Econ 104: Introduction to Econometrics

Instructor: Xu Cheng, Room 527, McNeil Building

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Office Hours: Thursday 4:30p-6:00p

Scheduled Class Time, Location, and Organization:

- Lectures: *Tuesdays* and *Thursdays* 3:00p-4:20p.

- Classroom: Stiteler Hall B6. This is a large classroom. I strongly encourage you to sit in the front rows.

- Recitation Sessions: one hour per week as scheduled.

Course Description: This course is designed to introduce you to econometric techniques and their applications in economic analysis and decision making. The main objective of the course is to train you in (i) handling economic data; (ii) quantitative analysis of economic models with probabilistic tools; (iii) econometric techniques, their application as well as their statistical and practical interpretation; (iv) implementing these techniques on a computer.

The course focuses on practical and conceptual issues involved in substantive applications of econometric techniques. Estimation and inference procedures are formally analyzed for simple econometric models and illustrated by empirical case studies using real-life data. The course covers linear regression models, simultaneous-equations models, discrete choice models, time series models, and panel data models. Estimation and inference is conducted using least squares, instrumental variable, and likelihood based techniques.

Prerequisites: ECON 101 and ECON 103; MATH 104 and MATH 114 or MATH 115.

Course Text: The required textbook for this course is Stock, James and Mark Watson (2015, updated 3rd Edition): *"Introduction to Econometrics"*.

Statistical Software: We will use the statistical package R via a front-end called RStudio throughout the course. Both programs are free and open source. See the last page of this document for instructions on how to configure your computer to run R and RStudio. Both programs are also available in the Undergraduate Data Analysis Lab (UDAL) in McNeil rooms 104 and 108-9.

Course Requirements and Grading: You are expected to attend the lectures and your assigned recitation session. You have to attend the recitation session for which you are registered.

- **Problem Sets [10%]**: There are six problem sets. Two lowest grades are dropped. Solutions must be submitted on the due dates. If you do not submit the problem set in class, you have to submit it directly to your recitation instructor. Submissions received after 6:00 pm on the due date are not accepted. Electronic submissions are not accepted.

- **Midterm Exam 1[15%]**: *Thursday 9/15*, closed books and notes, in class 3:10-4:20p.

- **Midterm Exam 2[20%]**: *Thursday 10/13*, closed books and notes, in class 3:10-4:20p.

- **Midterm Exam 3[20%]**: *Tuesday 11/8*, closed books and notes, in class 3:10-4:20p.

- **Final Exam[35%]**: *December 21,12:00-2:00p*, closed books and notes.