

# Part IIA Outlines

## Part IIA Paper 1 Microeconomics

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### Paper Content

This course builds on the material taught in Part I, Paper 1. It provides a rigorous foundation in the following core concepts of intermediate level microeconomic theory: social choice and welfare, game theory, and information economics. The first, and main, part of the first lecture course will develop the foundational concepts underlying game theory. This will include setting up simultaneous and sequential move games, and developing solution concepts to predict equilibrium play. Applications spanning many subjects will be covered, but with a particular focus on applications from industrial organisation. Lent term will cover the theory of uncertainty, asymmetric information, and various applications such as insurance markets, auctions, incentive contracts and markets for information. Upon completion of the course students will have been exposed to all important concepts currently considered to form the main body of microeconomic theory.

### Objectives

This course provides the basis for the material taught in both the more applied and the theoretical papers in Part IIB. At the end of the course students should have:

- a critical perspective on the assumptions underlying microeconomic models;
- a thorough understanding of, and the ability to model formally, core microeconomic concepts such as efficiency, strategic interaction and asymmetric information; and
- the ability to apply these concepts and models to a diverse range of market and economic settings.

### Lecture Courses

**Game Theory, Welfare, & Applications** (Dr M. Elliott, 20 hours, weeks 1-8, Michaelmas Term)

**Economics of Uncertainty and Information** (Prof L Felli, 20 hours, weeks 1-8, Lent Term)

### Selective Reading List

*There are many good game theory and microeconomic theory textbooks. The course lecture notes will be the primary source of information, but the following text books may provide useful additional material.*

#### Game Theory

- Martin Osborne and Rubinstein, Ariel, Models of Microeconomic Theory, Open Book Publishers, 2020 (<http://arielrubinstein.tau.ac.il/books.html>).
- Martin Osborne, An Introduction to Game Theory, OUP, 2004 [17F238].
- Hal Varian, Intermediate Microeconomics: A Modern Approach, 8th ed., Norton, 2010 [17A64G].
- Avinash Dixit and Susan Skeath, Games of Strategy, 2nd ed., Norton, 2004 [70F166B].
- Avinash Dixit and Barry Nalebuff, Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life, Norton, 1991.
- Kreps, David M, Game theory and economic modelling, Oxford University Press, 1990.

#### Social Choice

- Christian List, Social Choice Theory, Stanford Encyclopedia of Philosophy (2013) (Sections 1-4).

- Amartya Sen, The possibility of social choice. The American Economic Review 89.3 (1999): 349-378.

#### Economics of uncertainty and information

- Martin Osborne and Rubinstein, Ariel, Models of Microeconomic Theory, Open Book Publishers, 2020 (<http://arielrubinstein.tau.ac.il/books.html>).
- Steve Tadelis, Game Theory: An Introduction, Princeton University Press, 2013.
- Martin J. Osborne, An Introduction to Game Theory, Oxford University Press, 2003.
- Robert Gibbons, A Primer in Game Theory, Harvester Wheatsheaf, 1992.
- Milgrom, Paul and Roberts, John. Economics, Organization and Management. Prentice Hall, 1992.
- Bernard Salanié, Economics of Contracts, MIT Press, 2005.

*There are additional readings in the course handouts.*

#### **Supervisions**

Supervisions are arranged by Directors of Studies.

#### **Examination**

The content of the course changed a few years ago, and the order in which material is taught changed. The most relevant past examinations are for the last four or so years for the first lecture course, and or the last five or so years for the second lecture course. Older exam papers may also be useful. For the first lecture course, see Part I, Paper 1 (excluding the last four or so years). Past examination papers are available from the Faculty website.

For details of the examination structure, please refer to the Form and Conduct Notice pages on Moodle.