

EF5408: TOPICS IN ECONOMETRICS

Effective Term

Semester B 2024/25

Part I Course Overview

Course Title

Topics in Econometrics

Subject Code

EF - Economics and Finance

Course Number

5408

Academic Unit

Economics and Finance (EF)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

EF5470 Econometrics or equivalent

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

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.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Derive the theoretical results covered in this course.	60	x	x	
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	x	x	x

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 real-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.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	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.	1, 2	3 hours lecture per week

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Individual project, homework assignments, discussions	1, 2	100	

Continuous Assessment (%)

100

Assessment Rubrics (AR)

Assessment Task

Individual project, homework assignments, discussions (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Demonstrate the capability of comprehending the advanced topics on econometrics that were discussed in classes.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Individual project, homework assignments, discussions (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Demonstrate the capability of comprehending the advanced topics on econometrics that were discussed in classes.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Part III Other Information

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

Reading List

Compulsory Readings

Title	
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.

Additional Readings

Title	
1	Nil