





5.00 credits

30.0 h + 15.0 h

Q1

Teacher(s)	Mauleon Ana ;
Language :	French
Place of the course	Bruxelles Saint-Louis
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ul style="list-style-type: none"> • Identify and define the different types of games and equilibrium concepts in game theory. • Understanding how the main ideas of game theory can be applied to economic, social, and political situations in which decision-makers interact with each other. • Apply the theoretical concepts by solving the type of exercises proposed in the exam.
Evaluation methods	A written examination made up of problems similar to those seen in problem sessions as well as questions relating to course material will be used to determine each student's course grade.
Teaching methods	The course objectives are achieved via weekly lectures in which the professor presents the different solution concepts and the corresponding applications. A teaching assistant will help the students in the resolution of the different problems.
Content	<p>The first part of the course studies the games with perfect information and the different solution concepts: Nash equilibrium, subgame perfect equilibrium. Each solution concept will be explained by means of a wide variety of illustrations: Bertrand's model of oligopoly, Cournot's model of oligopoly, Stackelberg's model of duopoly, auctions, electoral competition, exit from a declining industry, voting, matching, etc. The second part of the course is dedicated to some variants and extensions: repeated games and Bayesian games.</p> <p>Course outline:</p> <ol style="list-style-type: none"> 1. Introduction (Chapter 1) Part I: Games with Perfect Information I 2. Nash Equilibrium: Theory (Chapter 2) 3. Nash Equilibrium: Illustrations (Chapter 3) 4. Mixed Strategy Equilibrium (Chapter 4) 5. Extensive Games with Perfect Information: Theory (Chapter 5) Part II: Variants and Extensions 6. Repeated Games: The Prisoner's Dilemma (Chapter 14) 7. Bayesian Games (Chapter 9)
Bibliography	<p>Un syllabus, reprenant un plan détaillé du cours ainsi que les principales définitions, résultats et illustrations, est proposé pour compléter le cours magistral. Sont également disponibles les transparents du cours.</p> <p>Autres:</p> <p>An introduction to game theory, Martin J. Osborne, Oxford University Press 2004, ISBN 0-19-512896-6.</p>
Faculty or entity in charge	ESPB

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Economics and Management	ECGB1BA	5	BECGE1231	
Bachelor in Economics and Management (French-English)	ECAB1BA	5	BECGE1231	
Bachelor in Economics and Management (French-Dutch-English)	ECTB1BA	5	BECGE1231	
Bachelor : Business Engineering	INGB1BA	5	BINGE1232	
Bachelor of Science in Business Engineering	BBEB1BA	5		