Experimental Economics

Fall 2022

Course Design by:	Daniel Parra	**Time:**	F 14:00 – 17:00
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Purpose of the course

Economic theory before the 1960s was not interested in using experimental methods to test the underlying assumptions of their models. However, currently, experimental methods are widely used mainly because they allow assessing causal relations in a context where field data is difficult to obtain. Experiments make it also possible to study fundamental questions related to beliefs, memory, unethical behavior, and so on. The main purpose of the course is to introduce experimental methods in economics at a master's level. The course aims to add experiments to the toolbox of an empirical researcher. I expect that this course will help students to think that economics can be an experimental science. Students will learn mainly through "learning by doing" which provides a working knowledge of techniques for conducting laboratory experiments, online experiments, field experiments, surveys, etc.

At the end of the course students will be able to :

- Relate the experimental methodology to the basic concepts of microeconomics and game theory.
- Explain why well designed experiments can assess causal effects.
- Identify potential issues in an experimental design.
- Recommend additional treatments to an experimental design to rule out potential confounds.
- Design an experiment that allows testing the main effect while controlling for other plausible alternatives.
- Analyze data obtained in an experiment.

Prerequisites

An undergraduate-level understanding of microeconomics, probability, econometrics, and game theory.

Assessment

To evaluate whether the course's learning outcomes have been completed, you will design an experiment that addresses your own research question. Therefore, the primary assignment of this course will be to hand in a paper with this experimental design that includes motivation, treatments, power analysis, and hypotheses. Students should schedule a meeting before the midterm to roughly discuss their idea with me. Some class time near the end may be devoted to presenting your ideas with the rest of the group to get feedback from your classmates and polishing your design before presenting. The presentations will not be graded but are mandatory to hand in the final paper. However, students will get additional points by giving feedback on their classmates' presentations. The experimental design will be graded by the professor but will take as an input one referee report made by one classmate (you will not be informed who your referee was). The professor will also grade the referee report.

The additional components of the final grade will be a midterm exam in which I will evaluate your proficiency in the essential theoretical components of the course, quizzes, and homework. The idea of all the components of the grading is that they complement each other rather than substitute.

Assignments & Grade Weights:

Midterm Exam	20%
Homework and quizzes	20%
Referee Report	20%
Experimental design	40%

Tentative Course Outline:

Week #	Topic
1	What is Experimental Economics all about?
2	Intelligent Design
3	Bayesian updating and cognitive heuristics
4	Reference dependence and endowment effects
5	Statistical methods for experiments
6	Midterm Exam
7	Dictator, Ultimatum, Trust & Public Goods Games
8	Cheating games
9	Behavioral Preferences, Eliciting Valuations
10	Overconfidence & Underconfidence
11	Gender differences
12	Idea presentations
13	Idea presentations

Main References:

This is a restricted list of various useful books and articles that will be used during the course. You need to consult them occasionally.

- Niederle, M. (2010). Intelligent design: The relationship of economic theory to experiments: Treatment driven experiments. Unpublished (available at http://www.stanford.edu/niederle/Intelligent%20Design.August15.pdf).
- Friedman and Sunder. 1994. Experimental Methods: A Primer for Economists. Cambridge.
- Kagel and Roth. 1995. The Handbook of Experimental Economics. Princeton.
- Friedman and Cassar. 2004. Economics Lab: An Intensive Course in Experimental Economics. Routledge.

- Moffatt, P. G. (2015). Experimetrics: Econometrics for experimental economics. Macmillan International Higher Education.
- Camerer, C. F. (2011). Behavioral game theory: Experiments in strategic interaction. Princeton University Press.