MSc Course Outline 2015/16
Advanced Topics in Microeconomics - EC5111
Course Leader – Michael Mandler
Spring Term – 20 credits

AIMS

This course covers static and dynamic games, games with incomplete information, Bayesian decision theory, and common knowledge.

COURSE DELIVERY

The course consists of a lecture and seminar each week. Given the subject’s mathematical content, the only way to understand the material is to work through problems and exercises. I highly recommend that you work together in groups on these problems. If you get stuck while working on a problem, tell me where and I’ll give you a hint. Problem sets will be assigned during lectures and answers to selected problems will be discussed during seminars.

ASSESSMENT

A final examination contributes 100% of the final mark and is taken during the Summer term.

READING

The lectures will be largely self-contained and I will hand out lecture notes. The following textbooks are designed to give you a broader background, fill in subjects that I go over quickly, and give you a reference when confused. Osborne and Rubinstein is by far the best book but its notation can be difficult. Jehle and Reny is a little easier than the other two books.

A. Mas-Colell, M. Whinston, and J. Green, Microeconomic Theory, Oxford University Press, 1995


M. Osborne and A. Rubinstein, A Course in Game Theory, MIT Press, 1994

TIMETABLE

Weeks 1-2 Static games: dominance, maximin, Nash equilibrium, and mixed strategies

Week 3-4 Extensive-form games and subgame perfection

Week 5 Repeated games
Osborne and Rubinstein, chapter 8.
Week 6 Incomplete-information games and Bayesian rationality
Mas-Colell et al., 8.E, Jehle and Reny, 7.2.3

Week 7 Perfect Bayesian equilibria and correlated equilibria
Osborne and Rubinstein, 3.3, 5.4 (5.1-5.3 also helpful), 11, and 12, Jehle and Reny, 7.3.6-7.3.7

Week 8 Common knowledge
Osborne and Rubinstein, 5.1-5.4

Week 9 Auctions

Week 10 Bets, assets, and coordination or Social choice
Osborne and Rubinstein, 5.1-5.4 or Jehle and Reny, 6.1-6.2