

EF8071: TOPICS IN MICROECONOMICS

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Topics in Microeconomics

Subject Code

EF - Economics and Finance

Course Number

8071

Academic Unit

Economics and Finance (EF)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

R8 - Research Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

EF8070 Advanced Microeconomics

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This is a game theory/ information economics course at a PhD level, intended to be taken by first year PhD students in Economics, Finance, Management Science etc. The list of topics to be studied in the course consists of: simultaneous-move

games (Nash equilibrium, dominance, rationalizability, Bayesian games etc.), sequential-move games (sub-game perfect equilibrium, backward induction, repeated games, Perfect equilibrium, etc.) - as well as topics in information economics, such as: signalling games, adverse selection, mechanism design and moral hazard models.

The main objectives of the course are (1) introduce PhD students to the ideas/ concepts of game theory and information economics at an advanced level, and (2) have PhD students start work on a research proposal connected to their research field, that would potentially turn into a research paper and constitute part of their PhD thesis.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain the ideas and concepts of game theory/ information economics at an advanced level that would permit students to conduct research		x	x	
2	Design a research question into a formal model of strategic interaction and perform a rigorous analysis, at a level comparable to that of published articles in the field		x		x
3	Apply game theory/ information economics models to address research questions, and offer theoretically-supported answers to these questions		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 engage in formal lectures that will present the main ideas and concepts of game theory and information economics.	1, 2, 3
2	Class participation	Students will participate in class discussion, ask questions, answer questions and be active during lectures.	1, 2, 3

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1	Class participation	1, 2, 3	10	-	Yes
2	Research proposal and presentation	1, 2, 3	30	-	Yes

Continuous Assessment (%)

40

Examination (%)

60

Examination Duration (Hours)

3

Assessment Rubrics (AR)**Assessment Task**

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

Excellent

(A+, A, A-) Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

(B+, B, B-) Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Fair

(C+, C, C-) Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Marginal

(D) Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure

(F) Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Assessment Task

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

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Assessment Task

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

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Good

(B+, B) Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Marginal

(B-, C+, C) Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

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Part III Other Information

Keyword Syllabus

Simultaneous-move games, Nash equilibrium, dominance, rationalizability, Bayesian games, sequential-move games, sub-game perfect equilibrium, backward induction, repeated games, Perfect equilibrium, signalling games, adverse selection, mechanism design and moral hazard models.

Reading List**Compulsory Readings**

Title	
1	Mas-Colell, A., M. Whinston and J. Green 1995. Microeconomic Theory, Oxford University Press.

Additional Readings

Title	
1	Fudenberg, D. and J. Tirole (1991). Game theory. MIT press.
2	R. Gibbons (1992) A primer in game theory Prentice Hall

3	Salanie, B. (2005) The economics of contracts: a primer second edition, MIT press
4	Bolton, P. and M. Dewatripont (2004) Contract theory MIT press