國立臺灣大學新開課程開授申請表(社科院新開授課程審查用) New Course Application Form

一、課程大綱 Syllabus

課程名稱 Course Title	(中文 Chinese) 機制設計導論 (英文 English) Introduction to Mechanism Design					口中文授課 ■英文授課 Chinese conducted/ English conducted	
授課教師 Instructor	SHI, Xianwen 羅珮瑜	任職單位 Department	經濟系 Economics	專兼任 Full time/ Adjunct	■專任 □兼任	職級	■教授■副教授 □助理教授□講 師 Professor/ Associate Professor/ Assistant Professor /Instructor
開課系所 Department	經濟系 Economics	課號 Curriculum Number	Assigned by Dept. office	學分數 Credits	1	修課人 數上限 Student numbers	40
每週時數	■ 演講	小時[] 實驗	小時			
Hours							
課程性質 Designated for	 □博士班課程 (D字頭) for PhD □ 碩士班課程 (M字頭) for MA ■高年級課程 (U字頭) for under,MA,PhD □ 學士班課程 for undergraduate 				加選 方式 Selection method	 □ 1. 不限人數。 Add Online no limit for student numbers □ ■2. 發給授權碼 Add with Code □ 3. 人數限制 Add Online with limit for student numbers of 	
課程大綱内容 (含 <u>課程概述、</u> <u>教學目標、每週</u> <u>進度及教學内</u> <u>容簡述</u>) Course outlines	1. 課程概述 Course Description This is an advanced undergraduate course on introductory mechanism design (or more broadly information economics). We first show how asymmetric information may lead to market breakdown, and then study when and how well-designed mechanisms can help alleviate the adverse effect of asymmetric information on market efficiency. Topics covered in						

	this course include adverse selection, monopolistic screening, auctions, and mechanism						
	design. We may briefly touch on models of						
	Bayesian persuasion and information design if time permitting. After taking the course, students should be able to identify incentive problems in applications with asymmetric information and suggest candidate solutions to the problems. Students are assumed to be						
	proficient in multivariate calculus and have basic knowledge of game theory.						
	二、教學目標 Course Objective						
	1. Provide an introduction to the main theorems and techniques of mechanism design						
	and information design						
	2. Illustrate the central insights of mechanism design and information design in						
	important economic applications.						
	Lecture 1: Adverse Selection and the Lemon's Market						
	(Xianwen Shi) (March 17)						
	Lecture 2: Monopolistic Screening						
	(Xianwen Shi) (March 21)						
	Lecture 3: Auctions, Public Goods and Mechanism Design						
	(Xianwen Shi). (March 22)						
	Lecture 4: Bayesian Persuasion						
	(Xianwen Shi) (March 24)						
	Lecture 5: Information Design						
	(Xianwen Shi) (March 28)						
	Final Exam (April 21)						
	The following books provide graduate level treatment on mechanism design:						
	• Borgers (2015), An Introduction to The Theory of Mechanism Design.						
指定閱讀及	• Mailath (2022), Modeling Strategic Behavior (online, free), Chapters 10-13.						
延伸閱讀	• Mas-Colell, Whinston and Green (1995), Microeconomic Theory. Chapter 23.						
Required	Chapters 1-4 of the first book are accessible to advanced undergraduate students. Some of our						
readings and	lectures will draw materials from these chapters						
extension	Reference						
readings	Reading List (articles with * in front are Nobel prize winning ones):						
(Textbooks &	Consul Introduction on Information Economic and Market D						
Reference)	General Introduction on Information Economics and Michanism Design						
	• Teytelboym, Li, Kominers, Akbarpour, Dworczak (2021), "Discovering Auctions:						
	Contributions of Paul Milgrom and Robert Wilson," Scandinavian Journal of Economics 123(3):						

	709-750.
	• Mookherjee (2008), "The 2007 Nobel Memorial Prize in Mechanism Design Theory,"
	Scandinavian Journal of Economics 110(2): 237-260.
	• Lofgren, Persson and Weibull (2002), "Markets with Asymmetric Information: The
	Contributions of George Akerlof, Michael Spence and Joseph Stiglitz," Scandinavian Journal of
	<i>Economics</i> 104, 195-211.
	• Sappington (1991) "Incentives in Principal-Agent Relationships" <i>Journal of Economic</i>
	Perspectives 5(2) 45-66
	Adverse Selection and Monopolistic Screening
	• *George Akerlof (1970) "The Market for Lemons: Qualitative Uncertainty and the Market
	Mechanism " Quarterly Journal of Economics 84(3): 488-500
	• Mussa and Rosen (1978) "Monopoly and Product Quality" <i>Journal of Economic Theory</i> 18
	301-
	317
	• Depeckere and McAfee (1996) "Damaged Goods" Journal of Economics and Management
	Strategy 5(2), 149-174.
	• *Stiglitz and Weiss (1981), "Credit Rationing in Markets with Imperfect Information,"
	American Economic Review 71(3), 393-410.
	Auctions and Mechanism Design
	• Easley and Kleinberg, "Auctions," Chapter 9, Networks, Crowds, and Markets, 2010.
	• *Vickrey (1961), "Counterspeculation, Auctions, and Competitive Sealed Tenders," <i>Journal of</i>
	Finance 16(1), 8-37.
	• Riley and Zeckhauser (1983). "Optimal Selling Strategies: When to Haggle. When to Hold
	Firm," <i>Quarterly Journal of Economics</i> 98(2): 267-289.
	• *Myerson (1981), "Optimal Auction Design," Mathematics of Operation Research 6(1), 58-73.
	Bayesian Persuasion and Information Design
	• Kamenica, Emir, and Matthew Gentzkow (2011), "Bayesian Persuasion.
	"American
	1. Economic Review, 101 (6): 2590-2615.
成績計量 万式	•Problem sets (50%) and Final Exam (50%)
兴候 <u>华</u> (建治明夕西	
(
設計、比例及標	
進) Grading	
本課程對學生	
課後學習之要	
求	
Requirements	
for students	
atter the class:	

授課教師申請開授課程之相關著作或近五年所發表之學術性著作目錄

(任教未滿 2 年之專(兼)任教師才須填寫此項目)

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Working papers, published papers in 1~5 years (Optional for faculty who are in NTU more than 2 years)