BSE3703 Econometrics for Business I

Semester 2 AY2020/21

Instructor:	Yuting Huang	**Time:**	Friday 12:00 - 15:00
Email:	bizhy@nus.edu.sg	**Venue:**	BIZ1-0203

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 useful books that will be touched during the course. You may 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.

Teaching Mode:

- In-person lectures are held in BIZ1-0203. Physical attendance is not mandatory. Please come to class *only if* you are healthy.

- Live webcast is available. You can find Zoom links on LumiNUS under "Conferencing".

- Lecture recordings will be uploaded during weekends.

Office Hours: We will use Zoom to conduct consultation. Please sign up for consultation slots on LumiNUS.

Evaluation: Homework (30%), midterm (30%), final exam (40%).

Homework:

- There will be three homework assignments.

- Group work (≤ 3 students per group) is encouraged; sign up for your study group on our shared Google spreadsheet.

- One submission per group.

- Submission must be typed and submitted as a single PDF file on LumiNUS. Please follow the instructions given at the beginning of each homework.

- **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 Week 13.

- There will be strictly 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**.

Academic Honesty: As an NUS student, you are expected to maintain and uphold the highest standards of integrity and honesty at all times. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation.

Tentative Teaching Plan:

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

Week	Date	Topic	Suggested Reading
1	Jan 15	Class Outline and Logistics Introduction to Econometrics	[AP] Introduction
2	Jan 22	Review of Probability and Statistics I	[AP] Chapter 1 Appendix [SW] Chapter 2
3	Jan 29	Review of Probability and Statistics II	[SW] Chapter 3
4	Feb 5	Simple Linear Regressions	[SW] Chapter 4 & 5.1-5.3
5	Feb 12 [PH]	Multivariate Linear Regressions	[AP] Chapter 2 [SW] Chapter 6
6	Feb 19	Review for Midterm *(Homework #1 due)*	
Recess Week			
7	Mar 5	**Midterm (no in-person class)**	
8	Mar 12	Randomized Trials	[AP] Chapter 1 [SW] Chapter 13.1-13.3
9	Mar 19	Instrumental Variable Estimation	[AP] Chapter 3 [SW] Chapter 12 & 13.4
10	Mar 26	Regression Discontinuity *(Homework #2 due)*	[AP] Chapter 4 [SW] Chapter 13.4
11	Apr 2 [PH]	Difference-in-differences Estimation	[AP] Chapter 5 [SW] Chapter 13.4
12	Apr 9	Review for Final *(Homework #3 due)*	
13	Apr 16	**Final Test (no in-person class)**	
Reading Week			
Exam Week			

[PH]: Class will be rescheduled or reformatted due to public holidays.