

SS489C Research Methods in Economics

COURSE OVERVIEW

The purpose of this course is to develop your Economic Research skills and begin your work toward a Senior Thesis. SS489C is a hybrid between a guided independent study (2/3) and a standard course (1/3). The primary product at the end of the semester will be a Thesis Proposal that will be used to judge admission to the Senior Thesis program in the spring.

The course will contain the following components:

- 1) Developing Empirical Intuition
 - a. Review the Rubin Model for causal inference
 - b. Review primary strategies for causal inference
 - c. Student presentations of empirical strategies from journal articles
- 2) Developing Economic Research Ideas
 - a. Iterative process of group meetings to discuss/triage/develop ideas
- 3) Writing Like an Economist
 - a. Independent writing/literature review
 - b. Group meetings to discuss/edit intermediate drafts of paper components
- 4) Data Management/Analysis
 - a. STATA programming review
 - b. Data analysis practice assignments.
 - c. Individual data analysis project (with data for your primary idea)

This will be a challenging course that will require substantial self-driven learning.

CONTACT INFO

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TEXTS AND MATERIALS

We will read parts of Mastering Metrics by Joshua Angrist and Jorn-Steffen Pischke (Princeton University Press) as well as journal articles.

STATA is required for the data analysis project. All instructions and handouts will refer to STATA 14

Grading

Assignment	Points	Percent
Intermediate Products		
Research Updates (10)	250	25.0%
Literature Review Drafts	75	7.5%
Data Analysis Memo	75	7.5%
Article Presentation	75	7.5%
Data Analysis Practice		
Assignment 1	25	2.5%
Assignment 2	50	5.0%
Thesis Proposal	450	45.0%
TOTAL	1000	100%

Research Updates (R1-R10)

Research Idea Update (R1-R3)

A research update is a *well-organized and concisely-written 2 page memo* summarizing what your research progress. These will be *due via Teams at 0800* the day prior to class (please submit as assignment AND post to Updates discussion forum).

You will be responsible for reading and commenting in class on 2 peers posts.

Idea Generation Research Update– For each of 3 new ideas provide bullets to address:

1. RESEARCH QUESTION: What is the research question?
2. MOTIVATION: Why would answering this question would be interesting/important?
3. EMPIRICAL STRATEGY:
 - a. What variation (e.g. policy change in some states but not others) will you use to answer this question?
 - b. What empirical strategy will you use (e.g. Difference-in-Differences or Regression Discontinuity)?
4. DATA: Where does data exist that I could use for this project? Or, if you can't find any data, describe the dataset that you would need to implement this idea (i.e. What level of observation? What sample population? What variables?).
5. NEED-TO-KNOW: What are the critical questions for the feasibility of this idea that you have not yet answered? For example, a need-to-know for a regression discontinuity idea might be “Was there substantial manipulation around the cutoff?”.

Idea Follow-up Research Update – You may substitute 1 new idea for a follow-up to a promising idea. This should include:

1. **SUMMARY OF IDEA:** In 2-3 sentences summarize the research question, variation, and empirical strategy.
2. **UPDATE:** This should list the next steps discussed after the previous update and describe the progress for each of those next steps.

*After multiple promising iterations, you may ask for approval to focus exclusively on one idea. In this case, you will simply have a longer update section with more depth.

Other Research Updates (R4-R10)

These draft components of your proposal will be **due via Teams at 0800** the day prior to class (unless otherwise noted). We will discuss the details of what is expected for each in class.

Article Presentation

This is an opportunity to dive deep into the empirical strategy of a journal article in economics and present it to the class.

The presentation should include slides and should be **15 minutes** in length. The primary focus should be **explaining the intuition behind the empirical strategy** used in the paper.

You will present in groups of 2-3, but you will be expected to understand all components of the presentation (i.e. just because you may not be the group member presenting the empirical approach slides **does not** mean you won't be expected to understand the empirical approach).

You **may not** present an article that you have presented or plan to present in another class. Please contact Dr. Smith/Dr. Carter if you have been assigned to such an article.

See handout for additional guidance as well as article and group assignments.

Literature Review Paper

This is a standalone paper that concisely explains the empirical approaches, results, and key takeaways of several (at least 5) of the most important papers that are related to your research idea (either in terms of the topic or source of variation). In the introduction section, you will synthesize the existing research in your topic area and highlight any gaps. Each paper will be discussed separately in a 1-2 page section of your Literature Review Paper where the section header is the paper's citation.

The goal is for you to have a solid understanding of papers that share some similarity to your project. This will aide you in defining the contribution of your project, as well as understanding standard practices in the literature related to your project (e.g. How do other papers motivate their research question? How do other papers construct their outcome measure? What are data concerns you will need to address? What controls are typically used?).

Data Analysis Project

This is an opportunity to gain some experience managing data in STATA while at the same time making progress toward your Thesis Proposal. The assignment will involve organizing, manipulating, merging, and summarizing data using STATA. You may tailor this project toward your own proposal (in consultation with Dr. Smith/Dr. Carter).

Thesis Proposal

The thesis proposal is the final product of the semester and is used to determine acceptance into the spring Senior Thesis program. This will consist of 3 chapters containing final revised versions of earlier assignments:

- 1) Paper Components
 - a) Introduction
 - b) Background
 - c) Empirical Strategy
- 2) Data Analysis Memo (with .do file appendix)
- 3) Literature Review

SCHEDULE (subject to change)

Lesson	Date	Material	Reading	Assignment
1	17-Aug	What is Economic Research?		Skill Survey (Intuition and STATA)
2	19-Aug	Causal Inference / Overview of DD/FE	Notes (see also Mastering Metrics)	
3	21-Aug	Overview of IV/RD	Notes (see also Mastering Metrics)	
4	25-Aug	DD/FE paper presentations (focus on empirical strategy)		Article Presentations by Group (2 person)
5	27-Aug	Research Update	Review Peer Updates	R1 - Research Idea Update
6	31-Aug	IV/RD paper presentations (focus on empirical strategy)		Article Presentations by Group (2 person)
7	2-Sep	<i>Faculty Seminar TBD</i>		
8	4-Sep	Research Update	Review Peer Updates	R2 - Research Idea Update
9	8-Sep	<i>Faculty Seminar TBD</i>		
10	10-Sep	Research Update	Review Peer Updates	R3 - Research Idea Update
11	14-Sep	<i>Faculty Seminar TBD</i>		
12	17-Sep	Research Update		R4 - Lit Review Spreadsheet
13	21-Sep	Writing like an Economist		
14	25-Sep	Research Update	Review Peer Updates	R5 - Draft of Intro OEMA DATA REQUEST
15	29-Sep	<i>Independent Study</i>		
16	1-Oct	Research Update Presentation		R6 - Background/Empirical Strategy Slides
17	5-Oct	<i>Faculty Seminar TBD</i>		
18	7-Oct	<i>Independent Study</i>		
19	9-Oct	Research Update	Review Peer Updates	R8 - Data Analysis Outline
20	14-Oct	<i>Independent Study</i>		
21	16-Oct	Research Update	Review Peer Updates	R7 - Draft of Background/Empirical
22	20-Oct	STATA Review 1		
23	22-Oct	STATA Review 2		Data Analysis Practice 1 Due
24	26-Oct	<i>Independent Study</i>		
25	28-Oct	<i>Optional STATA Help</i>		
26	30-Oct	<i>Independent Study</i>		Data Analysis Practice 2 Due
27	2-Nov	<i>Independent Study</i>		
28	6-Nov	<i>Independent Study</i>		D1 - Draft of Literature Review Paper Due (written comments)
29	9-Nov	<i>Independent Study</i>		
30	12-Nov	<i>Optional STATA Help</i>		
31	16-Nov	<i>Independent Study</i>		
32	18-Nov	<i>Independent Study</i>		D2 - Draft of Data Management Memo Due
33	20-Nov	Research Update	Review Peer Updates	D2 - Draft of Data Management Memo Comments
34	23-Nov	<i>Independent Study</i>		
35	25-Nov	Research Update	Review Peer Updates	R10 - Revised Intro/Empirical
36	1-Dec	<i>Independent Study</i>		Draft of Final Project to Peers
37	3-Dec	<i>Independent Study</i>		2 Peer Referee Reports (Due Friday 12/4 1600)
38	7-Dec	<i>Independent Study</i>		
39	9-Dec	<i>Independent Study</i>		
40	11-Dec	<i>Individual Assessment Meetings</i>		Thesis Proposal Due