City University of Hong Kong
Course Syllabus

offered by Department of Economics and Finance
with effect from Semester <u>A</u> 20<u>17</u> /<u>18</u>

Part I   Course Overview

Course Title:	**Topics in Econometrics**
Course Code:	**EF5408**
Course Duration:	**1 semester**
Credit Units:	**3**
Level:	**P5**
Medium of Instruction:	**English**
Medium of Assessment:	**English**
Prerequisites: *(Course Code and Title)*	**EF5470 Econometrics or equivalent**
Precursors: *(Course Code and Title)*	**Nil**
Equivalent Courses: *(Course Code and Title)*	**EF8075 Topics in Econometrics**
Exclusive Courses: *(Course Code and Title)*	**Nil**

Part II   Course Details

1.   Abstract

This course aims at providing an in-depth analysis of various advanced theoretical results in econometrics, including asymptotic distribution theory, instrumental variable methods, panel data analysis, discrete choice modeling, and topics in time series econometrics. Students will apply these techniques and concepts to real life cases and examine the usefulness of various economic and finance models. By engaging in these exercises, students further strengthen their discovery skills.

2.   Course Intended Learning Outcomes (CILOs)
(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Derive the theoretical results covered in this course.	60%	√	√	
2.	Apply the econometric methods covered in this course to real world data; Students will solve real-world problems by using econometric software. Empirical applications focus on the underlying economic rationale and their mathematical interpretations.	40%	√	√	√
		100%			

A1:   Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.
A2:   Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.
A3:   *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3.   Teaching and Learning Activities (TLAs)
(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.		Hours/week (if applicable)
		1	2	
Lectures, in-class discussions, assignments	Taught and discuss various advanced theoretical results in econometrics, including asymptotic distribution theory, instrumental variable methods, panel data analysis, discrete choice modeling, and topics in time series econometrics.	√	√	3 hours lecture per week

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.		Weighting	Remarks
	1	2		
Continuous Assessment: <u>100</u> %				
Individual project, homework assignments, discussions	√	√	100%	
Examination: <u>0</u>% (duration: , if applicable)				
-			0%	
			100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Individual project, homework assignments, discussions	Demonstrate the capability of comprehending the advanced topics on econometrics that were discussed in classes.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III **Other Information** (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

Matrix algebra; Mathematical statistics; Asymptotic distribution theory; Instrumental variables; Generalized method of moments; Maximum likelihood; Panel data; Dynamic panel regression; Discrete choice model; Forecast comparison and evaluation; Volatilities; Unit roots; Cointegration

2. Reading List
2.1 Compulsory Readings
(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Cameron, A.C. and Trivedi, P.K. (2005) Microeconometrics. Cambridge University Press.
2.	Greene, W. *Econometric Analysis*. Current Edition. Prentice-Hall.
3.	Hamilton, J. (1994) *Time Series Analysis*, Princeton University Press.
4.	Hayashi, F. (2000) *Econometrics*, Princeton University Press.
5.	Hsiao, C. (2003) *Analysis of Panel Data*. 2nd edition. Cambridge University Press.
6.	Wooldridge, J. (2001) *Econometric Analysis of Cross Section and Panel Data*, MIT Press.

2.2 Additional Readings
(Additional references for students to learn to expand their knowledge about the subject.)