

EXPERIMENTAL ECONOMICS

- Specifics: course code 212 BE; 5 credits; Semester 2, part IV
Teacher: Prof. dr. Arthur Schram
Room 6.35; te.: 5254293; email schram@uva.nl
- Prerequisites: Introduction to Game Theory
Exam: paper (50%) and oral exam (50%)
Literature: D. Davis & Ch. Holt: *Experimental Economics*; Princeton University Press; papers to be handed out.
- Objectives: The student will learn the experimental methodology, including the development of an experiment, the analysis of experimental data and the presentation of experimental results. In addition, the student will get acquainted with recent developments in experimental economics and their consequences for economic theory.

General structure of the course

The course is built around the following five topics, each to be discussed in a 2 hour lecture:

- Markets and Auctions*
- Public Goods
- Bargaining*
- Individual Decision Making
- Group Decision Making*

In addition, students will be split in 6 groups. Each group must organize an experiment on one of these topics, present the results of the experiment and submit a paper on the experiment and the results. Students in the English program International Industrial Economics must do the experiment on one of the topics marked with '*’.

Overview

In the first three weeks, there will be four lectures. In addition, students will be assigned to the various topics. In the second half of the course, we will alternate between lectures, experiments and presentations. A complete over view of the course is as follows.

Week	Date	Time	Place	Type	Topic
1	April 5	14.00-16.00	E.151	Lecture 1	Introduction
1	April 7	13.00-15.00	E.151	Lecture 2	Markets and Auctions
2	April 19	14.00-16.00	E.151	Lecture 3	Public Goods
3	April 26	14.00-14.00	E.151	Lecture 4	Bargaining
3	April 28	13.00-17.00	CREED	Experiments	3, to be chosen
4	May 3	14.00-16.00	E.151	Lecture 5	Individual Decision Making
5	May 10	14.00-16.00	E.151	Lecture 6	Group Decision Making
5	May 12	13.00-15.00	E.151	Lecture 7	Conclusions
6	May 17	13.00-17.00	CREED	Experiments	3, to be chosen
6	May 19	13.00-17.00	CREED	Presentations	3, to be chosen
7	May 24	13.00-17.00	CREED	Presentations	3, to be chosen

Goals, content and literature per topic

(D&H: the sections of Davis and Holt to be studied)

1. Introduction

Goal: The student will:

- know the basic methodology of Experimental Economics and be able to design a simple experiment;
- be capable of writing instructions for a simple experiment;
- be able to give a brief overview of the history of Experimental Economics;
- be able to explain the differences in experimentation in economics and psychology.

D&H: pages 1-45; 109-110.

2. Markets and Auctions

Goal: The student will:

- know the methodology of the double auction;
- be capable of running an oral double auction;
- be capable of discussing the theoretical properties of the four basic auction types;
- know the experimental results with respect to various auction types.

D&H: pages 46-62; 125-155 ; 167-168; 173-199 ; 217-219

3. Public Goods

Goal: The student will:

- know the methodology of voluntary contribution mechanisms;
- be capable of running a public goods experiment;
- know the common results obtained in public goods experiments;
- be capable of describing the Groves-Ledyard mechanism.

D&H: pages 317-375

4. Bargaining

Goal: The student will:

- be able to explain the difference between structured and unstructured bargaining;
- know and be able to apply the solution concepts to both types of bargaining;
- be able to design and run an ultimatum game experiment;
- be able to design and run an alternating offer experiment.

D&H: pages 241-275

5. Individual Decision Making

Goal: The student will:

- be able to present an overview of experiments testing the limits of the *homo economicus*;
- understand and be able to apply the Marshak-Machina probability triangle;
- be able to run a lottery experiment;
- be able to explain how the Becker, DeGroot and Marshak mechanism works and why it theoretically induces risk neutrality.

D&H: pages 67-73; 435-499

6. Group Decision Making

Goal: The student will:

- know the basic experimental methods for studying group decision making;
- be able to explain the importance of decision making procedures within groups for experimental outcomes;
- be able to run an experiment on group decision making.

Literature : two papers to be handed out in class.

7. Conclusions

Goal: The student will:

- be able to discuss the relationship between theory and experiments;
- understand the concept of independent data points in experiments and be capable of applying these correctly.

D&H: pages 505-553.

Class preparation

Students are expected to prepare classes.

- Before attending a lecture, the student should read the literature involved. It is not necessary to understand every detail, but the student should have a general idea of the topics involved.
- Before attending an experiment or presentation, the student should carefully study the literature and the lecture notes on the subject.

Organizing an experiment

Each student must be involved in organizing one experiment. The topics will be assigned at the end of the first lecture. In addition, each student is required to participate in all experiments organized by fellow students.

Organizing an experiment entails:

- formulating a research question to be studied in the experiment;
- designing an appropriate experiment to study the question, in particular paying attention to the design of treatments;
- writing instructions in order to run the experiment;
- running the experiment with the fellow students as participants.

Presenting experimental results

After running the experiment, each student must be involved in analyzing and presenting the results. If a group of students organized an experiment, each must give part of the presentation.

The presentation must include:

- an overview of the research question motivating the experiment;
- a link between the research question and the design chosen;
- a overview of the theory related to the experiment and the theoretical prediction of the experimental results;
- a discussion of the results and what the results show w.r.t. the research question and the theory.

Preparing a paper

After the presentation, students are required to prepare and submit a paper. The paper must have the same structure and contents as the presentation. Comments made at the presentation should be used when writing the paper.

The paper should have a length of about 10 pages, including tables and graphs.

If more than one student is involved in the experiment, the group must submit an overview of each student's contribution to organizing the experiment, preparing the presentation and writing the paper.

Exam

The mark for the course will be determined by a mark for the paper (50%) and a mark for an oral exam (50%).

The student must make an individual appointment for the oral exam with the teacher. At the exam, questions may be asked about the literature, the lectures and the experiments and presentations by other students. In addition, there may be a final discussion about the paper submitted by the student.