# **COURSE CONTENT**

Course Coordinator	Yan Jubo
Course Code	HE4203
Course Title	Panel Data and Policy Analysis
Pre-requisites	HE2003 Econometrics I/ HE2004 Introductory Economics/ HE2005 Principles of Econometrics
No of AUs	4
Contact Hours	52 hours (2 hours lecture and 2 hours tutorial per week)

#### **Course Aims**

This course helps students to form a foundation in econometric analysis especially those related to modern economic research. Modern econometric skills will be introduced to you through lectures and computer based class projects. The course emphasizes applications of econometric techniques rather than econometric theories. Statistical package will be used to illustrate analysis of real-world data.

### Intended Learning Outcomes (ILO)

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

- 1. Use scientific method as a guideline to design various studies.
- 2. Interpret and discuss the state of art research methods in applied microeconomics.
- 3. Fluently use statistical packages to conduct econometric analysis especially those using panel data.
- 4. Conduct basic applied microeconomic analyses especially policy analyses and program evaluations.

#### **Course Content**

The main topics covered are: Causal Inference, Randomized Controlled Trials, Non-experimental Methods, Difference in Difference, Instrumental Variable, and Regression of Discontinuity.

### Assessment (more details will be announced in class)

Continuous Assessment: 100%

Total	100%

#### **Reading and References**

[AP15] Angrist, J.D., Pischke, J.S. Mastering Metrics, 1st Ed., Princeton University Press 2015 [AP09] Angrist, J.D., Pischke, J.S. Mostly Harmless Econometrics: An Empiricist's Companion, 1st Ed., Princeton University Press 2009

[G] Greene, W.H. Econometric Analysis, 7th Ed., Pearson 2012

### **Course Instructors**

Instructor	Office Location	Email
Yan Jubo	SHHK 04-68	yanjubo@ntu.edu.sg

## **Planned Weekly Schedule**

Week	Торіс	Course LO	<b>Readings/ Activities</b>		
Week 1	Introduction and Overview	LO1, LO2, LO3 and LO4	[AP15] Intro		
Week 2	Causal Relation and	LO1. LO2. LO3 and	[G] Ch1		
	Scientific Method	LO4	[AP09] Ch1		
Week 3	Randomized Trials	LO1, LO2, LO3 and LO4	[AP15] Ch1		
Week 4	Non-experimental Methods: Statistical Control (Regression Analysis)	LO1, LO2, LO3 and LO4	[AP15] Ch2 [G] Ch2		
Week 5	Non-experimental Methods: Statistical Control (Regression Analysis)	LO1, LO2, LO3 and LO4	[AP15] Ch2 [G] Ch2		
Week 6	Instrumental Variables	LO1, LO2, LO3 and LO4	[AP15] Ch3 [G] 8 [AP09] Ch4		
Week 7	Instrumental Variables	LO1, LO2, LO3 and LO4	[AP15] Ch3 [G] 8 [AP09] Ch4		
Recess Week					
Week 8	Regression Discontinuity Designs	LO1, LO2, LO3 and LO4	[AP15] Ch4 [AP09] Ch6		
Week 9	Regression Discontinuity Designs	LO1, LO2, LO3 and LO4	[AP15] Ch4 [AP09] Ch6		
Week 10	Difference-in- Difference	LO1, LO2, LO3 and LO4	[AP15] Ch5 [AP09] Ch5		
Week 11	Difference-in- Difference	LO1, LO2, LO3 and LO4	[AP15] Ch4 [AP09] Ch6		
Week 12	Empirical Projects	LO1, LO2, LO3 and LO4	ТВА		
Week 13	Empirical Projects	LO1, LO2, LO3 and LO4	ТВА		