EF5470: ADVANCED ECONOMETRICS

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Advanced Econometrics

Subject Code
EF - Economics and Finance

Course Number
5470

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
Nil

Precursors
Background of basic statistics

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
The aim of this course is to provide research degree students with basic econometric techniques applicable to empirical work. Students will apply these techniques and concepts to real life cases and examine the usefulness of various economic

and finance models by testing them with case studies. 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	Describe basic probability and statistical theories to conduct estimation, inference and prediction with econometric models and derive basic mathematical results that are useful in applications.	30	x	x	
2	Explain econometric models to perform empirical investigations in economics and finance.	30	x	x	
3	Apply economic and financial data for empirical analysis.	20	x	x	
4	Demonstrate simple empirical analysis using econometric software packages, and make use of the knowledge acquired from the lectures and the software techniques to analyze real-life issues and develop problem-solving skills.	20	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	Students will gain basic econometric techniques and examine the usefulness of various economic and finance models by testing them with case studies.	1, 2, 3	

2	Use real-world examples to illustrate the applications of econometric models	Students will engage in solving real-world empirical issues by using econometric software. Empirical applications focus on underlying economic rationale and their mathematical interpretations.	2, 3, 4	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Midterm	2	15	-	No
2	Term Project	3	20	-	Yes
3	Assignments	4	25	-	No

Continuous Assessment (%)

60

Examination (%)

40

Examination Duration (Hours)

3

Assessment Rubrics (AR)

Assessment Task

Midterm (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Demonstrate having good understanding of basic econometric techniques and capability of appraising various economic and finance models

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

Term Project (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Demonstrate the capability of solving real-world empirical issues by using econometric software.

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
Assignments (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Demonstrate the capability of comprehending and applying econometric techniques to solve assigned problems.

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
Final Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Demonstrate having good understanding of basic econometric techniques and capability of appraising various economic and finance models

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
Midterm (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Demonstrate having good understanding of basic econometric techniques and capability of appraising various economic and finance models

Excellent
(A+, A, A-) High

Good
(B+, B) Significant

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Term Project (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Demonstrate the capability of solving real-world empirical issues by using econometric software.

Excellent
(A+, A, A-) High

Good
(B+, B) Significant

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Assignments (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Demonstrate the capability of comprehending and applying econometric techniques to solve assigned problems.

Excellent
(A+, A, A-) High

Good
(B+, B) Significant

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Final Examination (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Demonstrate having good understanding of basic econometric techniques and capability of appraising various economic and finance models

Excellent
(A+, A, A-) High

Good
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(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus
Statistical Inference, Ordinary Least Squares, Heteroskedasticity, Autocorrelation, Instrumental Variables, Two-Stage Least Squares, Generalized Method of Moments, Maximum Likelihood Estimation

Reading List

Compulsory Readings

	Title
1	Verbeek, M. (2004) A Guide to Modern Econometrics, 2th Edition, John Wiley and Sons.
2	Hayashi, F. (2000) Econometrics, Princeton University Press.

Additional Readings

	Title
1	Nil