ECON 513
Game Theory
Module 1, 2025-2026

Course Information

Instructor: Young Joon Park
Office: PHBS Building, Room 760
Phone: 86-755-2603-2019
Email: yjpark@phbs.pku.edu.cn
Office Hour: Wednesday/Friday 2:00 - 3:00 (or by appointment)

Teaching Assistant: Ms. Yu Jingyi
Email: yujingyi@stu.pku.edu.cn
Office Hours: Monday/Thursday 1:30 to 3:30 pm
Venue: Room 524, seat 30

Classes:
Lectures: Tuesday/Friday 3:30 to 5:20 pm
Venue: 229

Course Website:
https://cms.phbs.pku.edu.cn/claroline/course/index.php?cid=ECON513_007

1. Course Description

1.1 Context

Course overview:

We cover the main ideas and techniques of game theoretic analysis. The course is designed as a continuation of Adv. Microeconomics. Therefore, it covers various topics not covered in Adv. Microeconomics II. Students are expected to possess a basic knowledge of Game Theory, as some fundamental topics won't be covered or, if they are, will be covered briefly. The topics covered in the course will help students build up further understanding of game theory and how to apply it to their own research topics.

Prerequisites
Advanced Microeconomics I & II
(If you have not taken Adv. Microeconomics I & II, please talk to me in advance.)

1.2 Textbooks and Reading Materials

We cover several topics and their applications, including Repeated Games and Information Economics. Furthermore, some topics in Behavioral Game Theory will be covered.

There is no assigned textbook for the class. Many textbooks have their strengths and weaknesses. I do not plan to follow one specific text. However, I recommend that you get access to at least one textbook for your reference. The following is an incomplete list of Game Theory textbooks that you might find helpful.

[1] Drew Fudenberg & Jean Tirole, Game Theory, The MIT Press, 1991.
[2] Martin J. Osbourne & Ariel Rubinstein, A Course in Game Theory, The MIT Press, 1994.
[3] Michael Maschler, Eilon Solan, & Shmuel Zamir, Game Theory, Cambridge University Press, 2020.

[4] Zhiyong Tu, Game Theory, Peking University Press, 2009.
[5] Joel Watson, Strategy: An Introduction to Game Theory, Norton, 2013.
[6] Roger B. Myerson, Game Theory: Analysis of Conflicts, Harvard University Press, 1991.

[7] Jean-Jacques Laffont & David Martimort, The Theory of Incentives: The Principal-Agent Model, Princeton University Press, 2002.
[8] Patrick Bolton & Mathias Dewatripont, Contract Theory, The MIT Press, 2004.

[9] Colin F. Camerer, Behavioral Game Theory: Experiments in Strategic Interaction, Princeton, 2003.
[10] Nick Wilkinson & Mathias Klaes, "An Introduction to Behavioral Economics," Palgrave Macmillan, 2017.
[11] Daniel Friedman and Shyam Sunder, "Experimental Methods A Primer for Economists," Cambridge University Press, 1994.

[12] Andreu Mas-Colell, Michael Whinston, and Jerry Green, Microeconomic Theory, Oxford University Press, 1995.
[13] Geoffrey A. Jehle and Phillip J. Reny, Advanced Microeconomic Theory, Prentice Hall, 2011.

[1]-[3]: Commonly used text for graduate level
[4]-[6]: Commonly used text for upper-undergraduate level
[7]-[8]: Text for topics on asymmetric information and contract theory
[9]-[11]: Good references for Behavioral Game theory and Experimental Methods
[12]-[13]: Microeconomics textbooks with partial coverage of Game Theory

2. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	**Objectives**	**Assessment (YES with details or NO)**
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	No (There is a good chance that students can use the materials covered in this class in producing business or research-oriented documents. These features, however, will not be directly assessed in class.)
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	No (There is a good chance that students can use the materials covered in this class to improve their logical argument. These features, however, will not be directly assessed in class.)
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	No

	2.2. Students will be able to apply leadership theories and related skills.	No
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it.	No
	3.2. Our students will practice ethics in the duration of the program.	No
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	No
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	Yes (The course covers fundamental theories of Game Theory, and the students will become familiar with them after taking the course.)
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	Yes (Game Theory can be applied to many practical problems in strategic and competitive situations, which they will commonly encounter in business settings.)
	5.3. Our students will demonstrate competency in critical thinking.	Yes (Game Theory requires a higher level of understanding of own and opponents' strategies and payoffs, which is a great tool and practice for critical thinking.)

2.2 Course-specific objectives

The course's primary objectives are to provide students with a foundation in game theory that fosters strategic and critical thinking, and to enable them to apply their intuition to solve real-world problems. The course will also help students either initiate research ideas in the field or use the concept in other areas of Economics.

2.3 Assessment/Grading Details

Your grade depends on the midterm exam (40%), the final exam (50%), and class participation (10%):

The midterm exam is scheduled for Friday, October 10, pending confirmation.
The final exam covers all the topics discussed in class. The final exam will be held from 4:00 to 6:00 pm on Tuesday, November 12.

Class Participation will be marked periodically.
Any occasion of absence without approval is worth a 2% deduction of your final score.
Several in-class experiments may also evaluate class participation.

The weight of each evaluation is determined and not negotiable.
There is no make-up exam.

2.4 Academic Honesty and Plagiarism

A student's effort and credit need to be recognized through class assessment. Credits earned for a student's work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconduct, which includes plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain grades, honors, awards, or professional endorsement dishonestly; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to an academic misconduct check. Misconduct checks may include reproducing the assessment, providing a copy to another faculty member, and/or communicating a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purposes.

Where the violation is suspected, penalties will be implemented. The penalties for academic misconduct may include the deduction of discipline points, a zero mark on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information on plagiarism, please refer to *PHBS Student Handbook*.

2.5 AI tools requirement

Using AI tools to complete assignments or assessments without the approval of the course instructor will be regarded as an act of academic dishonesty. Depending on the severity of the situation, penalties will be implemented in accordance with the provisions of the Peking University Graduate Student Handbook.

3. Topics, Teaching, and Assessment Schedule

The schedule is tentative and subject to change.

Week 1-3 Application of Game Theory
- Repeated Games and Folk Theorem
- Alternating Offer Bargaining Game
- Nash Bargaining Solution

Week 4-6 Models of Asymmetric Information
- Issues on Hidden Information
- Issues on Hidden Action
- Topics on Theory of Firms and Organizations

Week 7-9 Behavioral Game Theory
- Other Regarding Preferences
- Initial Responses to Games