

Course Syllabus for Microeconomic Theory I (4 units)

Instructors: Hui-Wen Koo (古慧雯, part 2) and Joseph Tao-yi Wang (王道一, part 1)

TA: Jack Shu-yu Liu (劉書彧) (r99323001@ntu.edu.tw)

Classroom and Time: Wed 2:20-4:20pm, and Fri 2:20-5:20pm, at 經大講堂

Part 1: Behavioral Game Theory I

Class website: http://homepage.ntu.edu.tw/~josephw/experimental_fall2010.htm

Instructor: Joseph Tao-yi Wang (josephw@ntu.edu.tw) Office: 研究大樓 425 室

Office Hours: Wed 4:20-5:20pm (after class) or by email appointment at my office

Goals of Part 1:

1. **Enjoy economics through real world examples and experiments.**
2. **Train you to think like an economist.**
3. **Improve your English, especially in listening, speaking and writing.**

NOTE: This is a graduate micro theory course taught in English. Hence, you are expected to finish all assignments in English, including your exams and oral presentations. **Also, I pre-commit NOT to understand Chinese either in class or when grading.** If you feel that you would be in a disadvantaged position, please take Microeconomic Theory III instead. I will not accept English proficiency as an excuse for grade petition. Also, some of the reading material related to Taiwan specific issues would be in Chinese, so Chinese proficiency is not an excuse, either.

Textbooks:

1. **Main Textbook:** Camerer (2003), *Behavioral Game Theory: Experiments in Strategic Interaction*, Princeton University Press (hereafter BGT).
2. **Class Notes:** Riley (2010), *Essential Microeconomic Theory*, Cambridge University Press, forthcoming (hereafter EMT; chapter 9A and 9B).
3. **Auctions:** Cassar and Friedman (2004), *Economics Lab: An Intensive Course in Experimental Economics*, Routledge (hereafter EL; Chapter 9).
4. **Presentation:** Ariely (2010), *The Upside of Irrationality*, HarperCollins.

References:

5. **Part 2 Textbook:** Varian (1992), *Microeconomic Analysis*, 3rd ed., Norton.
6. **Reference 1:** Kagel and Roth (1995), *Handbook of Experimental Economics*, Princeton University Press (hereafter HEE, plus chapters of Vol.2).
7. **Reference 2:** Holt (2007), *Markets, Games and Strategic Behavior*, Addison-Wesley (hereafter MGS; undergrad experimental textbook).
8. **Reference 3:** Fudenberg and Tirole (1991), *Game Theory*, MIT Press (hereafter FT, graduate game theory textbook).

Grades and Requirements:

- 1. Homework assignments and Quizzes (30%):** Six quizzes (4% each) based on homework 1-6. Last homework is a computer programming assignment (6%).
- 2. Written Final Exam on 11/12 (15%):** Any request of absence must be filed in advance (before 11/13 9am, unless due to medical emergency).
- 3. Presentation (5%):** You will form groups to present Chapter 1-10 of Ariely's book in English. You will have to show in 10 minutes (a) the environment human behavior is observed, (b) what does standard theory predict, (c) what did people do, and (d) what theory can explain this. For advanced students, you can choose to present a research paper from the list below.
- 4. Re-grade Policy:** Requests must be submitted in writing within 1 week the quiz/exam is returned and only on the entire exam, not specific sections.

Presentation List:

1. Own and Wang (2010), "How Do Prices Tags Affect Willingness-To-Pay? - Evidence from the Field (and Lab)" *mimeo*.
2. (*) Caplin and Dean (2010), "[Search, Choice, and Revealed Preference](#)," *Theoretical Economics*, forthcoming.
3. Ostling, Wang, Chou and Camerer (2010), "[Strategic Thinking and Learning in the Field and Lab: Evidence from Poisson LUPU Lottery Games](#)," *mimeo*.
4. Chen, Huang and Wang (2010), "A Window of Cognition: Eyetracking the Reasoning Process in Spatial Beauty Contest Games," *mimeo*.
5. Bosch-Domènech and Vriend (2010), "[On the Role of Non-equilibrium Focal Points as Coordination Devices](#)," *mimeo*.
6. (*) Chen (2010), "Price Signaling under Different Channel Structures", *mimeo*.
7. (*) Bénabou and Tirole (2010), "[Identity, Morals and Taboos: Beliefs as Assets](#)," *Quarterly Journal of Economics*, forthcoming.
8. (*) Haile (2001), "[Auctions with Resale Markets: An Application to U.S. Forest Service Timber Sales](#)", *American Economic Review*, 91 (3), 399-427.
9. Erev, Ert and Roth (2010), "[A Choice Prediction Competition for Market Entry Games: An Introduction](#)," *Games*, 1, 117-136.
10. (*) Wu and Qiu (2010), "[Higher Order Beliefs and Asset Market Dynamics](#)," *mimeo*.
11. Chapter 1-10 of Ariely (2010), *The Upside of Irrationality*, HarperCollins.

Outline of the Course:

- [9/15] Introduction: Behavioral Game Theory** (BGT, [Ch.1](#); [Introduction](#)) **[HW1]**
- [9/17] Review 1: Games and Strategic Equilibrium** (BGT, A1.1; EMT 9.1);
Basic Principles of Experimental Design (BGT, A1.2) **[HW9.1]**
Demo Presentation 1: Ariely, Ch.1; OW (2010)
- [9/22] Holiday (Moon Festival)**
- [9/24] Review 2: Multi-Stage Games** (BGT, A1.1; EMT 9.2) **[HW9.2]**
Student Presentation 2: Ariely, Ch.2; CD (2010)
- [9/29] Mixed-Strategy Equilibrium and QRE** (BGT, Ch.3) **[Quiz 1] [HW2]**
- [10/1] Review 3: Games of Incomplete Information** (BGT, A1.1; EMT 9.6) **[HW9.6]**
Student Presentation 3: Ariely, Ch.3, OWCC (2010)
- [10/6] Level-k Thinking** (BGT, Ch.5b and [Crawford notes](#)) **[Quiz 2] [HW3]**
- [10/8] Review 4: Games of Private Information** (BGT, A1.1; EMT 9.7) **[HW9.7]**
Student Presentation 4: Ariely, Ch.4; CHW (2010)
- [10/13] Dominance-Solvable Games** (BGT, Ch.5a) **[Quiz 3] [HW4]**
- [10/15] Coordination** (BGT, Ch.7)
Student Presentation 5: Ariely, Ch.5; B-DV (2010)
- [10/20] Signaling and Reputation** (BGT, Ch.8) **[Quiz 4] [HW5]**
- [10/22] Reputation and Cheap Talk** (BGT, Ch.8)
Student Presentation 6: Ariely, Ch.6, Chen (2010)
- [10/27] Social Preferences: Dictator and Ultimatum** (BGT, Ch.2; [OTP](#)) **[Quiz 5] [HW6]**
- [10/29] Social Preferences: Trust Games** (BGT, Ch.2b)
Student Presentation 7: Ariely, Ch.7, BT (2010)
- [11/3] Auctions: Theory and Experiments** (EL, Ch.9; [Auction](#)) **[Quiz 6] [HW7]**
- [11/5] Learning** (BGT, Ch.6; [Learning](#))
Student Presentation 8: Ariely, Ch.8, Haile (2001)
- [11/10] Student Presentation 9: Ariely, Ch.9-10, EER, WQ**
- [11/12] Final Exam for Behavioral Game Theory**

Part 2: Optimization, Uncertainty and Information

Instructor: Hui-Wen Koo

Course Description: We shall discuss basic concepts of microeconomics. Students will be trained to have some analytical skills. Some sessions will be arranged for case discussion.

In the first eight and half weeks, Varian (1992) will be used, and the following topics will be covered:

1. Consumption
 - a. utility maximization
 - b. comparative statics
 - c. aggregation
 - d. welfare analysis
2. Production
3. Monopoly Pricing
 - a. second-degree price discrimination
 - b. two-part tariff
4. Uncertainty
 - a. expected utility function
 - b. risk aversion
5. Asymmetric Information
 - a. moral hazard
 - b. adverse selection

Cases to be discussed: (a) Taiwan's real estate market (b) Education in Taiwan

Textbook:

Varian (1992), *Microeconomic Analysis*, 3rd edition, W. W. Norton & Company.

Grading: two exams (20% and 25%), case discussion (5%)