

Department of Economics, HKUST
ECON 4114 Industrial Organization & Competitive Strategy
Course Outline

Instructor

Au, Pak Hung

Office: LSK 6069

Office hours: Thursdays 3:30 - 5:00 p.m.

Email: aupakhung@ust.hk

Course Webpage: <https://canvas.ust.hk>

Lecture time: Mondays and Wednesdays 10:30 a.m. – 11:50 a.m.

Lecture venue: LSK 1033

Teaching Assistant

Hsu, Ke-cheng

Office: LSK 5067

Office hours: Tuesdays 5:00 - 6:00 p.m.

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Tutorial time: Tuesdays 6:00 - 6:50 p.m.

Tutorial venue: Room 4502, Lift 25-26

Course Description, Objectives and Learning Outcomes

This course covers key aspects of an industry: market, firms, and regulator. Regarding the market aspect, we cover market structures, market power, and sources of market power. Regarding firm behaviors, we cover topics on pricing, quality, branding, and asymmetric information. From the regulator's perspective, we cover welfare, regulation, and competition policy. Particular emphasis is placed on game-theoretical models and their applications to real-world market interactions.

Per Program Intended Learning Objective (PILO) for BSc in Economics and Finance, upon completing the course, students are expected to be able to

- Understand the logic, scientific basis, and critical thinking of economic analyses (PILO 1)
- Apply frameworks and concepts in industrial organization to explain rationales for commonly observed business practices (PILO 4);
- Apply frameworks and concepts in industrial organization and game theory to explain reasoning behind strategic interaction among firms and predict market outcomes following changes in market environment (PILO 4);

- Identify distortions and inefficiency arising from misalignment of interests between firms and the society, and assess the effectiveness of regulatory and competition policies (PILO 8);
- Develop simple theoretical models and apply them to analyze current business issues (PILO 9).

Textbooks

Industrial Organization, Markets and Strategies (2nd edition), by Paul Belleflamme and Martin Peitz, Cambridge University Press. (Old edition is fine).

Prerequisite

Econ 3014 Managerial Microeconomics,

or

Econ 3113 & 3133 Microeconomic Theory I & Microeconomic Theory II

Basic calculus and algebra is expected.

Assessment

Participation (3%)

You are expected to behave civilly in lectures, tutorial sessions, and office hours. Common-sense classroom etiquette, such as turning up on time and showing respect to the instructor, teaching assistant, and fellow students, is expected.

Problem Set (15%)

There are six problem sets. The score of the lowest one will be dropped. 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.

Problem sets will be posted on Canvas every other Wednesday, and due the following Monday. The more challenging questions will be discussed in the tutorials on Tuesdays.

Midterm Test (26%)

The midterm test is tentatively scheduled at the regular lecture time on **October 19**. The style 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.

Final Examination (56%)

The final exam is **cumulative**. The style is similar to questions in problem sets.

The exam is centrally administered during December 7-19 and the date and time will be announced by the ARR.

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**.

Outline and Schedule

1. Introduction and basic concepts (1 lecture)

- Review of perfect competition and monopoly pricing
- Measures of market power and welfare

Suggested reading: Chapter 2

2. Classical oligopoly models (3 lectures)

- Theory of static games
- Static oligopoly models

Suggested reading: Chapter 3, Appendix A

3. Dynamics in oligopoly (4 lectures)

- Theory of dynamic games
- Dynamic oligopoly models

- Business strategies

Suggested reading: Chapter 4, 16, Appendix A

4. Tacit collusion (4 lectures)

- Theory of repeated games
- Tacit collusion and antitrust

Suggested reading: Chapter 14

5. Sources of market power (4 lectures)

- Product differentiation
- Consumer inertia

Suggested reading: Chapter 5, 7

6. Product pricing and quality offer (4 lectures)

- Experience goods and firm reputation
- Price discrimination: Market segmentation and menu pricing

Suggested reading: Chapter 8, 9, 10, 13

7. Vertically related markets (2 lectures)

- Double-marginalization
- Exclusive dealings

Suggested reading: Chapter 17

8. Market of network goods (2 lectures)

- Network effect and compatibility

Suggested reading: Chapter 20, 21