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國立東華大學

教學計劃表　Syllabus

課程名稱(中文) Course Name in Chinese	賽局理論與經濟應用(一)			學年/學期 Academic Year/Semester	102/1
課程名稱(英文) Course Name in English	Game Theory with Economic Applications (I)				
科目代碼 Course Code	IIE_57900	系級 Department & Year	碩士	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	/郭平欣				
先修課程 Prerequisite					

課程描述　Course Description

賽局探討在參與者互動之下的決策行為，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

近年來經濟分析大量引用賽局理論，研究生必須充分掌握此一工具，方有能力學習與理解新的經濟理論，為獨立的研究能力奠定基礎。

	系專業能力 Basic Learning Outcomes	課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.’s Education Objectives
A	數理分析能力：通曉經濟學的理論技巧，應用數學與賽局解決經濟議題的能力。Mathematical analysis skills: Mastering in application of mathematical theories and game theory in analyzing economic issues	○
B	實證經濟分析能力：通曉經濟學的實證技巧，善用資訊科技進行資訊蒐集、資料統計與計量分析。Empirical analysis skills: Mastering in application of statistics and econometrics in data collection and examination	
C	微觀經濟之闡釋能力：通曉個體經濟學相關的理論與應用。Microeconomic perspective: Thorough understanding of microeconomic theories and relevant application	○
D	宏觀經濟之闡釋能力：通曉總體經濟學相關的理論與應用。Macroeconomic perspective: Thorough understanding of macroeconomic theories and relevant application	
E	樂活能力：具備適應現代社會的學養以及就業能力。Employment opportunities: Capabilities of working on important policy and decision challenges in business and governmen	
F	溝通表達能力：思路清晰，有能力與人溝通並撰寫專業研究報告。Communication skills: Having a clear mind and capability in writing a professional academic report	

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	介紹	
2	中秋放假	

3	7. Basic Elements of Non-Cooperative Games A. Introduction B. What is a Game? C. The Extensive Form Representation of a Game D. Strategies and the Normal Form Representation of a Game E. Randomized Choices	
4	8. Simultaneous-Move Games A. Introduction B. Dominant and Dominated Strategies C. Rationalizable Strategies D. Nash Equilibrium E. Games of Incomplete Information: Bayesian Nash Equilibrium F. The Possibility of Mistakes: Trembling-Hand Perfection Appendix: Existence of Nash Equilibrium	
5	8. Simultaneous-Move Games A. Introduction B. Dominant and Dominated Strategies C. Rationalizable Strategies D. Nash Equilibrium E. Games of Incomplete Information: Bayesian Nash Equilibrium F. The Possibility of Mistakes: Trembling-Hand Perfection Appendix: Existence of Nash Equilibrium	
6	9. Dynamic Games A. Introduction B. Sequential Rationality, Backwards Induction, and Subgame Perfection C. Sequential Rationality and Out-of-Equilibrium Beliefs D. Reasonable Beliefs, Forward Induction, and Normal Form Refinements Appendix A: Finite and Infinite Horizon Bilateral Bargaining Appendix B: Extensive Form Trembling-Hand Perfection Exercises	
7	9. Dynamic Games A. Introduction B. Sequential Rationality, Backwards Induction, and Subgame Perfection C. Sequential Rationality and Out-of-Equilibrium Beliefs D. Reasonable Beliefs, Forward Induction, and Normal Form Refinements Appendix A: Finite and Infinite Horizon Bilateral Bargaining Appendix B: Extensive Form Trembling-Hand Perfection Exercises	
8	期中考試週 Midterm Exam	
9	第6章 Dynamic Games with Incomplete Information	
10	Chapter 7: Moral Hazard	
11	Chapter 8: Further Topics in Moral Hazard	
12	Chapter 9: Adverse Selection	
13	Chapter 10: Mechanism Design	
14	Chapter 11: Signalling	
15	Chapter 12: Bargainin	
16	Chapter 13: Auctions.	
17	Chapter 14: Pricin	
18	期末考試週 Final Exam	

教 學 策 略 Teaching Strategies

- [x] 課堂講授 Lecture
- [x] 分組討論Group Discussion
- [ ] 參觀實習 Field Trip
- [ ] 其他Miscellaneous:

學期成績計算及多元評量方式 Grading & Assessments

配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		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									
期中考成績 Midterm Exam	40%	✓							
期末考成績 Final Exam	30%			✓	✓				
作業成績 Homework and/or Assignments	30%			✓					
其他 Miscellaneous (_____)									

評量方式補充說明
Grading & Assessments Supplemental instructions

教科書與參考書目（書名、作者、書局、代理商、說明）
Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

1. A. Mas-Colell, M.D. Whinston, and J. R. Green, Microeconomic Theory, Oxford University Press, 1995.Part II. Game Theory
2. Eric Rasmusen,2006, Games & Information 4th ed.（科大文化代理）

課程教材網址（教師個人網址請列在本校內之網址）
Teaching Aids & Teacher's Website (Personal website can be listed here.)

其他補充說明 (Supplemental instructions)