



Microeconomics I: Choice and Preferences

Level: L1

Track: All

Semester : S1

Teaching hours: 18 hours of lectures and 18 hours of tutorials.

Teaching language: French for lectures; English for tutorials within the International Track.

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Course's objectives:

This course introduces first-year students to the fundamental concepts and methods of microeconomics. It combines abstract reasoning with intuitive examples to help students understand how economic agents make choices and to appreciate the relevance of economic models used throughout the Bachelor program to analyze real-world decision problems.

The course covers both formal classical results, such as the rationalization of choice functions by rational preferences and the existence of utility representations, and more applied contexts, including multi-criteria, intertemporal, risky, and collective decision-making. Extensions on decision-making under uncertainty, bounded rationality, cognitive biases, and moral dilemmas are also presented to enrich students' economic reasoning.

Lesson plan:

1. Choice, preferences, and utility: definitions and notation
2. Revealed preferences derived from choice functions
3. Numerical representation of preferences: utility
4. Applications: multi-criteria, intertemporal, risky, and collective decisions
5. Extensions: decision-making under uncertainty, bounded rationality, cognitive biases, and moral dilemmas

Skills developed:

- Ability to model and analyze decision-making situations
- Understanding the concepts of rational preferences, choice functions, and utility functions
- Awareness of the usefulness and limitations of the rational-agent model

Grading system: Three 30-minute multiple-choice quizzes in tutorials and one written exam in lectures

Prerequisites: High-school level mathematics (specialty math track)

References: 3 sets of handouts, complemented by (from introductory to more formal):

- The Economy, CORE (Chapter 3: Doing the best you can: Scarcity, wellbeing, and working hours)
- S. Bowles & S.D. Halliday, Microeconomics: Competition, Conflict, and Coordination (Ch. 2)
- N. Eber, Introduction à la microéconomie moderne (chapitre 1 : Rationalité et décision)
- M.J. Osborne & A. Rubinstein, Models in Microeconomic Theory (Chapters 1–4)
- H.R. Varian, Intermediate Microeconomics (Chapter 3: Preferences)
- A. Mas-Colell, M.D. Whinston & J.R. Green, Microeconomic Theory (Ch. 1: Preference and Choice)