

Master of Economics

Lecture Title:	Game Theory		
Lecturer:	Klaus Ritzberger		
Lecture Code:	017 908	ECTS:	6
Term:	Fall	Contact hours:	40
Lecture Dates:	see teaching calendar		
Final Exam:	see teaching calendar	Frequency of lecture:	Twice a week
Prerequisites:	Knowledge of microeconomics incl. of general equilibrium		
Language of instruction:	English		
Contact information	Klaus Ritzberger Institute for Advanced Studies Room A 304 Stumpergasse 56 1060 Wien		
	Telephone: 153	Email: ritzbe@ihs.ac.at	
Office hours	By appointment		
Course website			
Learning Objectives: (What are the intended learning outcomes? Which skills will be acquired?)	The goal is to introduce the basic concepts from game theory, both intuitively and at a formal level. Furthermore, important applications of game theory to economic problems will be discussed.		
Content: (Which professional competence and which contents will be imparted?)	• Introduction: What is a game? Simple examples, basic assumptions. • Games in Extensive Form: Perfect and imperfect Information, the tree, strategies (pure, mixed, and behavioral strategies), perfect recall (Kuhn’s theorem), Bayesian games (incomplete information). • Games in Normal Form: Normal form games, Thompson transformation, the space of games. • Solving Games: Dominance (weak and strict dominance), rationalizable strategies, Nash equilibrium, zero-sum games, correlated equilibrium. • Applications: Oligopoly (Cournot, Bertrand, differentiated commodities), repeated games, mechanism design, principal-agent problems, signaling, adverse selection and moral hazard, auctions.		
Teaching Approach: (Description of the learning and teaching methods)	Lecture and homework assignments to be discussed in class.		

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Workload: (Definition of workload (ECTS), divided in pre-modules (e.g. pre-readings), core-modules (contact hours), post-modules (e.g. case studies)):	-
Required literature: (scripts, books, articles, cases, papers)	• Ritzberger, K. (2002), Foundations of Non-Cooperative Game Theory, Oxford University Press. • Osborne, M. J., and A. Rubinstein (1994), A Course in Game Theory, chp. 10, MIT Press. • Friedman, J. W. (1986), Game Theory with Applications to Economics, chp. 3, Oxford University Press. • Kreps, D. M. (1990), A Course in Microeconomic Theory, chp. 10, 16, 17, Harvester-Wheatsheaf.
Recommended literature: (books, articles, cases, papers)	-
Special features: (e.g. excursion, guest speaker):	-
Mode of examination: (Mode of examinations and tests (e.g. oral or written examination, lecture, homework, papers, class participation)):	In each lecture problem sets are distributed. Problems will be discussed in class and the student's performance in handling the problems will be graded. In addition, there will be two written classroom exams, a midterm and a final. Each written exam covers the material that has been discussed up to the exam date. Written exams consist of 3-4 problems that students have to solve in writing.
Grading:	• Problem sets: 20% • Midterm exam: 35% • Final exam: 45%