

Microeconomics 1

Course title – Intitulé du cours	Microeconomics I
Level / Semester – Niveau / semestre	M2/S1
School – Composante	Ecole d'Economie de Toulouse,
Teacher – Enseignant responsable	Thomas Mariotti
Other teacher(s) – Autre(s) enseignant(s)	François Salanié
Other teacher(s) – Autre(s) enseignant(s)	TA: Dario Gori
Lecture Hours – Volume Horaire CM	36
TA Hours – Volume horaire TD	15
TP Hours – Volume horaire TP	
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	English

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

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Course Objectives – Objectifs du cours :

This class aims at providing fundamental tools to every economist. It focuses on General Equilibrium Theory: consumer, producer, optima, equilibria, welfare theorems, risk and time, expected utility, and finally market failures. We expect students to learn definitions, make some formal proofs, enjoy the generality of results, and discover how to use them.

Prerequisites – Pré requis :

A bit of elementary mathematics: analysis, derivatives, simple maximization programs, convexity, and rigorous proof-making above all. Some short mathematical notes will be given to students when needed: topology, monotone comparative statics, envelope theorem, maximum theorem, convexity, optimization, fixed point theorems.

Practical information about the sessions – Modalités pratiques de gestion du cours :

Be on time, be enthusiastic, participate.

Grading system – Modalités d'évaluation :

20 points overall: two homework (2 points each), one midterm (6 points), one final exam (10 points).

Bibliography/references – Bibliographie/références :

We strongly recommend that each student buy the following book:

"Microeconomic Theory", by Andreu Mas-Colell, Michael Whinston and Jerry Green

because it is the most complete, and it is universally used. But the following books are also very good investments:

"Microeconomic Foundations I", by David Kreps (more mathematical)

"Advanced Microeconomic Theory", by Geoffrey Jehle and Philip Reny (more modern topics)

"Lectures on Microeconomic Theory", by Edmond Malinvaud (exists also in French) (precise and clever);

"Theory of value", by Gérard Debreu (short, focused, historical value).

Session planning – Planification des séances

1. Preliminaries: competition, price-taking, and partial equilibrium. Toward a theory of value, both normative and positive.

2-3. Goods, technologies, firms:

Definitions: good, production set. The firm: profit function, supply and demand functions, elasticities, duality, cost function. Price-taking and aggregation. Afriat theorem for firms, the law of supply.

4. Choice, preference, utility:

Axioms, representation theorem, utility, ordinality Typology, examples

5-6-7-8. The consumer's problem:

Definitions: consumption set, budget constraint, demand functions, elasticities, indirect utility. The case of surplus. Afriat theorem for consumers, revealed preferences, the law of demand. Duality: expenditure minimization, Hicksian demand functions, revenue effect, substitution effect, comparative statics, complementarity and substitution, integrability, Slutsky equation.

9-10. Welfare

Evaluation of economic changes: compensating and equivalent variations, surplus. Aggregation of demand: positive, normative. Pareto Optima, welfare functionals, Pareto weights.

11-12-13-14. General equilibrium in exchange economies. Edgeworth box, excess demand, equilibrium existence and multiplicity, welfare theorems. Application: replication and core

15-16-17. General equilibrium theory

A few general results, for which proofs are only sketched. Application: matching with transferable utility.

18. Risk and time

Contingent goods, information, learning, rational expectations, sunspots, Finance (spot, forward, options, interest rate).

19-20-21. Expected utility: Axioms, representation theorem. Utility for money, risk aversion, Risk Dominance (FOSD, SOSD). Optimal risk-sharing, mutuality principle

22-23-24. Market failures: Incomplete Markets, Externalities and public goods.