



**LUNDS UNIVERSITET**  
Lunds Tekniska Högskola

*Course syllabus*

## **Avancerad mikroekonomisk analys** **Advanced Microeconomic Analysis**

**EXTP50, 7,5 credits, A (Second Cycle)**

**Valid for:** 2023/24

**Faculty:** Faculty of Engineering, LTH

**Decided by:** PLED I

**Date of Decision:** 2023-04-14

### **General Information**

**Depth of study relative to the degree requirements:** Second cycle, has only first-cycle course/s as entry requirements.

**Elective for:** I4, Pi4-fm

**Language of instruction:** The course will be given in English

### **Aim**

The aim of the course is to give the student an introduction into advanced microeconomics. The emphasis is on industrial organization and game theory.

### **Learning outcomes**

*Knowledge and understanding*

For a passing grade the student must

- deepen their knowledge of the theory of decision making under uncertainty, and obtain knowledge in game theory and industrial organisation including theories of monopoly, oligopoly and contracts,
- be able to translate competitive situations as well as other economic and social interaction problems into formalised games,
- be able to describe practically encountered incentive problems in terms underlying information asymmetries and, aided by this classification, be able to analyse them and suggest solutions,
- develop a command of the basic theory of decision making under risk in such a way that they will be able to explain the role played by the consistency requirements, including the "independence axiom".

### *Competences and skills*

For a passing grade the student must

- solve monopoly pricing problems, including problems that involve second and third degree price discrimination,
- solve games using basic solution concepts such as dominance, Nash equilibrium and subgame perfection, and be able to derive substantive economic conclusions from the solutions,
- evaluate arguments about likely implications of different actions on the way a market works in terms of competition and price formation,
- grasp non-cooperative game theory sufficiently well to explain simple games and their solutions to a layman.

### *Judgement and approach*

For a passing grade the student must

Students shall have a command of the course contents so that they will be able to deepen their knowledge by independently studying more advanced literature and scientific articles written at a reasonably technical level.

## **Contents**

The course presents modern microeconomic theory and a set of applications. The applications considered include:

- the theory of economic decision making under risk and uncertainty, including the important notions of risk aversion and stochastic dominance,
- non-cooperative game theory and the basic concepts of dominance, Nash equilibrium, and subgame perfection,
- the theory of monopoly with a classification and advanced treatment of the most common forms of price discrimination,
- oligopoly theory, developing game theoretic models of competition in prices and quantities as well as sequential competition,
- the basic theory of incentive problems created by asymmetric information about actions or states of nature.

## **Examination details**

**Grading scale:** TH - (U,3,4,5) - (Fail, Three, Four, Five)

**Assessment:** The examination consists of a written exam and optional home assignments. The written exam takes place at the end of the course. There will be further opportunities for examination close to this date. Points from the home assignments can only be carried forward to examinations taken the same term.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

## **Admission**

**Admission requirements:**

- EXTA40 Introduction to Microeconomic Theory

**The number of participants is limited to: 15**

**Selection:** Completed university credits within the programme. Priority is given to students enrolled on programmes that include the course in their curriculum.

**The course overlaps following course/s:** NEKN21

## **Reading list**

- Cowell, Frank: Microeconomics – Principles and Analysis, Second Edition. Oxford University Press, 2018, ISBN: 9780198804093.
- Supplementary material.

## **Contact and other information**

**Course coordinator:** Erik Wengström, erik.wengstrom@nek.lu.se

**Course coordinator:** Fredrik Andersson, fredrik.andersson@nek.lu.se

**Course homepage:** [http://Course webpage is in Live@Lund](http://Course%20webpage%20is%20in%20Live@Lund)

**Further information:** The course is to be studied together with NEKN2, which is given by the Department of Economics.