1 Course aims and learning outcomes

As economists strive hard to obtain realistic models of behaviour, bounded rationality is a growing topic in economics. What does it mean to make a boundedly rational decision? What are the welfare consequences of making boundedly rational decisions? How can we test whether an how an agent is boundedly rational? These questions are attracting ever more attention. By the end of this course you should have a command of the fundamentals needed to follow the literature - and to give your own contribution to it.

We will acquaint you with the basic tools and concepts in this field. We will begin with some technical topics (such as binary relations, set theory, and so on) that underpin most of choice theory. Then we will move to models of bounded rationality. This is a vast and fast developing area of research. Our approach is to give you examples of how the tools are applied in top scholarly papers. In this way you will be able to engage in a research project, which will hopefully lead to writing your own paper.

The philosophy of the course is that, once you have grasped the basics of a subject, the careful analysis of a single paper or even a single theorem may be a more rewarding learning experience than skimming over several topics. So the general aim is not to give you a comprehensive knowledge of the theory of bounded rationality, but rather to make you familiar with the logic, techniques and ‘style’ used in this subject. In order to do this we will privilege depth over breadth. This will equip you with the tools to make your way with confidence, according to your research needs and tastes, in the vast literature.

The course is divided into three parts. In the first part, we will follow mostly a traditional lecturing style and go over the building blocks. In the second part, we will involve you in first person, and structure each lecture as a presentation of papers written by leading scholars in the field, followed by a discussion of the issues raised. In the third part, you will have the opportunity to present your own (preliminary) results in a addressing a research question of
your choice in this area.

The choice of topics reflects in part our own tastes and research interests, in part the need to expose you to some standard and widely used techniques and concepts, and in part the desire to give you a sense of how bounded rationality is a ‘live’ subject which is growing and changing. We will discuss in class only one paper, but for each topic we consider also some additional suggested readings that will help you frame the class discussion.

2 Syllabus

We denote in parenthesis whether the lecture centres about a ‘textbook’ topic or a research paper.

Meeting 1: Mathspeak and basic tools (textbook/handouts).
We start with the very basics, introducing a little bit of maths and logic to help us as we go along, and introduce you to the formal use of elementary set theory and introduce binary relations and their properties.

Meeting 2: Representation theorems and choice theory (textbook/handout).
The representation of preferences by means of a utility function and the connection with revealed preferences.

Meetings 3-5: Readings of relevant papers in boundedly rational choice (denoted by an asterisk - non starred papers are required background reading):

- Sequential models:

- Attention:


- Search (one of the two starred papers):


Meeting 6: Student projects

2.1 Schedule

Meetings are all scheduled to take place on Mondays. They will develop over three batches, separated by some self study time which you should use to work on your project:

1. Preparing the ground: this is what we will do over the first three meetings. They will cover theory and one paper, with the objective to show you how the theoretical tools can
be used to address questions in the area of boundedly rational choice. At the end of this first section of the course you should identify a research project.

2. Getting started with your project: in parallel, we will be reading in depth more papers;

3. Delivering your project: this meeting is devoted to the presentation of your project. Of course, we do not expect a complete paper by this stage. However at the very least each project should have identified a relevant, interesting core question and the methods to answer it (e.g. a draft experimental design, a theoretical model, etc.).

**Useful textbooks**

For the theoretical part you can rely on your graduate economics textbook of choice, which will be integrated by handout. However in reading the research papers you may find the following useful:

Keith Devlin *Sets, Functions and Logic*, CRC Press

Peter K. Fishburn, *Mathematics for Decision Theory*


