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## 個體經濟理論二

陳暉 (Wei James Chen)

2023 春 二 7 五 34

E-mail: jamesweichen@ntu.edu.tw

課程網站 (Web): [NTU COOL](#)

辦公室 (Office): 農業綜合館 216 室

教室 (Classroom): 農經大講堂/農經三

TA: XXX

TA E-mail: r106270XX@ntu.edu.tw

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### 課程概述 (Course Description)

This course offers an introduction to noncooperative game theory. The course is intended both for graduate students who wish to develop a solid background in game theory in order to pursue research in the applied fields of economics and related disciplines, and for students wishing to specialize in economic theory. Meanwhile, we will also extend the discussion to basic mechanism design.

### 課程目標 (Course Objective)

本門課旨在讓學生能夠：

- 熟悉各種類型的賽局理論模型
- 運用賽局理論分析經濟議題
- 以形式理論架構分析行為者決策
- 運用數理分析提升決策的嚴謹程度、避免邏輯盲點
- 理解機制設計的基礎理論與應用

### 課程要求 (Prerequisites)

- 個體經濟學
- 個體經濟學理論一
- 微積分

## Office Hours

週五 12:20 – 13:10 (採預約制)

## 參考書目 (Textbooks)

Strategy: An Introduction to Game Theory, 3rd Edition by J. Watson (華泰文化代理)

## 指定閱讀 (Reading Materials)

Auction Theory, 2nd Edition by V. Krishna

## 評量方式 (Grading Policy)

分數比例如下：

- 35% 課堂教學表現互評
- 20% 作業
- 20% 期中考
- 25% 期末考

如果期末考考得比期中考高，期末考分數就會取代期中考。學期末會再依據全班表現調分。

## 課程進度 (Schedule)

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第 1 週	2/21	<b>About this Class*</b>
	2/24	<b>Introduction</b>
		<b>The Extensive Form</b>
第 2 週	2/28	二二八紀念日停課
	3/3	<b>Strategies and the Normal Form</b>
		<b>Beliefs, Mixed Strategies, and Expected Payoffs</b>
第 3 週	3/7	General Assumptions and Methodology (A)
	3/10	Dominance and Best Response (B)
第 4 週	3/14	Dominance and Best Response (B)
	3/17	Rationalizability and Iterated Dominance (A)
		Nash Equilibrium (C)
第 5 週	3/21	Nash Equilibrium (C)
	3/24	Mixed-Strategy Nash Equilibrium (D)
第 6 週	3/28	Details of the Extensive Form (D)
		Sequential Rationality and Subgame Perfection (E)
	3/31	Sequential Rationality and Subgame Perfection (E)
第 7 週	4/4	兒童節停課
	4/7	Repeated Games and Reputation (F)
第 8 週	4/11	Repeated Games and Reputation (F)
	4/14	Random Events and Incomplete Information (G)
第 9 週	4/18	Bayesian Nash Equilibrium and Rationalizability (H)
	4/21	Bayesian Nash Equilibrium and Rationalizability (H)
第 10 週	4/25	Perfect Bayesian Equilibrium (I)
	4/28	Perfect Bayesian Equilibrium (I)
第 11 週	5/2	溫書假
	5/5	期中考
第 12 週	5/9	<b>General Auction</b>
	5/12	<b>General Auction</b>
第 13 週	5/16	<b>General Auction</b>
	5/19	<b>General Auction</b>
第 14 週	5/23	<b>Mechanism Design</b>

	5/26	<b>Mechanism Design (錄影)</b>
第 15 週	5/30	<b>Mechanism Design</b>
	6/2	<b>Mechanism Design</b>
第 16 週	6/6	溫書假
	6/9	期末考

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\* 粗體字課程內容由我講授，其餘部份由同學分組講授，括號內英文字母代表分組。