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②國玄東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	賽局理論與經濟	孫 (一)		學年/學期 Academic Year/Semester		114/1	
課程名稱(英文) Course Name in English	Game Theory with Economic Applications (I)						
科目代碼 Course Code	ECM5010	系級 Department 碩士 & Year		開課單位 Course-Offering Department	經濟學系		
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)		3.0/3.0			
授課教師 Instructor	/林慧菁						
先修課程 Prerequisite							

課程描述 Course Description

賽局在社會科學中之應用相當廣泛,舉凡政治、經濟、產業、管理等各學界皆有運用賽局之範例,本課程將理論與應 用並重,強調賽局理論之邏輯性思維而非艱澀的數學驗證,以培養學生應用賽局理論來設計經濟模型及解釋經濟問題 之能力。

課程目標 Course Objectives

圖示說明Illustration : ● 高度相關 Highly correlated ○中度相關 Moderately correlated

授課進度表 Teaching Schedule & Content

週次Week	內容 Subject/Topics	備註Remarks
1	課程介紹 Introduction and general principles	
2	Introduction and general principles 1. Basic Ideas and Examples	
3	2. How to think about strategic games Game form, definition and solution concepts	
4	Funddamental concepts and techniques 3. Games and sequential moves Extensive form games, Game trees, Order advantages, Adding more players/moves	
5	4. Simultanteous-move games: discrete strategies Normal form games, Nash equilibrium, Dominance, Pure strategies	
6	5. Simultanteous-move games: continuous strategies, discussion, and evidence Normal form games, Pure strategies, Rationalizability	
7	6. Combining sequential and simultaneous moves Games with both simultaneous and sequential moves, Changing the order of moves, Alternative method of analysis	
8	6. Combining sequential and simultaneous moves Games with both simultaneous and sequential moves, Changing the order of moves, Alternative method of analysis	
9	期中考試週 Midterm Exam	
10	7. Simultaneous-move games: Mixed strategies Mixing moves, Beliefs and responses, Non-zero-sum games, Mixing when one or both players have 3 or more pure strategies	

11	7. Simultaneous-move games: Mixed strategies Mixing moves, Beliefs and responses, Non-zero-sum games, Mixing							
	when one or both players have 3 or more pure strategies							
	Some broad classes of strategies and games							
8. Strategic moves								
	Commitments, Deterrence versus Compellence, Credibility, Countering strategies							
	8. Strategic moves							
13	Commitments, Deterrence versus Compellence, Credibility, Countering							
10	strategies							
	9. Uncertainty and Information							
14	Strategies dealing with risk, Asymmetric information, Direct							
	communication, Cheap talk, Adverse selection, signalling, screening							
	9. Uncertainty and Information							
15	Strategies dealing with risk, Asymmetric information, Direct							
	communication, Cheap talk, Adverse selection, signalling, screening							
	10. The prisoners' dilemma and repeated games							
16	Finite and infinite repetition, Games of unknown length, Promises,							
	Penalties and rewards, Leadership							
1.77	10. The prisoners' dilemma and repeated games							
17	Finite and infinite repetition, Games of unknown length, Promises,							
	Penalties and rewards, Leadership							
18	期末考試週 Final Exam							
	教學策略 Teaching Strategies							
✓ 課堂講	授 Lecture							
其他Mi	scellaneous:							
其他Mi	scellaneous: 教學創新自評Teaching Self-Evaluation							
創新教學(教學創新自評 Teaching Self-Evaluation Innovative Teaching)							
創新教學(教學創新自評 Teaching Self-Evaluation							
創新教學(教學創新自評 Teaching Self-Evaluation Innovative Teaching)							
創新教學(問題導 翻轉教	教 學 創 新 自 評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) ■ 関體合作學習(TBL) 解決導向學習(SBL)							
創新教學(問題導 翻轉教 社會責任(教學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) 国體合作學習(TBL) 解決導向學習(SBL) 室 Flipped Classroom 原課師 Moocs							
創新教學(問題導 翻轉教 社會責任(在地實	教學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) 国體合作學習(TBL) 解決導向學習(SBL) 室 Flipped Classroom 原課師 Moocs Social Responsibility)							
創新教學(問題導 翻轉教 社會責任(在地實 跨域合作(教學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) 室 Flipped Classroom 原課師 Moocs Social Responsibility) 踐Community Practice 産學合作 Industy-Academia Cooperation							
創新教學(問題導 翻轉教 社會責任(在地實 跨域合作() 跨界教	数學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) 室 Flipped Classroom 原課師 Moocs Social Responsibility) 踐Community Practice 「產學合作 Industy-Academia Cooperation Transdisciplinary Projects) 學Transdisciplinary Teaching 」跨院系教學Inter-collegiate Teaching							
創新教學(問題導 翻轉教 社會責任(在地實 跨域合作() 跨界教	教學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) 室 Flipped Classroom 「磨課師 Moocs Social Responsibility) 踐Community Practice 「産學合作 Industy-Academia Cooperation Transdisciplinary Projects)							
創新教學(問題導 翻轉教 社會責任(在地實 跨域合作() 跨界教	数學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL) 室 Flipped Classroom 原課師 Moocs Social Responsibility) 踐Community Practice 「產學合作 Industy-Academia Cooperation Transdisciplinary Projects) 學Transdisciplinary Teaching 」跨院系教學Inter-collegiate Teaching							
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創新教學(問題等 計劃轉教 社會責任(」 跨域合作(」 跨界教	教學創新自評 Teaching Self-Evaluation Innovative Teaching) 向學習(PBL)							

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例	多元評量方式 Assessments							
Items	Percentage	測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績 General Performance	20%	~	~						
期中考成績 Midterm Exam	30%	~							
期末考成績 Final Exam	30%	~							
作業成績 Homework and/or Assignments	20%	~			~				
其他 Miscellaneous									

評量方式補充說明

Grading & Assessments Supplemental instructions

期中考、期末考可能為 take-home exam,但仍要看課堂上的學習狀態而定。課堂上會加入參考文獻的賽局模型的講述。

教科書與參考書目(書名、作者、書局、代理商、説明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

教科書

Dixit, A., S. Skeath, and D. McAdams, Games of Strategy, 5th ed. W. W. Norton & Company.

參考書:

- [R]. Rasmusen, E (2007), Games and Information, 4th ed. Blackwell.
- [Fr]. Friedman, J. W. (1991), Game Theory with Applications to Economics, 2nd ed., Oxford U. Press.
- [G]. Gibbons, R. (1992), Game Theory for Applied Economists, Princeton U. Press.
- [Fu]. Fudenberg, D. and J. Tirole (1991), Game Theory, MIT Press.
- [M]. Myerson, R. B. (1991), Game Theory: analysis of Conflict, Harvard U. Press.
- [0]. Osborne, M. J. and A. Rubinstein (1994), A Course in Game Theory, MIT Press.
- 以及其他補充教材與論文等.

課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

http://faculty.ndhu.edu.tw/~hclin/

其他補充說明 (Supplemental	instructions)