City University of Hong Kong
Course Syllabus

offered by Department of Economics and Finance
with effect from Semester A 2022 /23

Part I   Course Overview

Course Title: **Topics in Microeconomics**

Course Code: **EF8071**

Course Duration: **1 semester**

Credit Units: **3**

Level: **R8**

**Medium of
Instruction:** **English**

**Medium of
Assessment:** **English**

Prerequisites:
(Course Code and Title) **EF8070 Advanced Microeconomics**

Precursors:
(Course Code and Title) **Nil**

Equivalent Courses:
(Course Code and Title) **Nil**

Exclusive Courses:
(Course Code and Title) **Nil**

Part II   Course Details

1.   **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.

2.   **Course Intended Learning Outcomes (CILOs)**

No.	CILOs	Weighting	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	understand the ideas and concepts of game theory/ information economics at an advanced level that would permit students to conduct research	-	✓	✓	
2.	be able to put 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	-	✓		✓
3.	be able to use the game theory/ information economics models to address research questions, and offer theoretically-supported answers to these questions	-	✓		✓
		-			

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)

TLA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
Lectures	The lectures will present the main ideas and concepts of game theory and information economics.	✓	✓	✓	
Class participation	Students are required to participate in class discussion, ask questions, answer questions and be active during lectures.	✓	✓	✓	
Research proposal and presentation	Students will be required to write a research proposal in their area of research, and that makes use of a game-theoretic/ information economics model. The objective is to have the students start work on a research proposal connected to their field of study and that would potentially be a paper that is part of their dissertation. The students are required to present their work in class in the last week of the semester.	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.			Weighting	Remarks
	1	2	3		
Continuous Assessment: 40%					
Class participation	✓	✓	✓	10%	
Research proposal and presentation	✓	✓	✓	30%	(20% proposal, 10% presentation)
Examination: 60% (duration: 3 hours)					
				100%	

5. Assessment Rubrics

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Class participation 2. Research proposal and presentation 3. Examination		Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.	Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.	Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.	Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Class participation 2. Research proposal and presentation 3. Examination		Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.	Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.	Student who is profiting from the university experience; understanding of the subject; ability to develop solutions to simple problems in the material.	Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.	Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

Part III   Other Information

1.   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.

2.   Reading List
2.1   Compulsory Readings

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

2.2   Additional Readings

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