/j/6983465498>. You can also call in (+1 312 626 6799) or use the zoom meeting id: 698 346 5498.

Statement regarding Covid-19 classroom management:

This class does not meet in person, but students are expected to follow University policy regarding Covid-19 prevention and safety. Following University policy, all students are required to engage in appropriate behavior to protect the health and safety of the community, including wearing a facial covering properly, and maintaining social distance (at least 6 feet from others at all times). Students who live on or near campus are also required to follow the campus COVID-19 testing protocol.

Statement regarding zoom recordings:

Zoom sessions for this course may be recorded by the instructor only. Zoom recordings are compliant with federal FERPA regulations. The Zoom recordings of class sessions will be added to the secure course website (Compass 2g) or approved video platform (Illinois Media Space) and can only be accessed by persons enrolled in this course who have a University of Illinois netID and password. Please review the university FERPA compliance and Zoom and FERPA compliance information for additional details. If you have specific concerns about Zoom recordings for this class and your privacy rights as a student, contact the course instructor.

Statement regarding academic integrity:

The University has the responsibility for maintaining academic integrity so as to protect the quality of education and research on our campus and to protect those who depend upon our integrity. It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions.

Statement regarding students with disabilities:

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, call 333-4603, e-mail disability@illinois.edu or go to the DRES website. If you are concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available on campus that can help diagnosis a previously undiagnosed disability by visiting the DRES website and selecting Sign-Up for an Academic Screening at the bottom of the page.

Copyright notification:

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Course outline:

Reading list and dates are subject to change, any updates will be posted on Compass. Readings will be discussed during Monday's synchronous sessions. For this reason, readings are to be completed *before* Monday's synchronous session. All weekly quizzes are due on Fridays at 11:59 p.m..

1. Week of Aug. 24-28, Relationship between environment and development
 - Read Angelson 2014
 - Quiz 1 due Friday at 11:59 p.m.
2. Week of Aug. 31 - Sept. 4, Why should we care?
 - Read Banerjee & Duflo 2007
 - Quiz 2 due Friday at 11:59 p.m.
3. Week of Sept. 8-11, Basic economics and market failures
 - No synchronous session on Monday, Sept. 7 (Labor Day)
 - Read Graff Zivin & Neidell, 2013
 - Quiz 3 due Friday at 11:59 p.m.
 - Data homework #1, due Friday at 11:59 p.m.
4. Week of Sept. 14-18, Basic economics and market failures
 - Read Jha & Whalley, 2001
 - Quiz 4 due Friday at 11:59 p.m.
5. Week of Sept. 21-25, Introduction to game theory
 - Read Games Ch. 1-2
 - Quiz 5 due Friday at 11:59 p.m.
6. Week of Sept. 28 - Oct. 2, Why are developing countries poor?
 - Read Games Ch. 3-4
 - Quiz 6 due Friday at 11:59 p.m.
 - Data homework #2, due Friday at 11:59 p.m.
7. Week of Oct. 5-9, Why are developing countries poor?

- Read Kraay & McKenzie, 2014
 - Quiz 7 due Friday at 11:59 p.m.
8. Week of Oct. 12-16, Why is environmental quality poor in developing countries?
- Read Dasgupta et al., 2002
 - Synchronous midterm on Monday, 11:00 - 11:50 a.m. (online)
9. Week of Oct. 19-23, Why is environmental quality poor in developing countries?
- Read Wicke & Bulte, 2009
 - Quiz 8 due Friday at 11:59 p.m.
10. Week of Oct. 26-30, Solutions to environmental problems in developing countries
- Read Greenstone & Jack, 2015
 - Quiz 9 due Friday at 11:59 p.m.
 - Data homework #3, due Friday at 11:59 p.m.
11. Week of Nov. 2-6, Solutions to environmental problems in developing countries
- Read Fullerton & Stavins 1998, and Fullerton 2011
 - Quiz 10 due Friday at 11:59 p.m.
12. Week of Nov. 9-13, Case study: Pollution in China
- Read Zheng & Khan, 2017
 - Quiz 11 due Friday at 11:59 p.m.
13. Week of Nov. 16-20, Case study: Climate change
- Read Tol 2009, and Castells-Quintana et al. 2018
 - Quiz 12 due Friday at 11:59 p.m.
 - Data homework #4, due Friday, November 20, 11:59 p.m.
- Week of Nov. 23-27, Thanksgiving break ——
14. Week of Nov. 30 - Dec. 4, Case study: deforestation
- Read Busch & Ferretti-Gallon 2018
 - Quiz 13 due Friday at 11:59 p.m.
15. Week of Dec. 7-11, Final thoughts
- Final group project due Friday at 11:59 p.m.
- Final exam: Monday Dec. 14, 1:30 - 4:30pm. (online) ——