COURSE CONTENT

Course Coordinator	Feng Qu
Course Code	HE4903
Course Title	Advanced Econometrics
Pre-requisites	HE3021/HE3621 Intermediate Econometrics (for AY2020 intake and before)
	or
	HE3003 Econometrics II (applicable to AY2021 intake and after)
No of AUs	4
Contact Hours	39 hours (2 hours lecture and 1 hour tutorial per week)

Course Aims
Based on HE3021 Intermediate Econometrics, this course provides you with a theoretical foundation on econometric methods widely used in empirical studies and their applications. The approaches and models introduced to you will have both theoretical rigor and empirical relevance.

Intended Learning Outcomes (ILO)
By the end of this course, you (as a student) would be able to:

1. deal with economic data using appropriate econometric models;
2. interpret empirical results in a scientific way;
3. design projects to evaluate economic and public policies;
4. infer information of economic models and test theories using data;
5. communicate with the general public from the view of empirical research

Course Content
Topics covered include asymptotic theory, large sample properties of OLS, IV, GMM, heteroskedasticity, limited dependent variable models and panel data models.

*The content could change based on students' background and interests each year.

Assessment (includes both continuous and summative assessment)
Continuous Assessment   :   100%
                                                    Total   :   100%

Reading and References
[1] William Greene *Econometric Analysis* (7th ed. Pearson 2011)
[2] Badi Baltagi *Econometric Analysis of Panel Data* (5th ed.Wiley, 2013)

Course Instructors

Instructor	Office Location	Email
Feng Qu	SHHK 04-48	qfeng@ntu.edu.sg

Planned Weekly Schedule

Week	Topic	Course LO	Readings/ Activities
1	Overview of Multiple Regression Analysis	1, 2	Greene Ch 2-4
2	Asymptotics (1): Large Sample Properties of OLS Estimator	4	Greene, App D
3	Asymptotics (2): IV and GMM Estimators	4	Greene, Ch 4, 8,
4	Heteroskedasticity and Robust Inference	1, 2	Greene, Ch 9
5	Discrete Choice Models	4	Greene Ch19
6	Discrete Choice Models	4	Greene Ch19
7	Limited Dependent Variable Models	2, 4	Greene Ch19
Recess Week			
8	Static Panel Data Models	1, 2, 3	Baltagi Ch2,3
9	Static Panel Data Models	1, 2, 3	Baltagi Ch2,3
10	Dynamic Panel Data Models	1, 2, 3	Baltagi Ch8
11	Dynamic Panel Data Models	1, 2, 3, 4	Baltagi Ch8
12	Project Presentation	3, 5	
13	Project Presentation	3, 5	