

MSQE
PROGRAM

Uwe Walz
Pei Kuang

Microeconomics Pre-Semester Course 2008

Ph.D. Program in Economics and MSQE Program (Economics Track)

Syllabus

(Version September 1, 2008)

Note: The course “Advanced Microeconomic Theory I” of the Ph.D. Program in Economics and the MSQE Program in the academic year 2008/2009 will have two components: an entrance examination based on the contents of the Microeconomics Pre-Semester Course (the entrance examination will be given on October 15, 2008 from 8:00 am to 9:30 am); and a course component taught during the fall semester (counting 90% towards the overall course grade).

Instructor: Pei Kuang (Kuang@finance.uni-frankfurt.de).

Time: September 1 to September 5, every day from 10:00 am to 12:00 pm and from 1:00 pm to 3:00 pm.

Location: House of Finance, DZ Room.

Prerequisites: Students are expected to have a solid undergraduate background in mathematics. Students missing some of this background are expected to have worked through the following references *prior* to the beginning of the course:

- Chiang, A.C. and K. Wainwright (2005): *Fundamental Methods of Mathematical Economics*, Boston: Mc Graw-Hill Irwin, Chapters 1 through 13.

Course Texts:

- Varian, H.R. (2006): *Intermediate Microeconomics: A Modern Approach*, 7th Ed., W.W. Norton & Company.
- Pindyck, R.S. and D.L. Rubinfeld (1997): *Microeconomics*, 4th Ed., Prentice Hall.

Course Outline:

Theory of the Household

- Budget Constraint
- Preferences Utility
- Choice and Demand
- Slutsky Equation

References:

Varian, Chapters 1 to 7.

Theory of the Firm

- Technology
- Profit Maximization and Cost Minimization
- Cost Curves
- Firm Supply
- Monopoly and Oligopoly

References:

Varian, Chapters 18 to 22, 24 and 27.

Game Theory and Applications

- Nash Equilibrium
- Pure and Mixed Strategy
- Dominant Strategy
- Best Response Curve
- Subgame Perfectness
- Repeated Games
- Applications of Game Theory

References:

Varian, Chapters 28 and 29.

Welfare Economics

- Edgeworth Box
- Pareto Efficient Allocations
- Walras' Law
- Equilibrium and Efficiency
- First and Second Welfare Theorem

References:

Varian, Chapters 16 and 31.