fHong Kong University of Science and Technology

Microeconomic Analysis ECON 5130

Yuk-fai Fong

Syllabus

Section	Schedule	Venue
L2	Monday, Wednesday 2-5 p.m.	Classroom 3
L1	Tues, Thur: 9:30 am-12:30 pm	Classroom 3
L3	Tues, Thur: 2-5 pm	Classroom 3
Office Hours	Tues, Wednesday: 5 pm (Except when I'm on work trips)	Kwun Tong Education Hub

Due to my admin duties and other work commitments at the School, some of the classes are scheduled. Details are provided in the Appendix.

Teaching Assistants, Office Hours, and Tutorials

Xin ZUO (L1 & L2)	Shiyi LIU (L3)	Yuk-fai Fong
Email address: xzuo@connect.ust.hk Office hour: Monday 10 a.m.; Friday 3 p.m. Office Location: LSK 5067	Email address: sliudp@connect.ust.hk Office hour: Friday 2 p.m. Office Location: LSK 5067	Office Hour: Tuesday, Wednesday, 5 p.m. after class at the Kwun Tong Learning Hub

Whichever section you're in, you may attend any of these office hours.

Tutorial times will be announced ahead of time, with online access provided. In the weeks when they are held, there will be typically be three tutorials that cover (almost) the same content. Students can attend any tutorial of their choice.

Description & Course Objectives

This course covers theories of modern microeconomics. It intends to introduce the main theories and methodologies of neoclassical microeconomics, game theory, and information economics. Students are required to understand the theories and concepts intuitively, to master the modeling techniques and derivations, and to solve simple versions of the problems.

Intended Learning Outcomes (ILOs)

By the end of this course, students should be able to:

1. Explain fundamental microeconomic concepts, including consumer theory, producer theory, market equilibrium, and simple game theory.
2. Construct and interpret simple economic models to explain real-world phenomena.
3. Apply microeconomic principles and simple game theory to analyze economic policies and evaluate their potential impacts.

AASCSB Assurance of Learning (AOL) - MSc

This course will serve to assess learning goals 1 and 3 set out by the program.

Learning Goal 1: Graduates will be able to master the core of scientific knowledge for their discipline.

➢ **Learning Objectives:**
Objective 1.1: Summarize the strengths and limitations of the knowledge core.

Objective 1.2: Synthesize the knowledge core to evaluate business ideas.

➢ **AOL Assessment Rubrics:**

Learning Objectives	Emerging	Developing	Mastering
1.1 Summarize the strengths and limitations of the knowledge core.	Demonstrates insufficient understanding of the strengths and limitations of the knowledge core.	Demonstrates moderate understanding of the strengths and limitations of the knowledge core.	Demonstrates comprehensive understanding of the strengths and limitations of the knowledge core.
1.2 Synthesize the knowledge core to evaluate business ideas.	Demonstrates insufficient ability to synthesize and evaluate business ideas.	Demonstrates average ability to synthesize and evaluate business ideas.	Demonstrates excellent ability to synthesize and evaluate business ideas.

➢ **Assessment Vehicle used to measure the Learning Goal 1:**
Mid-term and final exams

- **Learning Goal 3**: Graduates will be able to integrate their knowledge and skills in business applications.

- **Learning Objectives:**

  Objective 3.1: Combine suitable knowledge and skills to analyze and propose solutions to business problems.

  Objective 3.2: Formulate sound, practical recommendations and communicate them to a business audience.

- **AOL Assessment Rubrics:**

Learning Objectives	Emerging	Developing	Mastering
3.1 Combine suitable knowledge and skills to analyze and propose solutions to business problems.	Insufficiently proficient in combining suitable knowledge and skills to analyze and propose applicable solutions to business problems.	Moderately proficient in combining suitable knowledge and skills to analyze and propose applicable solutions to business problems.	Highly proficient in combining suitable knowledge and skills to analyze and propose applicable solutions to business problems.
3.2 Formulate sound, practical recommendations and communicate them to a business audience.	Insufficiently proficient in formulating sound, practical recommendations and communicate them to a business audience.	Moderately proficient in formulating sound, practical recommendations and communicate them to a business audience.	Highly proficient in formulating sound, practical recommendations and communicate them to a business audience.

Assessment Vehicle used to measure the Learning Goal 3:

Final exams

This AACSB AOL assessment exercise does not affect students' learning experience and course grades.

Course Content

The first part of the course focuses on standard theories in advanced microeconomics. The second and third parts of the course introduce students to game theory and oligopoly competition. In the fourth part of the course, we cover some applications of microeconomics to competition policies and strategic interactions among firms.

Resources

Course Website

Slides, reading materials, and problem sets are there. All the slides shown in class are downloadable from this website.

Optional Textbook

Hal Varian, Microeconomic Analysis, Third Edition

Other Supplementary Readings

Wang, S. (2016). Microeconomic Theory. 3rd ed., PDF copy, free.

Jehle, G.A.; Reny, P.J. (2011). Advanced Microeconomic Theory, 3rd ed.

Mas-Colell, et al. (1995). Microeconomic Theory. Oxford University Press.

Laffont, J.J. (1995). The Economics of Uncertainty and Information. MIT.

Course Outline

Tentative Topics

Part 1: Neoclassical Economics.

- Preferences and utility function
- Budget
- Utility maximization
- Expenditure minimization
- Revealed preference
- Producer theory
- Profit maximization and cost minimization
- Competitive market: Partial equilibrium
- Competitive market: Welfare analysis
- Choice under uncertainty
- Externality
- Monopoly

Part 2: Game Theory.

Part 3: Oligopoly Competition.

Part 4: Applications: Competition Policies and Business Strategy.

Course Prerequisites

Basic math knowledge and optimization methods.

Assessment and Grading

Problem Sets: There are a number of problem sets. No need to hand in the problem sets.

Exam and grading: There is

A1: class attendance and participation (15%)

      Missing more than 15% of your class can further impact your grade in this course.

A2: one midterm exam (25%)

A3: one final exam (60%). The final exam will be arranged by ARRO.

Overall Grading Plan for the Course:

- All assessment marks for individual assessed tasked will be released within two weeks of the due date.

- The alignment of the course ILOs and Assessment is shown in the following table.

Learning outcome	Assessment
1. ILO1	A1, A2, A3
2. ILO2	A1, A2, A3
3. ILO3	A1, A2, A3

Rubrics for Final Grade

Grades	Short Description	Elaboration on subject grading description
A+, A, A-	Excellent Performance	Demonstrates a comprehensive grasp of microeconomic theories and tools covered in the course. Exhibit exceptional skills in utilizing the taught techniques to analyze real-life economic issues. Excels in the exams.
B+, B, B-	Good Performance	Shows a solid grasp of the microeconomic theories and tools covered in the course. Demonstrates good skills in utilizing the taught techniques to analyze real-life economic issues. Performs well in the exams.
C+, C, C-	Satisfactory Performance	Possesses adequate knowledge of microeconomic theories and tools covered in the course. Occasionally demonstrating a decent skill in utilizing the taught techniques to analyze real-life economic issues. Acceptable performance in the exams.

D+, D	Marginal Pass	Has threshold knowledge of microeconomic theories and tools covered in the course. Show limited skills in utilizing them. Below-average performance in the exams.
F	Fail	Demonstrates insufficient understanding of microeconomic theories and tools covered in the course. Lack skills in utilizing them. Unsuccessful in the exams.

Course AI Policy

- You can use GTP or other generative AI freely to help your study in this course, including the preparation for the exams, subject to change based on the university's general policies.

- However, no AI tools are allowed in the exams.

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to Academic Integrity | HKUST – Academic Registry for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

Classroom Etiquette

You are expected to be punctual for lectures and I will start and end the lecture on time. You are welcome to bring your laptop or other devices to lectures for learning purposes. Respect the others in the class and do not disturb others with side conversations, internet surfing, email-checking or instant-messaging during class time.

Appendix: Course calendar, including make-up arrangements

L1 – Every Tue and Thursday

Time: 0930AM – 1230 PM

Venue: Classroom 3, Learning Hub

#	Date		Remarks
#1	2-Sep	Tue	
#2	4-Sep	Thu	

#	Date		
#3	9-Sep	Tue	
#4	11-Sep	Thu	
#5	16-Sep	Tue	
#6	18-Sep	Thu	
#7	23-Sep	Tue	
#8	25-Sep	Thu	
#9	6-Oct	Mon	Make up class for 9 Oct Same class time
#10	14-Oct	Tue	
#11	16-Oct	Thu	
#12	21-Oct	Tue	
#13	28-Oct	Tue	
#14	30-Oct	Thu	
#15	11-Nov	Tue	
#16	13-Nov	Thu	
#17	18-Nov	Tue	
#18	27-Nov	Thu	Make up class for 20 Nov Same class time

Notes: no class on 30 Sep | 2, 7(PH), 9, 23 Oct | 4,6, 20 Nov

L2 – Every Mon and Wed

Time: 0200PM – 0500 PM

Venue: Classroom 3, Learning Hub

#	Date		Remarks
#1	1-Sep	Mon	
#2	3-Sep	Wed	
#3	8-Sep	Mon	
#4	10-Sep	Wed	

#	Date		
#5	15-Sep	Mon	
#6	22-Sep	Mon	
#7	24-Sep	Wed	
#8	6-Oct	Mon	
#9	8-Oct	Wed	
#10	13-Oct	Mon	
#11	15-Oct	Wed	
#12	20-Oct	Mon	
#13	22-Oct	Wed	
#14	27-Oct	Mon	
#15	10-Nov	Mon	
#16	12-Nov	Wed	
#17	17-Nov	Mon	
#18	19-Nov	Wed	

Notes: No class on 17 & 29 Sep| 1 (PH) Oct | 3, 5, 24 & 26 Nov

L3 – Every Tue and Thu

Time: 0200PM – 0500PM

Venue: Classroom 3, Learning Hub

#	Date		Remarks
#1	2-Sep	Tue	
#2	4-Sep	Thu	
#3	9-Sep	Tue	
#4	11-Sep	Thu	
#5	16-Sep	Tue	
#6	18-Sep	Thu	
#7	23-Sep	Tue	

#8	25-Sep	Thu	
#9	8-Oct	Wed	Make up class for 9 Oct Class time (0930-1230)
#10	14-Oct	Tue	
#11	16-Oct	Thu	
#12	21-Oct	Tue	
#13	28-Oct	Tue	
#14	30-Oct	Thu	
#15	11-Nov	Tue	
#16	13-Nov	Thu	
#17	18-Nov	Tue	
#18	27-Nov	Thu	Make up class for 20 Nov Class time (1400-1700)

Note: no class on 30 Sep | 2, 7(PH) ,9, 23 Oct | 4,6, 20 Nov

Students are able to view the class schedule at https://w5.ab.ust.hk/wcq/cgi-bin/2510/subject/ECON where the make up class schedule have also been included.

Thank you.