Econ 4114 Industrial Organization and Competitive Strategy

Course Information

Instructor: Yangguang (Sunny) Huang
Email: huangyg@ust.hk
Class time: Tue Thu 13:30-14:50
Office hour: Wed 13:30-15:30 or by appointment (LSK 6075)
Course website: https://canvas.ust.hk/courses/11882

Teaching Assistant: Wilson Wan
Email: ecwilsonwan@ust.hk
Tutorial time: Tue 11:00-11:50 (1511)
Office hour: Thu 15:00-17:00 or by appointment (LSK 6066)

Required textbook:
Optional textbook:

Grading

- Homework assignments 10%
  Group study is encouraged, but you need to submit your own homework. Submission will be through Canvas. Please scan and upload your homework to Canvas.

- Midterm exam, 40%
  Midterm will be hold during class time.

- Final exam, 50%

  Absence in an exam without prior notifications and reasonable and verifiable justifications will result in zero point for that part.

Learning Goal

The course teaches student knowledge about key aspects of an industry: market, firms, and regulator. For market, it covers market structures, market power, and sources of market power. For firms, we cover topics on pricing, quality, branding, and asymmetric information. From regulator perspective, we cover welfare, regulation, and competition policy. Students are trained to understand microeconomic models and game theory to think critically and analyze real market scenario.
Warning: This is an advanced level course and require significant amount of time and commitment. Students are assumed to have excellent knowledge of intermediate microeconomics and be comfortable using calculus in economic models.

Per Program Intended Learning Objective (PILO) for BSc in Economics and Finance, after completing this course, students will
1. Understand the logic, scientific basis, and critical thinking of economic analyses (PILO 1)
2. Have a sophisticated knowledge of economics and can use it to explain economic and social phenomena (PILO 4)
3. Develop ability to qualitatively analyze basic economic and social problems (PILO 4)
4. Apply economic knowledge to practical situations and make sound economic decisions (PILO 4)
5. Conduct basic economic analysis and research of the economy and society (PILO 4)
6. Have informed ethical thinking based on rigorous economic and social analyses (PILO 8)
7. Communicate effectively (PILO 2, 7)
8. Be a lifelong user of economic analysis (PILO 9)

Other Information

Academic Integrity and Honesty:
Please read the information on academic integrity carefully and follow the instruction: http://www.ust.hk/vpao/ug-guide/integrity/. You should be familiar with Academic Honor Code and the content on Academic Integrity website.

Learning Environment:
Matured conduct in classroom is the requirement for this course. Distractive behaviors such as use of cell phone, instant messaging and chatting are not tolerated. Violation of this rule will result in significant deduction of points from student’s grade. Please refer to following website for the guideline for good learning environment: http://www.ust.hk/vpao/conduct/good_learning_experience.pps.
Outline and Schedule

Total about 25 lectures

1. Market power (3 lectures)
   - Firm, consumer, and market
   - Monopoly and market power
   - Static game and Nash equilibrium
   - Static oligopoly models

   Readings:
   Ch. 2, 3, Appendix A.1
   Gibbons Ch. 1

2. Dynamic aspect of imperfect competition (4 lectures)
   - Dynamic game and subgame perfect equilibrium
   - Leader-follower model
   - Entry-related strategies

   Readings:
   Ch. 4.1, 4.2 16.1, 16.2, Appendix A.2
   Gibbons Ch. 2

3. Sources of market power (5 lectures)
   - Product differentiation
   - Discrete choice model
   - Advertisement
   - Consumer search and price dispersion
   - Switching costs
   - Static game with incomplete information and Bayesian Nash equilibrium

   Readings:
   Ch. 5, 6, 7, Appendix A.3
   Gibbons Ch. 3
   *Product Differentiation with Multiple Qualities*, Barigozzi & Ma (2016).
   *Discrete Choice Methods with Simulation*, Train (2009), Ch. 1, 2, and 3.

Midterm Exam (1 lecture, Mar. 21", subject to adjustment)
4. Pricing strategy (4 lectures)
   • Price discrimination
   • Selling mechanism: posted-price and auction
   • Durable good
   • Bundling
   • Two-sided market / platform

Readings:
Ch. 8, 10, 11.1

5. Product quality and information (6 lectures)
   • Dynamic game with incomplete information and perfect Bayesian equilibrium
   • Adverse selection / hidden information
   • Moral hazard / hidden action
   • Mechanism design
   • Menu pricing
   • Warranty
   • Branding

Readings:
Ch. 9.1, 9.2, 12.1, 12.2, 13, Appendix A.4
Gibbons Ch. 4
*Job Market Signaling*, Quarterly Journal of Economics, Spence (1973)
*Regulating a Monopolist with Unknown Costs*, Econometrica, Baron & Myerson (1982)

6. Merger, antitrust and competition policy (2 lectures)
   • Cartels and Collusion
   • Horizontal merger
   • Vertically related markets

Readings:
Ch. 14.1, 15, 16, Appendix B.

**Final Exam** (date to be announced)