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Microeconomics

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1 Course Outline

Learning Objectives:

- This course covers key concepts of microeconomic theory. The main goal of this course is to provide students with both, a basic understanding and analytical traceability of these concepts.

- The main concepts are discussed in detail during the lectures. In addition students have to work through the textbooks and have to solve problems to improve their understanding and to acquire skills to apply these tools to related problems.

  - *Decision Theory*: Rationality, Preference primitives and axioms, revealed preference theory, preference representations, expected utility theorem, risk aversion.
  - *Consumer Theory*: Walrasian and Hicksian demand, comparative statics, indirect utility, Slutsky equation, duality theory, welfare measures, aggregate demand.
  - *Production*: Production sets and returns to scale, production functions, cost minimization, profit maximization.

2 Literature

- Andreu Mas-Colell, A., Whinston, M.D., Green, J.R., *Microeconomic Theory*, Oxford University Press, 1995.

Supplementary Literature:

- Gilboa, I., *Theroy of Decision under Uncertainty*, Cambridge University Press, 2009.

- Gollier C., *The Economics of Risk and Time*, Mit Press, 2004.

- Jehle G.A. and P. J. Reny, *Advanced Microeconomic Theory*, Addison-Wesley Series in Economics, Longman, Amsterdam, 2000.

- Ritzberger, K., *Foundations of Non-Cooperative Game Theory*, Oxford University Press, 2002.

3   Scedule

- Winter Term 2012 in Brno

  - First block: October, 25-26: 11:00-12:30 and 14:00-15:30 on Thursday, 10:00-11:30 and 13:00-14:30 on Friday.

  - Second block: November, 22-23: 11:00-12:30 and 14:00-15:30 on Thursday, 10:00-11:30 and 13:00-14:30 on Friday.

  - Third block: December, 6-7: 11:00-12:30 and 14:00-15:30 on Thursday, 10:00-11:30 and 13:00-14:30 on Friday.

- Practice session will be organized by Rostislav Stanek.

- Final test: tba , Retake: tba

4   Problem Sets

- due on November, 23: 1.B.5., 1.C.1., 2.D.3.; 2.E.4.; 2.F.3.; 2.F.7.; 2.F.11.; 2.F.17.,3.C.2.

- due on December, 21: 3.D.4.; 3.D.5.; 3.G.11, 5.B.1.; 5.C.2.; 5.C.3.; 5.C.4. (Prove points I, II, IV, VI), 5.C.10. Show that the Hicksian wealth compensation is strictly smaller than the Slutsky wealth compensation for dicrete price changes.

- due on January, 21: 6.B.4.; 6.B.5.; 6.C.1.; 6.C.7.; 6.C.18.

Final Exam - Definitions, Theorems, Proofs

- D 1.B.1 and P 1.B.1 and proof.

- D 1.B.2 and P 1.B.2 and proof.

- Definitions on choice rules (especially the weak axiom), P 1.D.1 and proof.

- Chapter 2: definitions (Walras' law, homogeneous of degree zero,...

- Chapter 2 - weak axiom with Walrasian demand, Proposition 2.F.1 without proof

- Chapter 3.B,C all axioms + existence theorem (without proof)

- Chapter 3.D: P 3.D.2,3 and proof

- Chapter 3.E. P 3.E.1,2,3 and proofs

- Proof of Slusky, Shepard's lemma, Roy's identity with proof

- Profit function and properties (P 5.C.1 (i,ii,iii,iv,vi) with proof)

- Chapter 6 Axioms and vNM existence proof (P. 6.B.1 and 6.B.3)

- Equivalent definitions of risk aversion - proof of P 6.C.1

- Proof of Arrow-Pratt approximation.