

Advanced Microeconomics (MA)

Fall 2025

Content

Description Microeconomics studies the decisions of individuals and firms and their interaction in markets. This course is devoted to study foundational models of microeconomic analysis. It covers decision theory, choice theory, and game theory. While decision theory deals with individual's choices, game theory analyzes situations where decision makers influence each other.

This course provides the basis for further courses in economics as well as for own work, e.g., writing a Master's thesis in the field of microeconomics.

Training Objectives In this course students will

- a) learn decision-theoretic methods
- b) learn game-theoretic methods
- c) deepen their knowledge in foundational models of microeconomics

Syllabus

Part I *“Deep Micro”*

1. Introduction
2. Preferences
3. Demand
4. Supply
5. General Equilibrium
6. Social Choice

Part II *Game Theory*

1. Static games with complete information
2. Dynamic games with complete information
3. Static Games with incomplete information
4. Dynamic games with incomplete information
5. Bargaining

Organisation

The lectures are held by Giovanni Valvassori Bolgè and the exercise tutorials are given by Qingchao Zeng.

The room is PER 21, E120.

For questions please use the Q&A forum on moodle or write an email to giovanni.valvassoribolge@unifr.ch or qingchao.zeng@unifr.ch.

Date	Time	Content
Thu 18.09.2025	8:15 - 9:15	Lecture I-1: Introduction
	9:30 - 12:00	Lecture I-2: Preferences
Thu 25.09.2025	8:15 - 9:15	Exercises
	9:30 - 12:00	Lecture I-3: Demand
Thu 02.10.2025	8:15 - 9:15	Exercises
	9:30 - 12:00	Lecture I-3: Demand
Thu 09.10.2025	8:15 - 9:15	Exercises
	9:30 - 12:00	Lecture I-4: Supply
Thu 16.10.2025	8:15 - 9:15	Exercises
	9:30 - 12:00	Lecture I-4: Supply
Thu 23.10.2025	8:15 - 9:15	Exercises
	9:30 - 12:00	Lecture I-5: General Equilibrium
Thu 30.10.2025	8:15 - 09:15	Exercises
	10:15 - 12:00	Lecture I-6: Social Choice
Thu 06.11.2025	8:15 - 10:00	Lecture II-1: Static Games with Complete Information
	10:15 - 12:00	Lecture II-1: Static Games with Complete Information
Thu 13.11.2025	8:15 - 09:15	Exercise: Nash Equilibrium
	09:30 - 12:00	Lecture II-2: Dynamic Games with Complete Information
Thu 20.11.2025	8:15 - 09:15	Exercise: Mixed Strategies
	09:30 - 12:00	Lecture II-2: Dynamic Games with Complete Information
Thu 27.11.2025	8:15 - 09:15	Exercise: Subgame Perfection
	09:30 - 12:00	Lecture II-3: Static Games with Incomplete Information
Thu 04.12.2025	8:15 - 09:15	Exercise: Repeated Games
	09:30 - 12:00	Lecture II-4: Dynamic Games with Incomplete Information
Thu 11.12.2025	8:15 - 09:15	Exercise: Static Games with Incomplete Information
	09:30 - 12:00	Lecture II-4: Dynamic Games with Incomplete Information
Thu 18.12.2025	8:15 - 09:15	Exercise: Dynamic Games with Incomplete Information
	09:30 - 12:00	Lecture II-5: Bargaining and Exam Preparation

Examination

Final Exam This class is graded through an end-of-semester written exam. The exam lasts 120 minutes and it covers both parts equally.

Supporting Materials

Lecture & Exercises All materials required for the class are available on Moodle.

The best preparation material for the final exam is the material shared during the lecture and exercises. Students are particularly advised to independently prepare for the exercise tutorials.

Reference Books The main textbooks for this course are:

RUBINSTEIN, A. (2025) *Lecture Notes in Microeconomic Theory*, Princeton University Press.

TADELIS, S. (2013) *Game Theory: An Introduction*, Princeton University Press.

There are many more textbooks on these topics. We can also recommend the following ones.

JEHLE G., RENY. P. (3rd ed., 2011) *Advanced Microeconomic Theory*, Financial Times/Prentice Hall.

GIBBONS, R. (1992) *A Primer in Game Theory*, Pearson Education.

MAS-COLELL, A., WHINSTON, M. D., & GREEN, J. R. (1995) *Microeconomic Theory*, Oxford University Press.

OSBORNE, M. (1994) *An Introduction to Game Theory*, MIT Press.

OSBORNE, M., & RUBINSTEIN, A. (1994) *A Course in Game Theory*, MIT Press.

Prerequisites From the Bachelor studies basic knowledge in the following topics is expected.

- Sets and mappings, e.g. functions
- Calculus, e.g. derivatives
- Optimization, e.g. Lagrange

- Choice under uncertainty, e.g. expected values
- Probability theory, e.g. Bayes' rule

Most textbooks cited above provide helpful summaries of these topics, usually in their mathematical appendices.