University College London
Department of Economics

ECON0013 Microeconomics

Aims: This course is designed to provide students with a rigorous grounding in the core concepts and methods of microeconomics. At the end of the course, a student should:

- Understand microeconomic theory at a level appropriate for an economics graduate.

- Understand how to analyze these models using the relevant techniques.

- Be able to address economic phenomena using these techniques.

Texts: The main text is: Microeconomics: Principles and Analysis [F. Cowell, OUP 2006]. This can be supplemented with the easier books: Microeconomic Theory: Basic Principles and Extensions [Nicholson, South-Western 2005] and Intermediate Microeconomics [Varian, Norton 2003]. A more advanced book for an ambitious student is: Microeconomics [Gravelle and Rees, Pearson 2004].

Other Materials: Copies of the slides used, the problem sets and answers will be posted on the course website.

Typical Assessment: There are usually three components to assessment:

Two multiple choice examinations, one at the end of each term (TWENTY PERCENT of the final mark each)

ONE written take-home examination in the third term requiring answers to THREE longer problem-type questions, of which at least ONE to be answered from Part A and at least ONE to be answered from Part B (SIXTY PERCENT of the final mark)

Required coursework: Five problem sets for Term 1 and five problem sets for Term 2

Course Outline:

Term 1:

I.1 Games in Strategic Form

    I.1.1 Describing games in strategic form
    I.1.2 Dominance and Nash equilibrium
    I.1.3 Finding Nash equilibria

    I.2 Games in Extensive
                Form

  I.2.1 Extensive form games
    I.2.2 Nash equilibrium and backwards induction
    I.2.3 Subgame perfect equilibrium

I.3 Monopoly and Oligopoly

    I.3.1 Monopoly
    I.3.2 Static oligopoly
    I.3.3 Dynamic oligopoly

I.4 Perfect competition

    I.4.1 Production sets and functions
    I.4.2 Profit maximisation
    I.4.3 Cost minimisation

I.5 Adverse Selection

    I.5.1 Lemons and risk
    I.5.2 Insurance and market failure
    I.5.3 Two part tariffs
    I.5.4 Optimal screening

I.6 Moral Hazard

    I.6.1 Introduction and bank loans
    I.6.2 Contracts and risk neutrality
    I.6.3 Contracts and cost of risk

I.7 Economic Design and Mechanisms

    I.7.1 Mechanisms
    I.7.2 Auctions

Term 2:

I.1 **Budget Constraints and Consumer Demand**

    I.1.1 Linear budget constraints

    I.1.2 Nonlinear budget constraints

    I.1.3 Total budget effects

    I.1.4 Price effects

    I.1.5 Adding up

    I.1.6 Homogeneity

I.2 **Revealed Preference and the Law of Demand**

    I.2.1 Direct revealed preference and WARP

    I.2.2 Indirect revealed preference and SARP

    I.2.3 Slutsky compensation and the law of demand

    I.2.4 Negativity in general

    I.2.5 Slutsky equation

I.3 **Consumer Preferences**

    I.3.1 Preference relations

    I.3.2 Consumer rationality

    I.3.3 Continuity and utility

    I.3.4 Nonsatiation and indifference curves

    I.3.5 Convexity and diminishing MRS

    I.3.6 Homotheticity and quasilinearity

    I.3.7 Examples

I.4 **Consumer Choice**

    I.4.1 Consumer choice

    I.4.2 Income expansion paths

    I.4.3 Expenditure minimisation

    I.4.4 Expenditure function and indirect utility function

    I.4.5 Shephard's lemma, Roy's identity and the Slutsky equation

    I.4.6 Integrability

I.5 **Consumer Welfare**

    I.5.1 Consumer surplus

    I.5.2 Cost of living indices