

390035 UK PhD-VGSE: Topics in Dynamic Economic Analysis

Lecturer: Univ.-Prof. Dipl.-Ing. Dr. Gerhard Sorger

Monday 10:00- 11:30 Seminarroom VGSE

Course starts on October 6th, 2014

Target group: PhD students of *Economics*. The course counts for 2 hours (5 ETCS points).

Prerequisites: Knowledge of macroeconomics, microeconomics, and mathematics as covered in the Master program.

Contents: The course deals primarily with mathematical methods for the analysis of deterministic dynamic economic models in discrete time. These include in particular dynamic optimization with and without commitment, dynamic games, and dynamic competitive equilibrium models. Depending of the preferences of the students, the course may also cover selected issues in continuous-time dynamic models.

Objectives: After successful completion of this course, students

- are familiar with standard optimization methods for deterministic dynamic models;
- understand the difference between decision making under commitment and discretionary decision making;
- are familiar with some important equilibrium concepts for dynamic games;
- are familiar with the basic methodology to formulate and solve dynamic competitive equilibrium models;
- are able to characterize the solutions of simple models from the above mentioned modeling frameworks.

Bibliography: The course is based on the book manuscript *Dynamic Economic Analysis: Deterministic Models in Discrete Time* by Gerhard Sorger (to be published by Cambridge University Press, 2015). Alternative recommended textbooks are *Recursive Methods in Economic Dynamics* by N.L. Stokey and R.E. Lucas, Jr. (Harvard University Press, 1989) and *Recursive Macroeconomic Theory* by L. Ljungqvist and T.J. Sargent (3rd ed., MIT Press 2012).

Assessment will be based on homework exercises and an oral exam.

Registration per email to info@vgse.at.