



**Econ 5210: Ph.D. Microeconomic Theory I**  
 Fall 2015 Syllabus (DRAFT)

Department of Economics  
 HKUST Business School

**Class Schedule:** August 31; September 7, 14, 17, 24; October 5, 8, 12, 15, 19, 22, 26;  
 November 2, 9, 23  
**Time:** 1:30–4:50p.m.  
**Venue:** LSK Rm. 1027

**Course Web Site:** <https://canvas.ust.hk/>

<p><b><u>Instructor:</u></b></p> <p>Yuk-fai Fong (房育輝)          Email: <a href="mailto:yfong@ust.hk">yfong@ust.hk</a> (Primary contact)          Office Location: Rm. 6069, LSK Bldg          Phone: 2358-7620          Webpage: <a href="http://ihome.ust.hk/~yfong/">http://ihome.ust.hk/~yfong/</a></p>	<p><b><u>Teaching Assistant:</u></b></p> <p>To be confirmed          Email: <a href="#">TBA</a>          Office Location: Rm. <a href="#">TBA</a>, LSK Bldg</p>
<p><b>Office Hours:</b> By Appointment          Email is always a great way to reach me.          If you send me message via the LMES,          please also send a copy to me by email.</p>	<p><b>Office Hours:</b> Two hours each week will          be scheduled.  <b>Tutorial Session:</b> <a href="#">TBA (Up to 2 hours per          assignment).</a></p>

**Course objective**

This course provides first-year Economics Ph.D. students with foundation knowledge in advanced microeconomic theory. In particular, the course focuses on essential *concepts* and necessary *analytical tools* for the study of consumer and firm decision making, both in single-player and multi-player (strategic) environments. We will also consider how uncertainty and concern for future payoffs impact economic agents' decision making.

### Learning outcomes

On completion of this course, you will be able to

1. understand classic results in microeconomic theory,
2. formalize economic problems using simple but well-reasoned models,
3. find solutions for formal economic problems, and
4. apply equilibrium concepts of game theory to various economic settings.

### Required Textbook

Microeconomic Theory, Mas-Colell, A., M.D. Whinston, and J.R. Green, Oxford, 1995

### Optional References

Microeconomic Theory, S. Wang, People's University Publisher 2006

Microeconomic Analysis, Hal R. Varian, W. W. Norton & Company 1992

Game Theory, Drew Fudenberg and Jean Tirole, MIT Press 1991

### Grades

The grades will be based on problem sets (10%), one mid-term (each 35%), and a final (55%).

Students are encouraged to work together on problem sets but each must write up his or her own solutions to each problem. Problem sets will only be graded based on effort and not accuracy.

The *midterm exam* will be held on **Thursday, October 22, 2015** during the regular class. The *final exam* will be held on **Monday, November 23, 2015** during the regular class. You will need a very strong reason, substantiated by sufficient supporting documents, to miss any exam. Considering the advantage of having more time to prepare, the make-up exam is expected to be more difficult than the original exam.

### Course Outline

#### I. Individual Decision Making (Chapters 1-3, 5-6)

- Preference and Choice (Chapter 1)
- Consumer Choice (Chapter 2)
- Classical Demand Theory (Chapter 3)
- Choice under Uncertainty (Chapter 6)
- Production (Chapter 5)

#### II. Game Theory (Chapters 7-9)

- Basic Elements of Noncooperative Games (Chapter 7)
- Simultaneous-Move Games (Chapter 8)
- Dynamic Games (Chapter 9)

#### III. Market Equilibrium and Market Failure (Chapters 10, 12)

- Competitive Markets (Chapter 10)
- Market Power (Chapter 12)
- Other Topics in Industrial Organization (coverage depends on time available)