INTRODUCTION TO ECONOMETRICS
Fall 2018

Course Information:
Course #: ECO33150
Classroom: 6/310 (North Academic Center)
Time: Thursday 6:30pm-9:15pm
Instructor: Ercio Munoz
Email: emunozsaavedra@gc.cuny.edu
Office hours: Thursday 5:15pm-6:15pm (By appointment) at NA 5/139 or google hangout videochat by appointment (preferred)
Prerequisite(s): ECO20150, ECO20250, ECO20350, and MATH20100 or MATH20500
Credits: 4

Course Description:
The aim of this course is to learn the application of statistical methods to economic questions, known as econometrics. It will introduce students to the analysis of linear and certain types of nonlinear models of common use in economics. It will focus equally on theory and implementation of empirical methods. The first few lectures will review some basic concepts of probability theory and statistical inference. You will be required to learn R (software) and its unique programming language in order to complete the problem sets and/or in-class assignments.

Textbook(s):
Introduction to Econometrics, 3rd edition, 2015, by James H. Stock and Mark W. Watson, Pearson.
Suggestions for further reading will be provided in class.
For R, a good reference is:
Using R for Introductory Econometrics, by Florian Heiss. Available online at www.urfie.net

Course Objectives:
At the completion of this course, students will be able to:

1. Develop knowledge of the basic principales of probability and statistics
2. Master the foundations of the classical linear regression model
3. Interpret the quantitative relationship between economic variables
4. Be able to estimate and test hypothesis about the parameters of the classical linear regression model
5. Be able to apply basic techniques to control for unobserved variables that are constant over time, estimate models with binary dependent variables, and address problems when the error is correlated with some regressors
6. Develop basic working knowledge of the software R

Grade Distribution:

Class Participation	10%
Assignments	30%
Midterm Exam	30%
Final Exam	30%

Letter Grade Distribution:

>= 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	<= 59.99	F

Course Policies:

- **General**
  - Exams for this course require a calculator. You are responsible for bringing your own to the exam. Use of phones, computers, tablets, or notes are strongly prohibited.
  - Quizzes and exams are closed book, closed notes.
  - **No makeup quizzes or exams will be given.**
  - The midterm exam will cover the material presented in the classes prior to the midterm. The final exam is cumulative, and covers any of the material presented in the course.
  - **Computers are not to be used unless instructed to do so.**
- **Labs and Assignments**
  - Students are expected to work independently. **Offering** and **accepting** solutions from others is an act of **plagiarism**, which is a serious offense and **all involved parties will be penalized**. Discussion among students is encouraged, but when in doubt, direct your questions to the professor.
  - **No late assignments will be accepted under any circumstances**.
- **Attendance and Absences**
  - Attendance is expected and will be taken each class. You are allowed to miss **1** class during the semester without penalty. Any further absences will result in point and/or grade deductions.
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.

Tentative Course Outline:
The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the reading assignments.

Week	Content	Reading
Week 1	Economic questions and data Review of probability	SW Chapter 1 and 2
Week 2	Review of statistics Introduction to R	SW Chapter 3
Week 3	Simple linear regression - Estimation	SW Chapter 4
Week 4	Simple linear regression - Inference	SW Chapter 5
Week 5	Multivariate linear regression	SW Chapter 6 and 7
Week 6	Nonlinear regression functions	SW Chapter 8
Week 7	**Midterm exam (October 11)**	
Week 8	Assesing regression results	SW Chapter 9
Week 9	Regression with panel data	SW Chapter 10
Week 10	Regression with a binary outcomes	SW Chapter 11
Week 11	Instrumental variables regression	SW Chapter 12
Week 12	Experiments and quasi-experiments	SW Chapter 13
Week 13	Time-series regression & forecasting (if time permits)	SW Chapter 14
Week 14	Review Session	
	Final exam (TBA 6PM-8:15PM)	