Department of Economics, HKUST
ECON 3133 Microeconomic Theory II
Course Outline

Instructor

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Lectures and Tutorials

	L1	L2
Lecture Time	Tu, Th 9:00 a.m. – 10:20 a.m.	Tu, Th 4:30 p.m. – 5:50 p.m.
Lecture Venue	Rm 2302, Lift 17-18	G009A, CYT Bldg
Tutorial Time	Th 6:00 p.m. – 6:50 p.m.	Tu 3:00 p.m. – 3:50 p.m.
Tutorial Venue	G001, LSK Bldg	Rm 1010, LSK Bldg

Course Description and Objectives

The main objective of this course is to provide a solid foundation of microeconomic analysis. The first half of the course covers producer theory and market equilibrium. The second half intorduces game theory and its applications. We will adopt a rigorous analytical and mathematical approach in our analyses.
In the language of the AACSB AOL Assessment, we focus on Goal 3 and its objectives:

Goal 3 Graduates will demonstrate a broad understanding of business functions and in-depth knowledge of their major.

Objective 3.1 Demonstrate a broad understanding of different business functions and domains to formulate integrated solutions.

Objective 3.2 Demonstrate substantial knowledge of their business major to solve business problems.

In the language of department's Program Intended Learning Objectives (PILOs), we focus mainly on Goal 1 and 3.

Goal 1 Graduates will be critical and all rounded thinkers who make decisions supported by analytical and statistical techniques on economic problems/issues.

Goal 3 Graduates will apply their knowledge of economics principles and skills to analyse economic questions in different business functions quantitatively.

Specifically, upon completing the course, students are expected to be able to

- identify core economic issues and make key assumptions (Objective 1.1);
- demonstrate proficiency in using taught analytical and statistical techniques (Objective 1.2);
- demonstrate substantial knowledge of various economic principles to solve economic problems (Objective 3.1); and
- use economic knowledge to provide recommendations for different business functions (Objective 3.3).

Prerequisite

ECON 3113

Textbook

Microeconomic Theory: Basic Principles and Extensions (SN) by Christopher Snyder and Walter Nicholson, Cengage. (Mildly older editions are perfectly fine).

Industrial Organization: A Strategic Approach (CW) by Jeffrey Church and Roger Ware (downloadable at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5366237).

Assessment

Participation (3%)

You are expected to behave civilly and showing respect to the instructors, teaching assistants and fellow classmates during lectures, tutorial sessions, and office hours. Common-sense classroom etiquette, such as turning off or silencing mobile phones during class time, is expected.

Problem Sets (10%)

A problem set is to be assigned **almost every week**. Problem sets will be posted on Canvas on Fridays, and due the following Thursdays.
Group study/discussion is encouraged, but you have to turn in **your own written answers (**word-to-word copying is **not accepted)**. Grading of problem sets is based on effort instead of accuracy. The score of the lowest one will be dropped.
Please submit your homework online at canvas.ust.hk, and make sure it is completely and successfully uploaded. Full solutions will be posted on Canvas, and more challenging questions will be discussed in the tutorial sessions.
In this assessment, you are allowed to use generative artificial intelligence (AI) to aid you in any manner. However, you must give proper credit for any use of generative AI.
(PILOs 1.1, 1.2, 3.1)

Midterm Test (28%)

The midterm test is tentatively scheduled on **October 22**, from **4:30 pm to 5:50 pm.** The style and format is similar to questions in problem sets.
There is **no make-up test**. Students who miss the midterm test with a legitimate and documented reason will have the weight of the midterm test transferred to the final exam. Missing the test without a legitimate and documented reason will result in zero marks.
(PILOs 1.1, 1.2, 3.1, 3.2)

Final Examination (59%)

The final exam is **cumulative**. The style and format is similar to the midterm exam.
The exam is centrally administered during Dec 7-19. The date and time will be announced by the ARR.
(PILOs 1.1, 1.2, 3.1, 3.2)

Rubrics for Final Grades

A Range: Excellent Performance

Students demonstrate a strong grasp of course materials, effectively utilize tools introduced, excel in problem sets, and perform exceptionally on the midterm and exam. They display exceptional analytical skills, critical thinking, and effective class participation.

B Range: Good Performance

Students exhibit a solid understanding of course materials, proficient use of tools introduced, and competent completion of problem sets. They perform reasonably well on the midterm and exam. They show commendable analytical skills, effective critical thinking, and class participation.

C Range: Satisfactory Performance

Students demonstrate an adequate understanding of course materials, satisfactory use of tools introduced, and completion of problem sets. Their performances on the midterm and exam are fair. They display acceptable analytical skills and class participation.

D: Marginal Pass

Students show limited understanding of course materials, inconsistent use of tools, and incomplete performance in problem sets. They perform poorly on the midterm and exam. Their class participation is minimal.

F: Fail

Students display a lack of understanding of course materials, inadequate use of tools, and unsuccessful completion of problem sets. Their performances on the midterm and exam are disappointing. They show little to no participation in class discussions.

Regrading

In order to avoid problems associated with self-selection (grading mistakes that increase and decrease scores can happen, but only the one that decrease scores will be reported), disputes on individual questions will result in re-grading of the entire exam by the instructor. The re-graded score will be final and it may be higher or lower than the original one. Requests for re-grading must be submitted in writing to the instructor within one week since the score is first published.

Academic Honesty and Integrity

Academic integrity and honesty are key values of HKUST. Cheating and plagiarism are treated with **zero tolerance**. Please read the information on academic integrity carefully. It is your responsibility to be familiar with the Academic Honor Code and the content on the Academic Integrity website (http://www.ust.hk/provost/integrity). The Code is to be **strictly enforced**. All cheating cases are to be reported to the University **without exception**.

Tentative Lecture Plan

The plan below is tentative and may be modified as we go. Major changes will be announced in advance in lectures and/or Canvas.

- Overview and Review (1 lecture)
  - Constrained optimization
  - Theory of demand

    Suggested reading: SN Chapters 1-4
- Exchange Economy and Welfare Theorems (4 lectures)
  - Edgeworth box
  - Competitive equilibrium under pure exchange
  - 1st and 2nd Welfare Theorem
  - Consumption externality

    Suggested reading: SN Chapter 13.5
- Production (4 lectures)
  - Production function and its properties
  - Cost minimization
  - Relation between difference cost functions
  - Profit maximization
  - Supply curves

    Suggested reading: SN Chapter 9, 10, 11

- Perfect Competition (3 lectures)
  - Partial equilibrium
  - Production externality
  - General equilibrium with production
  - *Suggested reading: SN Chapter 12, 13, 19*
- Monopoly (2 lectures)
  - Monpoly pricing
  - Price discrimination

    Suggested reading: SN Chapter 14; CW Chapter 5
- Game Theory (3 lectures)
  - Static game representation
  - Nash equilibrium
  - Applications: public goods and common property

    Suggested reading: SN Chapter 8; CW Chapter 7
- Imperfect Competition (2 lectures)
  - Bertrand, Cournot and Hotelling models

    Suggested reading: CW Chapter 8
- Dynamic Games and Entry Deterrence (2 lectures)
  - Subgame perfection
  - Stackelberg model and entry deterrence

    Suggested reading: CW Chapter 9, 10
- Repeated Games (3 lectures)
  - Long-term cooperation
  - Tacit collusion
  - *Suggested reading: CW Chapter 10*