

Mini-Course in Game Theory and Economic Theory (Fall 2019)

Classroom and Time: Intensive Sessions, at Social Science Room 603 (601 for Monday)

Instructor: Tai-Wei Hu ([taiwei.hu "at" bristol.ac.uk](mailto:taiwei.hu@bristol.ac.uk)) Office: Social Sciences 社科 546

Office Hours: After class or by email appointment

Co-Instructor: Joseph Tao-yi Wang ([josephw "at" ntu.edu.tw](mailto:josephw@ntu.edu.tw)), Social Sciences 社科 754

This is a mini-course on game theory. The first lecture reviews and introduces the history and background of game theory (and economic theory!), and the remaining lectures discuss the latest development and future directions of game theory and economic theory, starting from expected utility theory, normal form games, bargaining theory and epistemic game theory. The purpose is to inspire student's interest in this line of research. There is an formal exercise in the third lecture, though numerous in-class exercises are included in each lecture. (本課程分為五堂課，第一堂課回顧並介紹賽局理論(和經濟理論)的歷史與背景。第二堂課開始，從期望效用理論出發，討論賽局理論與經濟理論目前最新的研究發展和未來方向，涵蓋零和與非零和賽局、談判理論與知識賽局論。希望能啟發同學對此一研究方向的興趣。第三堂課會有專門的課堂演練，且有隨堂練習。)

Time and Date	Place	Topic
12/16 (M) 2:20-5:20pm (賽局論的歷史背景)	SS 601	History and background of game theory and economic theory: From monopoly, Cournot, Stackelberg to perfect competition
12/17 (T) 2:20-5:20pm (期望效用理論)	SS 603	Foundation for measurements in modern economics: Expected utility theory (History, motivation, and axiomatic approach)
12/18 (W) 2:20-5:20pm (零和/非零和賽局)	SS 603	Normal form game: Zero-sum (minimax thm) vs. non-zero-sum games (Nash equilibrium, existence); ex ante decision-making
12/19 (Th) 3:15-6:15pm (談判理論)	SS 603	Bargaining theory: Cooperative game approach (Nash bargaining game); strategic foundations; applications
12/20 (F) 2:20-5:20pm (知識賽局論)	SS 603	Epistemic Game Theory and Level-k Reasoning

References:

Nash (1951), Kuhn (1953), Hu (2010), Kaneko and Kline (2008), Hu and Kaneko (2011).

New! Course Website:

http://homepage.ntu.edu.tw/~josephw/MiniCourse_EpistemicGameTheory_19F.htm