

School of Mathematics

Course 381 — Mathematical Economics
(J.S./S.S. Mathematics, J.S./S.S. TSM)

2003–04

Lecturer: Dr T Gradev

Requirements/prerequisites:

Duration: 24 weeks

Number of lectures per week: 2 lectures + 1 tutorial per week.

Assessment: Homework assignments to be discussed at tutorials will count for 30% of the marks.

End-of-year Examination: Three-hour examination at the end of Trinity term will count for 70% of the marks.

Description: The course will address a selected core of the contemporary microeconomic and macroeconomic theories. Microeconomic foundations will be introduced first, starting with choice behaviour and individual decision-making, and developing the argument through to aggregate economic outcomes, the subject matter of macroeconomics. Step-stones in the process include non-cooperative game theory, or the study of the mutual interdependence of rational agents, partial equilibrium, or the structure and organisation of the markets, and general equilibrium, or the Walrasian view of the economy as a closed and interrelated system. Elements of welfare economics and some models of economic growth should facilitate critical students in their own evaluation of economic policy choices.

Bibliography

Readings:

- Andreu Mas-Colell, Michael D. Winston, and Jerry R. Green, Microeconomic Theory, Oxford University Press, 1995, Mas-Collell, Winston & Green.
- David Romer, Advanced Macroeconomics, McGraw-Hill, 1996, Romer.
- Jeoffrey A. Jehle, Advanced Microeconomic Theory, Addison Wesley (Pearson Education), 2000.
- Hal R Varian, Microeconomic Analysis, Third Edition, W.W.Norton & Company, 1994.
- David M. Kreps, A Course in Microeconomic Theory, Harvester Wheatsheaf, 1990.
- Hugh Gravelle and Ray Rees, Microeconomics, Second Edition, Longman, 1992.
- Charles Johnes, Introduction to Economic Growth, W.W.Norton, 2002.

Main texts:

- **Mas-Collell, Winston & Green** (Michaelmas & Hilary Terms)
- **Romer** (Hilary & Trinity Terms)

The course will roughly follow the exposition in Mas-Collel, Winston & Green.

February 16, 2004