City University of Hong Kong
Course Syllabus

offered by Department of Advanced Design and Systems Engineering
with effect from Semester A 2022 / 23

Part I Course Overview

Course Title:	Managerial Economics
Course Code:	ADSE8205
Course Duration:	One semester
Credit Units:	3
Level:	R8
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites:	Nil
Precursors:	Nil
Equivalent Courses:	SEEM8205 Managerial Economics (offered until 2021/22)
Exclusive Courses:	Nil

Part II Course Details

1. Abstract

This course aims to equip students with a necessary conceptual framework for understanding the economic forces at work in firms and markets. It will provide students economic models and tools for managerial decision making. Students will not only learn how supply and demand effect prices but also learn how game theory can be applied in decision-making processes at a strategical level.

2. Course Intended Learning Outcomes (CILOs)

No.	CILOs	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Develop the theory of consumer choice and demand under uncertainty and derive optimal dynamic strategies.	10%	✓	✓	
2.	Formulate noncooperative games and compute solutions such as Nash equilibrium to these games.	30%		✓	
3.	Apply game theory to analyze the impact of market forces such as supply and demand and price mechanism.	20%			✓
4.	Understand the nature of industry and market structure and apply game theory to develop strategic decisions as well as pricing strategies	20%	✓	✓	
5.	Formulate dynamic stochastic games and develop solutions to these games	20%		✓	✓
		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)

TLA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
Lectures	Introduction and Explanation of Theory and methods through Examples	✓	✓	✓	✓	✓	2 hours/week
Group Activities	Further Learning Theory from Solving Problems together by Members in a Group	✓	✓	✓	✓	✓	1 hour/week
Consultation Hours	Discussions of Course Materials	✓	✓	✓	✓	✓	1 hour/week/ 25 students

4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.					Weighting*	Remarks
	1	2	3	4	5		
Continuous Assessment: 50 %							
Participation and Exercises: Students need to participate actively in in-class activities such as class exercises and discussions designed to facilitate their understanding of knowledge and mastering in skills of modelling and problem solving taught in class.	✓	✓	✓	✓	✓	20%	
Case Studies & Mini Projects: Students are required to effectively apply knowledge and skills learned from the course in modelling, analyzing and solving some simple practical problems.	✓	✓	✓	✓	✓	30%	
Examination: 50 % (duration: 2 hours , if applicable)							
Students will be assessed via the examination their understanding of concepts and mastering in skills of modelling and problems solving learned in class, textbooks and reading materials and their ability to apply subject-related knowledge.	✓	✓	✓	✓	✓	50%	
						100%	

For a student to pass the course, at least 30% of the maximum mark for the examination should be obtained.

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. Participation & Exercises	Submitted solutions to individual assignments.	Excellent	Good	Marginal	Failure
2. Case Studies & Mini Projects	Submitted group work and presentations.	Excellent	Good	Marginal	Failure
3. Examination	Submitted solutions to the final examination.	Excellent	Good	Marginal	Failure

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)
4. Participation & Exercises	Submitted solutions to individual assignments.	High	Significant	Moderate	Basic	Not even reaching marginal levels
5. Case Studies & Mini Projects	Submitted group work and presentations.	High	Significant	Moderate	Basic	Not even reaching marginal levels
6. Examination	Submitted solutions to the final examination.	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III Other Information

1. Keyword Syllabus

- Noncooperative Games
- Nash Equilibrium
- Demand and Supply
- Market Equilibrium Pricing
- Pricing Mechanism
- Stochastic Games

2. Reading List

2.1 Compulsory Readings

1.	A Course in Microeconomic Theory, David M. Kreps

2.2 Additional Readings

NIL