

Undergraduate Honors Seminar UG4999

Schedule for the 2021-2022 Academic Year

Instructor: Michael Carlos Best. michael.best@columbia.edu

Fall Office hours Fridays 3:00-5:00PM. Spring Office hours Wednesday 2:40-4:00PM.

Sign up at [this link](#)

March 17, 2022

1 Schedule

In the fall we will meet on Thursdays in room 1027 in the International Affairs Building. Our meetings will start at 12:10PM and go until just before 2PM. In the spring we will meet on Tuesdays in room 1027 in the International Affairs Building. Our meetings will start at 12:10PM and go until just before 2PM. Here is a summary of the schedule. More details below.

WEEK	DATE	CLASS CONTENT	INSTRUCTOR
3	9/23	Introduction / Methods 1	Michael Best
4	9/30	Methods 2	Michael Best
5	10/7	6 Student Introductions	
6	10/14	6 Student Introductions	
7	10/21	Stata 1	Kyle Coombs
7	10/22	Midterm Report Due	
8	10/28	No class	
9	11/4	Stata 2	Kyle Coombs
10-14	11/11-12/9	Student Presentations?	
15	12/13	End of Term Report Due	
SPRING 2022			
1-8	1/18-3/08	Student Presentations?	
9	3/15	No Class (Spring Break)	
10	3/22	No class	
10	3/25	Final Draft Due	
11-13	3/29-4/12	Final Presentations	
14	4/18	Final Paper Due	

2 Methods Lectures

We will have two lectures on econometric methods that you will find useful in your research. The focus will be on providing you with the intuitions you will need to develop to approach empirical

research. The focus will *not* be on proving the asymptotic properties of the estimators discussed (though I can point you to readings about them if you wish to read more about them). To do this I will present the estimators and then we will run through a number of potential pitfalls and examples of empirical papers that illustrate them nicely and provide ways to address them. The examples will come mostly from labor economics, public economics and development economics, though the issues apply more broadly to applied microeconomics research.

The topics we will cover are

1. The potential outcomes framework and the problem of identification
2. Instrumental variables.
3. Difference-in-differences designs
4. Regression Discontinuity Designs

3 Student Introductions

In weeks 5 & 6 we will meet and get to know what each of you are going to be working on this year. Each of you will have 10–12 minutes to talk about your project and to get feedback from the rest of the group. The idea here is for all of us to work together to help each of you develop your project into the best possible project it can be.

To help us all to give you good feedback, it is important for you to guide us to the places where our input is most useful. To do that, tell us three things:

1. What motivates you to work on this topic? Why is it interesting? Why is it important? Convince us that we should be as excited as you are about the area you want to research. This can take the form of anecdotes, facts, policy questions etc. They should be easy to understand and accessible to anyone with a basic background in economics.
2. State a research question. Tell us very precisely the question you hope your project will answer. Once you have convinced us that the general topic you are working on is interesting, the next thing you want to do is convince us that your project will have something new and creative to add to that topic. Stating it as a question helps with this. If the answer is obvious, then it's not going to be interesting to answer it, and it won't require any creativity to come up with a way to solve the puzzle.
3. Outline how you plan to attack the problem. What will be your strategy for finding an answer to the interesting question you have stated? What data will you use? How will you measure the key things you are interested in? How will you rule out other potential explanations for your findings? Here, you don't have to have answers for everything. If you have solved all the problems already then you don't need to work on the problem for a year! What we want to do is think through the potential problems we can expect so that we can brainstorm ways we might overcome them.

If you like, you can prepare some slides and/or a handout to share with the group. Going through this process will help you to figure out what to do next and focus you on the key challenges you

will face so that you can get creative about looking for ways to solve the problems. It is extremely important that we do this in a supportive and positive way. We want to be critical, skeptical scientists - challenging assumptions and taking nothing at face value. But we also want to be helpful to our fellow scientists as we all work towards a better understanding of the world around us. Whenever we spot a problem with someone's work, we should all also try and think of ways to fix the problem. It's easy to be a critic, it's much harder to come up with constructive criticism that helps solve problems. This is not about who is smarter than who, or who has the best criticism of others' work, this is about all of us helping each other to do the best research we can do.

4 Stata/R Programming Support

4.1 Stata/R classes

In weeks 7 & 9 Kyle Coombs (kgc2127@columbia.edu) will provide an introduction to working with data in STATA and/or R. These classes will go through the basics of

- importing data
- cleaning and manipulating data
- writing do files - using macros and loops
- running OLS/panel/IV regressions
- reporting summary statistics and regression results
- exporting graphs
- dealing with error messages: how to get 95% of the answers you need from the internet.

You are encouraged (though it is by no means compulsory) to get Stata and R on your laptops before the first class. You can find out more about how to get Stata here: <https://cuit.columbia.edu/content/stata>. The workstations in the Digital Social Science Center also have Stata on them if you prefer to work there: <http://library.columbia.edu/locations/map.html?location=dssc>. R is open source, so you can just download it here: <https://www.r-project.org> It is also highly recommended to use RStudio as an interface: <https://www.rstudio.com>.

4.2 Office Hours

Kyle Coombs will also hold office hours on Mondays and Wednesdays from 3PM to 4PM. Office hours will be held on zoom at [this link](#). Office hours are drop-in, but if you'd prefer to have a one-on-one meeting, you can sign up in advance here: [here](#).

5 Class Presentations

In most of our meetings, the focus will be on you guys. You will get the opportunity to present your work in progress as you're working on it. It is not compulsory to do a presentation in the

fall (though note that it will be compulsory for everyone to present in the spring). Presenting in the fall will give you an opportunity to get feedback as you work on your project if you want it. Presentations should last no more than 50 minutes

If you would like to present, please let me know by email by 5PM the Friday before. This is so that I can let everyone know in good time that we will be having a meeting and a presentation. The schedule above lists the dates on which we'll have the presentations.

6 Reporting on Your Progress

In the fall semester you will submit 2 reports.

1. By 5pm on Friday 10/22 you should submit your Midterm report. Your midterm report should be only 3–4 pages. This can be based on your first class presentation and updated to incorporate the feedback you received in class. The report should include a brief literature review and identify the data that you will be using (if any) in your thesis. Please submit your report by email to your faculty advisor and with a copy to me so I know you've submitted it.
2. By 5pm on Monday 12/13 you should submit your End of Term report. This report should be a 10 page summary of your work. Your report should (at least) include descriptive statistics and one or two motivating graphs. Please submit your report by email to your faculty advisor and with a copy to me so I know you've submitted it.

7 The Actual Paper

In the spring semester you will submit one final draft and then the final paper.

1. By 5pm on Friday 3/25 you should submit your final draft. This should be 25–35 pages and should include some results. It will be the last draft you submit prior to your final thesis, so take advantage of this opportunity to get feedback, especially from your faculty advisor. Please submit your report by email to your faculty advisor and with a copy to me.
2. By 5pm on Tuesday 4/18 you should submit your final thesis. This probably shouldn't be much longer than your final draft. Please submit your report as a .pdf file by email to
 - (a) Your faculty advisor
 - (b) Me (michael.best@columbia.edu)
 - (c) The director of undergraduate studies, Susan Elmes (se5@columbia.edu)

Because we have to coordinate reading all the papers among a large group of people, and to make it fair to all of you, *it will not be possible to grant extensions to this deadline.*

8 Grading

Since this is a year-long class, in the fall semester you will receive a grade of "YC", which stands for "Year Course". Then, in the spring, when you submit your final paper, your paper will be

graded by all three of the readers, and your grade on the honors thesis will be the average of the three grades. This grade will be recorded for both the fall and spring semesters.