



## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	對局論AA		學年/學期 Academic Year/Semester	112/1	
課程名稱(英文) Course Name in English	Game Theory				
科目代碼 Course Code	AM_5430AA	系級 Department & Year	碩士	開課單位 Course-Offering Department	應用數學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/黃延安				
先修課程 Prerequisite					
課程描述 Course Description					
建立對局論的基礎，介紹合作與不合作對局論。課程偏重在合作對局論。將介紹在TU對局與NTU對局上的幾個熟悉的解，並以公設化理論及動態理論來處理它					
課程目標 Course Objectives					
建立對局論的基礎。(Introduction of game theory)					
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	具備專業機率、統計知識與應用分析能力。Have well-founded expertise in probability and statistics, and good analytical ability in solving real problems.			○	
B	具備程式設計與統計計算能力。Have the computer programming and statistical computing skills.				
C	具備學習其它學科的能力，以期能邁向跨領域研究。Be able to study other fields of science so as to conduct interdisciplinary research in the future.			●	
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	Introduction				
2	Non-cooperative game				
3	Shapley value (1)				
4	Shapley value (2)				
5	Shapley value(3)				
6	期中考				
7	Core (1)				
8	core (2)				

9	prekernal	
10	Bargaining set, prenucleolus, stable set	
11	Bargaining set, prenucleolus, stable set	
12	NTU games	
13	Shapley solution	
14	Harsanyi solution	
15	monotonic solution	
16	NTU core	
17	期末考試週 Final Exam	
18	自主學習	

教學策略 Teaching Strategies

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

教學創新自評 Teaching Self-Evaluation

創新教學 (Innovative Teaching)

- 問題導向學習 (PBL)
  團體合作學習 (TBL)
  解決導向學習 (SBL)
  翻轉教室 Flipped Classroom
  磨課師 Moocs

社會責任 (Social Responsibility)

- 在地實踐 Community Practice
  產學合作 Industry-Academia Cooperation

跨域合作 (Transdisciplinary Projects)

- 跨界教學 Transdisciplinary Teaching
  跨院系教學 Inter-collegiate Teaching

- 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

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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	20%		✓						
期中考成績 Midterm Exam	40%	✓							
期末考成績 Final Exam	40%	✓							
作業成績 Homework and/or Assignments									
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.)

Game Theory, by Guillermo Owen

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.)

其他補充說明 (Supplemental instructions)