

## **Economics 191 / H191: Topics in Economic Research, Fall 2025**

Syllabus v1, August 20, 2025

Prof. Ben Handel

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For those enrolled in 191, this class provides a structure for students to write an original research paper in economics, while exposing them to frontier research by professors of the Department of Economics at UC Berkeley. Course grades are based on a series of research assignments that cumulate in a 20-25 page research paper. Students must choose a research question and begin refining that question, reviewing the literature, collecting data, and developing techniques to answer the research question relatively early in the term. The course requires *continued engagement throughout the semester*, with a series of tightly scheduled assignments. We do not recommend the course if you have trouble meeting deadlines.

For those enrolled in H191, this class provides a structure for students to write their honors thesis in economics. The primary difference in the course between H191 and 191 is that requirements for the H191 thesis are higher than for the 191 research paper, as noted below in the syllabus. H191 students are also entitled to extra office hours with guest lecturers. Otherwise, students will follow a similar process to hone and develop their research project and research skills.

**Class Structure.** Classes will take place Tuesday and Thursday from 11-12:30 PM in Hearst Mining 390. Each week, the class will typically feature an 80 minute faculty talk (given by one of the economics professors at UC Berkeley) or an 80 minute tutorial session on key research methods.

In the faculty talk, each week's researcher presents research that she or he has been working on. The researchers may share related reading material or slides ahead of the meeting, which we will share and announce via bCourses. In the tutorial session, the GSIs will present a series of lectures on basic methods for applied research. We will post the slides for the tutorials before the class meeting on the bCourses website. Students should review the slides before the meeting. In class session recordings will be regularly uploaded to BCourses via Course Capture.

**Laptop, Phone and Tablet Policy.** Laptops and tablets are allowed, but for course reasons only, i.e., accessing ECO 191 materials in class or taking notes in class. Use of laptops and tablets for non-ECO 191 reasons is prohibited in class.

**Graded Attendance.** Since the faculty speakers donate their time to give lectures in Econ 191, our responsibility as a group is to encourage attendance and participation. In-person attendance for guest-speakers talks is mandatory and graded with "bonus points"; we may give bonus points for participation. To accommodate specific concerns, up to two absences are not penalized, no warning or excuse needed. So please do not email us with potential excuses if you fail to attend, as out of fairness to other students, we cannot extend this buffer and this system is to avoid adjudicating justified absences.

**Tutorial Leaders and Research Mentors: the GSIs and Readers.** The GSIs will lead the tutorials, which will typically occur on Thursday each week. Along with the GSIs, the Readers will serve as "research mentors" and meet with you to discuss your research. Initially, students will be assigned to research

mentors alphabetically, but Pareto improving trades may occur when students have other classes over their assigned mentor's office hours or in cases where the research topic chosen would match much better with an alternative mentor.

Economics 191 has **two GSIs**:

Sarah Frick

[sfrick@berkeley.edu](mailto:sfrick@berkeley.edu)

Sebastian Puerta

[sebastian\\_puerta@berkeley.edu](mailto:sebastian_puerta@berkeley.edu)

and **three Readers**:

Ester Anatoliivna Muzychuk

[ester\\_muzychuk@berkeley.edu](mailto:ester_muzychuk@berkeley.edu)

Tianrui Lai

[tianrui\\_lai@berkeley.edu](mailto:tianrui_lai@berkeley.edu)

Third Reader TBD

TBD

**Research Mentor Office Hours:**

Sarah: Tuesday 2:3-3:30pm location TBD, Wednesday 3-4pm on zoom

Sebastian: Monday 1-2pm location TBD, Wednesday 1-2pm location TBD

Tianrui: Wednesday 9am-11am location TBD

Ester: Tuesday 1-2pm location TBD, Thursday 1-2pm location TBD

The OH schedule may be adjusted during the term, via bCourses announcement.

**Research Paper for 191.** Each student will write a research paper addressing an important, well-formulated economics research question. Typically, the most successful papers are empirical, either they are descriptive or they aim to address a causal question, using econometric methods and addressing a question of economic interest.

The required format is:

20-25 pages

12-point font

1-inch margins (left and right, top and bottom)

**Double-spaced**

The file format must be a PDF file. It will be submitted through the course website (method TBA).

The page limit includes text, tables, figures, and references. If it strengthens your paper, you can, but do not have to, add an appendix with supplementary material (e.g., data appendix or additional robustness checks). But the main text of the paper (20-25 pages) should be self-contained. A reader should be able to understand the paper without reading the appendix and skimming the appendix should suffice for a reader to grasp the paper.

**Honors Thesis for H191.** The broad requirements for the paper are the same as listed above for research paper for 191, except the honors thesis is expected to be roughly 30-35 pages in length, instead of 20-25. This is intended to reflect a deeper and longer engagement with your research project. We will hold honors to students to a higher standard on all aspects of their paper. This includes having an interesting and original research question, a well-thought out and executed causal inference method such as difference-in-differences, instrumental variables, etc., a correct execution

and interpretation of results (i.e. the economic and statistical significance, or lack thereof) in the context of their question and research setting, as well as a proper exploration of potential mechanisms which explain their results.

**The Centrality of Empirical Work (Data Analysis).** Research papers must include a formal data analysis. We do permit students to include in the brainstorming assignment (Assignment 1) at most one non-empirical idea. However, for your final paper to not be empirical, you must obtain permission in advance from the GSI/Reader after Assignment 1. A 100% theoretical paper must be rigorous and mathematically based. *Purely narrative papers will not be approved.*

For help with econometrics, we recommend: Adrian Colin Cameron and Pravin K. Trivedi, *Microeconomics Using Stata*, by Stata Press (available online), or James Stock's *Introduction to Econometrics* textbook. Some of the early tutorial sessions will involve Stata exercises.

**Stata and Other Statistical Programs.** The campus has 20 concurrent licenses for Stata, which are free for you to use <https://software.berkeley.edu/stata>. You can also purchase your own copy at a discounted student price or obtain a one-week free student trial <https://www.stata.com/order/new/edu/gradplans/student-pricing/>.

This same website contains recorded tutorials for using Stata. The campus Data Lab typically provides live Zoom tutorials for using Stata <https://dlab.berkeley.edu/>.

If you are competent using Python or R, that is also acceptable. It is highly unlikely that MS Excel will suffice for your final paper.

**Academic Misconduct and Plagiarism.** According to UC Berkeley's honor code <http://sa.berkeley.edu/conduct/integrity/definition>, "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." We expect everyone to obey this code. Please additionally review the material on <https://gsi.berkeley.edu/gsi-guide-contents/academic-misconduct-intro/>, especially the sections on plagiarism. We will check carefully for plagiarism.

**Duplication.** The requirement for this course is to write an original research paper. You must not turn in a paper that duplicates or includes only a modest extension of a paper of yours prepared for another concurrent or previous course. When in doubt (i.e., if you have conducted research related to the 191 paper beforehand), email the GSI / Reader before proposal v1 is due with a summary of the previous research (and attach any potential paper you already wrote).

**Generative AI Guidelines for Economics Research.** Generative AI tools (Chat GPT, Claude, etc.) can be excellent resources to help you complete economics research tasks. However, when used inappropriately or excessively, they can get in the way of your learning. Below are some guidelines for using generative AI to complement your learning in this class.

You may use Generate AI tools (Chat GPT, Claude, etc.) to aid you in coding. For example, say you're trying to calculate the average outcome of units by certain groups (e.g. average wage by years of experience), but you're not sure how to do that in Python. It's okay to use Gen AI to assist you. Or, if you want to make a certain plot, say an event-study plot of your dynamic effect coefficients, then

you may use Gen AI to assist you. Although we do not ask to see all the code you've written for this course, we nevertheless ask that you refrain from using GenAI to do all your coding. There will likely be mistakes which will damage the scientific accuracy of your results.

Do not use GenAI to write your entire essay for you. There are very clear hallmarks of GenAI usage that we're aware of, e.g. unnecessary, text-heavy lists. GenAI can be used to clarify parts of the text, assist with translation if English is not your first language, or fix small grammatical errors. However, asking GenAI to write your results section will not only impede your learning but likely result in a noticeably inferior paper. This course is about creating your own research. Keep in mind that you're the researcher who may use GenAI as a tool to aid you in answering a question, not the other way around.

**Grading.** The following table shows the points awarded for each assignment. The total number of points available is 110 (including 10 “bonus points” for attendance).

Assignment	Points	Due
Research brainstorming	10	September 19
Research proposal v1	15	October 3
Research proposal v2	15	October 24
Draft of results	15	November 14
Final paper / Honors Thesis	45	December 9
Attendance	10 “bonus points”	

### Content of Assignments and Deadlines

*Page format for all submissions below (except Final Paper) is font size of 12, font Times New Roman or Arial, 1 inch margins. **Single-spaced.** See page 2 for final paper formatting.*

#### 1: Brainstorming research questions

- Due: 10:30am, September 16
- On 3 single-spaced pages, brainstorm 3 potential research questions. You will select one of these questions for your research proposal after receiving feedback from your research mentor. What is this question, why may this question be interesting or important, and what may be a way to tackle the question in a research paper with data and different potential empirical designs?

#### 2: Proposal v1

- Due: 10:30am, October 2
- Now, commit to 1 research question. Unless you received an exception from your Research Mentor, this topic must be from the brainstorming assignment. This assignment will be approximately 3 pages in total length with the following structure.
- Page 1:
  - Paragraph 1 (at most ¼ of the page): statement of question
  - Paragraph 2: basic approach to answering this question (research design and strategy)

- Paragraph 3: list and discuss of *concrete* data sources to be used in the question, including verification of data availability and accessibility
- Page 2:
  - Literature review: cite and discuss existing research on this question
  - Discuss problems with this evidence, or why you think evidence on this research question is insufficient
- Page 3: explain why your approach is better or solves the problem you identify on page 2. (This could be methodology, or a new empirical context, or a new data set.)

### 3: Proposal v2

- Due: 10:30am, October 23
- By this date, you should have your data set available, have started analyzing it and have honed your research design.
- 7 pages
  - 3 pages: attach proposal v1 again (update if needed)
- Pages 4-7: present and summarize your data and research design.
  - Divide between (at least 1/3 of the 4 new pages for each) two topics:
    - Discuss in detail the data you will use (how many observations? How many variables?). Ideally, you will have obtained the data and explored it. Report on your explorations. Are the data up to the task? Which problems do you see?
    - Elaborate further on your research design: which concrete econometric model(s) you will estimate (what regression equation(s)), which control variables, be clear whether you have the data and why you need those controls, etc. How do you interpret your main regression coefficients? How will your regression model or empirical analysis answer your research question?

### 4: Overview of your data & initial results

- Due: 10:30am, November 13
- Include the 7 pages of proposal v2 (and update if needed)
- Add 3 new pages of text + separately 2 pages at least containing the 3 tables/figures described below:
  - Table 1: summary statistics, e.g., means of key variables you will use and observation counts
  - Figure 1: key correlation or time series patterns in the data (e.g., time series graph, bar chart, pie chart, etc.)
- Initial, preliminary results from an empirical (econometric) analysis that implements your research design
  - Expand further the discussion of the econometric model you preview in Proposal v2. Now, describe the concrete empirical analysis you are conducting that underlie your first initial results.
  - Table 2: initial regression estimates

- Describe these initial results. Interpret the magnitudes of the main coefficients, and how they change across different regression specifications (e.g., with and without controls). Discuss statistical significance and precision of the coefficients.
- Provide a brief interpretation of your (initial, preliminary) results in light of your research question.

## 5: Final Paper / Honors Thesis

- Due December 8th by 5:00 PM PST. The final paper / honors thesis will not be accepted after the deadline. *There will not be any extensions for the final paper / honors thesis.* It is not possible to compress the writing of the paper, so you should spread out your writing over a prolonged period of time, which is why we have the earlier assignments during the semester. *No extensions will be allowed.*

**Deadlines and Late Assignments.** For all assignments excluding the final paper, 20% of the points will be deducted for each day an assignment is late. You must turn in every assignment eventually. The deadlines for the assignments are listed above and in the schedule below. *Do not take this course if you cannot meet these deadlines.* For those with DSP accommodations only, we can discuss assignment extensions if carefully discussed in advance.

**Regrades.** Requests for regrades will be accepted for reasons of possible clerical error. In a typical year, zero regrades should be expected.

**Research Mentor Meetings.** You will be able to meet with your research mentors on an as needed basis throughout the semester during their office hours. However, after the submission of proposal v2, the following week we will take off the regular class structure so that you can have one on one meetings with your research mentors. These will be short, 10 minute meetings where you should come prepared to discuss your biggest questions / concerns related to your research proposal in a concise and efficient manner. This will be a good touch point to ensure that you are on the right track for your final paper. Sign ups for these slots will be released as it gets closer to this week.

## Schedule

	Faculty/GSI	Topic	Topic	Faculty/GSI	Assignment
8/28			Class Intro	Ben Handel	
9/2 9/4	Sebastian Puerta	Intro to Stata	Economics/data resources on campus	Jim Church	
9/9 9/11	Emmanuel Saez	Public Economics	Intro to regression methods	Sarah Frick	
9/16 9/18	Ted Miguel	Development Economics	Reading and Reviewing the Literature	Sarah Frick	1: Brainstorming research questions
9/23 9/25	Shachar Kariv	Economic Theory	RCT and IV	Sarah Frick	
9/30 10/2	Emi Nakamura	Macro Economics	IV and RD	Sarah Frick	2: Proposal v1
10/7 10/9	Sebastian Puerta	Diff-in-Diff I (Intro)	Diff-in-Diff II (Event Studies)	Sebastian Puerta	
10/14 10/16	Sebastian Puerta	Diff-in-Diff II (Synthetic control groups, p-score matching)	Panel Data + Fixed Effects	Sarah Frick	
10/21 10/23	Sebastian Puerta	How to work with data	Labor Economics	Enrico Moretti	3: Proposal v2
10/28 10/30	Matt Backus	IO	How to write an Econ Paper + Latex	Sarah Frick	
11/4 11/6	Cecile Gaubert	Trade Economics	Data Visualization	Sebastian Puerta	
11/11 11/13	<i>One-on-one meeting slots with Research Mentors</i>				4: Overview of data / initial results
11/18 11/20	Gautam Rao	Behavioral Economics	Job Market Presentation (To be Confirmed)	Guest Graduate Student	
11/25 11/27	No class	Thanksgiving	No class	Thanksgiving	
12/9					5: Final paper due