BSE3703 Econometrics for Business I

Semester 1 AY2020/21

Instructor:	Yuting Huang	**Time:**	Thur 12:00 - 15:00
Email:	bizhy@nus.edu.sg	**Place:**	BIZ 1 02-03

Office Hours: After class or by appointment.

Course Description: This module introduces the science and art of building and using econometric models. It aims to equip business students to: (i) Understand and appreciate econometric analysis in economic and business reports; and (ii) Carry out estimation using least squares regression to support business analysis.

Main References: This is a list of various useful books that will be touched during the course. You need to consult them occasionally.

- [AP] Angrist, J.D. and Pischke, J.S., *Mastering'Metrics: The Path from Cause to Effect*, Princeton University Press, 2014.

- [SW] Stock, J.H. and Watson, M.W., *Introduction to Econometrics*, Pearson, 2015.

Evaluation: Participation (10%), homework (30%), midterm (30%), final exam (30%).

Participation: Class participation is awarded based on your contribution to class discussion.

Homework:

- There will be three homework assignments.

- Group work ($\leq$ 5 students per group) is encouraged; one submission per group.

- Submission must be typed and submitted as a single PDF file on LumiNUS. Please name PDF files using the following convention: **"HW#_GroupX.pdf"**, where # is the homework number (1 to 3) and **X** is your group number. Write all group numbers' names (as in matric card) and matriculation numbers in the first line of your submission.

- **Homework is due on the day before class by 2359hrs**. Late submission will be deducted 25% of the grade.

Exams:

- **Midterm** will be given in class in Week 7.

- **Final exam** will be held during the Exam Week.

- Format will be similar to homework and in-class practice questions.

- There will be no make-up exams.

Communication:

- Our primary means of communication outside the classroom is email. I will be using LumiNUS to post course materials and announcements.

- Use your NUS email address. Start your subject title with "BSE3703", followed by a brief phrase summarizing the question, e.g., *BSE3703 - Derivation of Variance*.

Tentative Teaching Plan:

Note the following course outline is tentative and therefore subject to change during the process.

Week	Topic	Suggested Reading
1	Class Outline and Logistics Introduction to Econometrics	[AP] Introduction
2	Review of Probability and Statistics I	[AP] Chapter 1 Appendix [SW] Chapter 2
3	Review of Probability and Statistics II	[SW] Chapter 2 & 3
4	Bivariate and Multivariate Regressions	[AP] Chapter 2 [SW] Chapter 4
5	"Problems" with Regressions	[AP] Chapter 2
6	Review for Midterm *(Homework #1 due in class)*	
Recess Week		
7	**Midterm (in class)**	
8	Randomized Trials	[AP] Chapter 1 [SW] Chapter 13.1-13.3
9	Instrumental Variables Estimation *(Homework #2 due in class)*	[AP] Chapter 3 [SW] Chapter 12 & 13.4
10	Regression Discontinuity	[AP] Chapter 4 [SW] Chapter 13.4
11	Difference-in-differences Estimation	[AP] Chapter 5 [SW] Chapter 13.4
12	Applications - *Assessments of Regression-based Studies*	
13	Review for Final *(Homework #3 due in class)*	
Reading Week		
Exam Week	**Final Exam**	

Classroom Courtesy:

- Your attendance is expected and required. Coming late to class will inevitably create an unnecessary disturbance for all your fellow classmates. Being late once or twice due to unforeseen reasons is understandable, but if this happens constantly, there will be actions.

- I count on your judgment and discipline regarding the use of electronic devices in the classroom. Exercise your discipline and respect other students and the instructor.

Academic Honesty: Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation.