Aims
This course is a graduate level introduction to microeconomic theory, aiming to acquaint students with the basics of modern microeconomic analysis. During the course, the students will learn the core tools that economists use to analyse problems of resource allocation in market settings.
We will begin with a review of the prerequisite mathematical tools. We will then apply these tools to the formal analysis of the optimizing behaviour of producers and consumers. Finally, we will introduce markets and the notion of competitive equilibrium, first in a partial equilibrium setting and then in a general equilibrium setting.

Learning Outcomes
Upon completion the course students should be able to:

- Apply the basic tools of economics to analyse problems of scarce resource allocation.
- Formulate and solve both the profit maximization and the cost minimization problems of a price-taking producer; understand the key properties of the solutions.
- Formulate and solve both the Marshallian (utility maximizing) and the Hicksian (cost minimizing) demand problems; understand the key properties of the solutions.
- Perform basic welfare analysis using compensating and equivalent variations and consumer surplus.
- Understand the notion of partial equilibrium; solve for partial equilibrium with perfect competition and under monopoly.
- Understand the notion of general equilibrium; solve for the Walrasian equilibrium in a pure exchange economy.
- Understand the First and Second Welfare Theorems.

Course Delivery
The course consists of a two-hour lecture and a one-hour seminar each week. Given the subject's mathematical content, the only way to understand the material is to work through problems and exercises. Students are encouraged to work together in groups on these problems. Problem sets will be assigned during lectures and answers to selected problems will be discussed during seminars.
Students are strongly encouraged to talk to the course leader about the course by coming to see him either during regular office hours or by appointment.

Assessment

Summative assessment:

- **2-hour final examination** during the Exam term, which contributes 75\% of the final mark and is taken during the Summer term.
- **1-hour in-class test**, which contributes 25\% of the final mark and is taken during the seminar slot in week 8 of the Autumn term (the week after Reading week).

Formative assessment:

- **Weekly problem sets**
  Detailed solutions to problem sets will be posted on Moodle. Students will be able to assess their own performance by comparing their answers to the posted suggestions. In addition, discussions during seminars and the instructor's office hours will provide more personalized feedback.

- **In-class test** (as listed under “summative assessment” above)
  Solutions will be posted on Moodle (collective feedback). Scripts will be marked and numerical grades assigned (individual feedback).

READING

The main text for the course will be:


The following text can also be useful as additional reading:


This is the most comprehensive and detailed graduate textbook on microeconomic theory. It is used as standard in most of the world’s top Ph.D. programs in economics. However, it makes for quite heavy reading and might be a bit too much for a first course on formal microeconomic theory.

Another useful text for reference is:


The scope and level of difficulty are similar to Varian's.

Weekly timetable

Lectures 1–2 Overview of the course. Optimization problems.
Reading: Lecture notes Varian, Chapter 27

Lectures 3–5: Producer theory: Technologies; profit maximization; cost minimization
Reading: Lecture notes Varian, Chapters 1–5

**Lectures 6–8: Consumer theory: Preferences; utility maximization; cost minimization; The Slutsky equation; Compensating and equivalent variations; consumer surplus**
Reading: Lecture notes Varian, Chapters 7–10

**Lecture 9: Partial equilibrium: Perfect competition and monopoly**
Reading: Lecture notes Varian, Chapters 13–14

**Lecture 10: General equilibrium in a pure exchange economy; First and Second Welfare Theorems**
Reading: Lecture notes Varian, Chapter 17