ECO 6610
Experimental Economics
UG Economics
Spring 2024

Instructor: Prof. Swagata Bhattacharjee. email: swagata.bhattacharjee@ashoka.edu.in.
Office Hours: By appointment   **Time and Location:** TBA
Textbook:

1. Handbook of Experimental Economics by *Kagel and Roth (editors).* Princeton University Press. ISBN 069104290-X.

2. Market, Games and Strategic Behavior by *Charles Holt.*

3. Experimental Methods by *Friedman and Sunder.*

4. *Software to be used:* zTree. Ref: Fischbacher U. (1999). Zurich toolbox for readymade economic experiments, experimenter's manual. Working Paper No. 21. Institute for Empirical Research in Economics, University of Zürich.

   The textbooks are **not required but highly recommended** for providing background for several sections of the course. However, the course will mostly involve reading papers, to be uploaded on AMS/ moodle.

Overview:

   Experimental methods have been widely adopted by economists to develop new insights, it is the fastest growing research methodology in economics. This course will be an introduction to experimental economics, its methods, and some of the major subject areas that have been addressed by laboratory experiments. Substantive areas of application in the course will include market equilibrium, individual decision-making, risk and uncertainty, strategic interactions, learning in games, public good provision, and labor market relationships. Additional topics will include field experiments in development economics.

   Student Learning Outcomes

   By the completion of the course the students should be able to do the following:

1. Understand and explain the principles behind experimental economics.

2. Recognize an original economic question and design a suitable experiment to address the question.

3. Conduct laboratory experiments using the software zTree.

4. Analyze experimental data to obtain results.

5. Evaluate a literature critically and determine what important elements may be missing that could lead to future research.

Mode of Teaching:

- We will conduct the classes as seminars, so there will be less of lecture and more of discussion. We will use Flipped Classroom Technique and encourage going through the material before the classes and discussing it during the class hours.

  - Every week, the readings for the next week will be posted by Friday. This will include the papers, text chapters, lecture slides along with video, as needed.

  - At the very beginning of the semester, you will form groups of 4.

  - During the class time, we will go over the readings, have short class works to evaluate your understandings. There will be group work involved.

  - For home works and referee reports you are welcome to discuss with your group members, but individual reports are to be submitted. **Note that discussions are not same as plagiarism.**

– In this class, we take a strong stand against plagiarism. **Any form of cheating will ensue a warning in the first instance and a direct F grade if repeated.**

Grading:
There are three major components to determine the grade.

- Final Project: Experimental Design *worth 40% of your grade*

  This will involve multiple stages, each graded separately, and will run through the semester.

  – First Proposal:

  The class will form groups of 4 or less. on **Oct 3**, each group will submit a one-page write up specifying a question they'd like to address using laboratory experimental methods (details later).

  – Proposal presentation:

  On **Oct 3,** each group will present the idea for the project. This proposal and the presentation are *worth 10% of your grade*. You are encouraged to set up a meeting with me as soon as possible in order to fix your ideas.

  – Related Literature:

  Due on **Oct 24**. The literature review should clearly place the chosen question in the existing body of literature, in the process summarizing the key findings of the existing literature and stating how the current question complements it. Literature review is worth 5% of the grade.

  – Final Draft: *worth 25% of your grade*

  The papers turned in should be the equivalent of full papers, just missing results sections. This means you will need an introduction in which you state the question you wish to address and motivate why it is worth examining. You need to provide a review of the relevant literature noting what aspects of the question have and have not been previously addressed. You should present your experimental design as well as a set of hypotheses about potential results from the experiment along with support for those hypotheses. The support could involve constructing a model of the theoretical situation and solving it or it could involve borrowing the theory from another paper and showing how your design proposes to test it. The final draft should also contain the zTree program that can run this experiment.

  The first draft will be due on **Nov 21**, so that you will have enough time to address the feedback in your final version of the draft.

  On the **last day of the reading week preceeding the final exam**, the final draft is due.

- Referee Reports: *worth 20% of your grade*

  Each student will have to submit two short referee reports on two of the readings to be specified later. This will be a maximum one-page long summary of that reading, concisely highlighting how that reading fits into the class and extends our understanding of the field and evaluating the paper critically.

- Problem Set: One problem set *worth 5% of your grade*

- Paper Presentation: *worth 20% of your grade*

  At the beginning of the semester, each group will choose two papers to present in class. The papers suitable for student presentation are marked with an asterix in this syllabus. We will discuss the details of an ideal presentation later in class.

- Class Participation: *worth 15% of your grade*

  This will come from quizzes, group works, classroom experiments, and class debates.

- We will use a mix of relative and absolute grading on a curve. The tentative details are:

Percentile in Class	Grade
Top 10%	A
Top $10 - 20\%$	$A-$
Top $20 - 30\%$	$B+$
Top $30 - 50\%$	B
Top $50 - 55\%$	$B-$
Top $55 - 60\%$	$C+$
Top $60 - 70\%$	$C, C-$
Below 40	$D-$
Below 30	F

Detailed Course Outline

The papers and chapters to read are given below. The tentative dates of each topic are also given. Some of the classes will be devoted to lab sessions and one class will have the groups proposing their ideas for the experiment design. The shorthands for the texts are as follows:

Friedman and Sunder=FS
Kagel and Roth=KR
Holt=H

1. Introduction to Experimental Economics

   (a) FS Ch 1

   (b) KR Ch 1

   (c) Samuelson, Larry, 2005 "Economic Theory and Experimental Economics," Journal of Economic Literature, 43: 65-107.

   (d) Smith, Vernon, 1982. "Microeconomic Systems as an Experimental Science", American Economic Review, vol. 72. no. 5, pp. 923-955.

   (e) Smith, Vernon, 2002. "Method in Experiment: Rhetoric and Reality," Experimental Economics, 5: 91-110.

   (f) Falk, A. and Heckman, J.J., 2009. Lab experiments are a major source of knowledge in the social sciences. science, 326(5952), pp.535-538.**

   (g) De Quidt, J., Haushofer, J. and Roth, C., 2018. Measuring and bounding experimenter demand. American Economic Review, 108(11), pp.3266-3302.**

2. Game Theory Experiments

   (a) H Ch 9-12

   (b) O'Neill, B, 1987. "Nonmetric Test of the Minimax Theory of Two-Person Zerosum Games," Proceedings of the Nat. Acad. Of Sci, 84, 2106-2109.

   (c) Ochs, J., 1995. "Simple Games with Unique Mixed Strategy Equilibrium: An Experimental Study," Games and Economic Behavior, 10, 202-217.

   (d) Stahl, and Wilson, 1995. "On Players Models of Other Players: Theory and Experimental Evidence," Games and Economic Behavior, 10, 218-254.

   (e) McKelvey R. and T. Palfrey, 1992. "An Experimental Study of the Centipede Game," Econometrica, 60, 803-836. **

3. Auction Experiments

   (a) KR Ch 7

   (b) Klemperer, Paul, 1999, "Auction Theory: A Guide To the Literature," Journal of Economic Surveys, Vol. 13 No. 3, pp. 227-285.

   (c) Cox, James C., Bruce Roberson and Vernon L Smith, 1982 "Theory and Behavior of Single Object Auctions," Research in Experimental Economics, Volume 2, pages 1-43.

   (d) Kagel, J. H. and D. Levin. 1986. "The Winner's Curse and Public Information in Common Value Auctions," American Economic Review, 76:894-920. **

   (e) Kagel, J.H. and Levin, D., 2009. Implementing efficient multi-object auction institutions: An experimental study of the performance of boundedly rational agents. Games and Economic Behavior, 66(1), pp.221-237.

   (f) Güth, W., Ivanova-Stenzel, R. and Wolfstetter, E., 2005. Bidding behavior in asymmetric auctions: An experimental study. European Economic Review, 49(7), pp.1891-1913. **

   (g) Esponda, Ignacio and Emanuel Vespa, 2014 "Hypothetical Thinking and Information Extractions in the Laboratory," 6(4): 180-202.

4. Individual Decision Making Experiments

   (a) KR Ch 8 Part III

   (b) H Ch 4, 5 **

   (c) Berg, Daley, Dickhaut, and O'Brien. "Controlling Preferences for Lotteries on Units of Experimental Exchange," Q.J.E., May 1986, 281-306.

   (d) Fehr, E. and Schmidt, K. 1999. "A Theory of Fairness, Competition and Cooperation," Quarterly Journal of Economics 114: 817-68. **

   (e) Cox, James C and Klarita Sadiraj and Vjollca Sadiraj, 2008. "Implications of Trust, Fear and Reciprocity for Modeling Economic Behavior." Experimental Economics 11:1-24. **

   (f) Andersen, Steffen, Glenn Harrison, Morten Lau and Elisabet Rutstrom 2006 "Elicitation using Multiple Price List Formats, "Experimental Economics Vol 9 No. 4 pp 383-405.

   (g) Andreoni, James and Charles Sprenger. 2012 "Estimating Time Preferences from Convex Budgets," American Economic Review, Vol 102, Number 7. Pp. 3333-3356.

   (h) Dohmen, Thomas, Armin Falk, David Huffman and Uwe Sunde 2010 "Are Risk Aversion and Impatience Related to Cognitive Ability?" American Economic Review Vol 100 pp. 1238-1260. **

5. Market Experiments

   (a) KR Ch 5

   (b) H Ch 13-17

   (c) Smith, V., 1982. "Markets as Economizers of Information: Experimental Examination of the Hayek Hypothesis," Econ. Inquiry, 165-179.

   (d) Plott, C., 1986. "Laboratory Experiments in Economics: The Implications of Posted-Price Institutions," Science, 237, 732-8.

   (e) Gode, D., and S. Sundar, 1993. "Allocative Efficiency of Markets with Zero-Intelligence Traders: Market as a Partial Substitute for Individual Rationality," J. of Political Economics, 101, 1993, 119-137. **

   (f) Cox, J.C. and Isaac, R.M., 1987. "Mechanisms for incentive regulation: theory and experiment," The RAND Journal of Economics, pp.348-359.

   (g) Durham, Y., 2000. "An experimental examination of double marginalization and vertical relationships," Journal of Economic Behavior & Organization, 42(2), pp.207-229. along with H Ch 14 **

6. External Validity: Field Experiments vs Lab Experiments

   (a) Levitt, Steven and John A List 2007 "What do laboratory experiments Measuring Social Preferences Tell Us About the Real World," Journal of Economic Perspectives, Vol 21, Number 2 pp 153-174

   (b) Camerer, Colin. 2011 "The Promise and Success of Lab-Field Generalizibility in Experimental Economics: A Critical Reply to Levitt and List." Forthcoming in "Methods of Modern Experimental Economics", edited by Guillaume Frechette and Andrew Schotter, Oxford University Press

   (c) Guest Lecture

7. Behavioral Experiments

   (a) KR Ch 8 Part II **

   (b) Fehr, E. and Schmidt, K.M., 1999. A theory of fairness, competition, and cooperation. The quarterly journal of economics, 114(3), pp.817-868.

(c) Fehr, E. and Schmidt, K.M., 2001. Theories of fairness and reciprocity-evidence and economic applications. Available at SSRN 264344.**

(d) Chen, Yan and Xin Li, 2009, "Group Identity and Social Preference," American Economic Review, 99:1, 431-457. **

(e) Charness, G., Rigotti, L. and Rustichini, A., 2007. Individual behavior and group membership. American Economic Review, 97(4), pp.1340-1352.**

(f) Camerer, C.F. and Fehr, E., 2006. When does" economic man" dominate social behavior?. science, 311(5757), pp.47-52.