1. General Information

Course Subject	ECON
Course Number	2214
Course Title	Games and Decisions
Academic Years	2024-2025
Grading Method	Letter

2. Instructors

Professor CHING, Tang Foon Stephen
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Subclasses: 1A,2B

4. Course Description

Course Description	The first part of the course starts with sequential games and introduces the concept of subgame perfect equilibrium for solving sequential games. Then it introduces Nash equilibrium through a series of concepts as follows: dominant strategy, successive elimination of dominated strategies, and the minimax approach for simultaneous games. It also discusses the limitations of Nash equilibrium and offers rationalizability as an alternative equilibrium concept. This forms the basic theory of the course, which is used to analyze repeated games and collective-action games in the second part of the course. Additionally, new solution (evolutionary stability) and equilibrium concept (perfect Bayesian equilibrium) are introduced to deal with applications that involve imperfect rationality or imperfect information, respectively. Mechanism/auction design are potential optional topics of the course.
Prerequisites	ECON1210 Introductory Microeconomics
Mutually exclusive	STRA3709 Applications of Strategic Thinking in Business

5. Course Objectives

1. To introduce game theory at the undergraduate level
2. To help students appreciate how various equilibrium concepts in game theory are related
3. To illustrate how to apply game theory in different contexts

6. Faculty Learning Goals

Goal 1: Acquisition and internalization of knowledge of the programme discipline
Goal 2: Application and integration of knowledge

6. Faculty Learning Goals

Goal 3: Inculcating professionalism

Goal 4: Developing global outlook

Goal 5: Mastering communication skills

Goal 6: Cultivating leadership

7. Course Learning Outcomes

Course Teaching and Learning Activities	Aligned Faculty Learning Goals					
	1	2	3	4	5	6
CLO1. Formulate strategic problems as sequential and/or simultaneous games	✔	✔	✔			
CLO2. Understand various equilibrium concepts in game theory and how they are related	✔	✔	✔			
CLO3. Apply game theory in specific contexts	✔	✔	✔			

8. Course Teaching and Learning Activities

Course Teaching and Learning Activities #	Expected Study Hours	Study Load (% of study)
T&L1. Lecture	36	30
T&L2. Tutorial	12	10
T&L3. Coursework	48	40
T&L4. Self study	24	20
	Total: 120	Total: 100

9. Assessment Methods

Assessment Methods	Description	Weight %	Aligned Course Learning Outcomes
A1. Tutorial Assignments and Participation	Consolidate your knowledge in tutorials; complete and submit five tutorial assignments to keep up with the progress of the course	25%	1,2
A2. In-Class Quizzes	Two quizzes will be given in class (students who do not attend both quizzes will receive an F grade in the course). If in-class quizzes cannot be arranged, then they will be replaced by alternative assessments such as, including but not limited to, essays and term paper.	30%	1,2,3
A3. Final Exam	Final examination is a comprehensive examination focusing on Part II of the course (students who do not attend the final examination will receive an F grade in the course). If an in-hall final examination cannot be arranged by	45%	1,2,3

9. Assessment Methods

	the University, then it will be replaced by alternative assessments such as, including but not limited to, essays and extended term paper.		

Assessment Rubrics

A1. Tutorial Assignments and Participation	
A+,A,A-	Strong evidence of superb ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
B+,B,B-	Strong evidence of the ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
C+,C,C-	Evidence of adequate ability to fulfill the intended learning outcomes of the course at low levels of learning such as describe and apply but not at high levels of learning such as evaluate, and synthesize
D+,D	Evidence of basic familiarity with the subject
F	Little evidence of basic familiarity with the subject
A2. In-Class Quizzes	
A+,A,A-	Strong evidence of superb ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
B+,B,B-	Strong evidence of the ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
C+,C,C-	Evidence of adequate ability to fulfill the intended learning outcomes of the course at low levels of learning such as describe and apply but not at high levels of learning such as evaluate, and synthesize
D+,D	Evidence of basic familiarity with the subject
F	Little evidence of basic familiarity with the subject
A3. Final Exam	
A+,A,A-	Strong evidence of superb ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
B+,B,B-	Strong evidence of the ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
C+,C,C-	Evidence of adequate ability to fulfill the intended learning outcomes of the course at low levels of learning such as describe and apply but not at high levels of learning such as evaluate, and synthesize
D+,D	Evidence of basic familiarity with the subject
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10. Course Grade Descriptors

A+,A,A-	Strong evidence of superb ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize

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B+,B,B-	Strong evidence of the ability to fulfill the intended learning outcomes of the course at all levels of learning: describe, apply, evaluate, and synthesize
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11. Course Content and Tentative Teaching Schedule

Topic/ Session	Content	Readings
1	Sequential Games	Chapter 3
2	Simultaneous Games: Pure Strategies	Chapters 4, 5
3	Simultaneous Games: Mixed Strategies	Chapter 7
4	Sequential-Simultaneous Games	Chapter 6
5	Prisoners' Dilemma and Repeated Games	Chapter 10
6	Collective Actions	Chapter 11
7	Evolutionary Games	Chapter 12
8	Uncertainty and Information	Chapter 9

12. Required/Recommended Readings & Online Materials

Textbook	Avinash Dixit, Susan Skeath, and David McAdams, Games of Strategy, Fifth Edition, 2021

13. Means / Processes for Student feedback on Course

	Conducting mid-term survey in additional to SETL around the end of the semester
✔	Online response via Moodle site
✔	Others
	Online response via email

14. Course Policy

The University Regulations on academic dishonesty will be strictly enforced! Please check the University Statement on plagiarism on the web: http://www.hku.hk/plagiarism/.

Academic dishonesty is behavior in which a deliberately fraudulent misrepresentation is employed in an attempt to gain undeserved intellectual credit, either for oneself or for another. It includes, but is not necessarily limited to, the following types of cases:

a. Plagiarism - The representation of someone else's ideas as if they are one's own. Where the arguments, data, designs, etc., of someone else are being used in a paper, report, oral presentation, or similar academic project, this fact must be made explicitly clear by citing the appropriate references. The references must fully indicate the extent to which any parts of the project are not one's own work. Paraphrasing of someone else's ideas is still using someone else's ideas, and must be acknowledged.

b. Unauthorized Collaboration on Out-of-Class Projects - The representation of work as solely one's own when in fact it is the result of a joint effort. Where a candidate for a degree or other award uses the work of another person or persons without due acknowledgement.

1. The relevant Board of Examiners may impose a penalty in relation to the seriousness of the offence.
2. The relevant Board of Examiners may report the candidate to the Senate, where there is prima facie evidence of an intention to deceive and where sanctions beyond those in (1) might be invoked.

15. Additional Course Information

This course is not open to students who have taken or are taking ECON4214 Advanced Game Theory.