Master of Economics

Lecture Title:	**Microeconomics I**		
Lecturer:	Egbert Dierker		
Lecture Code:	017 907	**ECTS:**	6
Term:	Spring term 2013	**Contact hours:**	40
Lecture Dates:	April 23rd – July 18th, 2013		
Final Exam:	TBA	**Frequency of lecture**:	Twice a week
Prerequisites:	Mathematics I and II, Microeconomics I		
Language of instruction:	English		
Contact information	Prof. Dr. Egbert Dierker IHS, Department of Economics and Finance Room: A 323		
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Office hours	By appointment		
Course website	https://cecnet.tuwien.ac.at		
Learning Objectives: (What are the intended learning outcomes? Which skills will be acquired?)	Deeper understanding of consumer and producer theory. Familiarity with the main concepts and theorems (including their proofs) in General Equilibrium Theory. Introduction to GE under uncertainty and incomplete markets.		
Content: (Which professional competence and which contents will be imparted?)	**Part I:** Consumer theory: ▪ Debreu's utility representation theorem. ▪ The weak axiom of revealed preference (WA). ▪ Duality and prices, expenditure functions as support functions, duality theorem. ▪ Sums of closed convex sets and support functions. ▪ Individual choice, differentiability of demand, Slutsky equation. ▪ Continuity properties of correspondences and Berge's maximum theorem. ▪ WA and the law of demand, Slutsky compensation and law of compensated demand. ▪ When does aggregate demand depend on aggregate wealth? Gorman form. ▪ Aggregation, the loss of the WA and of the absence of a representative consumer. Theory of production: ▪ Assumptions and interpretation, profit and support functions.		

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	▪ Aggregate technology, aggregate supply correspondence and aggregate profits. Existence of a representative producer; production efficiency and profit maximization. **Part II:** General Equilibrium Theory when markets are complete: ▪ Pareto efficiency and Walrasian Equilibria in an Edgeworth box with production. ▪ Feasible allocations and Pareto-efficiency. ▪ Private ownership economies, Walrasian equilibria and equilibria with transfers. ▪ First welfare theorem and the underlying hidden assumptions. ▪ Obstacles to a converse theorem: Non-convexities and the minimum-wealth problem; quasi equilibrium with transfers. ▪ Second welfare theorem, proof and discussion. ▪ Nonconvex technologies, marginal cost pricing equilibria, efficiency and the need for redistribution. ▪ Existence of Walrasian equilibria in exchange economies with two goods, the excess demand correspondence and Walras' law. ▪ Retractions and derivation of Brouwer's fixed point theorem. ▪ Kakutani's fixed point theorem, Debreu's fundamental existence lemma and Debreu's equilibrium existence theorem. ▪ Global uniqueness of equilibrium, the WA, gross substitutes and the dominant-diagonal property. ▪ Local uniqueness and robustness of equilibria, regular economies and "smallness" of the set of critical economies. ▪ Index Theorem. ▪ Price adjustment, the WA and global stability. ▪ Sonnenschein-Mantel-Debreu Theorem. ▪ Core and Walrasian equilibria, replica economies and the Debreu-Scarf theorem. Uncertainty and incomplete Markets: ▪ State contingent commodities and sequential trade, Arrow securities, Radner equilibria. ▪ Existence problems and Pareto dominated equilibria when the market structure is incomplete. ▪ Financial market equilibria and the absence of arbitrage.
Teaching Approach: (Description of the learning and teaching methods)	Lecture and group work

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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)	• Mas-Colell, Winston, Green: "Microeconomic Theory", parts 1 and 4 • Debreu: "Theory of value" • Sundaram: "A first course in optimization theory", chapter 9 • Debreu and Scarf (1963): "A Limit Theorem on the Core of an Economy" • Hart (1975): "On the optimality of equilibrium when the market structure is incomplete"
Recommended literature: (books, articles, cases, papers)	• Magill and Quinzii: "Theory of incomplete markets", chapter 9 • Hildenbrand, Kirman: "Equilibrium analysis" • Arrow and Hahn: "General competitive analysis"
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)):	• Regular homework assignments. Students are encouraged to work in small groups. They present and discuss their answers in TA sessions. • Midterm exam after the end of part 1 (consumer and producer theory). No retake. • Final exam.
Grading:	The midterm exam accounts for 30% and the final exam for 70%. Students can improve their grades through classroom participation and their contributions to TA sessions.