台大經濟系 Fall, 2025
Dept. of Economics, NTU

賽局論 Game Theory

ECON4031

黃景沂 Ching-I Huang

Time and Location: Mondays, 10:20 am – 12:10 pm at 社會科學院 506

Office: 社會科學院頤賢館 857

Office Hour: Thursdays, 11:30 am – 12:15 pm

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Course Description

The objective of this course is to introduce game theory for advanced undergraduate students. **Prerequisites** for this course include **Intermediate Microeconomics** and **Statistics**. Students should have been familiar with utility maximization under uncertainty and decision-making over time. Students are also **expected to have known some basic concepts about game theory**, such as dominant strategy, mixed strategy, Nash equilibrium, and subgame-perfect equilibrium.

This course will introduce some advanced topics in game theory beyond those covered in Intermediate Microeconomics. We will talk about games with complete information and games with incomplete information. We will also introduce several new solution concepts, such as iterated elimination of dominated strategies, Bayesian Nash equilibrium. The goal of this course is to provide a rigorous framework to analyze both static and dynamic games.

Please note the method for adding this course during the add/drop period is **Method 3**. Students who want to add this course should register in the NTU Course Selection System during the first week (Sept. 1 – Setp. 6) and wait for the allocation by the system.

Reference Book

Game Theory: An Introduction by Steven Tadelis

(Princeton University Press, 2013)

A copy of this book has been reserved at the NTU Social Science Library.

Grades

There will be NO make-up exams. Please make sure you can attend the exams before enrolling this course. You will be allowed to bring an A4-sized handwritten "cheat sheet" in the exams.

Midterm	(45%)	Nov. 4
Final	(55%)	Dec. 15

Problem sets are not directly counted in the course grade, but doing problem sets will help students to be familiar with the exam problems. Active participation in class may earn up to 5% bonus points.

Topics

- Static Games of Complete Information
  - Introduction/Review (9/1)
  - Rationality and Common Knowledge (9/8)
  - Nash Equilibrium (9/15, 9/22)
  - Mixed Strategies (10/13)
- Dynamic Games of Complete Information
  - Preliminaries (10/20)
  - Credibility and Sequential Rationality (10/27)
- Static Games of Incomplete Information
  - Bayesian Games (11/10)
  - Auctions and Competitive Bidding (11/17, 11/24)
  - Mechanism Design (12/8, if time permitted)
- Dynamic Games of Incomplete Information
  - Sequential Rationality with Incomplete Information (12/1)
  - Signaling Games (12/8)