Syllabus: Econ 438 A, Econometric Applications

PLEAE READ VERY CAREFULLY for grading policy. No exceptions will be made later AFTER damage is already done.

Also read carefully:
https://econ.washington.edu/policy-academic-conduct

Instructor : Dong-Jae Eun (djeun@uw.edu)

Schedule

Lecture : TTh, 10:30 – 12:20

For student presentation sessions: it will be synchronous. Everyone is required to attend and ask questions and give comments to presenters.

For all other sessions, it will be asynchronous. You can check the "Announcements" section and see the recorded lecture there.

See the tentative schedule at the end. I'll announce the student presentation session schedules on Canvas, once it's finalized. No worries.

OH : F 10–10:50am

Both for synchronous lectures and office hours: use the zoom sections on Canvas

Description

The goal of the course is putting econometric theory in practice. Students will be asked to independently think about an economic question, develop econometric methodologies to tackle the question, discuss limitation of such methodologies, and finally present and write up findings.

Prerequisite

- Minimum grade of 2.0 in ECON 301; either ECON 311/STAT 311, STAT 341, MATH 390/STAT 390, or Q SCI 381.
- If you haven't used Stata, you might have to spend hours to learn by yourself. If you are familiar with coding in general, don't worry. Stata is very easy to learn.
- STATA:
  For statistical analyses, students should use STATA. One reasonably good introduction is http://data.princeton.edu/stata/. It is readily available on the computers in Savery Hall, but some students elect to purchase it anyway for the convenience. You can purchase STATA by following the instructions at https://www.washington.edu/uware/stata/. Choose Intercooled STATA (Stata/IC), not Small STATA. Small STATA is not adequate for many of the applications we will consider. STATA contains an extensive on-line and embedded help facility.

Textbook

There is no textbook, but you will benefit from having as reference:
Wooldridge, Jeffrey M., Introductory Econometrics: A Modern Approach, South- Western College Publishing

Using Stata

1. You can buy Stata here (https://itconnect.uw.edu/wares/uware/) You can buy "Stata/IC" (the cheapest version.) Of course you can buy more expensive version but not necessary for this course.

2. If you are familiar with 'remote access', there is a way to use Stata free of charge. Go to this link (https://csde.washington.edu/computing/resources/#TS_Connecting) and follow the instructions under "Remote Access Windows Computing (Terminal Servers)" carefully for setting up the remote desktop. If it doesn't work for you, you may have to use the first option (buying)

Note: You can use other statistical packages (like R, Python) ONLY IF you are comfortable using these languages and doing basic statistical analyses. Otherwise I do recommend using Stata as it's more econometrics-friendly.

Class Requirements

The grade will be mostly based on individual project (proposal, final paper, and two presentations), participation in discussion (asking questions, giving comments, any form of participation will be appreciated; Remember: there is no stupid question!) during your classmate's presentation, and a problem set.

For the problem set, I recommend using Stata. You can use other statistical package if you want, but I recommend Stata because that's econometrics friendly.

Attendance check on presentation dates: 10%

- (I believe) "Zoom" allows instructors to do an easy attendance check. I'll use this feature to grade.

In-class participation (questions/suggestion during classmates' presentation): 15%
(NOTE: absence during classmates' presentations will lead to point deduction BOTH in Attendance (if quiz is taken that day) and Participation parts.) "Zoom" is extremely helpful for grading this one, too!

Problem sets using Stata: 25%
(This is as important as doing your project, in terms of learning. Use the problem set as a guideline for your project. It's like doing a guided project, with given dataset.) You may want to use "Discussions" board and ask questions there.

Proposal: 5%
Proposal in-class presentation: 5%
Final in-class presentation: 10%
Final paper: 30%

For detailed description of the project, refer to the pdf file ("final paper guideline.pdf") on Canvas. Note that **NO LATE SUBMISSION IS ALLOWED without asking for permission 2 WEEKS PRIOR TO DEADLINE.** My suggestion: To prevent any "accidents", be ready to submit your homework at least one day before the deadline. That way, you won't miss the *actual* deadlines.

Topics (tentative!!)

(class 1) Introduction and Class survey

(class 2) Econometrics and causality

(class 3, 4) Simple regression

(class 4, 5) Introduction to Stata

(class 6, 7) Students' proposal presentation

(class 8) Multiple regression

(class 9) Heteroskedasticity

(class 10, 11) Endogeneity and Instrumental variable

(class 12) Difference in difference

(class 13) Limited dependent variable

(class 14-17) Student' final presentation

Remark

This course is NOT a "writing-intensive" ("W") course. Final paper is more about quantitative analysis and related discussion. Indeed, this course is not designed to be writing intensive.