Growth, Development, and the Environment (EC8510) 2024-25

Course Outline. Subject to (minor) Changes.

Instructor: Jonathan Colmer

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Lectures: We 5:00PM - 7:30PM

Office Hours: I am very happy to chat with you about your research ideas (my availability to discuss research is the purpose of the course). Please DM me on our Slack page to set up a time.

Slack: Slack is our main mode of communication. Please join the group here, https://tinyurl.com/GDE-2024 and make sure notifications are turned on.

Website: We will be setting up a Course Github repo in the first class.

Pre-Requisites: First year graduate-level microeconomics, macroeconomics, and econometrics.

Course Organization

Content: The course will provide an introduction to frontier topics in growth, development and environmental economics. Topics will include: measuring poverty and development, growth and poverty traps, development/growth accounting, misallocation (within firms, across sectors, and across space), and topics in environmental economics (pollution, natural capital and biodiversity, climate change). The focus of the class, however, is to provide a benchmark for future research and to get each student to start identifying and developing viable research projects. This need not be in the field of development economics. The course emphasizes the transition from being a consumer to a producer of research and on learning how to do professional-level research. Learning to read, think about, and evaluate research is an essential part of generating novel research. For this reason, research idea generation and class discussions will be an integral part of the course.

Lectures: The course consists of 2.5 hours of lectures and discussion each week in the Fall term.

Participation: You are expected to engage actively in class discussions.

Assessment:

- At least 5 Research Ideas (30%)
- Summer Paper Research Proposal (50%)
- Class Participation (20%)

Class Participation

The Class Participation Grade corresponds to attendance and active engagement in class. You are expected to complete readings in advance of class and engage actively in class discussions. Discussion of research papers will be an active part of the class. If you intend to conduct research in development economics you should attend the Global Development Seminar. Attendance of at least one seminar is critical to your development as professional researchers, even (especially) when the topic doesn't align with your area of active research. Please let me know, which seminar you will be attending.

When reading papers be sure to distill the key ideas and points of the paper.

- What is the problem? Why should we care?
- What is the specific research question that deals with the problem that the author thinks we should care about?
- What is the method? i.e., why should we believe the author?
- What is the main result?
- What is the takeaway? What is the lesson that we should learn about the problem?

I'd encourage you to set up a google doc that tracks this for all the papers you read.

When evaluating papers, what matters is your views about the paper,

- its importance (what did you learn from this paper?);
- its strengths (in what ways was the paper innovative and/or persuasive?);
- its weaknesses (in what ways did the paper fail to persuade you?);
- how the paper might be improved (what would you do differently?);
- how might the paper be extended (what future research might build on the methods or conclusions of the paper?)

The most important question to ask is does the paper answer the question it set out to answer. We care about precision. We don't want to undersell our work, but overselling is far worse. We should be precise about what we do.

Please read, and carefully think about, each paper. Note that you should never be spending more than an hour on this process, unless a paper is truly central to your research. Frequently, one can get to the core of what a paper is doing in about 5-10 minutes (abstract, introduction, and conclusion). Beyond that there will be target areas you may want to focus on (the data if you are interested in sources or researcher choices, the methods if you are interested in the research design and how they present their ideas, the results if you want to see how the present and discuss their findings).

Getting Started Doing Research

Over the course of the semester, I'd like you to write short (one page) descriptions of research ideas you are exploring and how it is coming together. Think about multiple ideas until you have settled on the one you can be most self-driven about (even then it's not a bad idea to have multiple irons in the fire). Your ideas don't need to be related to development or environmental economics. The objective is for you to get as much experience as possible as quickly as possible in formulating

professional-level research ideas. Things don't work out most of the time. This is normal. We expect this. It's called "re-search" for a reason.

Set up a google doc that you can share with me and track your ideas over time. An idea is not a question. An idea is a question that you can answer. The question should be well-motivated, i.e., hook a broader audiences interest. This takes some consideration and one gets substantially better at framing questions over the course of their career ... or so I'm told. I would encourage you to keep things simple and precise. Then comes the hard part, making a convincing case that you can answer the question. Not all uncertainty can be resolved. Nevertheless, as quickly as possible you need to determine whether you can make any headway. You need to figure out a clear plan of implementation for answering the question. More often than not this requires having access to relevant data and having a research design that allows you to under certain assumptions, which you should be able to clearly lay out, identify relevant parameters for answering your question. More often than not I'd try and understand some basic facts and variation in the data. If you can see a signal of what you're looking for in the raw data then you know that at least in principle it could be an important part of the overall variation. If the raw data does not map to your hypothesis or idea well then it's not as likely to be of "first-order importance." There is a lot of ground work that goes into motivating a research project. Basic facts help to give you a direction and reduce the dimensionality of the problem. Original research projects take thousands of hours.

Project

The project is an extension of one of your research ideas. Again this doesn't need to be a development or environment idea, although if you're interested in doing research in this space then it should be. At a minimum this is a research proposal, but I don't want to constrain you to just writing a proposal if you're able to make more progress. The goal is to dig deeper and push an idea as far as you can (you may even end up with the start of a research project at the end of it). What do you need to figure out to see whether the paper has promise? Initial descriptive results? a model (the simplest economic model is always helpful to be able to frame things in Econ101 terms even if it doesn't end up in the paper)? Figure out the hurdles that need to be overcome for the paper to survive and then clear as many hurdles as you can. It's fine if you aren't able to overcome a hurdle (but better to figure out fundamental constraints as quickly as possible). Discuss why/what needs to happen to overcome it. Use the feedback on your weekly research ideas to push on the most promising ideas, but ultimately you should work on the project you are most interested in.

Topics

- Measuring Growth and Development
- Growth and Poverty Traps
- Development Accounting
- Misallocation
- Topics in Environmental and Energy Economics