Course Syllabus for Experimental Economics

Instructor: Joseph Tao-yi Wang (王道一)  E-mail: josephw@ntu.edu.tw
Office: 社法學院研究大樓 425室  Office Phone: (02)2351-9641 ext514
Class Time: Thursday, 9:10am-12:10pm at 社法 13教室  Office Hours: By email appointment

Course Description:
This is a graduate level course on experimental economics. The purpose is to provide a thorough introduction to experimental economics so students can start to perform their own research in this field. You will be expected to write a research proposal by the end of the course.

Specific goals of this class include:
1. Introduction to experimental economics: After the class, students are expected to name several experiments performed in different fields of economics, and describe how the experimental results affirm (or differ from) economic theory and/or field data. During class, students have to choose a particular class topic, record the lecture and write a review.
2. Experimental methods: After the class, students are expected to understand how to design and run an experiment, as well as how to analyze the data they obtain. During class, students are expected to write a research proposal that
   a. describes a proposed experiment (with a sample instructions for subjects),
   b. why should we care about this experiment,
   c. why the experiment is designed this way (compared to other possible designs),
   d. expected results, and,
   e. methods to analyze the data (and possibly some simulation results).
3. Evaluate the most current research: After the class, students are expected to develop the ability to read recent journal articles in experimental economics, and evaluate the quality of the papers. During class, students are expected to read all assigned journal articles, write one (referee) review report for them, and present the article in class.

References and Textbook:
The reading list (see below) assigns journal articles. Basic topics covered by these textbooks:
3. Holt, Charles (2007), Markets, Games and Strategic Behavior, Addison-Wesley (hereafter MGS). Most up-to-date undergraduate textbook on experimental economics. Undergraduate students who take this course can read this book in lieu of journal articles.

Assignments:
You need to hand in a midterm review report on a basic topic (50%) and a final research proposal (50%). Class presentation of your research proposal is highly recommended and earns extra credit. If you are a graduate student taking this course, you will also have to review a journal article, write a referee report and present the article in class.
Course outline:

Part A: Overview of Experimental Economics

[ 2 /21] Introduction: BGT, Ch. 1, HEE, Ch. 1, and MGS, Ch. 1-3.
[ 3 /20] Bargaining: BGT, Ch. 4, MGS, Ch. 23, and HEE, Ch. 4.
[ 3 /27] Dominance-Solvable Games: BGT, Ch. 5.
[ 4 /10] Coordination: BGT, Ch. 7, HEE, Ch. 3, and MGS, Ch. 26.
[ 4 /17] Signaling and Reputation: BGT, Ch. 8, and MGS, Ch. 33.
[ 4 /24] Individual Decision Making - Risk and Time: HEE, Ch. 8, and MSG, Ch. 27-29.
[ 5 /22] Market Experiments and IO: HEE, Ch. 5, and MGS, Ch. 6-10.
[ 5 /29] Experimental Asset Markets and Bubbles: HEE, Ch. 6 and MGS, Ch. 11, 34.

Part B: Experimental Methods

a. The Gold Standards: Basic Principles of Experimental Design
b. Experimental Design:
   i. Goals
   ii. Control
   iii. Programming the Experiment: z-Tree, the Psychophysics Toolbox, etc.
   iv. Pre-testing: Simulation
   v. Pre-testing: Pilot Studies
c. Running an Experiment:
   i. Giving Instructions and Comprehension Tests
   ii. The Experimental Session(s)
   iii. Post-Experimental Surveys
   iv. Handing out Payments
   v. What if Something Unexpected Happens?
d. Data Analysis:
   i. Summary Statistics
   ii. Regressions and other Basic Econometrics
   iii. Maximum Likelihood Estimations: QRE, Cognitive Hierarchy, level-k, EWA…
   iv. Out-of-Sample Prediction
   v. Handling Eyetracking Data: Time Series and Markov Switching Models
   vi. Handling fMRI Data: SPM2
Reading List: (* means required reading.)

[2/21] Introduction: BGT, Ch. 1 and MGS, Ch. 1-3.
Other References: HEE, Ch. 1.

Other References: HEE, Ch. 2.

Other References:

[3/20] Bargaining: BGT, Ch. 4, and MGS, Ch. 23.
Other References: HEE, Ch. 4.

[3/27] Dominance-Solvable Games: BGT, Ch. 5.
Other References:

Other References:

[ 4 /10] Coordination: BGT, Ch. 7 and MGS, Ch. 26.
Other References: HEE, Ch. 3.

[ 4 /17] Signaling and Reputation: BGT, Ch. 8, and MGS, Ch. 33.
Other References:

[ 4 /24] Individual Decision Making - Risk and Time: HEE, Ch. 8, and MSG, Ch. 27-29.
Other References:

Other References:
*Hsu, Bhatt, Adolphs, Tranel and Camerer (2005), “Neural Systems Responding to Degrees of Uncertainty In Human Decision Making,” Science, 310, 9 December 2005, 1624-1625. (Perspectives by Rustichini.)


Other References:


Other References:


[ 5 /22] Market Experiments and IO: HEE, Ch. 5, and MGS, Ch. 6-10.

Other References:

McKinney, Niederle and Roth (2005), "The collapse of a medical labor clearinghouse (and why such failures are rare)," American Economic Review, 95 (3), 878-889.

[ 5 /29] Experimental Asset Markets and Bubbles: HEE, Ch. 6 and MGS, Ch. 11, 34.

Other References:


Other References:


[6/12] Field Experiments:

Other References: